

SuperGPQA: Scaling LLM Evaluation across 285 Graduate Disciplines

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<https://supergpqa.github.io/>

Abstract

Large language models (LLMs) have demonstrated remarkable proficiency in mainstream academic disciplines such as mathematics, physics, and computer science. However, human knowledge encompasses over 200 specialized disciplines, far exceeding the scope of existing benchmarks. The capabilities of LLMs in many of these specialized fields—particularly in light industry, agriculture, and service-oriented disciplines—remain inadequately evaluated. To address this gap, we present *SuperGPQA*, a comprehensive benchmark that evaluates graduate-level knowledge and reasoning capabilities across 285 disciplines. Our benchmark employs a novel Human-LLM collaborative filtering mechanism to eliminate trivial or ambiguous questions through iterative refinement based on both LLM responses and expert feedback. Our experimental results reveal significant room for improvement in the performance of current state-of-the-art LLMs across diverse knowledge domains (*e.g.*, the reasoning-focused model DeepSeek-R1 achieved the highest accuracy of 61.82% on *SuperGPQA*), highlighting the considerable gap between current model capabilities and artificial general intelligence. Additionally, we present comprehensive insights from our management of a large-scale annotation process, involving over 80 expert annotators and an interactive Human-LLM collaborative system, offering valuable methodological guidance for future research initiatives of comparable scope.

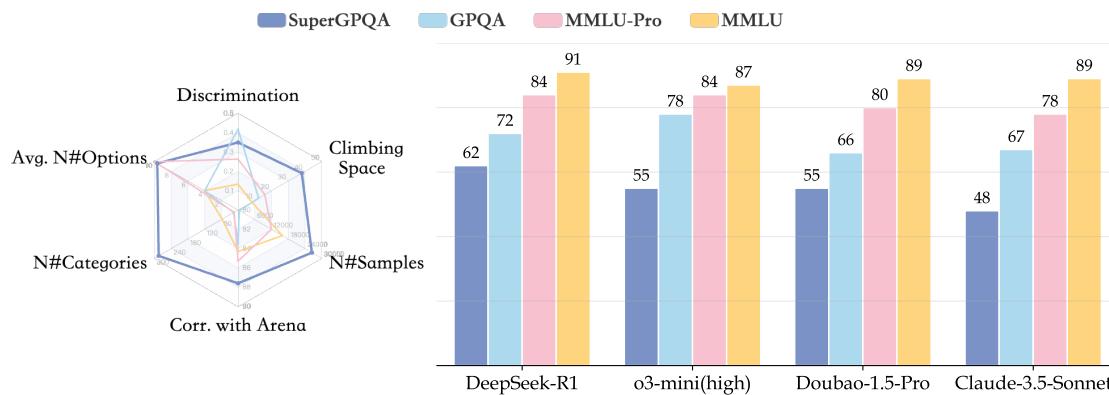


Figure 1. **Benchmark Comparison.** **Left:** Radar Chart. **Discrimination:** The degree of distinction between different models (detailed in Sec. 4.4). **Climbing Space:** The remaining improvement space for the SOTA models. **Corr. with Arena:** Correlation with Chatbot Arena Elo scores. **Right:** Performance comparison of SOTA models across different benchmarks.

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1. Introduction

Large language models (**LLMs**) have greatly changed human life. LLMs are seen as the next technological singularity and proved to surpass human performance in many areas [Phan et al., 2025], significantly improving work efficiency. However, the measurement of LLMs' accessibility on various real-world professionalism remains an unresolved issue, especially in the long-tailed fields with less attention, such as light industry, agriculture, and various service-related disciplines. Many popular benchmarks, such as MMLU [Hendrycks et al., 2020], GPQA [Rein et al., 2023], and MMLU-pro [Wang et al., 2024b], evaluate LLMs' abilities across different fields, while mainly focus on common fields like mathematics, physics, chemistry, biology, and law, limiting these benchmarks' practical significance on many real-world professionalisms. These benchmarks fail to cover the diverse and long-tail knowledge accumulated by humans. Moreover, large language models have achieved very high scores on these benchmarks, making them lose their value as challenging frontiers.

To address the gap, we introduce *SuperGPQA*, a comprehensive evaluation at the boundaries of human knowledge covering the evaluation of 285 graduate-level disciplines' knowledge and reasoning capacities. *SuperGPQA* provides at least 50 questions for each graduate-level disciplines to guarantee its accessibility on various real-world professionalism. *SuperGPQA* is developed by a large-scale human-LLM collaboration system, with crowd-sourcing annotators, experts, and state-of-the-art (**SOTA**) LLMs participating in, and then verified by a rigorous 3-stage quality inspection process, to guarantee its reliability. Moreover, *SuperGPQA* is qualified as a challenging frontier for SOTA reasoning LLMs, instruct LLMs, and base LLMs, where the best LLMs (e.g., o1 and Deepseek-R1) only achieve a score of around 60.

For building *SuperGPQA*, we propose a large-scale human-LLM collaboration system and share the valuable lessons learned in the paper. We divide the annotation system of *SuperGPQA* into three major stages: **Source Screening**, **Transcription**, and **Quality Inspection**. **During the source screening stage**, expert annotators collect credible resources of different disciplines' questions to guarantee the reliability and difficulty of the raw questions. **During the transcription stage**, crowd-sourcing annotators are asked to revise or translate the raw questions to multiple-choice questions, generate complementary confusion options, and estimate the difficulty and reliability of these questions. Crowd-sourcing annotators estimate the difficulty and reliability of candidate questions based on both expert judgments and the accuracy of LLMs' responses during

the annotation process. Crowd-sourcing annotators, rigorous real-time plagiarism checks with existing candidate questions, and a robust filtering system based on SOTA LLMs are adopted in the transcription stage to reduce the waste of funding and expert manpower. **During the quality inspection stage**, we adopt a rigorous three-stage quality inspection process:

- We select suspicious candidate questions based on a checklist of LLMs' responses.
- Expert annotators review the suspicious candidate questions with unrestricted access to the web and revise these questions.
- The easy questions are further tailored based on the accuracy of LLMs' responses to guarantee the discrimination of *SuperGPQA*.

We share several major insights based on the evaluation results of *SuperGPQA*:

- **Reasoning capacities matter.** The reasoning models (e.g., DeepSeek-R1, o1-2024-12-17) achieve the best performance in *SuperGPQA*.
- **Instruction tuning is very helpful.** For example, the results (47.40, 40.75) of DeepSeek-V3 and Qwen2.5-72B-Instruct are better than the results (32.14, 34.33) of DeepSeek-V3-Base and Qwen2.5-72B a lot, respectively.
- **More powerful LLMs lead to more balanced results.** On different difficulties. the results of simple, middle, and hard splits of DeepSeek-R1 are 63.59, 63.63, and 56.87. In contrast, the results of easy, middle, and hard splits of Qwen2.5-14B-Instruct are 44.82, 37.90, and 19.97.
- **Models are better in newer versions.** For example, the results of GPT-4o-2024-11-20, GPT-4o-2024-08-06, and GPT-4o-2024-05-13 are 44.40, 41.64, and 39.76, respectively.

2. Data Collection

We solicit difficult questions from well-educated experts and crowd-sourcing annotators, where we consider experts as individuals having or pursuing a PhD, as in GPQA [Rein et al., 2023], and crowd-sourcing annotators as undergraduates and master students from top-tier Chinese universities, i.e.mainly from Tsinghua University, Peking University, Zhejiang University, Beihang University, and Chinese Academy of Sciences. [Figure 2](#) shows the three major stages of *SuperGPQA*'s data collection pipeline: Source Screening, Transcription, and Quality Inspection, which are separately detailed in [subsection 2.1](#),

[subsection 2.2](#), and [subsection 2.3](#). First, experts select credible resources of different disciplines' questions. Second, crowd-sourcing annotators revise the raw questions from credible resources to candidate questions. Finally, a rigorous human-LLM collaboration quality inspection process is adopted to select difficult and reliable questions from candidate questions.

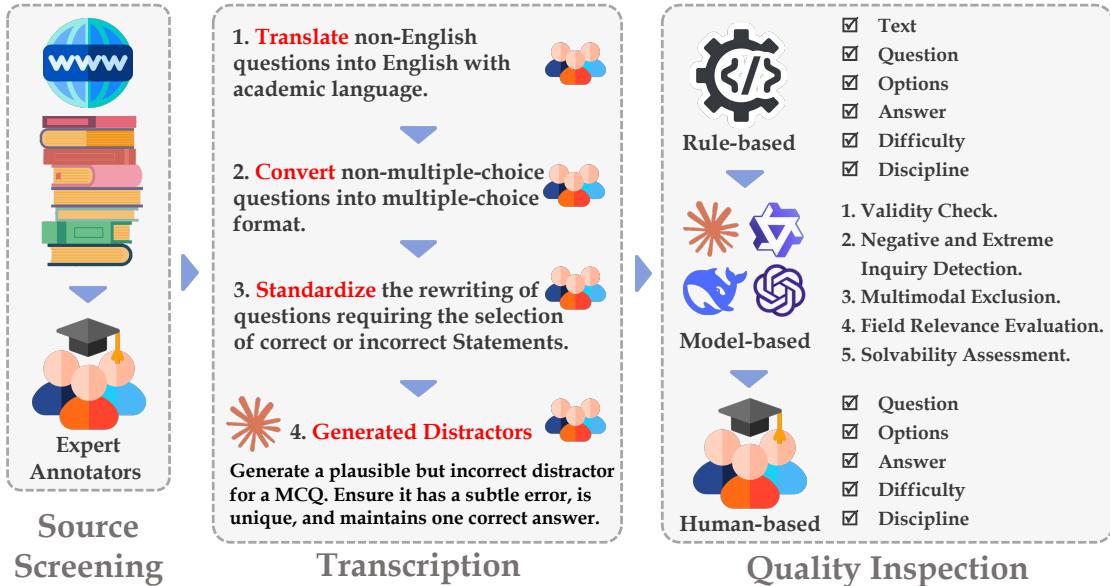


Figure 2. Data Collection Process of *SuperGPQA*.

2.1. Source Screening

💡 Lessons:

- Crowd-Sourcing Annotators are not capable of collecting credible resources for multiple-choice question annotation with high expertise requirements.
- The questions and answers (**QAs**) on exercise websites are not always reliable, even sometimes these QAs are claimed verified.
- Multiple-choice questions modified from calculation and reasoning problems usually are more discriminatory than the original multi-choice questions available online.

During the source screening stage, only expert annotators are allowed to collect credible resources of different disciplines' questions to guarantee the reliability and difficulty of the raw questions. In the early stage of collecting candidate questions of *SuperGPQA*, we trust crowd-sourcing annotators to collect credible resources themselves.

However, the candidate questions based on the resources found by the crowd-sourcing annotators are always judged too easy or unreliable by expert annotators. As a result, a significant portion of early funding is wasted on ineffective questions annotated by crowd-sourcing annotators. Additionally, we point out that QAs on exercise websites are not always reliable.

In the early stage of *SuperGPQA* collection process, some annotators, even expert annotators, trust exercise websites that serve as corroboration of their reasoning process and answers. In the subsequent quality inspection stage, this proved to be a costly mistake, leading us to spend a significant amount of time and cost correcting erroneous answers derived from online exercise websites. Furthermore, we find that many SOTA LLMs, such as GPT-4o, o1-mini, and Gemini-flash, exhibit a high frequency of consistency in both process and answers with the erroneous processes and answers from several online exercise websites. The observations reveal that **the reliability of the solutions provided by online exercise websites is limited and there is a significant risk of data leakage.**

Expert annotators are asked to provide raw questions from credible resources with screenshots for further annotation in the source screening stage. The screenshot greatly eases the workload of quality inspection. We observe that the efficiency of quality inspection is greatly improved with the provided source screenshot. The priority order for selecting original questions is:

- Example problems with solutions from textbooks.
- Calculation and reasoning-needed questions with solutions from websites.
- Reasoning-needed multiple-choice questions with solutions from websites.
- General multiple-choice questions with solutions from websites.
- Questions only with answers but deemed correct by expert annotators.

A sampled list of credible resources certified by expert annotators is provided in [Appendix H](#) for reference.

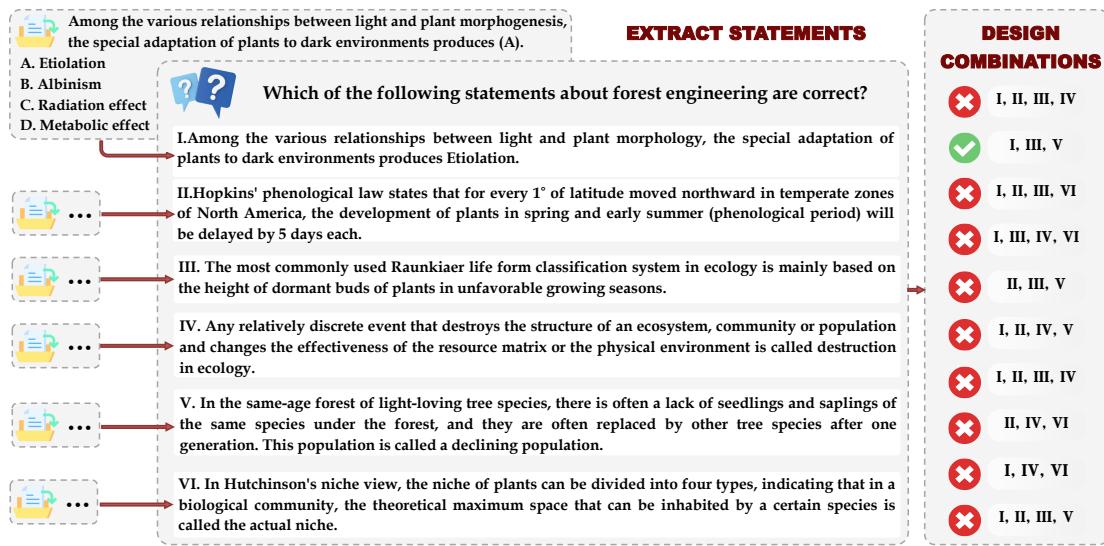


Figure 3. Rewriting Samples of Questions Requiring the Selection of Correct or Incorrect Options.

2.2. Transcription

💡 Lessons:

- Crowd-sourcing annotators have low accuracy in judging generated distractors. For question types like selecting correct or incorrect options, it is easy to generate flawed distractors, requiring unified rewriting at this stage.

During the transcription stage, crowd-sourcing annotators are asked to revise the original questions into candidate questions. Specifically, the following operations are performed:

- Translate non-English questions into English with academic language.
- Convert non-multiple-choice questions into multiple-choice format.
- Standardize the rewriting of questions requiring the selection of correct or incorrect statements, as shown in Figure 3.
- Include region-specific information where necessary, such as specifying the country for laws mentioned in the questions, except for universally accepted rules.

The questions requiring the selection of correct or incorrect statements must be standardized as shown in Figure 3. Because we notice that even SOTA LLMs, e.g. Claude-3.5-Sonnet, GPT-4o-0806, suffer from generating correct suitable confounders for questions

requiring the selection of correct or incorrect statements. The full transcription tutorial is provided in [Appendix B](#).

2.3. Quality Inspection

Lessons:

- Questions where LLMs choose the same incorrect option are highly suspicious.
- Cases where multiple or all SOTA LLMs make the same error often indicate that the LLMs have memorized explanations from incorrect exercise websites, based on SOTA LLMs' responses.

We refer to the data quality inspection and filtering methods used in LIME and MMLU-Redux [Zhu et al. \[2024\]](#), [Gema et al. \[2024\]](#), [Wu et al. \[2024\]](#), etc. The quality inspection process consists of three substages: **Rule-based Quality Inspection**, **LLM-based Quality Inspection**, and **Expert-based Quality Inspection**.

Candidate questions with clear formatting issues are identified and filtered out by rule-based quality inspection. The full checklist of rule-based quality inspection refers to [subsection C.1](#). We then adopt several SOTA LLMs to generate responses and additional tags to these reserved candidate questions. LLM-based quality inspection includes validity checks, negative and extreme inquiry detection, multimodal exclusion, field relevance evaluation, completeness assessment, and discrimination tagging based on SOTA LLMs' responses. It provides an estimation of not only the correctness but also the discrimination of the candidate questions. Finally, we ask the expert annotators to re-annotate the suspicious candidate questions. The checklist for selecting suspicious candidate questions refer to [subsection C.2](#). We adopt GPT-4o-2024-08-06, Gemini-2.0-flash, Doubao-1.5-pro-32k-250115, Claude-3.5-Sonnet, DeepSeek-R1, QwQ, Qwen-2.5-72B-Instruct as SOTA LLMs for selecting suspicious candidate questions. During the re-annotation process, following the rules stated in GPQA [[Rein et al., 2023](#)], expert annotators are asked to review and solve the given candidate questions with unrestricted access to the web. They spend over 30 minutes on each candidate question according to the post-annotation interview. The tutorial for manual quality review refers to [subsection C.3](#).

3. Statistics

| Discipline | #Num. | Question #Tokens | | | Answer #Tokens | | | Options | | Cal. Rate |
|------------------|-------|------------------|-----|-------|----------------|-----|-------|---------|---------|-----------|
| | | Max | Min | Avg | Max | Min | Avg | #Num. | #Tokens | |
| Engineering | 7892 | 715 | 4 | 67.26 | 352 | 1 | 13.86 | 9.76 | 13.67 | 55.40% |
| Medicine | 2755 | 447 | 4 | 39.06 | 89 | 1 | 7.57 | 9.67 | 7.38 | 3.34% |
| Science | 9838 | 623 | 5 | 69.77 | 372 | 1 | 16.89 | 9.71 | 16.75 | 66.34% |
| Philosophy | 347 | 573 | 5 | 44.63 | 71 | 1 | 8.93 | 9.63 | 8.42 | 0.29% |
| Military Science | 205 | 336 | 7 | 30.03 | 50 | 1 | 6.76 | 9.29 | 6.40 | 3.41% |
| Economics | 314 | 314 | 5 | 36.15 | 98 | 1 | 7.85 | 9.86 | 7.12 | 20.50% |
| Management | 501 | 308 | 7 | 41.87 | 217 | 1 | 7.77 | 9.72 | 6.62 | 3.79% |
| Sociology | 143 | 107 | 6 | 25.31 | 75 | 1 | 7.34 | 9.87 | 6.91 | 2.10% |
| Literature | 1676 | 869 | 5 | 35.80 | 88 | 1 | 6.82 | 8.78 | 6.75 | 0.60% |
| History | 674 | 539 | 6 | 28.38 | 125 | 1 | 5.32 | 9.64 | 5.49 | 1.04% |
| Agriculture | 485 | 331 | 7 | 27.25 | 33 | 1 | 5.32 | 9.91 | 5.24 | 1.44% |
| Law | 656 | 560 | 6 | 66.38 | 89 | 1 | 12.17 | 9.73 | 11.45 | 0.46% |
| Education | 484 | 173 | 7 | 23.35 | 37 | 1 | 5.74 | 9.78 | 5.39 | 0.41% |
| Overall | 26529 | 869 | 4 | 58.42 | 372 | 1 | 12.86 | 9.67 | 12.64 | 42.33% |

Table 1. Statistics of *SuperGPQA*. Tokens are calculated with Tiktoken using [cl100k_base](#) encoding.

We propose *SuperGPQA*, designed as a comprehensive benchmark to probe the upper bounds of state-of-the-art Large Language Models’ capabilities. With 26,529 questions spanning 13 disciplines, 72 fields, and 285 subfields, it substantially surpasses existing benchmarks in both scale and taxonomic depth. Compared to similar “hard” benchmarks such as GPQA (448 questions) and MMLU-Pro (12,032 questions), *SuperGPQA* not only contains a larger question pool but also features a more challenging format with an average of 9.67 options per question, significantly higher than the conventional 4-option format (*e.g.*, MMLU).

Comprehensiveness and Discrimination. As revealed in [Table 1](#), the distribution of questions across disciplines reveals a notable concentration in STEM fields, with Science (9,838 questions), Engineering (7,892 questions), and Medicine (2,755 questions) collectively accounting for 77.2% of the benchmark. While this distribution might appear uneven at first glance, it emerges from our rigorous question collection and validation process. During the data annotation phase, we source a comparable number of reference books for 285 subfields (the subfields are detailed in [Table 2](#) and [Table 3](#)). Note that we

| Discipline | Field : Subfield |
|-------------------|--|
| Agronomy(485) | Animal Husbandry(103) : Animal Nut. & Feed Sci.; Animal Rear. & Breed. Aquaculture(56) : Aquacult. Crop Science(145) : Crop Sci. Forestry(131) : Forest Cult. & Gen. Breed.; Landsc. Plants & Orn. Hort. Veterinary Medicine(50) : Vet. Med. |
| Economics(873) | Applied Economics(723) : Econ. Stats.; Fin.; Indus. Econ.; Int. Trade; Labor Econ.; Nat. & Def. Econ.; Pub. Fin.; Quant. Econ. Theoretical Economics(150) : Econ. Hist.; Pol. Econ.; West. Econ. |
| Education(484) | Education(247) : Edu. Tech. & Prin.; Presch. Edu.; Spec. Edu.; Theory of Curric. & Instr. Physical Education(150) : Phys. Edu. & Train.; Sports Hum. & Socio.; Sports Sci. & Med. Psychology(87) : Psychol. |
| Engineering(7892) | Aeronautical and Astronautical Science and Technology(119) : Aeronaut. & Astronaut. Sci. & Tech. Agricultural Engineering(104) : Agric. Environ. & Soil-Water Eng.; Agric. Mech. Eng. Architecture(162) : Arch. Design & Theory; Arch. Hist.; Urban Plan. & Design Chemical Engineering and Technology(410) : Chem. Transport Eng.; Elem. of Chem. React. Eng.; Fluid Flow & Heat Transfer in Chem. Eng.; Mass Trans. & Sep. Process in Chem. Eng. Civil Engineering(358) : Bridge & Tunnel Eng.; Geotech. Eng.; Struct. Eng.; Urban Infra. Eng. Computer Science and Technology(763) : Adv. Prog. Lang.; Comp. Arch.; Comp. Net.; Comp. Soft. & Theory; Data Struc.; Databases; Formal Lang.; Oper. Sys.; Pattern Recog.; Princip. of Comp. Org. Control Science and Engineering(190) : Control Theory & Eng.; Guid. Nav. & Control; Oper. Res. & Cyber. Electrical Engineering(556) : Elect. Theory & New Tech.; High Volt. & Insul. Tech.; Power Elec. & Elec. Drives; Power Sys. & Autom. Electronic Science and Technology(246) : Circuits & Sys.; Electromag. Field & Microwave Tech.; Microelect. & Solid-State Elec. Environmental Science and Engineering(189) : Environ. Eng.; Environ. Sci.; Environ. & Res. Protect. Food Science and Engineering(109) : Food Biochem.; Food Proc. & Stor. Eng. Forestry Engineering(100) : Forest Eng.; Wood Sci. & Tech. Geological Resources and Geological Engineering(50) : Geol. Res. & Geol. Eng. Hydraulic Engineering(218) : Hydraul. & Hydrol.; Water Cons. & Hydropower Eng. Information and Communication Engineering(504) : Antenna & Radio Comm.; Comm. Prin.; Comm. & Info. Sys.; Optical Fiber Comm.; Signal & Info. Proc. Instrument Science and Technology(50) : Instr. Sci. & Tech. Materials Science and Engineering(289) : Mater. Phys. & Chem.; Mater. Proc. Eng. Mechanical Engineering(176) : Manuf. Autom.; Mechatron. Eng. Mechanics(908) : Fund. of Dyn. & Control; Rigid Body Mech.; Solid Mech.; Theor. Fluid Mech.; Theor. Mech. Metallurgical Engineering(255) : Iron & Steel Metall.; Non-fer. Metall.; Phys. Chem. of Metall. Proc.; Princip. of Metall. Mining Engineering(100) : Mineral Proc. Eng.; Mining & Safety Eng. Naval Architecture and Ocean Engineering(138) : Marine Eng.; Ship Mech. & Design Prin. Nuclear Science and Technology(107) : Nuc. Energy & React. Tech.; Radiation Prot. & Nuclear Tech. Appl. Optical Engineering(376) : Applied Opt.; Laser Tech.; Optoelect. Tech.; Theor. Opt. Petroleum and Natural Gas Engineering(112) : Oil & Gas Field Dev. & Stor. & Trans. Eng.; Poromech. & Res. Phys. Power Engineering and Engineering Thermophysics(684) : Eng. Fluid Mech.; Eng. Thermophys.; Fluid Mach. & Eng.; Heat Trans.; Internal Comb. Eng.; Power Mach. & Eng.; Refrig. & Cryogen. Eng.; Thermal Energy Eng. Surveying and Mapping Science and Technology(168) : Carto. & Geo. Info. Eng.; Dig. Survey. & Remote Sens. Appl.; Geodesy & Survey. Eng. Textile Science and Engineering(100) : Text. Chem. & Dyeing Eng.; Text. Mater. Sci. Transportation Engineering(251) : Road & Rail. Eng.; Traffic Info. Eng. & Control; Transp. Plan. & Manag.; Vehicle Oper. Eng. Weapon Science and Technology(100) : Mil. Chem. & Pyro.; Weapon Syst. Sci. & Eng. |
| History(674) | History(674) : Archaeol. & Museol.; Hist. Geo.; World Hist. |

Table 2. The Disciplinary Categories of *SuperGPQA* (1/2).

| Discipline | Field : Subfield |
|---------------------------|---|
| Law(656) | <p>Law(591) : Civil & Comm. Law; Const. & Admin. Law; Contract Law; Crim. Law; Int. Law; Law & Soc. Gov.; Legal Theory & Hist.; Mil. Law; Proced. Law</p> <p>Political Science(65) : Pol. Sci.</p> |
| Literature and Arts(1676) | <p>Art Studies(603) : Broad. & TV Art; Dance Stud.; Design Arts; Drama & Opera Stud.; Film Stud.; Fine Arts</p> <p>Journalism and Communication(207) : Comm. & Broad.; Hist. & Theory of Jour. & Media Mngmt.; Jour. & News Prac.</p> <p>Language and Literature(440) : Class. Chinese Lit.; Fr. Lang. & Lit.; Ling. & Appl. Ling.; Lit. Hist.; Lit. Theory; Mod. & Cont. Chinese Lit.; Phil. & Bib.; Russ. Lang. & Lit.</p> <p>Musicology(426) : Comp.; Harm.; Instr. & Perf.; Music Hist., Ed. & Tech.; Music Forms & Anal.; Pitch & Scales</p> |
| Management(501) | <p>Business Administration(142) : Bus. & Acct. Mngmt.; Tour. Mngmt. & Tech. Econ. Mngmt.</p> <p>Library, Information and Archival Management(150) : Info. Mngmt. Sci.; Info. Mngmt. & Comm.; Lib. & Arch. Sci.</p> <p>Management Science and Engineering(58) : Mngmt. Sci. & Eng.</p> <p>Public Administration(151) : Ed. Econ., Mngmt. & Soc. Sec.; Land Res. Mngmt. & Admin. Mngmt.; Soc. Med. & Health Mngmt.</p> |
| Medicine(2755) | <p>Basic Medicine(567) : For. Med.; Hum. Anat. & Hist.-Emb.; Immun.; Path. Biol.; Pathol. & Pathophys.; Rad. Med.</p> <p>Clinical Medicine(1218) : Anesth.; Clin. Lab. Diagn.; Derm. & Ven.; Emerg. Med.; Geriat. Med.; Imag. & Nucl. Med.; Intern. Med.; Neurol.; Nurs. & Rehabil. Med.; Obst. & Gyneco.; Oncol.; Ophth.; Oto. & Rhinol.; Pediatr.; Psych. & Ment. Health; Surg.</p> <p>Pharmacy(278) : Medic. Chem.; Microbiol. & Biochem. Pharm.; Pharm. Anal.; Pharmaceut.; Pharmacol.</p> <p>Public Health and Preventive Medicine(292) : Epidemiol. & Health Stats.; Health Tox. & Envir. Health; Matern., Child & Adol. Health; Nutr. & Food Hyg.</p> <p>Stomatology(132) : Basic Stom.; Clin. Stom.</p> <p>Traditional Chinese Medicine(268) : Trad. Chin. Health Pres.; Trad. Chin. Med. Theory; Trad. Chin. Pharm.</p> |
| Military Science(205) | Military Science(205) : Mil. Command & Info. Systems; Mil. Logistics & Equip.; Mil. Mngmt.; Mil. Thought & Hist. |
| Philosophy(347) | Philosophy(347) : Ethics; Logic; Phil. Aesth.; Phil. of Sci. & Tech.; Relig. Stud. |
| Science(9838) | <p>Astronomy(405) : Astron. Obs. & Tech.; Astrophys.; Cosmology; Solar Sys. Sci.; Stell. & Interst. Evol.</p> <p>Atmospheric Science(203) : Atm. Phys. & Envir.; Dyn. Meteorol.; Meteorol.</p> <p>Biology(1120) : Biochem. & Mol. Biol.; Biophys.; Botany; Cell Biol.; Ecol.; Genet.; Microbiol.; Physiol.; Zool.</p> <p>Chemistry(1769) : Analyt. Chem.; Electrochem.; Inorg. Chem.; Org. Chem.; Phys. Chem.; Polym. Chem. & Phys.; Radiochem.</p> <p>Geography(133) : Hum. Geogr.; Phys. Geogr.</p> <p>Geology(341) : Geochem.; Miner., Petrol. & Econ. Geol.; Paleontol. & Stratig.; Prin. of Seism. Expl.; Struct. Geol.</p> <p>Geophysics(100) : Solid Earth Geophys.; Space Phys.</p> <p>Mathematics(2622) : Adv. Algebra; Combinat. Math.; Comput. Math.; Crypt.; Discr. Math.; Func. of Complex Vars.; Func. of Real Vars.; Fund. Math.; Fuzzy Math.; Geo. & Topol.; Graph Theory; Group Theory; Math. Anal.; Num. Theory; Num. Anal.; Ord. Diff. Eq.; Poly. & Ser. Exp.; Prob. & Stats.; Spec. Num. Theory; Stoch. Proc.</p> <p>Oceanography(200) : Hydrogeol.; Marine Biol.; Marine Chem.; Underwater Acou.</p> <p>Physical Oceanography(50) : Phys. Oceanogr.</p> <p>Physics(2845) : Acou.; Atom. & Mol. Phys.; Electrodyn.; Fluid Phys.; Part. & Nucl. Phys.; Polym. Phys.; Quant. Mech.; Relativity; Semicond. Phys.; Solid State Phys.; Stat. Mech.; Subatom. & Atom. Phys.; Thermodyn.; Thermo. & Stat. Phys.</p> <p>Systems Science(50) : Sys. Sci.</p> |
| Sociology(143) | Sociology(143) : Demo. & Anthropol.; Soc. & Folklore Studies |

Table 3. The Disciplinary Categories of *SuperGPQA* (2/2).

also use some open-source datasets for supplementation of *SuperGPQA* in [Appendix H](#). However, the STEM disciplines yielded more questions meeting our stringent quality and difficulty criteria aforementioned in [section 2](#), where the questions and options are filtered through rigorous rule-based, model-based and human-based pipeline. This natural emergence of STEM-heavy distribution aligns with the benchmark’s goal of probing LLMs’ upper-bound capabilities in complex reasoning tasks. Despite the relatively smaller representation of non-STEM disciplines (*e.g.*, Philosophy: 347, Literature: 1,676, History: 674 questions), our experiments demonstrate that these subsets effectively discriminate various SOTA LLMs’ performance levels (detailed in [subsection 4.2](#)). This once again validates the discriminative power of our benchmark across all domains, regardless of sample size.

Difficulty. The difficulty distribution across disciplines ([Table 4](#)) reveals varying levels of complexity. In STEM fields, we observe a more balanced distribution of difficulty levels. For instance, Engineering questions are distributed as 31.1% hard, 43.9% middle, and 25.0% easy, while Science shows 42.8% hard, 42.0% middle, and 15.2% easy. Non-STEM disciplines generally show a different pattern, with a higher proportion of easy and middle-difficulty questions. Notably, 42.33% of all questions require mathematical calculations or formal reasoning, with Science (66.34%) and Engineering (55.40%) showing the highest calculation rates.

| Difficulty | Agro. | Econ. | Edu. | Eng. | Hist. | Law | Lit. & Arts | Mgmt. | Med. | Military Sci. | Phil. | Sci. | Socio. |
|-------------|-------|-------|------|------|-------|------|-------------|-------|------|---------------|-------|------|--------|
| Hard (#N) | 7 | 47 | 1 | 2458 | 3 | 57 | 12 | 6 | 217 | 4 | 27 | 4210 | 1 |
| Hard (%) | 1.4 | 5.4 | 0.2 | 31.1 | 0.4 | 8.7 | 0.7 | 1.2 | 7.9 | 2.0 | 7.8 | 42.8 | 0.7 |
| Middle (#N) | 219 | 565 | 179 | 3462 | 180 | 343 | 496 | 236 | 1629 | 78 | 183 | 4133 | 45 |
| Middle (%) | 45.2 | 64.7 | 37.0 | 43.9 | 26.7 | 52.3 | 29.6 | 47.1 | 59.1 | 38.0 | 52.7 | 42.0 | 31.5 |
| Easy (#N) | 259 | 261 | 304 | 1972 | 491 | 256 | 1168 | 259 | 909 | 123 | 137 | 1495 | 97 |
| Easy (%) | 53.4 | 29.9 | 62.8 | 25.0 | 72.8 | 39.0 | 69.7 | 51.7 | 33.0 | 60.0 | 39.5 | 15.2 | 67.8 |
| Total | 485 | 873 | 484 | 7892 | 674 | 656 | 1676 | 501 | 2755 | 205 | 347 | 9838 | 143 |

Table 4. Distribution of Difficulty Levels Across Disciplines. “#N” denotes the number of samples.

Sentence Length. Question and answer length analysis reveals substantial variation across disciplines. The average question length is 58.42 tokens, with Literature questions showing the highest maximum length (869 tokens) and Engineering questions averaging 67.26 tokens. The “answer” options maintain a length pattern similar to the general options across different disciplines, averaging 12.86 tokens per option. Such a consistent



Figure 4. The Visualization of the Text Embeddings of Question-Answer Pairs Across Disciplines.

length distribution across options aligns with one of the requirements of error option curation, which tries to confuse the models by providing confusing options in similar lengths.

Semantic Visualization. As shown in Figure 4, we employ t-SNE visualization of question-answer pair embeddings to visualize the distribution *SuperGPQA*¹ and to further show the comprehensiveness of it. The resulting visualization demonstrates clear clustering patterns across disciplines while maintaining substantial overlap in conceptual spaces. The Engineering and Science demonstrate the highest degree of embedding overlap, suggesting strong semantic similarities in their Q&A patterns. The humanities cluster (Literature, Philosophy, History) shows diffuse boundaries but maintains distinct centroids. The Military Science exhibits relatively isolated embedding patterns, indicating unique domain-specific language. This analysis shows aligning

¹We use the gte-large-en-v1.5 [Li et al., 2023, Zhang et al., 2024b] encoding model and set the t-SNE parameters as: perplexity 100, learning rate 500, and 1000 iteration. For clearer visualization, we randomly select maximum 1000 samples from each disciplines.

| Chatbot Arena | 100.0 | 87.6 | 83.1 | 83.3 | 41.7 | 85.2 |
|----------------------|-------|-------|-------|-------|-------|-------|
| SuperGPQA | 87.6 | 100.0 | 90.0 | 95.7 | 58.6 | 95.6 |
| MMLU | 83.1 | 90.0 | 100.0 | 96.3 | -28.4 | 80.8 |
| MMLU-PRO | 83.3 | 95.7 | 96.3 | 100.0 | 73.9 | 87.5 |
| HLE | 41.7 | 58.6 | -28.4 | 73.9 | 100.0 | 87.7 |
| GPQA | 85.2 | 95.6 | 80.8 | 87.5 | 87.7 | 100.0 |

Figure 5. The Correlation Coefficients between Different Benchmarks. For MMLU, we record the results under the 5-shot setting.

conclusions from Figure 6 and reveals that the semantic structure of the *SuperGPQA* pairs reflects both the traditional organization of academic disciplines and their natural intellectual relationships, effectively capturing both domain-specific knowledge and cross-disciplinary connections.

| | | | | | | | | | | | | | |
|------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Engineering | 100.0 | 95.4 | 96.2 | 97.7 | 99.1 | 90.3 | 83.7 | 91.7 | 88.8 | 96.0 | 89.1 | 94.6 | 90.8 |
| Philosophy | 95.4 | 100.0 | 98.4 | 97.4 | 91.5 | 96.1 | 90.5 | 97.4 | 94.3 | 97.7 | 93.9 | 97.8 | 94.6 |
| Medicine | 96.2 | 98.4 | 100.0 | 96.9 | 93.3 | 95.3 | 90.8 | 96.1 | 93.8 | 97.9 | 94.1 | 97.3 | 94.7 |
| Economics | 97.7 | 97.4 | 96.9 | 100.0 | 94.8 | 93.9 | 86.2 | 96.5 | 92.0 | 97.7 | 91.0 | 97.1 | 93.1 |
| Science | 99.1 | 91.5 | 93.3 | 94.8 | 100.0 | 84.9 | 78.0 | 86.4 | 83.6 | 92.3 | 84.0 | 90.5 | 86.1 |
| Law | 90.3 | 96.1 | 95.3 | 93.9 | 84.9 | 100.0 | 96.1 | 96.7 | 96.7 | 95.4 | 97.6 | 97.3 | 98.1 |
| History | 83.7 | 90.5 | 90.8 | 86.2 | 78.0 | 96.1 | 100.0 | 90.2 | 96.3 | 89.8 | 98.6 | 93.0 | 97.1 |
| Education | 91.7 | 97.4 | 96.1 | 96.5 | 86.4 | 96.7 | 90.2 | 100.0 | 94.0 | 96.9 | 93.4 | 96.2 | 94.0 |
| Military Science | 88.8 | 94.3 | 93.8 | 92.0 | 83.6 | 96.7 | 96.3 | 94.0 | 100.0 | 94.4 | 97.4 | 95.4 | 96.7 |
| Management | 96.0 | 97.7 | 97.9 | 97.7 | 92.3 | 95.4 | 89.8 | 96.9 | 94.4 | 100.0 | 94.1 | 97.0 | 94.3 |
| Literature & Arts | 89.1 | 93.9 | 94.1 | 91.0 | 84.0 | 97.6 | 98.6 | 93.4 | 97.4 | 94.1 | 100.0 | 95.7 | 98.3 |
| Agronomy | 94.6 | 97.8 | 97.3 | 97.1 | 90.5 | 97.3 | 93.0 | 96.2 | 95.4 | 97.0 | 95.7 | 100.0 | 96.6 |
| Sociology | 90.8 | 94.6 | 94.7 | 93.1 | 86.1 | 98.1 | 97.1 | 94.0 | 96.7 | 94.3 | 98.3 | 96.6 | 100.0 |

Figure 6. The Correlation Between Disciplines in *SuperGPQA*.

4. Experiments

4.1. Baseline Models

We evaluate 6 reasoning models (o3-mini has three modes), 28 chat models and 17 base models on *SuperGPQA*, which includes closed-source models, open-source models, and fully open-source models. The reasoning models include Deepseek-R1 and Deepseek-R1-Zero [Guo et al., 2025], o1 and o1-mini [OpenAI, 2024b], QwQ [Team, 2024b], and o3-mini [OpenAI, 2025] series models. The chat models include closed-source models such as Doubao-1.5-pro, Qwen-max, Claude-3.5 [Anthropic, 2024], Gemini [Team, 2024a], GPT-4o [OpenAI, 2024a], Yi-Lightning [Wake et al., 2024], and open-source models like MiniMax-Text-01 [Li et al., 2025], Qwen2.5 [Yang et al., 2024a] series, Llama-3.1 [Dubey et al., 2024] series, Mistral [Jiang et al., 2023] and Mixtral [Jiang et al., 2024] series, Gemma-2 [Team et al., 2024] series, Yi-1.5 [Young et al., 2024] series, Phi4 [Abdin et al., 2024], and Granite-3.1 [Granite Team, 2024]. Additionally, there are fully open-source models like MAP-Neo [Zhang et al., 2024a] and OLMo-2 [OLMo et al., 2024]. According to our test results, these models still show a significant gap when compared to industry standards level. The base models include Qwen2.5 [Yang et al., 2024a] series, Deepseek-V3 [Liu et al., 2024], Yi-1.5 [Young et al., 2024] series, Llama-3.1 [Dubey et al., 2024] series, Gemma-2 [Team et al., 2024] series, and Mistral [Jiang et al., 2023] and Mixtral [Jiang et al., 2024] series. Reasoning models and chat models are evaluated using a zero-shot approach, while base models are assessed using a five-shot evaluation. Specifically, the five-shot evaluation for base models follow a similar methodology to MMLU-Pro. The specific prompts employed for both the zero-shot and five-shot evaluations are detailed in [Appendix F](#). For all main results, the temperature is set to 0. The maximum number of new tokens is set to 32K for reasoning models, while for all other models, it is set to 4K. More model results can be found in [Appendix I](#), and all detailed results are provided in [Appendix K](#).

4.2. Main Results

We present the performances of the baselines on different levels, difficulties ([Table 5](#)) and disciplines ([Table 6](#)).

Overall Results. In general, the top-performed reasoning models (e.g., DeepSeek-R1, o1-2024-12-17) achieve the best overall performance in *SuperGPQA*. The effectiveness of instruction tuning to improve the performances is once again verified in the benchmark.

| Model | Overall (sample) | Overall (subfield) | Overall (field) | Overall (discipline) | Easy (sample) | Middle (sample) | Hard (sample) |
|-----------------------------|---------------------|-----------------------|--------------------|-------------------------|------------------|--------------------|------------------|
| Reasoning Models | | | | | | | |
| DeepSeek-R1 | 61.82 | 62.61 | 61.23 | 59.95 | 63.59 | 63.63 | 56.87 |
| o1-2024-12-17 | 60.24 | <u>61.25</u> | 59.94 | <u>59.44</u> | 64.40 | 61.44 | 53.67 |
| DeepSeek-R1-Zero | 60.24 | 61.62 | 60.95 | <u>60.99</u> | <u>65.06</u> | 62.61 | 50.99 |
| o3-mini-2025-01-31-high | <u>55.22</u> | 54.94 | 52.11 | 48.32 | 53.05 | 56.09 | 56.16 |
| o3-mini-2025-01-31-medium | 52.69 | 52.66 | 49.95 | 46.07 | 51.30 | 53.79 | 52.37 |
| o3-mini-2025-01-31-low | 48.03 | 48.51 | 45.89 | 42.63 | 48.80 | 50.21 | 43.53 |
| o1-mini-2024-09-12 | 45.22 | 45.46 | 42.53 | 39.33 | 46.77 | 47.34 | 40.00 |
| QwQ | 43.59 | 44.40 | 43.19 | 41.63 | 46.46 | 47.40 | 34.07 |
| Chat Models | | | | | | | |
| Doubao-1.5-pro-32k-250115 | 55.09 | 56.55 | 55.62 | 54.39 | 57.70 | 60.15 | 43.80 |
| Doubao-1.5-pro-32k-241225 | 50.93 | 52.41 | 51.76 | 51.24 | 53.54 | 56.56 | 38.70 |
| Qwen-max-2025-01-25 | 50.08 | 52.75 | 52.47 | <u>51.65</u> | 58.16 | <u>54.95</u> | 33.09 |
| Claude-3-5-sonnet-20241022 | 48.16 | 51.38 | 51.23 | 53.15 | <u>59.04</u> | 51.91 | 29.99 |
| Gemini-2.0-flash | 47.73 | 48.70 | 47.80 | 46.10 | 53.06 | 49.56 | 38.84 |
| DeepSeek-V3 | 47.40 | 49.10 | 48.31 | 47.35 | 55.63 | 50.11 | 33.86 |
| MiniMax-Text-01 | 45.11 | 47.46 | 46.97 | 47.06 | 54.51 | 48.60 | 28.98 |
| GPT-4o-2024-11-20 | 44.40 | 47.62 | 47.50 | 48.84 | 56.84 | 48.75 | 23.50 |
| Llama-3.1-405B-Instruct | 43.14 | 46.43 | 45.83 | 47.35 | 56.06 | 46.31 | 23.70 |
| GPT-4o-2024-08-06 | 41.64 | 44.79 | 44.91 | 46.29 | 55.22 | 45.11 | 20.98 |
| Qwen2.5-72B-Instruct | 40.75 | 43.66 | 43.32 | 42.10 | 48.84 | 45.42 | 24.10 |
| Mistral-Large-Instruct-2411 | 40.65 | 43.38 | 43.13 | 43.37 | 52.92 | 43.28 | 22.81 |
| Qwen-max-2024-09-19 | 39.96 | 42.93 | 42.16 | 41.62 | 50.23 | 43.63 | 22.60 |
| Qwen2.5-32B-Instruct | 38.76 | 41.18 | 40.40 | 39.43 | 47.42 | 43.05 | 22.13 |
| Llama-3.3-70B-Instruct | 37.69 | 40.56 | 40.15 | 41.12 | 49.68 | 40.68 | 19.55 |
| Phi-4 | 37.65 | 39.59 | 38.61 | 37.66 | 45.43 | 40.91 | 23.69 |
| Qwen2.5-14B-Instruct | 35.15 | 37.72 | 37.41 | 36.07 | 44.82 | 37.90 | 19.97 |
| Llama-3.1-70B-Instruct | 34.86 | 38.94 | 39.18 | 40.57 | 48.22 | 37.85 | 15.22 |
| Yi-Lightning | 33.42 | 36.57 | 36.45 | 36.92 | 43.38 | 35.32 | 19.35 |
| Mixtral-8x22B-Instruct-v0.1 | 29.23 | 32.14 | 32.28 | 32.82 | 42.52 | 29.73 | 13.82 |
| Qwen2.5-7B-Instruct | 28.78 | 30.78 | 30.37 | 30.63 | 37.77 | 30.98 | 15.23 |
| Gemma-2-27B-it | 27.43 | 30.50 | 30.42 | 31.30 | 40.90 | 27.45 | 12.64 |
| Qwen2.5-3B-Instruct | 23.31 | 25.45 | 25.86 | 25.57 | 33.10 | 23.50 | 12.24 |
| Granite-3.1-8B-instruct | 20.83 | 22.85 | 22.92 | 22.26 | 29.48 | 19.79 | 13.09 |
| Qwen2.5-1.5B-Instruct | 18.82 | 20.91 | 20.75 | 22.11 | 27.41 | 18.19 | 10.45 |
| OLMo-2-1124-13B-Instruct | 18.66 | 20.46 | 20.60 | 21.80 | 27.10 | 17.85 | 10.74 |
| MAP-Neo-7B-Instruct-v0.1 | 17.05 | 18.52 | 18.42 | 18.70 | 23.26 | 16.62 | 10.95 |
| OLMo-2-1124-7B-Instruct | 16.81 | 18.08 | 18.57 | 18.85 | 22.80 | 15.82 | 11.90 |
| Base Models | | | | | | | |
| Qwen2.5-72B | 34.33 | 38.08 | 38.70 | 39.54 | 46.20 | 38.12 | 15.01 |
| Qwen2.5-32B | 33.16 | 36.52 | 37.33 | 38.29 | 45.12 | 36.58 | 14.34 |
| DeepSeek-V3-Base | <u>32.14</u> | <u>34.79</u> | <u>34.58</u> | <u>34.71</u> | 41.28 | <u>34.50</u> | 18.20 |
| Qwen2.5-14B | 30.19 | 33.33 | 34.14 | 34.54 | <u>42.27</u> | 31.44 | 14.85 |
| Yi-1.5-34B | 27.62 | 30.78 | 31.03 | 32.55 | 39.68 | 27.95 | 13.86 |
| Llama-3.1-70B | 27.22 | 30.52 | 31.28 | 32.55 | 40.78 | 26.95 | 12.78 |
| Qwen2.5-7B | 25.36 | 28.19 | 28.73 | 29.60 | 36.58 | 25.94 | 12.10 |
| Llama-3.1-405B | 25.23 | 28.09 | 28.33 | 30.15 | 37.58 | 25.12 | 11.86 |
| Gemma-2-27B | 24.49 | 27.35 | 27.96 | 28.58 | 36.26 | 24.07 | 12.27 |
| Mixtral-8x22B-v0.1 | 22.41 | 24.71 | 25.04 | 25.02 | 32.78 | 21.67 | 12.26 |
| Qwen2.5-3B | 20.14 | 22.81 | 23.30 | 24.42 | 30.42 | 19.81 | 9.40 |
| Mistral-7B-v0.3 | 19.48 | 21.50 | 21.81 | 22.27 | 27.62 | 18.65 | 11.96 |
| Qwen2.5-1.5B | 17.17 | 19.31 | 19.80 | 21.35 | 24.52 | 16.79 | 9.74 |
| OLMo-2-1124-13B | 16.07 | 18.75 | 19.82 | 21.37 | 27.24 | 14.41 | 6.57 |
| MAP-Neo-7B | 15.76 | 17.48 | 18.26 | 19.54 | 22.86 | 14.64 | 9.83 |
| Granite-3.1-8B-Base | 15.69 | 16.98 | 16.79 | 16.65 | 20.40 | 15.65 | 10.60 |
| OLMo-2-1124-7B | 15.15 | 17.62 | 18.30 | 19.60 | 24.43 | 13.83 | 7.15 |

Table 5. Performance on SuperGPQA. LLMs are scored sample-wise, subfield-wise, field-wise, and discipline-wise levels to ensure fair assessment despite imbalanced question distributions. The highest, the second-best and the third-best scores are shown in **boxed**, **bold** and underlined, respectively.

| Model | Agr. | Econ. | Edu. | Eng. | Hist. | Law | Lit & Arts | Mgt. | Med. | Mil Sci. | Phil. | Sci. | Soc. |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <i>Reasoning Models</i> | | | | | | | | | | | | | |
| DeepSeek-R1 | 54.43 | 66.09 | 54.75 | 63.10 | 55.19 | 65.24 | 52.45 | 57.09 | 59.93 | 57.07 | 63.11 | 63.69 | 67.13 |
| DeepSeek-R1-Zero | 53.81 | 66.44 | 60.54 | 60.28 | 58.61 | 66.77 | 56.86 | 59.68 | 60.65 | 58.54 | 63.69 | 59.93 | 67.13 |
| o1-2024-12-17 | 50.93 | 61.17 | 53.31 | 59.17 | 60.98 | 63.87 | 55.79 | 57.29 | 62.25 | 60.49 | 61.38 | 61.76 | 64.34 |
| o3-mini-2025-01-31-high | 41.03 | 54.07 | 46.28 | 56.41 | 36.80 | 45.73 | 39.44 | 51.50 | 51.72 | 46.34 | 51.01 | 61.72 | 46.15 |
| o3-mini-2025-01-31-medium | 40.62 | 51.32 | 41.74 | 53.83 | 35.01 | 43.60 | 37.11 | 48.50 | 50.34 | 45.85 | 48.13 | 58.79 | 44.06 |
| o3-mini-2025-01-31-low | 37.32 | 45.25 | 38.43 | 48.20 | 32.94 | 39.79 | 36.22 | 43.71 | 48.09 | 41.46 | 44.09 | 53.24 | 45.45 |
| o1-mini-2024-09-12 | 34.02 | 45.02 | 36.16 | 45.41 | 26.26 | 35.98 | 32.22 | 40.52 | 44.32 | 39.51 | 39.48 | 51.09 | 41.26 |
| QwQ | 38.14 | 47.77 | 45.25 | 43.37 | 29.53 | 45.88 | 32.82 | 41.32 | 43.88 | 40.00 | 43.52 | 46.33 | 43.36 |
| <i>Chat Models</i> | | | | | | | | | | | | | |
| Doubao-1.5-pro-32k-250115 | 50.93 | 65.06 | 55.58 | 55.60 | 42.88 | 58.84 | 42.30 | 53.29 | 59.13 | 54.15 | 61.96 | 55.54 | 51.75 |
| Doubao-1.5-pro-32k-241225 | 47.42 | 60.14 | 54.75 | 50.76 | 37.54 | 54.12 | 38.31 | 52.69 | 54.99 | 53.66 | 57.06 | 51.57 | 53.15 |
| claude-3-5-sonnet-20241022 | 47.01 | 56.59 | 53.72 | 47.57 | 53.56 | 60.21 | 50.42 | 51.30 | 49.26 | 59.51 | 52.45 | 45.02 | 64.34 |
| qwen-max-2025-01-25 | 44.33 | 57.50 | 56.40 | 50.81 | 44.81 | 54.12 | 44.93 | 54.69 | 56.37 | 49.27 | 56.20 | 47.51 | 54.55 |
| Llama-3.1-405B-Instruct | 43.09 | 49.71 | 45.45 | 41.89 | 50.00 | 55.34 | 43.20 | 47.70 | 49.04 | 52.20 | 48.41 | 39.80 | 49.65 |
| gpt-4o-2024-11-20 | 42.27 | 46.74 | 50.00 | 42.83 | 52.52 | 53.81 | 46.72 | 47.31 | 52.52 | 52.20 | 52.74 | 40.67 | 54.55 |
| gpt-4o-2024-05-13 | 41.44 | 40.78 | 44.21 | 37.47 | 50.74 | 52.90 | 45.11 | 41.32 | 48.82 | 50.73 | 45.24 | 35.41 | 53.85 |
| DeepSeek-V3 | 41.24 | 49.48 | 43.80 | 47.21 | 47.18 | 51.07 | 45.23 | 48.50 | 46.10 | 48.29 | 43.23 | 48.30 | 55.94 |
| Qwen2.5-72B-Instruct | 41.24 | 46.62 | 44.42 | 41.12 | 30.71 | 45.88 | 34.90 | 42.32 | 45.74 | 45.37 | 43.52 | 39.33 | 46.15 |
| MiniMax-Text-01 | 39.79 | 49.60 | 47.52 | 44.88 | 45.25 | 54.27 | 43.02 | 48.90 | 47.08 | 48.29 | 45.53 | 43.81 | 53.85 |
| gpt-4o-2024-08-06 | 39.59 | 40.78 | 44.42 | 38.84 | 50.89 | 54.12 | 46.30 | 45.51 | 50.49 | 50.73 | 47.84 | 38.41 | 53.85 |
| Mistral-Large-Instruct-2411 | 38.76 | 42.27 | 42.15 | 39.66 | 44.96 | 47.87 | 41.11 | 43.31 | 43.23 | 48.78 | 42.07 | 39.24 | 50.35 |
| gemini-2.0-flash | 38.56 | 45.93 | 42.36 | 48.37 | 45.25 | 49.24 | 43.68 | 41.32 | 43.77 | 51.22 | 45.53 | 50.20 | 53.85 |
| Llama-3.1-70B-Instruct | 37.11 | 41.12 | 41.94 | 33.88 | 33.09 | 45.88 | 35.08 | 46.11 | 44.21 | 47.80 | 42.94 | 30.04 | 48.25 |
| Llama-3.3-70B-Instruct | 36.70 | 40.55 | 40.29 | 36.44 | 41.25 | 44.66 | 38.54 | 45.51 | 43.77 | 46.34 | 42.94 | 34.96 | 42.66 |
| qwen-max-2024-09-19 | 36.49 | 45.02 | 45.66 | 39.84 | 35.16 | 44.05 | 39.08 | 45.11 | 43.41 | 47.32 | 43.23 | 38.24 | 38.46 |
| Qwen2.5-32B-Instruct | 36.49 | 43.07 | 45.45 | 38.93 | 30.71 | 41.92 | 32.76 | 39.52 | 42.21 | 44.88 | 39.19 | 38.24 | 39.16 |
| Qwen2.5-14B-Instruct | 36.08 | 37.69 | 39.26 | 35.87 | 26.41 | 37.04 | 31.44 | 41.52 | 36.91 | 38.05 | 38.04 | 34.20 | 36.36 |
| Yi-Lighting | 33.81 | 39.18 | 35.95 | 32.53 | 36.05 | 37.35 | 36.34 | 38.12 | 36.95 | 42.44 | 37.75 | 30.85 | 42.66 |
| Phi-4 | 32.78 | 40.21 | 39.26 | 37.27 | 30.27 | 41.46 | 31.62 | 39.12 | 37.79 | 39.02 | 40.63 | 38.87 | 41.26 |
| Gemma-2-27B-it | 31.13 | 29.32 | 30.99 | 26.72 | 24.78 | 35.06 | 29.42 | 34.93 | 31.00 | 39.02 | 35.45 | 24.81 | 34.27 |
| Qwen2.5-7B-Instruct | 29.28 | 34.59 | 35.33 | 28.38 | 22.85 | 32.62 | 24.28 | 33.33 | 32.60 | 32.68 | 34.58 | 27.54 | 30.07 |
| Mixtral-8x22B-Instruct-v0.1 | 28.25 | 33.45 | 33.68 | 29.02 | 30.86 | 34.60 | 30.55 | 35.13 | 30.53 | 44.39 | 32.85 | 26.95 | 36.36 |
| Qwen2.5-3B-Instruct | 25.36 | 26.35 | 30.99 | 22.83 | 18.55 | 25.61 | 22.32 | 30.94 | 26.82 | 27.32 | 27.09 | 21.64 | 26.57 |
| Granite-3.1-8B-instruct | 24.74 | 20.16 | 23.76 | 21.60 | 16.32 | 24.70 | 20.53 | 25.15 | 20.58 | 27.80 | 21.33 | 19.70 | 23.08 |
| Qwen2.5-1.5B-Instruct | 22.27 | 22.57 | 27.27 | 17.64 | 16.47 | 26.37 | 17.84 | 24.95 | 22.58 | 25.37 | 27.67 | 16.85 | 19.58 |
| OLMo-2-1124-13B-Instruct | 20.82 | 22.68 | 25.21 | 18.18 | 16.91 | 22.10 | 19.57 | 21.96 | 21.81 | 25.85 | 27.38 | 16.39 | 24.48 |
| Yi-1.5-6B-Chat | 20.41 | 23.83 | 25.62 | 18.50 | 13.95 | 25.61 | 18.79 | 24.15 | 21.89 | 29.27 | 25.36 | 17.60 | 23.78 |
| MAP-Neo-7B-Instruct-v0.1 | 17.94 | 17.64 | 21.69 | 16.79 | 13.50 | 21.19 | 16.35 | 20.96 | 18.91 | 25.85 | 21.61 | 15.99 | 14.69 |
| Qwen2.5-0.5B-Instruct | 16.91 | 16.49 | 17.98 | 9.77 | 10.09 | 13.87 | 12.89 | 15.97 | 14.12 | 13.17 | 12.68 | 8.55 | 12.59 |
| <i>Base Models</i> | | | | | | | | | | | | | |
| Qwen2.5-32B | 38.76 | 40.89 | 45.87 | 32.70 | 28.49 | 39.94 | 30.91 | 40.72 | 38.84 | 47.80 | 43.52 | 29.45 | 39.86 |
| Qwen2.5-72B | 36.29 | 44.33 | 45.25 | 33.39 | 31.31 | 44.21 | 35.50 | 43.51 | 43.12 | 46.34 | 42.94 | 29.38 | 38.46 |
| Qwen2.5-14B | 34.02 | 34.82 | 40.08 | 30.26 | 28.49 | 36.89 | 28.94 | 40.32 | 34.37 | 40.00 | 37.75 | 26.68 | 36.36 |
| Llama-3.1-405B | 29.28 | 27.95 | 31.20 | 23.61 | 34.12 | 34.30 | 30.79 | 34.13 | 29.47 | 39.51 | 31.70 | 21.47 | 24.48 |
| Llama-3.1-70B | 28.87 | 29.67 | 36.36 | 26.19 | 32.94 | 33.38 | 32.64 | 36.73 | 30.96 | 40.98 | 36.89 | 23.30 | 34.27 |
| Gemma-2-27B | 28.87 | 27.26 | 30.79 | 24.09 | 22.85 | 28.96 | 27.51 | 32.73 | 27.80 | 37.56 | 31.70 | 21.38 | 30.07 |
| DeepSeek-V3-Base | 28.66 | 35.17 | 39.05 | 31.87 | 30.12 | 37.20 | 33.65 | 37.33 | 34.70 | 37.07 | 38.62 | [30.08] | 37.76 |
| Qwen2.5-7B | 28.25 | 31.96 | 38.02 | 24.89 | 22.55 | 30.34 | 25.06 | 28.54 | 30.56 | 31.71 | 36.60 | 22.04 | 34.27 |
| Yi-1.5-34B | 28.25 | 35.85 | 37.60 | 27.32 | 24.63 | 34.45 | 30.25 | 36.13 | 31.18 | 40.49 | 35.45 | 23.80 | 37.76 |
| Mixtral-8x7B-v0.1 | 28.04 | 24.97 | 29.34 | 20.67 | 23.89 | 30.79 | 27.27 | 30.74 | 25.05 | 37.56 | 30.84 | 17.87 | 28.67 |
| Gemma-2-9B | 27.22 | 26.23 | 30.99 | 21.79 | 21.81 | 26.83 | 23.81 | 28.94 | 26.06 | 32.68 | 27.09 | 20.01 | 27.97 |
| Mistral-7B-v0.3 | 25.98 | 20.96 | 25.62 | 19.02 | 14.84 | 24.24 | 20.11 | 23.55 | 22.61 | 30.24 | 25.94 | 17.47 | 18.88 |
| Mixtral-8x22B-v0.1 | 23.92 | 23.94 | 27.27 | 22.02 | 20.33 | 27.59 | 24.64 | 30.14 | 22.50 | 28.78 | 24.50 | 20.96 | 28.67 |
| Qwen2.5-3B | 22.47 | 23.83 | 28.31 | 19.74 | 18.40 | 26.37 | 21.60 | 28.14 | 25.41 | 30.73 | 29.39 | 16.54 | 26.57 |
| MAP-Neo-7B | 20.21 | 18.10 | 23.35 | 15.43 | 15.28 | 21.34 | 18.79 | 21.76 | 17.10 | 24.88 | 22.19 | 13.16 | 22.38 |
| OLMo-2-1124-13B | 19.59 | 20.27 | 26.24 | 15.21 | 19.73 | 22.41 | 20.88 | 26.15 | 19.96 | 25.85 | 26.51 | 11.93 | 23.08 |
| Qwen2.5-1.5B | 19.18 | 20.73 | 28.10 | 16.50 | 15.43 | 21.95 | 17.72 | 23.35 | 20.87 | 24.88 | 25.65 | 14.48 | 28.67 |
| Granite-3.1-8B-Base | 15.46 | 17.87 | 15.08 | 16.26 | 11.72 | 18.29 | 13.84 | 14.57 | 14.81 | 20.49 | 20.17 | 15.44 | 22.38 |
| Qwen2.5-0.5B | 15.05 | 12.37 | 16.32 | 10.30 | 11.42 | 12.96 | 14.92 | 11.78 | 12.23 | 16.59 | 15.56 | 8.74 | 13.99 |

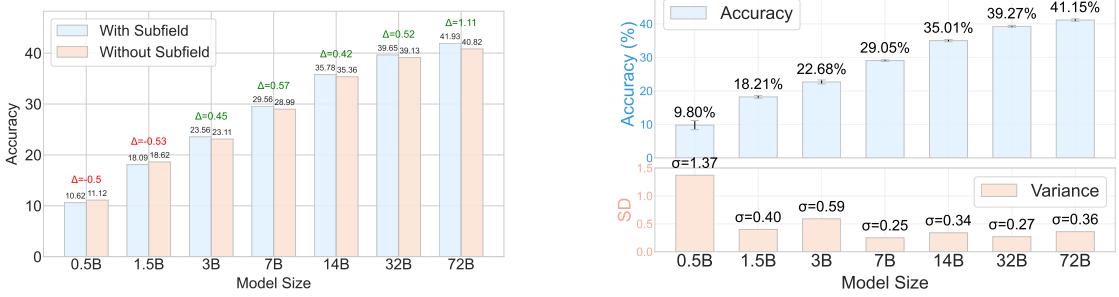
Table 6. Performance on *SuperGPQA*. We present LLMs' performance on different disciplines. The highest, the second-best and the third-best scores are shown in **boxed**, **bold** and underlined, respectively.

For instance, the results (47.40, 40.75) of DeepSeek-V3 and Qwen2.5-72B-Instruct are significantly better than the results (32.14, 34.33) of DeepSeek-V3-Base and Qwen2.5-72B, respectively. More powerful LLMs achieve more balanced results on different difficulties. For example, the results of simple, middle and hard splits of DeepSeek-R1 are 63.59, 63.63 and 56.87. In contrast, the results of simple, middle and hard splits of Qwen2.5-14B-Instruct are 44.82, 37.90 and 19.97.

Observations for Reasoning Models. Surprisingly, the performance gap between DeepSeek-R1 and DeepSeek-R1-Zero is relatively small. In [Table 6](#), the DeepSeek-R1 only beats DeepSeek-R1-Zero in two disciplines (i.e., Science and Engineering). In the other disciplines, the DeepSeek-R1-Zero is slightly better than DeepSeek-R1, which leaves the optimal training paradigm of the reason models an open question. From the performances across different dimensions, compared to the o1-2024-12-17 model, the newer o1-mini and o3-mini models show decreasing scores except in science and engineering, suggesting a potential data leakage. Moreover, for different versions of o3-mini (o3-mini-2025-01-31-high, o3-mini-2025-01-31-medium, o3-mini-2025-01-31-low), we observe obvious performance gaps for different difficulties.

Advantages from Pre-training Corpus. The newer versions of proprietary LLMs achieve significant improvements on *SuperGPQA*, considering the incremental growing of qwen-max series (2024-09-19→2025-01-25: 39.96 →50.08) and GPT-4o series (2024-05-13 → 2024-08-06 → 2024-11-20: 39.76 → 41.64 → 44.40). Such incremental performances following the chronological order suggest that the developers of proprietary models highly value the incorporation of long-tailed knowledge. Moreover, we conjecture that the LLMs from Chinese firms (e.g., Qwen and Doubao) generally show superior performances is partially because their data collection pipelines are more aligned to *SuperGPQA*, i.e., a considerable ratio of the references are translated from Chinese textbooks.

Progress of Open-source. The *SuperGPQA* also reveals a pessimistic open-source progress from the research community. In the dimension of pre-training corpus curation, the fully open-sourced LLMs (e.g., MAP-Neo-7B and OLMo-2-1124-13B) perform similarly and lag behind to other non fully open ones in similar sizes (e.g., Qwen2.5-7B). It can also be observed that, compared to the proprietary models, most of the open-weight LLMs except for the DeepSeek-R1 series are not satisfactory in our benchmark, especially



(a) Impact of subfield information.

(b) Model robustness analysis.

Figure 7. (a) Accuracy comparison of Qwen2.5 models (0.5B–72B) with and without subfield information in prompts. Larger models benefit more from additional context. (b) Robustness evaluation across 24 semantically equivalent prompts, indicating larger models exhibit higher stability with lower variance.

the hard questions.

Difficulty-Specific Capabilities. The difficulty stratification in *SuperGPQA* reveals distinct capability patterns between reasoning-focused and knowledge-oriented LLMs. As shown in Table 5, the **hard** split specifically challenges models’ reasoning capacities, while **easy** and **middle** splits better reflect factual knowledge mastery. For instance, the o3-mini series exhibits lower scores than Doubao-1.5-pro-32k-250115 on easy and middle splits, yet surpasses it significantly on hard questions. This dichotomy suggests that:

- **Chat-oriented LLMs** (e.g., Doubao series) excel at knowledge recall for common professional questions but struggle with complex reasoning in long-tail domains.
- **Reasoning-specialized models** demonstrate superior performance on hard questions through enhanced logical processing, despite potential compromises in broad knowledge coverage.

This differentiation validates *SuperGPQA*’s design rationale – using difficulty levels as diagnostic tools to dissect complementary capabilities in modern LLMs.

4.3. Further Analysis

Effect of Subfield Information in Prompts. To investigate the impact of subfield information on model performance, we conduct zero-shot evaluations under two conditions: (1) zero-shot-with-subfield, where the prompt includes a description of the problem’s

subfield, and (2) zero-shot-without-subfield, where no such information is provided. The prompts of zero-shot-with-subfield are shown in subsection G.1. We evaluate Qwen2.5-Instruct models ranging from 0.5B to 72B parameters across these two settings. **Figure 7a** show that incorporating subfield information generally leads to improved performance, particularly for larger models. For example, Qwen2.5-72B-Instruct achieves an accuracy of 41.93% in the zero-shot-with-subfield setting, compared to 40.82% without subfield annotations. Similarly, Qwen2.5-32B-Instruct improves from 39.13% to 39.65%, and Qwen2.5-14B-Instruct sees a minor increase from 35.36% to 35.78%, suggesting that additional contextual information helps larger models refine their reasoning by narrowing down the relevant domain. However, for smaller models like Qwen2.5-0.5B-Instruct and Qwen2.5-1.5B-Instruct, the introduction of subfield information does not lead to a noticeable gain in accuracy. Qwen2.5-0.5B-Instruct performs slightly worse with subfield annotations (10.62% vs. 11.12%), while Qwen2.5-1.5B-Instruct shows near-identical performance (18.09% vs. 18.62%), indicating that smaller models may lack the capacity to leverage fine-grained domain-specific cues effectively, relying more on general knowledge retrieval rather than contextual domain disambiguation.

Robustness Analysis. Benchmark evaluations can be significantly influenced by slight variations in prompts, leading to inconsistencies in model ranking and overall assessment reliability. To investigate this phenomenon, we conduct robustness experiments across Qwen2.5-Instruct models (0.5B~72B), employing 24 distinct yet semantically equivalent prompts in a zero-shot setting, using the same evaluation parameters as in the main results. Specifically, we employ 4 types of initial prompts and 6 types of question formats, resulting in a combination of 24 different prompt styles to verify the robustness of our bench. The combination of initial prompt 1 and question format 1 is the default prompt for our evaluation. The detailed prompts are shown in the subsection G.2. **Figure 7b** shows that larger models exhibit increased robustness, as a steady improvement in accuracy from 9.80% of Qwen2.5-0.5B-Instruct to 41.15% of Qwen2.5-72B-Instruct while variance decreases ($\sigma = 1.37$ for the smallest model, dropping to $\sigma \approx 0.27 \sim 0.36$ in the largest models). This demonstrates the our evaluation framework is more stable with a maximum standard deviation SD of 1.37%, that mitigates prompt-induced instability and provides a more reliable basis for model assessment.

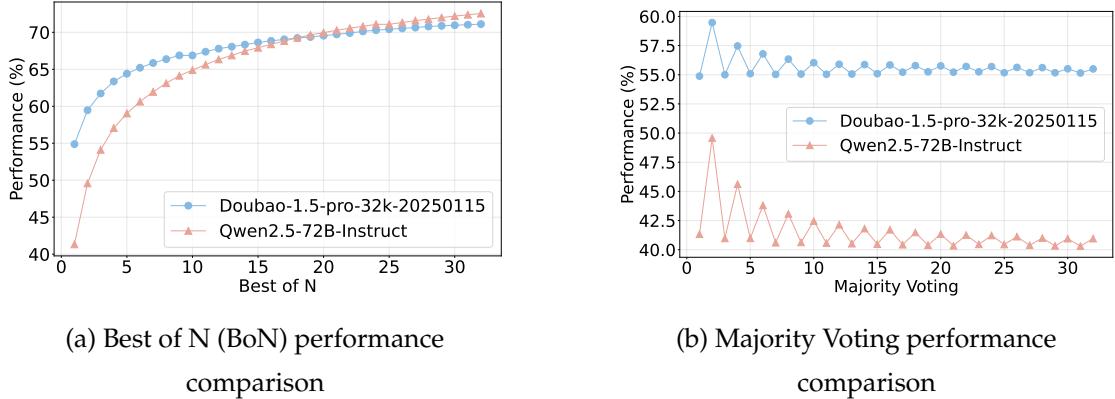


Figure 8. Performance comparison of Qwen2.5-72B-Instruct and Doubao-1.5-pro-32k-20250115 under two ensembling strategies: (a) Best of N (BoN) and (b) Majority Voting. BoN shows that Qwen2.5-72B-Instruct benefits more from increased sampling, whereas Majority Voting favors Doubao-1.5-pro-32k-20250115 due to its more consistent output distribution.

Best of N (BoN) Analysis. BoN (Best of N) is a strategy that selects the highest-quality response from N independent generations which utilize stochastic sampling to improve overall performance. In our experiments, we evaluate Qwen2.5-72B-Instruct and Doubao-1.5-pro-32k-20250115 under BoN settings ranging from $N = 1$ to $N = 32$, with results presented in Figure 8a. **Qwen2.5-72B-Instruct exhibits a steeper BoN curve compared to Doubao-1.5-pro-32k-20250115**, suggesting that Qwen benefits more significantly from multiple sampling attempts, likely due to a higher variance in response quality. Conversely, **Doubao-1.5-pro-32k-20250115 shows stronger initial performance but a more gradual BoN gain**, implying that its response distribution is more consistent but less opportunistic in leveraging multiple trials. Notably, **while Doubao maintains a lead in early BoN values ($N \leq 15$), Qwen2.5-72B-Instruct surpasses it around Bo24 and continues to outperform at Bo32**, indicating that for scenarios where extensive sampling is feasible, Qwen2.5-72B-Instruct demonstrates a greater ability to exploit high-quality outputs.

Majority Voting Analysis. ² Majority Voting is a strategy that selects the most frequently generated response from multiple independent runs. We evaluate Majority Voting using Qwen2.5-72B-Instruct and Doubao-1.5-pro-32k-20250115 shown in Figure 8b. When multiple options receive the same highest number of votes, the answer is

²Both the BoN and Majority Voting analyses are conducted using the same set of inference results, generated with temperature = 0.7 and repeated for 32 independent runs.

considered correct if the correct option is among them. We show that **Douba**-1.5-pro-32k-20250115 consistently outperforms Qwen2.5-72B-Instruct across all voting sizes, exhibiting a stable performance around 55-57%. In contrast, Qwen2.5-72B-Instruct demonstrates fluctuations, particularly for lower N, with performance largely remaining in the 40-45% range, indicating that Douba generates more consistent responses across independent runs.

4.4. Analysis of Disciplinary Discrimination Power

To systematically evaluate the discrimination power across disciplines, we employ two complementary analytical approaches: **descriptive statistics** and **discrimination indices analysis**. The descriptive statistics approach examines the distribution characteristics of model performance within each discipline through three key metrics:

- **Mean Accuracy:** Reflects the overall difficulty level of the discipline.
- **Standard Deviation (SD):** Measures the dispersion of model performance.
- **Coefficient of Variation (CV):** Normalizes the standard deviation by mean accuracy, enabling cross-discipline comparison.

The discrimination indices analysis complements this by comparing performance extremes through:

- **High-Low Group Difference (Δ):** Calculates the mean accuracy gap between the top 3 and bottom 3 models in each discipline.

Table 7 presents complete results with group comparisons across all 13 disciplines, highlighting key patterns through color coding.

Our systematic analysis reveals two distinct patterns in disciplinary discrimination power:

- **High-discrimination disciplines:** History (SD=8.45, CV=0.175, Δ =19.19) and Law (SD=7.17, CV=0.126, Δ =16.62) demonstrate the strongest differentiation capacity, indicating models exhibit substantially varied performance in these domains.
- **Low-discrimination disciplines:** Military Science (SD=4.99, CV=0.093, Δ =11.55), Engineering (SD=5.75, CV=0.107, Δ =13.13), and Management (SD=5.21, CV=0.099, Δ =10.98) exhibit performance convergence among top models.

| Discipline | Descriptive Statistics | | | Discrimination Indices Analysis | | |
|-------------------|------------------------|------|-------|---------------------------------|-------|----------|
| | Mean Acc. | SD | CV | High | Low | Δ |
| Engineering | 53.93 | 5.75 | 0.107 | 60.85 | 47.72 | 13.13 |
| Philosophy | 55.56 | 7.33 | 0.132 | 62.92 | 46.59 | 16.33 |
| Medicine | 54.42 | 6.44 | 0.118 | 60.94 | 46.38 | 14.57 |
| Economics | 58.25 | 6.96 | 0.120 | 65.86 | 49.83 | 16.04 |
| Science | 54.52 | 6.86 | 0.126 | 62.39 | 46.94 | 15.45 |
| Law | 56.92 | 7.17 | 0.126 | 65.29 | 48.68 | 16.62 |
| History | 48.28 | 8.45 | 0.175 | 58.26 | 39.07 | 19.19 |
| Education | 52.15 | 5.94 | 0.114 | 57.51 | 44.15 | 13.36 |
| Military Science | 53.85 | 4.99 | 0.093 | 59.51 | 47.97 | 11.55 |
| Management | 52.73 | 5.21 | 0.099 | 58.02 | 47.04 | 10.98 |
| Literature & Arts | 46.94 | 6.58 | 0.140 | 55.03 | 40.02 | 15.02 |
| Agronomy | 46.97 | 5.58 | 0.119 | 53.06 | 40.27 | 12.78 |
| Sociology | 57.83 | 7.33 | 0.127 | 66.20 | 50.35 | 15.85 |

Table 7. Comprehensive Discrimination Analysis with Several Key Evaluation Metrics
(Mean Acc.: Mean Accuracy, **SD:** Standard Deviation, **CV:** Coefficient of Variation, **Δ :** High-Low Group Difference).

The observed dichotomy between humanities and STEM disciplines emerges from fundamental differences in knowledge representation. The heightened discrimination in humanities (History CV=0.175) likely originates from:

- Context-dependent reasoning requiring real-world knowledge synthesis.
- Cultural nuance interpretation demands.
- Ethical judgment variance in open-ended scenarios.

Conversely, the performance convergence in STEM fields (Engineering CV=0.107) reflects:

- Standardized problem-solving patterns in technical domains.
- Mathematical consistency in training corpora.
- Concentrated optimization efforts by model developers.

This finding validates our experimental design hypothesis: when evaluating top-performing models (per-discipline top 10 selection), humanities disciplines better reveal capability differences due to their complexity beyond pattern recognition, while STEM

metrics approach performance ceilings. Our results emphasize the critical need for comprehensive cross-domain evaluation frameworks to fully capture models' heterogeneous capabilities beyond technical domains.

5. Related Work

5.1. Large Language Models

The landscape of natural language processing has been transformed by recent breakthroughs in Large Language Models (LLMs) [Zhang et al., 2024a, Young et al., 2024]. The introduction of GPT-3 marked a significant milestone, showcasing its ability to interpret tasks and examples from textual inputs with minimal prior training. Recently, the latest generation of LLMs (e.g., GPT-4 [OpenAI, 2023], Claude-3.5³, Gemini [Team, 2023], and Llama-3 [AI@Meta, 2024]), have exhibited remarkable progress in sophisticated reasoning across diverse fields. To comprehensively evaluate and challenge the expanding capabilities of these advanced AI systems, we present *SuperGPQA*. This novel benchmark is specifically crafted to probe the knowledge boundaries of existing LLMs.

5.2. LLM Benchmarks

Recently, the development of the Large Language Model (LLM) has been transformed by the introduction of various benchmarks [Cobbe et al., 2021, Wang et al., 2024a, Bai et al., 2024]. Notable examples include GLUE [Wang et al., 2019b] and its successor SuperGLUE [Wang et al., 2019a], which have been instrumental in propelling advancements in language comprehension tasks. These foundational benchmarks paved the way for more specialized assessments, such as MMLU [Hendrycks et al., 2020], HotpotQA [Yang et al., 2018], BigBench [Srivastava et al., 2022], HellaSwag [Zellers et al., 2019], CommonsenseQA [Talmor et al., 2019], KOR-Bench [Ma et al., 2024], SimpleQA [Wei et al., 2024a] and Chinese SimpleQA [He et al., 2024a]. These newer benchmarks have expanded the evaluation scope to encompass content generation, knowledge understanding, and complex reasoning abilities. While numerous benchmarks have been developed to evaluate LLMs' capabilities and alignment with human values, these have often focused narrowly on performance within singular tasks or domains. To enable a more comprehensive LLM assessment, we propose *SuperGPQA* to scale the LLM evaluation to 285 graduate-level disciplines and provide a comprehensive and fine-grained analysis of foundation models.

³<https://www.anthropic.com/news/clause-3-5-sonnet>

6. Contributions and Acknowledgements

Multimodal Art Projection (M-A-P) is a non-profit open-source AI research community, ran by donation. The community members are working on research topics in a wide range of spectrum, including but not limited to the pre-training paradigm of foundation models, large-scale data collection and processing, and the derived applications on coding, reasoning and music generation.

Our team members contribute to the development of *SuperGPQA* from the following perspectives:

- Data Annotation Management
- Data Annotation
- Data Quality Inspection
- Model Evaluation
- Result Analysis
- Paper Writing

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A. Difficulty-Stratified Samples

👉 Easy Sample

Question:

Which of the following statements about dance studies are correct?

1. According to Danto's definition, context is an art world with modern aspects.
2. "La Bayadère" is a ballet created during the French July Revolution.
3. The ballet "Sylvia" is a dance drama created during the Paris Commune period in 1871.
4. Korean court dance, when calculated according to temporal principles, does not belong to secondary civilization.

Options:

- A) 1,3
- B) 1,4
- C) 1,2,4
- D) 2,3
- E) 1,2,3
- F) 3
- G) 4
- H) 3,4
- I) 1,2,3,4
- J) 2,4

Answer: 3,4

Answer letter: H

Discipline: Literature and Arts

Field: Art Studies

Subfield: Dance Studies

Difficulty: easy

⌚ Middle Sample

Question:

A deck of playing cards has 52 cards, and each shuffle changes the order of the cards, which is a permutation. If each shuffle strictly follows the operation below: first divide the cards into two equal parts, then interlace the cards from each part alternately, so that the first and last cards remain in their original positions while all other cards are rearranged. Express this permutation as a product of disjoint cycles, write out the

cyclic structure of this permutation, and determine the minimum number of shuffles needed to restore the deck to its original order.

Options:

- A) $(1^2, 2, 8^6), 8$
- B) $(1^2, 5, 5^6), 6$
- C) $(1^3, 1, 8^5), 15$
- D) $(1^1, 4, 7^6), 11$
- E) $(1^2, 4, 6^4), 12$
- F) $(2^2, 1, 9^5), 9$
- G) $(1^2, 3, 7^5), 10$
- H) $(2^1, 2, 7^6), 7$
- I) $(2^2, 3, 6^5), 5$
- J) $(1^2, 6, 4^6), 4$

Answer: $(1^2, 2, 8^6), 8$

Answer letter: A

Discipline: Science

Field: Mathematics

Subfield: Group Theory

Difficulty: middle

🏆 Hard Sample

Question:

A certain transmitter has a transmission power of 10 W, a carrier frequency of 900 MHz, a transmission antenna gain $G_T = 2$, and a receiving antenna gain $G_R = 3$. Calculate the output power of the receiver and the path loss at a distance of 10 km from the transmitter in free space.

Options:

- A) $P_R = R_T G_T G_R \left(\frac{\lambda}{3\pi d} \right)^2 = 2.55 \times 10^{-12} \text{ W}$
 $L = \frac{P_T}{P_R} = 5.19 \times 10^{11} \text{ (BII 142.43 dB)}$
- B) $P_R = R_T G_T G_R \left(\frac{\lambda}{4\pi d} \right)^2 = 5.07 \times 10^{-11} \text{ W}$
 $L = \frac{P_T}{P_R} = 1.97 \times 10^{10} \text{ (BII 101.95 dB)}$
- C) $P_R = R_T G_T G_R \left(\frac{\lambda}{4\pi d} \right)^2 = 1.74 \times 10^{-10} \text{ W}$
 $L = \frac{P_T}{P_R} = 4.81 \times 10^9 \text{ (BII 98.48 dB)}$
- D) $P_R = R_T G_T G_R \left(\frac{\lambda}{5\pi d} \right)^2 = 8.40 \times 10^{-10} \text{ W}$
 $L = \frac{P_T}{P_R} = 3.98 \times 10^9 \text{ (BII 96.07 dB)}$
- E) $P_R = R_T G_T G_R \left(\frac{\lambda}{4\pi d} \right)^2 = 2.93 \times 10^{-10} \text{ W}$

$$L = \frac{P_T}{P_R} = 6.29 \times 10^9 \text{ (BII 99.90 dB)}$$

F) $P_R = R_T G_T G_R \left(\frac{\lambda}{3\pi d} \right)^2 = 6.83 \times 10^{-10} \text{ W}$

$$L = \frac{P_T}{P_R} = 1.46 \times 10^{10} \text{ (BII 89.35 dB)}$$

G) $P_R = R_T G_T G_R \left(\frac{\lambda}{4\pi d} \right)^3 = 9.11 \times 10^{-11} \text{ W}$

$$L = \frac{P_T}{P_R} = 3.64 \times 10^{10} \text{ (BII 104.78 dB)}$$

H) $P_R = R_T G_T G_R \left(\frac{\lambda}{4\pi d} \right)^1 = 3.12 \times 10^{-09} \text{ W}$

$$L = \frac{P_T}{P_R} = 9.24 \times 10^9 \text{ (BII 99.63 dB)}$$

I) $P_R = R_T G_T G_R \left(\frac{\lambda}{4\pi d} \right)^2 = 4.22 \times 10^{-10} \text{ W}$

$$L = \frac{P_T}{P_R} = 2.37 \times 10^{10} \text{ (BII 103.75 dB)}$$

J) $P_R = R_T G_T G_R \left(\frac{\lambda}{6\pi d} \right)^2 = 7.95 \times 10^{-11} \text{ W}$

$$L = \frac{P_T}{P_R} = 2.50 \times 10^{10} \text{ (BII 102.20 dB)}$$

Answer:

$$P_R = R_T G_T G_R \left(\frac{\lambda}{4\pi d} \right)^2 = 4.22 \times 10^{-10} \text{ W}$$

$$L = \frac{P_T}{P_R} = 2.37 \times 10^{10} \text{ (BII 103.75 dB)}$$

Answer letter: I

Discipline: Engineering

Field: Information and Communication Engineering

Subfield: Communication Principles

Difficulty: hard

B. Annotation Tutorial

B.1. Material Requirements

The specific requirements for material selection are as follows:

- Ensure the selected materials are accurate, with correct answers.
- Ensure the materials cover a variety of knowledge points and are free from regional bias.
- The selected materials should be correctly stated and involve a certain level of academic reasoning, with a difficulty appropriate for graduate-level study.
- Avoid using materials that rely on images as conditions.
- Verify that the materials comply with copyright requirements.

B.2. Annotation Methods

During the annotation process, the following four methods are primarily used: **1) Original Transcription Method, 2) Non-Choice Conversion Method, and 3) Statement Combination Method.**

B.2.1. *Original Transcription Method*

Original Transcription

Description:

- Directly transcribe the original multiple-choice questions, ensuring the question maintains its original meaning and correctness. Additional distractors are included to increase the difficulty of the question or enhance its discriminative power.

Operations:

1. Material Review:

- Ensure that the materials meet the aforementioned requirements, including accuracy, diversity, neutrality (free from regional bias), non-image-based content, and compliance with copyright regulations.

2. Question Transcription:

- Use OCR tools to recognize the text in the materials or directly paste the original content. Transcribe the question content word-for-word, ensuring no key information is omitted, with particular attention to the accurate transcription of formulas.

3. Option Transcription:

- Use OCR tools to recognize the text in the materials or directly paste the original content. Transcribe the options word-for-word, ensuring no key information is omitted, with particular attention to the accurate transcription of formulas.

4. Answer Identification:

- Clearly mark the correct answer within the list of options, ensuring its accuracy and uniqueness.

5. Distractor Addition:

- Add distractors while maintaining the quality of the options (avoiding meaningless or excess correct answers) until the annotator deems the level of confusion sufficient. The number of options should be between 4 and 10, with

more options being preferred to increase the difficulty and discriminatory power of the question.

6. Field Completion:

- Complete the category fields ("discipline","field","subfield") and select the appropriate difficulty level to ensure the integrity and accuracy of the question information.

B.2.2. Non-Choice Conversion Method

Non-Choice Conversion

Description:

- Convert non-multiple-choice questions (such as calculation questions, fill-in-the-blank questions, etc.) into multiple-choice format, ensuring that the conditions of the question are complete and the final result is accurate while generating reasonable distractors based on the analysis steps or calculation process.

Operations:

1. Material Review:

- Ensure that the materials meet the aforementioned requirements, including accuracy, diversity, neutrality (free from regional bias), non-image-based content, and compliance with copyright regulations.
- Ensure that the conditions of the question are complete and do not cause ambiguity. Add supplementary explanations if necessary.
- Ensure that the answer does not contain any essential explanatory process that is unsuitable for adaptation or transcription.

2. Question Transcription:

- Use OCR tools to recognize the text in the material or directly paste the original text. Transcribe the content of the original question word by word, ensuring that all numbers, formulas, or condition information in the question are accurate and complete to avoid ambiguity or incorrect answers.
- Add supplementary information if the question requires prior conditions from other questions.

3. Answer Transcription:

- Identify and select the correct result for the appropriate question based on the answer analysis process. item Use OCR tools to recognize results in the material and confirm that all numerical and formula information in the answer is accurate.

4. Distractor Addition:

- On the basis of the correct answer, consider setting common calculation errors (such as rounding errors, sign mistakes, digit errors, etc.) as distractors.
- For numerical results, the setting of distractors should consider reasonable ranges of calculation errors to ensure differentiation between options.

5. Answer Identification:

- Clearly mark the correct answer within the list of options, ensuring its accuracy and uniqueness.

6. Field Completion:

- Complete the category fields ("discipline", "field", "subfield") and select the appropriate difficulty level to ensure the integrity and accuracy of the question information.

B.2.3. Statement Combination Method **Statement Combination****Description:**

- By integrating stated expressions related to multiple concepts or knowledge points, a multi-level, multi-perspective multiple-choice question is constructed to increase the comprehensiveness and depth of examination of the topic.

Operations:**1. Statement Extraction:**

- Extract core concepts, definitions, relationships between concepts, application cases, and common misconceptions from textbooks and related learning resources, ensuring that the statements are representative and comprehensive.
- Extract important statements from multiple-choice questions, covering multiple knowledge points to avoid being limited to a single definition or formula, thus enhancing the overall comprehensiveness of the questions.
- Ensure that the extracted statements are accurate and concise, avoiding redundancy or vague expressions. The content should cover both correct and incorrect situations to provide a foundation for subsequent adaptation.

2. Statement Adaptation:

- Adapt the extracted statements to include both correct and incorrect versions.
- Incorrect statements should be somewhat misleading, avoiding obvious or easily dismissible errors.

- Number the adapted statements (e.g., I, II, III, etc.). Arrange the statements in a reasonable order, avoiding bias towards any direction (e.g., always placing correct statements first).

3. Question Design:

- Depending on the need, questions may limit the scope or conditions being tested.
- "Which of the following statements about [knowledge point] is correct?"
- "Which of the following statements about [knowledge point] is incorrect?"

4. Combination Design:

- Combine the numbered statements to create options, such as I and II; II and III; III, VI, and VII.
- Ensure that there is exactly one correct answer among the options.

5. Answer Identification:

- Clearly mark the correct answer within the list of options, ensuring its accuracy and uniqueness.

6. Field Completion:

- Complete the category fields ("discipline", "field", "subfield") and select the appropriate difficulty level to ensure the integrity and accuracy of the question information.

B.2.4. Confusion-options Generation

During the annotation process, we use large models to assist in generating distractors. We select Claude-3.5, GPT-4, Doubao, and Qwen2.5-72B-Instruct, and follow the prompt below to generate confusion options. In the annotation process, a model is randomly selected to generate a confusion option, which is then double-checked by the annotator. Finally, the confirmed confusion option is used as the final option.

Prompt

You are an expert in creating multiple-choice questions. Your task is to generate plausible but incorrect distractors for a given question that only has one correct answer. You are skilled at introducing subtle yet distinct mathematical errors to the existing answer options, making the distractor look reasonable but still wrong.

Input Description:

- You will be given:

- A question stem.
- A set of answer options (no numbering).
- The correct answer (no numbering).

Guidelines:

1. Generate Distractor:

- The distractor must be incorrect (not the correct answer).
- The distractor should introduce a subtle mathematical error while maintaining the formula structure.
- It must be **distinct** from all existing options, including the correct answer.
- Avoid any **repetition** or overlap with the existing answer options in terms of value or meaning.
- **Plausibility:** The distractor should look reasonable and appear to be a potential answer, but still be wrong.
- Ensure the question still has exactly **one correct answer** after adding the distractor.

2. Uniqueness Check:

- **Thoroughly check** all existing options (including the correct one) to ensure the distractor is unique.
- If the distractor matches any existing option, regenerate it.
- The distractor must **not** create ambiguity; the correct answer must remain the sole valid choice.

3. Formatting:

- Ensure the distractor matches the format of the existing options (e.g., fractions, exponents, etc.).
- Avoid formatting inconsistencies such as misplaced symbols or spaces.

Output Format:

<distractor> your generated distractor here </distractor>

Do not include explanations or extra information. Do not include numbering.

Input:

```
Question: "{}",
Options: {},
Correct Answer: "{}"
```

Output:

C. Data Filtering and Manual Review Process Details

In the data processing workflow, we employ a three-stage filtering and review mechanism to ensure data quality:

1. **Rule-Based Pre-Check** [subsection C.1](#): Data undergoes initial screening based on predefined code rules, quickly identifying and eliminating clearly invalid data points, thereby enhancing efficiency and reducing subsequent workload.
2. **LLM-Based Quality Inspection** [subsection C.2](#): Large language models are utilized to perform in-depth quality assessments of the data, identifying potential errors and inconsistencies, thereby improving the accuracy and completeness of the data.
3. **Manual Quality Review** [subsection C.3](#): Experienced data analysts conduct a final review to ensure the high quality and usability of the data, correcting potential misjudgments and incorporating domain knowledge for a comprehensive evaluation.

C.1. Rule-Based Pre-Check

[Table 8](#) presents the rules for data filtering and pre-checking, including text normalization, validation of the consistency of questions and options, integrity checks of answers, and requirements for the completeness of metadata such as difficulty, discipline, and others.

| Category | Rules |
|--|--|
| Text  | Replace full-width punctuation with half-width punctuation. |
| | Remove unnecessary whitespace characters (e.g., spaces, newline characters, tab spaces). |
| | Replace common escape characters. |
| | Add missing escape characters. |
| Question  | Not Empty or Placeholder. |
| | Ensure the question field is in string format to avoid errors. |
| | Text length > 5. |
| | Text Standardization. |
| | Perplexity ≤ 100 , calculated using the <i>Qwen2.5-0.5B-Instruct</i> model. |
| | No Semantic Duplicates: For a given question q_i , the cosine similarity with each existing question q_j : |
| Options  | $\text{CosineSimilarity}(q_i, q_j) = \frac{\mathbf{e}_i \cdot \mathbf{e}_j}{\ \mathbf{e}_i\ \ \mathbf{e}_j\ } < 0.90$ |
| | where \mathbf{e}_i and \mathbf{e}_j are embeddings generated by the model SentenceTransformer("all-MiniLM-L6-v2"), and <i>Faiss</i> is used for efficient similarity search. |
| | 4 \leq Option count \leq 10. |
| | No empty or meaningless options (e.g., no empty strings, no only whitespace characters, no common placeholders like 'none', 'null'). |
| Answer  | No duplicate options. |
| | Remove built-in option prefixes, using regular expressions(<code>r'^([A-Ja-j])[\.\.\.\s]'</code> , <code>r'^\(([A-Ja-j])\)', r'^([A-Ja-j])\)'</code>). |
| | Text Standardization for each option. |
| | Not Empty or Placeholder. |
| Difficulty  | Within options list. |
| | Text Standardization. |
| Discipline  | Ensure discipline, field, and subfield exist. |

Table 8. Detailed Criteria for Rule-Based Pre-Check.

C.2. LLM-Based Quality Inspection

This section outlines the quality inspection process of LLMs in data processing, including: **1) Validity Check, 2) Negative and Extreme Inquiry Detection, 3) Multimodal Exclusion, 4) Field Relevance Evaluation, 5) Solvability Assessment.**

C.2.1. Validity Check

① Purpose

- Validate the question's correctness, ensuring it follows the standards, can be answered with the given text, and the options are complete and reasonable.

② Prompt

You are a master of format checking, skilled at verifying whether multiple-choice questions in JSON format conform to the specifications.

You will receive an input in JSON format containing a question, options, and the answer, for example:

```
{  
    question: "Question content",  
    options: ['Option content', 'Option content',  
              'Option content', 'Option content'],  
    answer: "Answer content"  
}
```

Please determine whether the text in the JSON represents a complete and solvable multiple-choice question. It must meet the following requirements:

1. The question must explicitly pose a **specific problem** or **ask a clear question** that can be answered or calculated. If the question does not clearly ask something (e.g., if it is vague, incomplete, or does not directly ask for a specific answer), it should be considered **invalid**.

A valid question should directly require an answer, such as asking for a numerical value or selection (e.g., "What is the value of X?", "Which of the following is correct?", etc.). Questions that lack a clear problem or don't ask for a specific answer must be marked invalid.

2. The question, options, and answer must be fully defined. If any part is missing or unclear (e.g., if the answer does not match any of the listed options), the question should be deemed invalid. Note that the number of options is not a factor in determining completeness—having only one option is acceptable as long as the content is complete and coherent.
3. The question, options, and answer must be directly relevant to each other. The options should not reference each other, and there should be no circular dependencies or inter-referencing between options (e.g., "Option A is true because Option B is false"). Each option must stand independently, with no cross-references to other options.

4. Negative phrasing such as "The following options are incorrect" or "None of the above" is not allowed in the question. The question should use positive phrasing (e.g., "Which of the following is correct?") to avoid confusion. If negative phrasing is detected in the question, it should be deemed invalid.
5. The question must be in a valid multiple-choice format. If the question is not suitable for a multiple-choice format (e.g., it is a free-form answer question like a problem or essay), it should be deemed invalid. Ensure that the question is designed specifically for multiple-choice answering, rather than being a question that requires an open-ended response.

Please return the result in the following JSON format:

```
{
  "is_valid": true/false
}
```

Ensure that the output is valid JSON format and do not return any unrelated information.
Input:

```
{
  question: "{}",
  options: {},
  answer: "{}"
}
```

Output:

C.2.2. Negative and Extreme Inquiry Detection

Purpose

- Identify negative questions that may appear in the options, such as 'Which of the following options is incorrect?' or 'Which of the following is not correct?'.
- Also, identify questions that use "most" to indicate a higher degree of likelihood or preference, such as 'Which of the following is most likely to occur?' or 'Which option is most appropriate?'.
- These types of questions are prone to having distractors that meet the conditions.

i Prompt 1

Please evaluate whether the following text is a valid and well-formed multiple-choice question, adhering to the following criteria:

1. The question must not be a negation (e.g., "Which of the following is NOT...?" or "What is not...?").
2. The question should avoid vague or ambiguous phrasing, such as "Which of the following is the best/worst...?" or other uncertain expressions.
3. The answer choices should not be all affirmations or all negations, such as "All of the above" or "None of the above," as these are considered inappropriate.

Please return the result in the following JSON format:

```
{  
  "is_valid": true/false  
}
```

Ensure that the output is valid JSON and do not return any unrelated information.

Example input 1:

```
{  
  question: Which of the following procedure is not done in CHC?,  
  options: ["Aboion", "Blood transfusion", "Caesaran section",  
           "Urine microscopy and culture sensitivity"],  
  answer: Urine microscopy and culture sensitivity  
}
```

Example output 1:

```
{  
  "is_valid": false  
}
```

Example input 2:

```
{  
  question: Most common viral cause of acquired aqueductal stenosis  
  is?,  
  options: ["Rubella", "Mumps", "Toxoplasma", "Enterovirus"],  
  answer: Mumps  
}
```

Example output 2:

```
{  
  "is_valid": false  
}
```

Example input 3:

```
{  
  question: Acute cerebral edema occurs at high altitude due to,  
  options: ["apillary blood pressure",  
           "Cerebral arteriolar dilation",  
           "Hypoxic damage to capillary  
             walls leading to capillary  
             leak",  
           "All of the above"],  
  answer: All of the above  
}
```

Example output 3:

```
{  
  "is_valid": false  
}
```

Example input 4:

```
{  
  question: Rideal Walker test is used to determine the efficiency  
  of the,  
  options: ["Disinfectant",  
           "Moist heat sterilisation",  
           "Antibiotics",  
           "Dry heat sterilization"],  
  answer: Disinfectant  
}
```

Example output 4:

```
{  
  "is_valid": true  
}
```

Input:

```
{  
  "question": {},  
  "options": {},  
  "answer": {}  
}
```

Output:

i Prompt 2

Input Description:

You will be given:

- A question statement (Question).

Guidelines:

1. Analyze the final part of the question (the actual question being asked) to check for specific phrases:
 - "incorrect" in a context like "which of the following is incorrect"
 - "most" in a context like "which is most likely"
2. If either of these phrases appears in the question's final asking part, output `true`, followed by a brief explanation of why the phrase is present.
3. If neither phrase is found in the question's final part, output `false`, followed by a brief explanation.

Output Format:

Provide a response with:

- `true` or `false` as the first part of the output
- A brief explanation that justifies your answer

Example Input:

Question:

"A new technology is introduced in a manufacturing plant. Which of the following is most likely to occur?"

Example Output:

```
{  
  "is_valid": true/false,  
}
```

Explanation: Brief explanation of why the phrase is present.

Question:

```
{}
```

Output:

```
{
    "is_valid": true/false,
}
```

C.2.3. Multimodal Exclusion

① Purpose

- Check if the question relies on multimodal image information, and remove questions involving image information.

② Prompt

You will be given a question or problem statement. Please determine if it strictly requires visual/image input to be solved.

Only output 'true' if the question absolutely cannot be solved without an image (e.g. "What color is the car in this image?", "Describe the graph shown").

For all other cases where the question could potentially be answered with just text, output 'false' (e.g. math problems, logic puzzles, verbal descriptions).

Output format:

- If visual input is strictly required: 'true' + brief reason
- Otherwise: 'false' + brief reason

Question:

```
{}
```

C.2.4. Field Relevance Evaluation

① Purpose

- Assess whether the classification labels are appropriate.
- Evaluate the classification level by level:
 - First, check if the "discipline" is relevant to the question.
 - If the "discipline" is appropriate, assess whether the "field" is relevant.
 - If the "field" is suitable, evaluate whether the "subfield" is relevant.

- If the "subfield" is highly relevant to the question, the entire classification ("discipline," "field," and "subfield") is considered appropriate, even if there are minor mismatches in the "discipline" or "field."
- If no levels meet the above criteria, or if any level other than "subfield" is deemed inappropriate and the "subfield" is not highly relevant, the classification is considered not relevant.

Prompt

You are an expert in hierarchical classification. Based on the given question and the provided three-level classification structure (`discipline`, `field`, `subfield`), evaluate whether the classification assigned to the question is appropriate.

Classification Structure:

```
{
  "discipline": "{}",
  "field": "{}",
  "subfield": "{}"
}
```

Question:

```
{}
```

Instructions:

1. Evaluate the classification level by level:
 - First, check if the `discipline` is relevant to the question.
 - If `discipline` is appropriate, evaluate if the `field` is relevant.
 - If `field` is appropriate, evaluate if the `subfield` is relevant.
2. Special rule:
 - If the `subfield` is found to be **highly relevant** to the question, the entire classification (`discipline`, `field`, and `subfield`) is considered appropriate, regardless of minor mismatches in `discipline` or `field`.
3. If no levels meet the above criteria, or if any level other than `subfield` is deemed inappropriate without `subfield` being highly relevant, the classification is considered not relevant.
4. Output **strictly and exclusively** in the following JSON format and don't output any explanation, just output JSON:

```
{
  "is_relevant": true/false
}
```

```
}
```

C.2.5. Completeness Assessment

② Purpose

- Determine if the question is solvable, considering the following two dimensions:
 - Confidence: The level of confidence in the answer, categorized as "High," "Medium," or "Low."
 - Missing Information: If an accurate answer cannot be provided, assess whether it is due to missing information (e.g., diagrams, formulas, known conditions) that makes the problem unsolvable, or if it is due to other reasons (e.g., high difficulty or uncertainty).

① Prompt

Please review and solve the following problems:

1. Attempt to solve the problem and assess your confidence level in the answer.
2. If you cannot provide an accurate answer, evaluate whether it is due to missing information (e.g., diagrams, formulas, known conditions) that makes the problem unsolvable, or if it's due to other reasons (e.g., high difficulty or uncertainty in solving).
3. Output format:

```
{
    "final_answer_letter": "A",
    "confidence": "High",
    "missing_info": false
}
```

Rules:

- If the problem is missing a "diagram" (such as a geometry question requiring visual input), mark it as `missing_info: true` and explain that the absence of the diagram or visual representation makes the question unsolvable.
- If the problem contains sufficient information but is difficult (e.g., requiring complex reasoning or having multiple possible solutions), mark `missing_info: false` and assign a confidence level based on the model's reasoning process:
 - "High": If the problem is simple and straightforward, with a clear solution.

- "Medium": If the problem involves multiple steps or requires further reasoning.
- "Low": If the problem is complex, involves extensive information, or the model is uncertain about the solution.
- If the problem is missing key necessary information (such as numbers, formulas, or critical conditions), mark it as `missing_info: true`.

Output Format:

```
# The final answer option letter (e.g., A, B, C...)
final_answer_letter: "A"
# Confidence level (High, Medium, Low)
confidence: "High"
# Whether key information is missing, boolean (true or false)
missing_info: false
```

Examples:

- **Question:** "Calculate the difference between A and B."
 - `missing_info: true`
 - `explanation: "Missing the values of A and B, so it cannot be calculated."`
 - `answer: "A"`
 - `confidence: "Low"`
- **Question:** "Given a geometric shape, calculate its area."
 - `missing_info: true`
 - `explanation: "The diagram is missing, so it cannot be solved."`
 - `answer: "B"`
 - `confidence: "Low"`
- **Question:** "Given the radius of a circle as 5, calculate the area of the circle."
 - `missing_info: false`
 - `explanation: "The problem is complete and solvable, high confidence."`
 - `answer: "A"`
 - `confidence: "High"`

Question:

```
{}
```

Output:

```
final_answer_letter: "A"
confidence: "High"
missing_info: false
```

C.3. Manual Quality Review

Table 9 outlines the manual review process, focusing on ensuring consistency, clarity, accuracy, global perspective, and appropriate difficulty, while validating the correctness and uniqueness of answers and proper categorization.

| Category | Focus | Description |
|--|--------------------------------|--|
| | Source Consistency | Align question source with annotations. |
| | Condition Completeness | Base answers solely on provided text. |
| | | Avoid needing additional conditions like charts or legal clauses. |
| | Question Clarity | Be clear and specific. |
| | | Have only one correct answer. |
| | | Avoid vague or open-ended questions. |
|  Question | | |
| | Expression Accuracy | Write in English. |
| | | Use precise terminology. |
| | | Accurately translate specialized terms. |
| | Formula and Numerical Accuracy | Write formulas in LaTeX. |
| | | Align key formulas and numerical details. |
| | Global Perspective | Frame from a global perspective. |
| | | Avoid regional bias. |
| | Expression Accuracy | Accurately translate proper nouns and terminology. |
| | Formula and Numerical Accuracy | Ensure formula and numerical accuracy. |
|  Options | | Correctly format in LaTeX. |
| | Distractor Relevance | Make incorrect options meaningful but not correct. |
| | | Distinguish from correct answers. |
| | | Match correct options in length and format. |
| | Answer Correctness | Ensure the answer is in the options. |
|  Answer | | Accurately answers the question. |
| | Answer Uniqueness | Ensure the answer is unique. |
| | | Avoid multiple valid answers due to vague wording or incorrect options. |
|  Difficulty | Difficulty Matching | Match difficulty to graduate-level. |
| | Difficulty Reasonableness | Ensure difficulty is reasonable based on complexity and presented options. |
| | Category Accuracy | Categorize correctly with accurate primary and secondary subjects. |
|  Discipline | Category Validity | Correctly fill category fields. |
| | | No missing or unnecessary fields. |

Table 9. Detailed Guidelines for Manual Quality Review.

C.4. Reasons for Failing Quality Inspection

⌚ Question Block 1

Question: Consider a resistor made from a hollow cylinder of carbon as shown below. The inner radius of the cylinder is $R_i = 0.2\text{mm}$ and the outer radius is $R_o = 0.3\text{mm}$. The length of the resistor is $L = 0.9\text{mm}$. The resistivity of the carbon is $\rho = 3.5 \times 10^{-5} \Omega \cdot \text{m}$. What is the resistance?

Options:

- 3.0
- 1.0
- 5.0
- 2.0
- 1.5
- 2.8
- 3.5
- 4.0
- 2.5
- 1.8

Answer: 2.5

⚠ Error Analysis Block 1

Error Type: Condition Setting Defect

Error Analysis: The solution to the correction problem requires a diagram as a condition; without the diagram, the problem cannot be solved. Therefore, this question lacks condition setting and cannot be answered.

⌚ Question Block 2

Question: Which of the following descriptions about the function of gastrointestinal motility is incorrect?

Options:

- Controlling the release of bile from the gallbladder
- Facilitating the absorption of nutrients into the bloodstream
- Assisting in the immune response of the gut
- Regulating the pace of digestion
- Stimulating enzyme production in the pancreas
- Breaking down large food molecules into smaller molecules

- Mixing food with digestive juices
- Propelling food through the digestive tract
- Coordinating muscle contractions in the digestive system
- Maintaining the pH balance in the stomach

Answer: Breaking down large food molecules into smaller molecules

▲ Error Analysis Block 2

Error Type: Incorrect option construction

Error Analysis: Options such as stimulating enzyme production in the pancreas, maintaining the pH balance in the stomach, and several other choices are correct answers to the question. Questions involving terms like "incorrect" or "most" require careful construction of distractors, but the reviewer fails to ensure the uniqueness of the correct answer.

⌚ Question Block 3

Question: Ross claims that we learn of our *prima facie* duties:

Options:

- from the moral judgments we make in various situations.
- by seeing the *prima facie* rightness of particular acts, and then apprehending general principles.
- from the explicit moral instruction we receive as children.
- through societal norms and cultural values.
- from religious teachings or scriptures.
- by observing the consequences of our actions.
- by intuitively understanding moral obligations.
- by proving them philosophically.
- by apprehending general principles, and then inferring the *prima facie* rightness of particular acts.
- through legal regulations and laws.

Answer: by seeing the *prima facie* rightness of particular acts, and then apprehending general principles

▲ Error Analysis Block 3

Error Type: Missing Contextual Information

Error Analysis: The problem does not provide sufficient contextual information, such as Ross's background or theories, to allow for proper comprehension and answer selection.

Question Block 4

Question: About the I-type system tracking the step signal, what's the steady-state error between them?

Options:

- 10
- infinity
- 2
- -0.5
- 1
- 0.5
- undefined
- 0
- -1
- 100

Answer: 0

Error Analysis Block 4

Error Type: Distractor Quality Issue

Error Analysis: Some options, such as "infinity" and "undefined," may not be relevant or may be poorly constructed. These distractors may not effectively contribute to creating meaningful confusion.

Question Block 5

Question: A cube of iron was heated to 70°C and transferred to a beaker containing 100g of water at 20°C. The final temperature of the water and the iron was 23°C. What is the heat capacity?

Options:

- $0.310 \text{ } K^{-1} \text{ } g^{-1}$
- $0.740 \text{ } K^{-1} \text{ } g^{-1}$
- $0.582 \text{ } K^{-1} \text{ } g^{-1}$
- $1.200 \text{ } K^{-1} \text{ } g^{-1}$
- $0.453 \text{ } K^{-1} \text{ } g^{-1}$
- $0.235 \text{ } K^{-1} \text{ } g^{-1}$
- $1.004 \text{ } K^{-1} \text{ } g^{-1}$
- $0.505 \text{ } K^{-1} \text{ } g^{-1}$
- $0.875 \text{ } K^{-1} \text{ } g^{-1}$

- $0.690 \text{ } K^{-1} \text{ } g^{-1}$

Answer: $0.453 \text{ } K^{-1} \text{ } g^{-1}$

⚠ Error Analysis Block 5

Error Type: Condition Setting Defect

Error Analysis: The problem lacks critical information about the mass of the iron cube, which makes it unsolvable.

⚡ Question Block 6

Question: The Central Committee of the Communist Party of China and the Central Government are striving to enhance our country's military security functions. In order to achieve this, they should further promote the governance of the military according to law and strict discipline, focusing on the crucial ().

Options:

- Checks and Balances on the Exercise of Power
- Procedures and Control of Power
- Maintenance and Supervision of Power
- Regulation and Oversight of Authority
- Coordination and Monitoring of Authority
- Systems and Regulation of Governance
- Security and Management of Authority
- Power Operation Management
- Power Operation Guarantee
- Power Operation Coordination

Answer: Checks and Balances on the Exercise of Power

⚠ Error Analysis Block 6

Error Type: Region-Specific Context Missing

Error Analysis: The question has a clear regional context (China) that should be accounted for in item selection or modification. Additionally, the item could be better adapted or refined to enhance clarity and relevance.

⚡ Question Block 7

Question: Use the example below to answer the question that follows. Identify the type of dissonance found above the asterisk in the given voice-leading example.

Options:

- Neighbor tone
- Appoggiatura
- Suspension
- Passing tone

Answer: Passing tone

▲ Error Analysis Block 7

Error Type: Missing Contextual Information

Error Analysis: The question lacks the necessary example (voice-leading notation) and cannot be answered.

⌚ Question Block 8

Question: Suppose an electric field $\mathbf{E}(x, y, z)$ has the form

$$E_x = ax, \quad E_y = 0, \quad E_z = 0$$

where a is a constant. What is the charge density? How do you account for the fact that the field points in a particular direction, when the charge density is uniform?

Options:

- $\epsilon_0 x$
- $\epsilon_0 y$
- $x a \epsilon$
- $\epsilon_0 a$
- $x \epsilon_0$
- $\epsilon_z a$
- $\epsilon_0 z$
- $a \epsilon_y$
- ϵa_y
- $\epsilon_x a$

Answer: $\epsilon_0 a$

▲ Error Analysis Block 8

Error Type: Incomplete Question and Answer Construction

Error Analysis: The question contains two sub-questions, but the answer and options only address one, causing ambiguity.

D. Quantitative Overview of Disciplines at Three Levels

| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------------------------|--|---|-------------------|--|--|
| Agronomy(485) | Animal Husbandry(103) | Animal Nutrition and Feed Science(52) | Engineering(7892) | Geological Resources and Geological Engineering(50) | Geological Resources and Geological Engineering(50) |
| | | Animal Rearing and Breeding(51) | | Hydraulic Engineering(218) | Hydraulics and Hydrology(136) Water conservancy and Hydropower Engineering(82) |
| | Aquaculture(56) | Aquaculture(56) | | Information and Communication Engineering(504) | Antenna and Radio Communication(114) |
| | Crop Science(145) | Crop Science(145) | | | Communication Principles(116) Communication and Information Systems(69) Optical Fiber Communication(50) |
| | Forestry(131) | Forest Cultivation and Genetic Breeding(81) Landscape Plants and Ornamental Horticulture(50) | | | Signal and Information Processing(155) Instrument Science and Technology(50) |
| | Veterinary Medicine(50) | Veterinary Medicine(50) | | Instrument Science and Technology(50) | Materials Physics and Chemistry(199) |
| | Applied Economics(723) | Economic Statistics(50) Finance(176) | | Materials Science and Engineering(289) | Materials Processing Engineering(90) Manufacturing Automation(126) |
| | | Industrial Economics(84) | | Mechanical Engineering(176) | Mechatronic Engineering(50) Fundamentals of Dynamics and Control(347) |
| | | International Trade(69) | | Mechanics(908) | Rigid Body Mechanics(173) Solid Mechanics(93) |
| | | Labor Economics(74) | | | Theoretical Fluid Mechanics(140) Theoretical Mechanics(155) |
| Economics(873) | | National and Defense Economics(50) | | Metallurgical Engineering(255) | Iron and Steel Metallurgy(105) Non-ferrous Metallurgy(50) Physical Chemistry of Metallurgical Process(50) Principles of Metallurgy(50) |
| | | Public Finance(120) | | Mining Engineering(100) | Mineral Processing Engineering(50) Mining and Safety Engineering(50) |
| | | Quantitative Economics(100) | | Naval Architecture and Ocean Engineering(138) | Marine Engineering(50) |
| | Theoretical Economics(150) | Economic History(50) | | Nuclear Science and Technology(107) | Ship Mechanics and Design Principles(88) Nuclear Energy and Reactor Technology(57) |
| | | Political Economy(50) | | | Radiation Protection and Nuclear Technology Applications(50) |
| | | Western Economics(50) | | Optical Engineering(376) | Applied Optics(124) Laser Technology(50) Optoelectronic Technology(67) Theoretical Optics(135) |
| | Education(247) | Educational Technology and Principles(96) | | Petroleum and Natural Gas Engineering(112) | Oil and Gas Field Development and Storage & Transportation Engineering(62) Poromechanics and Reservoir Physics(50) Engineering Fluid Mechanics(84) |
| | | Preschool Education(50) | | Power Engineering and Engineering Thermophysics(684) | Engineering Thermophysics(146) |
| | | Special Education(50) | | | Fluid Machinery and Engineering(64) Heat Transfer(129) |
| | | Theory of Curriculum and Instruction(51) | | | Internal Combustion Engineering(50) Power Machinery and Engineering(52) |
| Education(484) | Physical Education(150) | Physical Education and Training(50) | | | Refrigeration and Cryogenic Engineering(50) |
| | | Sports Humanities and Sociology(50) | | Surveying and Mapping Science and Technology(168) | Thermal Energy Engineering(109) Cartography and Geographic Information Engineering(50) |
| | | Sports Science and Medicine(50) | | | Digital Surveying and Remote Sensing Applications(68) |
| | Psychology(87) | Psychology(87) | | | Geodesy and Surveying Engineering(50) |
| | Aeronautical and Astronautical Science and Technology(119) | Aeronautical and Astronautical Science and Technology(119) | | | Textile Chemistry and Dyeing Engineering(50) |
| | Agricultural Engineering(104) | Agricultural Environment and Soil-Water Engineering(54) | | | Textile Materials Science(50) |
| | | Agricultural Mechanization Engineering(50) | | | Road and Railway Engineering(50) |
| | Architecture(162) | Architectural Design and Theory(50) | | | Traffic Information Engineering and Control(65) |
| | | Architectural History(62) | | | Transportation Planning and Management(86) |
| | | Urban Planning and Design(50) | | | Vehicle Operation Engineering(50) |
| Engineering(7892) | Chemical Engineering and Technology(410) | Chemical Transport Engineering(50) | | | Military Chemistry and Pyrotechnics(50) |
| | | Elements of Chemical Reaction Engineering(107) | | Weapon Science and Technology(100) | Weapon Systems Science and Engineering(50) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(107) | | History(674) | Archaeology and Museology(104) |
| | | | | | Historical Geography(142) |
| | | Mass Transport and Separation Process in Chemical Engineering(146) | | | World History(428) |
| | Civil Engineering(358) | Bridge and Tunnel Engineering(51) | | Law(591) | Civil and Commercial Law(118) |
| | | Geotechnical Engineering(179) | | | Constitutional and Administrative Law(50) |
| | | Structural Engineering(57) | | | Contract Law(50) |
| | | Urban Infrastructure Engineering(71) | | | Criminal Law(116) |
| | | Advanced Programming Languages(50) | | | International Law(57) |
| Computer Science and Technology(763) | Computer Science and Technology(763) | Computer Architecture(50) | | | Law and Social Governance(50) |
| | | Computer Networks(59) | | | Legal Theory and Legal History(50) |
| | | Computer Software and Theory(79) | | | Military Law(50) |
| | | Data Structures(99) | | | Procedural Law(50) |
| | | Databases(157) | | Political Science(65) | Political Science(65) |
| | | Formal Languages(52) | | | |
| | | Operating Systems(85) | | | |
| | | Pattern Recognition(50) | | | |
| | | Principles of Computer Organization(82) | | | |
| | Control Science and Engineering(190) | Control Theory and Control Engineering(89) | | | |
| Electrical Engineering(556) | | Guidance, Navigation and Control(51) | | | |
| | | Operations Research and Cybernetics(50) | | | |
| | | Electrical Theory and New Technologies(190) | | | |
| | | High Voltage and Insulation Technology(88) | | | |
| | | Power Electronics and Electrical Drives(182) | | | |
| | | Power Systems and Automation(96) | | | |
| | Electronic Science and Technology(246) | Circuits and Systems(108) | | | |
| | | Electromagnetic Field and Microwave Technology(88) | | | |
| | | Microelectronics and Solid-State Electronics(50) | | | |
| | Environmental Science and Engineering(189) | Environmental Engineering(89) | | | |
| Food Science and Engineering(109) | | Environmental Science(50) | | | |
| | | Environmental and Resource Protection(50) | | | |
| | | Food Biochemistry(50) | | | |
| | | Food Processing and Storage Engineering(59) | | | |
| | Forestry Engineering(100) | Forest Engineering(50) | | | |
| Forestry Engineering(100) | | Wood Science and Technology(50) | | | |

Table 10. Comprehensive Overview of Three Levels of Disciplines and Their Sample Sizes.

| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|---|-------------------|--|---|
| Literature and Arts(1676) | Art Studies(603) | Broadcasting and Television Art(50) | Philosophy(347) | Philosophy(347) | Religious Studies(50) |
| | | Dance Studies(50) | | Astronomy(405) | Astronomical Observation and Technology(100) |
| | | Design Arts(62) | | Astrophysics(69) | Cosmology(78) |
| | | Drama and Opera Studies(82) | | Solar System Science(88) | Stellar and Interstellar Evolution(70) |
| | | Film Studies(158) | | Atmospheric Science(203) | Atmospheric Physics and Atmospheric Environment(69) |
| | Journalism and Communication(207) | Fine Arts(201) | Biology(1120) | Dynamic Meteorology(50) | |
| | | Communication and Broadcasting(58) | | Meteorology(84) | |
| | Language and Literature(440) | History and Theory of Journalism and Media Management(59) | Chemistry(1769) | Biochemistry and Molecular Biology(99) | |
| | | Journalism and News Practice(90) | | Biophysics(50) | |
| | | Classical Chinese Literature(50) | | Botany(166) | |
| | | French Language and Literature(50) | | Cell Biology(87) | |
| | | Linguistics and Applied Linguistics(50) | | Ecology(144) | |
| Management(501) | Business Administration(142) | Literary History(69) | | Genetics(184) | |
| | | Literary Theory(64) | | Microbiology(161) | |
| | | Modern and Contemporary Chinese Literature(50) | | Physiology(120) | |
| | | Philology and Bibliography(50) | | Zoology(109) | |
| | | Russian Language and Literature(57) | | Analytical Chemistry(396) | |
| | Musicology(426) | Composition(50) | | Electrochemistry(222) | |
| | | Harmony(60) | | Inorganic Chemistry(138) | |
| | | Instrumentation and Performance(65) | | Organic Chemistry(171) | |
| | | Music History, Education, and Technology(145) | | Physical Chemistry(706) | |
| | | Musical Forms and Analysis(50) | | Polymer Chemistry and Physics(76) | |
| Medicine(2755) | Business Administration(142) | Pitch and Scales(56) | | Radiochemistry(60) | |
| | | Business and Accounting Management(92) | Geography(133) | Human Geography(50) | |
| | | Tourism Management and Technological Economics Management(50) | | Physical Geography(83) | |
| | | Information Management Science(50) | | Geochemistry(50) | |
| | | Information Management and Communication(50) | | Mineralogy, Petrology, and Economic Geology(121) | |
| | Library, Information and Archival Management(150) | Library and Archival Science(50) | | Paleontology and Stratigraphy(50) | |
| | | Management Science and Engineering(58) | | Principles of Seismic Exploration(50) | |
| | | Management Science and Engineering(58) | | Structural Geology(70) | |
| | | Public Administration(151) | | Solid Earth Geophysics(50) | |
| | | Education, Economics, Management and Social Security(50) | | Space physics(50) | |
| Pharmacy(278) | Basic Medicine(567) | Land Resource Management and Administrative Management(51) | Mathematics(2622) | Advanced Algebra(202) | |
| | | Social Medicine and Health Management(50) | | Combinatorial Mathematics(191) | |
| | | Forensic Medicine(50) | | Computational Mathematics(50) | |
| | | Human Anatomy and Histology-Embryology(189) | | Cryptography(50) | |
| | | Immunology(69) | | Discrete Mathematics(89) | |
| | Clinical Medicine(1218) | Pathogen Biology(94) | | Functions of Complex Variables(122) | |
| | | Pathology and Pathophysiology(115) | | Functions of Real Variables(67) | |
| | | Radiation Medicine(50) | | Fundamental Mathematics(197) | |
| | | Anesthesiology(50) | | Fuzzy Mathematics(50) | |
| | | Clinical Laboratory Diagnostics(50) | | Geometry and Topology(265) | |
| Public Health and Preventive Medicine(292) | Clinical Medicine(1218) | Dermatology and Venereology(66) | | Graph Theory(51) | |
| | | Emergency Medicine(66) | | Group Theory(50) | |
| | | Geriatric Medicine(50) | | Mathematical Analysis(288) | |
| | | Imaging and Nuclear Medicine(67) | | Number Theory(220) | |
| | | Internal Medicine(202) | | Numerical Analysis(67) | |
| | Stomatology(132) | Neurology(189) | | Ordinary Differential Equations(160) | |
| | | Nursing and Rehabilitation Medicine(50) | | Polynomials and Series Expansions(179) | |
| | | Obstetrics and Gynecology(102) | | Probability and Statistics(224) | |
| | | Oncology(58) | | Special Number Theory(50) | |
| | | Ophthalmology(50) | | Stochastic Processes(50) | |
| Military Science(205) | Traditional Chinese Medicine(268) | Otorhinolaryngology(50) | Oceanography(200) | Hydrogeology(50) | |
| | | Pediatrics(50) | | Marine Biology(50) | |
| | | Psychiatry and Mental Health(50) | | Marine Chemistry(50) | |
| | | Surgery(68) | | Underwater Acoustics(50) | |
| | | Surgery(68) | | Physical Oceanography(50) | |
| | Military Science(205) | Medicinal Chemistry(50) | | Acoustics(245) | |
| | | Microbiology and Biochemical Pharmacy(50) | | Atomic and Molecular Physics(210) | |
| | | Pharmaceutical Analysis(50) | | Electrodynamics(383) | |
| | | Pharmacetics(73) | | Fluid Physics(134) | |
| | | Pharmacology(55) | | Particle and Nuclear Physics(225) | |
| Philosophy(347) | Systems Science(50) | Epidemiology and Health Statistics(83) | | Polymer Physics(109) | |
| | | Health Toxicology and Environmental Health(80) | | Quantum Mechanics(206) | |
| | | Maternal, Child and Adolescent Health(79) | | Relativity(79) | |
| | | Nutrition and Food Hygiene(50) | | Semiconductor Physics(61) | |
| | | Basic Stomatology(53) | | Solid State Physics(147) | |
| | Sociology(143) | Clinical Stomatology(79) | Physics(2845) | Statistical Mechanics(50) | |
| | | Traditional Chinese Health Preservation(59) | | Subatomic and Atomic Physics(51) | |
| | | Traditional Chinese Medicine Theory(90) | | Thermodynamics(215) | |
| | | Traditional Chinese Pharmacy(119) | | Thermodynamics and Statistical Physics(530) | |
| | | Military Command and Information Systems(50) | | Systems Science(50) | |
| Philosophy(347) | Philosophy(347) | Military Logistics and Equipment(54) | | Sociology(143) | Demography and Anthropology(50) |
| | | Military Management(50) | | Sociology(143) | Social and Folklore Studies(93) |
| | | Military Thought and History(51) | | | |

Table 10. Continued: Comprehensive Overview of Three Levels of Disciplines and Their Sample Sizes.

E. Detailed Dataset Statistics

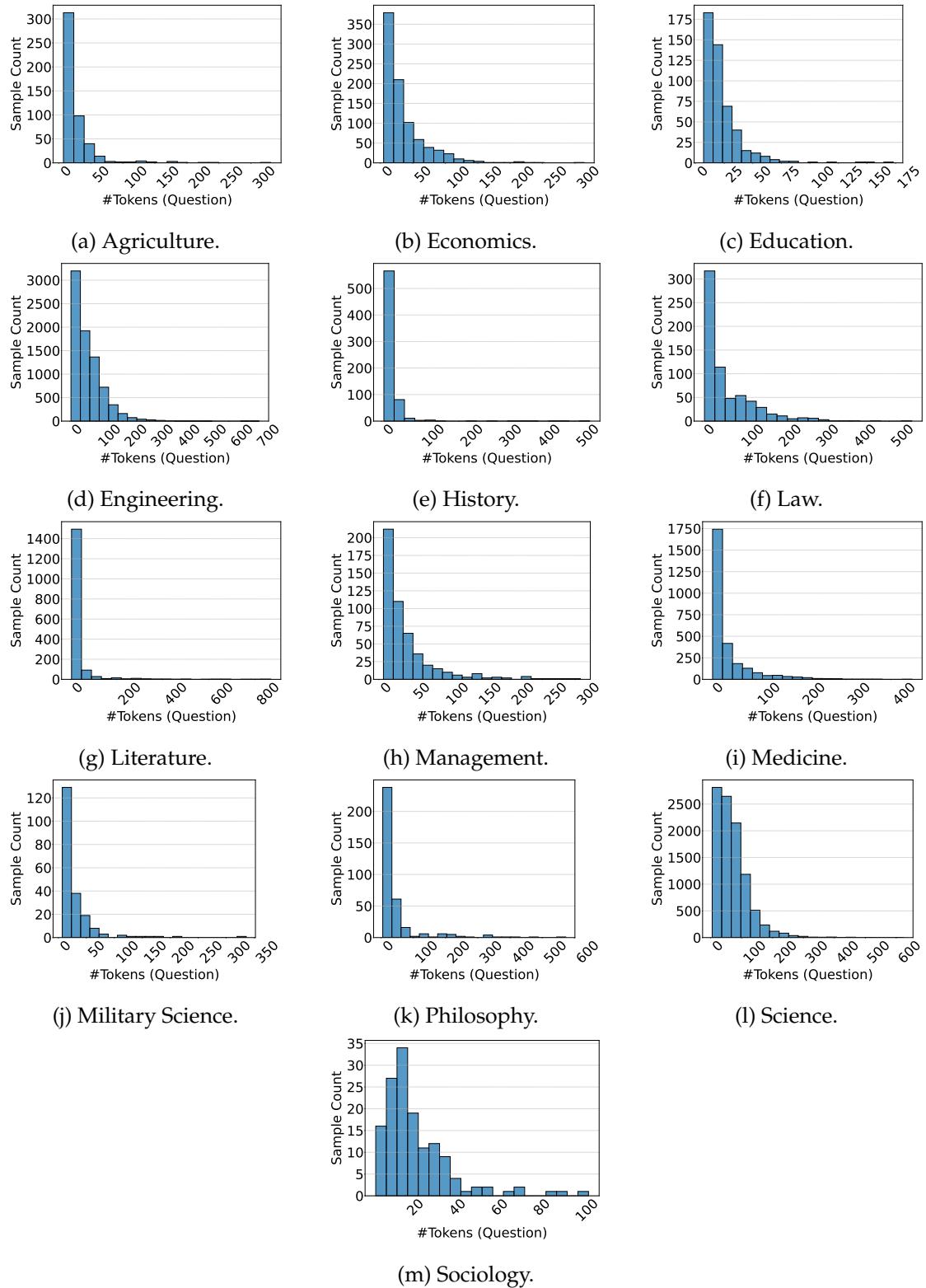


Figure 9. Question Length Distribution Across Disciplines.

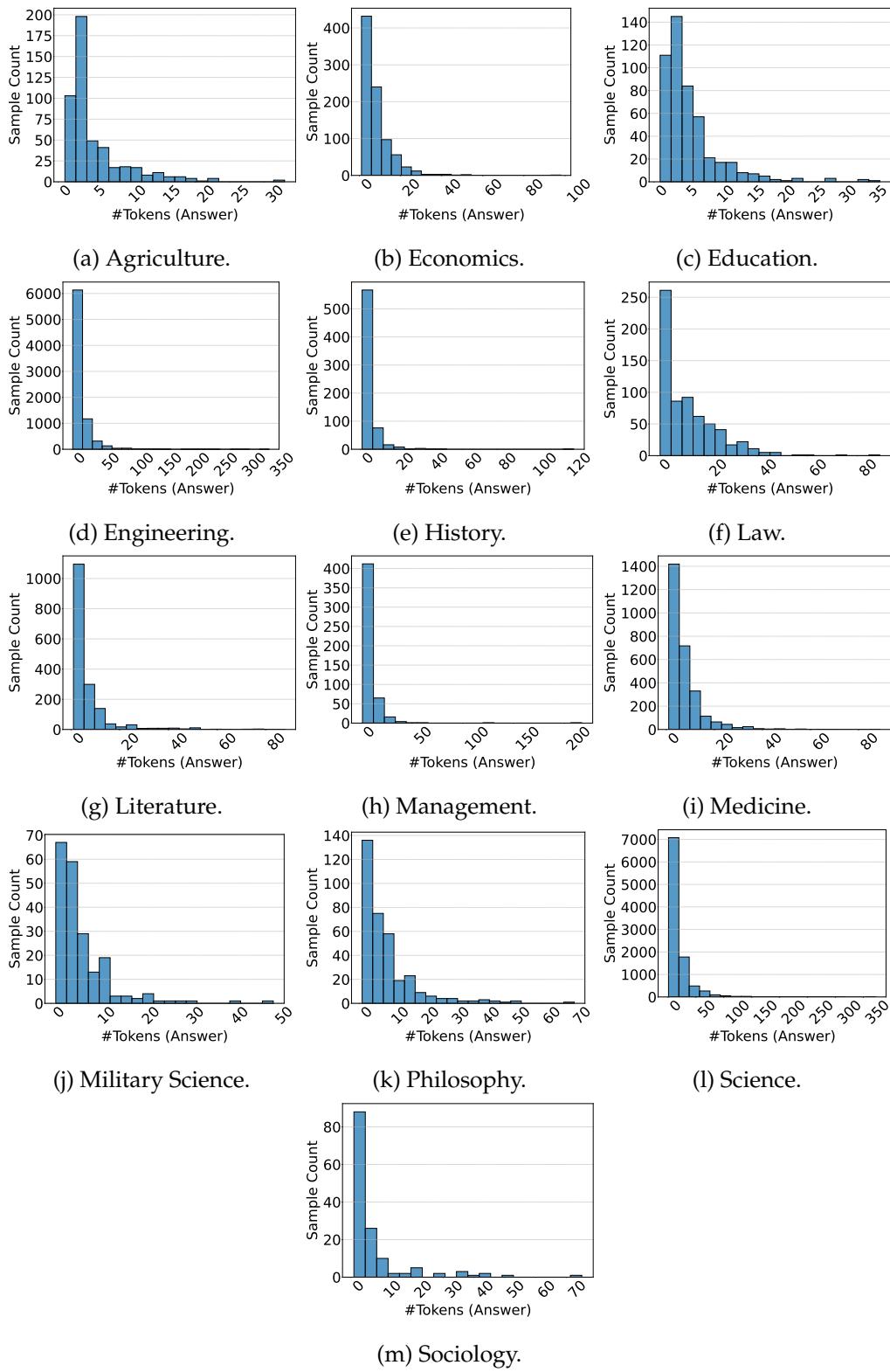


Figure 10. Answer Length Distribution Across Disciplines.

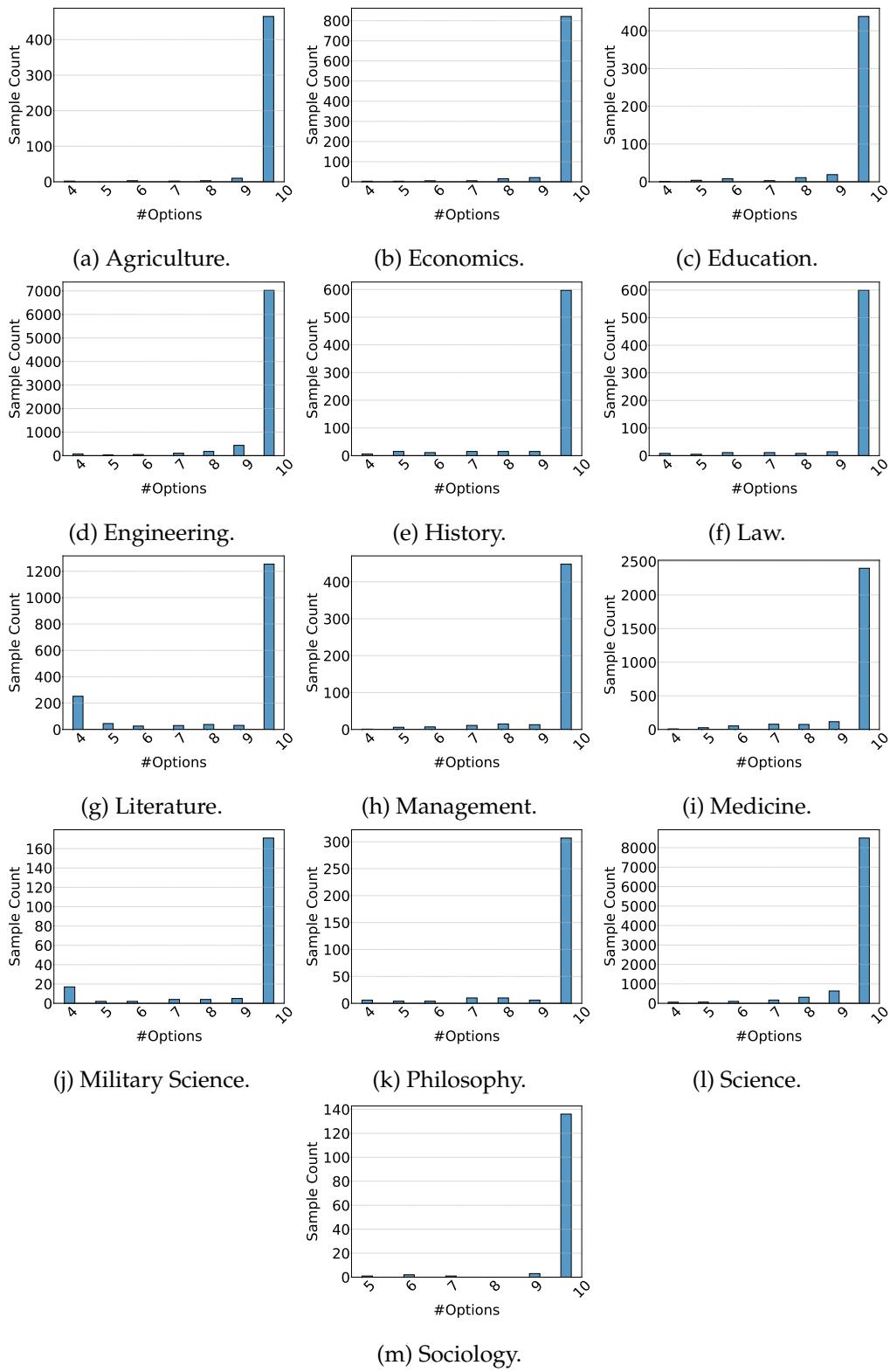


Figure 11. Option Count Distribution Across Disciplines.

F. Evaluation Prompt

F.1. Zero-shot Prompt

i Zero-shot

Answer the following multiple-choice question. There is only one correct answer. The last line of your response should be in the format 'Answer: \$LETTER (without quotes), where LETTER is one of A, B, C, D, E, F, G, H, I, or J.

{Question}

i Question format example:

Question: A microwave oven is connected to an outlet, 120 V, and draws a current of 2 amps. At what rate is energy being used by the microwave oven?

- A) 240 W
- B) 120 W
- C) 10 W
- D) 480 W
- E) 360 W
- F) 200 W
- G) 30 W
- H) 150 W
- I) 60 W
- J) 300 W

F.2. Five-shot Prompt

i Five-shot

Answer the following multiple-choice question. There is only one correct answer. The last line of your response should be in the format 'Answer: \$LETTER (without quotes), where LETTER is one of A, B, C, D, E, F, G, H, I, or J.

Question: A refracting telescope consists of two converging lenses separated by 100 cm. The eye-piece lens has a focal length of 20 cm. The angular magnification of the telescope is ().

- A) 10
- B) 40
- C) 6

- D) 25
- E) 15
- F) 50
- G) 30
- H) 4
- I) 5
- J) 20

Answer: Let's think step by step. In a refracting telescope, if both lenses are converging, the focus of both lenses must be between the two lenses, and thus the focal lengths of the two lenses must add up to their separation. Since the focal length of one lens is 20 cm, the focal length of the other must be 80 cm. The magnification is the ratio of these two focal lengths, or 4.

Answer: H.

Question: Say the pupil of your eye has a diameter of 5 mm and you have a telescope with an aperture of 50 cm. How much more light can the telescope gather than your eye?

- A) 1000 times more
- B) 50 times more
- C) 5000 times more
- D) 500 times more
- E) 10000 times more
- F) 20000 times more
- G) 2000 times more
- H) 100 times more
- I) 10 times more
- J) N/A

Answer: Let's think step by step. The amount of light a telescope can gather compared to the human eye is proportional to the area of its apertures. The area of a circle is given by the formula $A = \pi \left(\frac{D}{2}\right)^2$, where D is the diameter. Therefore, the relative light-gathering power is calculated as:

$$\frac{\left(\frac{50 \text{ cm}}{2}\right)^2}{\left(\frac{5 \text{ mm}}{2}\right)^2} = \frac{\left(\frac{50 \text{ cm}}{0.1 \text{ cm}}\right)^2}{\left(\frac{5 \text{ mm}}{0.1 \text{ cm}}\right)^2} = \frac{500^2}{5^2} = 10000.$$

Answer: E.

Question: Where do most short-period comets come from and how do we know?

- A) The Kuiper belt; short period comets tend to be in the plane of the solar system like the Kuiper belt.
- B) The asteroid belt; short period comets tend to come from random directions indicating

- a spherical distribution of comets called the asteroid belt.
- C) The asteroid belt; short period comets tend to be in the plane of the solar system just like the asteroid belt.
- D) The Oort cloud; short period comets have orbital periods similar to asteroids like Vesta and are found in the plane of the solar system just like the Oort cloud.
- E) The Oort Cloud; short period comets tend to come from random directions indicating a spherical distribution of comets called the Oort Cloud.
- F) The Oort cloud; short period comets tend to be in the plane of the solar system just like the Oort cloud.
- G) The asteroid belt; short period comets have orbital periods similar to asteroids like Vesta and are found in the plane of the solar system just like the asteroid belt.

Answer: Let's think step by step. Most short-period comets originate from the Kuiper belt. This is deduced from the observation that these comets tend to follow orbits that lie in the plane of the solar system, similar to the distribution of objects in the Kuiper belt itself. Thus, the alignment of these cometary orbits with the ecliptic plane points to their Kuiper belt origin.

Answer: A.

Question: Colors in a soap bubble result from light ().

- A) dispersion
- B) deflection
- C) refraction
- D) reflection
- E) interference
- F) converted to a different frequency
- G) polarization
- H) absorption
- I) diffraction
- J) transmission

Answer: Let's think step by step. The colorful patterns observed in a soap bubble are caused by the phenomenon of light interference. This occurs when light waves bounce between the two surfaces of the soap film, combining constructively or destructively based on their phase differences and the varying thickness of the film. These interactions result in vibrant color patterns due to variations in the intensity of different wavelengths of light.

Answer: E.

Question: A microwave oven is connected to an outlet, 120 V, and draws a current of 2 amps. At what rate is energy being used by the microwave oven?

- A) 240 W
- B) 120 W
- C) 10 W
- D) 480 W
- E) 360 W
- F) 200 W
- G) 30 W
- H) 150 W
- I) 60 W
- J) 300 W

Answer: Let's think step by step. The rate of energy usage, known as power, in an electrical circuit is calculated by the product of voltage and current. For a microwave oven connected to a 120 V outlet and drawing a current of 2 amps, the power consumption can be calculated as follows:

$$\text{Power} = \text{Voltage} \times \text{Current} = 120 \text{ V} \times 2 \text{ A} = 240 \text{ W}.$$

Therefore, the microwave oven uses energy at a rate of 240 watts.

Answer: A.

{Question}

Answer: Let's think step by step.

G. Further Experiment Analysis

G.1. Impact of Subfield Information

We conduct zero-shot evaluations under two conditions to investigate the impact of subfield information. 1) zero-shot-with-subfield, where the prompt includes a description of the problem's subfield, and (2)zero-shot-without-subfield, where no subfield information is provided. The prompts employed for the zero-shot-with-subfield evaluation are presented below.

➊ Zero-shot-with-subfield

Answer the following multiple choice question about

{subfield}

There is only one correct answer. The last line of your response should be in the format 'Answer: \$LETTER' (without quotes), where LETTER is one of A, B, C, D, E, F, G, H, I, or

J.

i Question format example:

The common-mode rejection ratio of the first stage amplification circuit in a three-op-amp differential circuit is determined by ().

- A) the absolute value of the difference in the common-mode rejection ratio of A1 and A2 themselves
- B) all of the above
- C) the average of A1 and A2's common-mode rejection ratios
- D) the sum of A1 and A2's common-mode rejection ratios
- E) the product of A1 and A2's common-mode rejection ratios
- F) the square root of the product of A1 and A2's common-mode rejection ratios
- G) the size of A2's common-mode rejection ratio
- H) the size of A1's common-mode rejection ratio
- I) The difference in the common-mode rejection ratio of A1 and A2 themselves
- J) input resistance

G.2. Robustness of the Evaluation

We employ 4 types of initial prompts and 6 types of question formats, resulting in a combination of 24 different prompt styles to verify the robustness of our bench. The 4 initial prompts and 6 types of question formats are listed below.

i Initial Prompt 1

Answer the following multiple choice question. There is only one correct answer. The last line of your response should be in the format 'Answer: \$LETTER' (without quotes), where LETTER is one of A, B, C, D, E, F, G, H, I, or J.

i Initial Prompt 2

You are a helpful assistant. Answer the given multiple-choice question. Only one option is correct. The last line of your response should be in the format 'The correct answer is: \$LETTER', where LETTER is one of A, B, C, D, E, F, G, H, I, or J.

i Initial Prompt 3

Select the correct answer for the following multiple-choice question. There is only one valid choice. The last line of your response should be in the format 'Answer: \$LETTER' (without quotes), where LETTER is one of A, B, C, D, E, F, G, H, I, or J.

➊ Initial Prompt 4

Review the following multiple-choice question and choose the one correct answer. Ensure that your response concludes with a line exactly formatted as 'The correct answer is: \$LETTER', where LETTER represents one of A, B, C, D, E, F, G, H, I, or J.

➋ Question Format Example 1

The common-mode rejection ratio of the first stage amplification circuit in a three-op-amp differential circuit is determined by ().

- A) the absolute value of the difference in the common-mode rejection ratio of A1 and A2 themselves
- B) all of the above
- C) the average of A1 and A2's common-mode rejection ratios
- D) the sum of A1 and A2's common-mode rejection ratios
- E) the product of A1 and A2's common-mode rejection ratios
- F) the square root of the product of A1 and A2's common-mode rejection ratios
- G) the size of A2's common-mode rejection ratio
- H) the size of A1's common-mode rejection ratio
- I) The difference in the common-mode rejection ratio of A1 and A2 themselves
- J) input resistance

➋ Question Format Example 2

The common-mode rejection ratio of the first stage amplification circuit in a three-op-amp differential circuit is determined by ().

- A. the absolute value of the difference in the common-mode rejection ratio of A1 and A2 themselves
- B. all of the above
- C. the average of A1 and A2's common-mode rejection ratios
- D. the sum of A1 and A2's common-mode rejection ratios
- E. the product of A1 and A2's common-mode rejection ratios
- F. the square root of the product of A1 and A2's common-mode rejection ratios
- G. the size of A2's common-mode rejection ratio
- H. the size of A1's common-mode rejection ratio
- I. The difference in the common-mode rejection ratio of A1 and A2 themselves
- J. input resistance Your response:

❶ Question Format Example 3

Question:

The common-mode rejection ratio of the first stage amplification circuit in a three-op-amp differential circuit is determined by ().

Options:

- A) the absolute value of the difference in the common-mode rejection ratio of A1 and A2 themselves
- B) all of the above
- C) the average of A1 and A2's common-mode rejection ratios
- D) the sum of A1 and A2's common-mode rejection ratios
- E) the product of A1 and A2's common-mode rejection ratios
- F) the square root of the product of A1 and A2's common-mode rejection ratios
- G) the size of A2's common-mode rejection ratio
- H) the size of A1's common-mode rejection ratio
- I) The difference in the common-mode rejection ratio of A1 and A2 themselves
- J) input resistance Please begin answering.

❶ Question Format Example 4

Q: The common-mode rejection ratio of the first stage amplification circuit in a three-op-amp differential circuit is determined by (). (A) the absolute value of the difference in the common-mode rejection ratio of A1 and A2 themselves (B) all of the above (C) the average of A1 and A2's common-mode rejection ratios (D) the sum of A1 and A2's common-mode rejection ratios (E) the product of A1 and A2's common-mode rejection ratios (F) the square root of the product of A1 and A2's common-mode rejection ratios (G) the size of A2's common-mode rejection ratio (H) the size of A1's common-mode rejection ratio (I) The difference in the common-mode rejection ratio of A1 and A2 themselves (J) input resistance

❶ Question Format Example 5

Question: The common-mode rejection ratio of the first stage amplification circuit in a three-op-amp differential circuit is determined by ().

Options:

- (A) the absolute value of the difference in the common-mode rejection ratio of A1 and A2 themselves
- (B) all of the above
- (C) the average of A1 and A2's common-mode rejection ratios
- (D) the sum of A1 and A2's common-mode rejection ratios
- (E) the product of A1 and A2's common-mode rejection ratios

- (F) the square root of the product of A1 and A2's common-mode rejection ratios
- (G) the size of A2's common-mode rejection ratio
- (H) the size of A1's common-mode rejection ratio
- (I) The difference in the common-mode rejection ratio of A1 and A2 themselves
- (J) input resistance

❶ Question Format Example 6

Question: The common-mode rejection ratio of the first stage amplification circuit in a three-op-amp differential circuit is determined by ().

Options:

- A: the absolute value of the difference in the common-mode rejection ratio of A1 and A2 themselves
- B: all of the above
- C: the average of A1 and A2's common-mode rejection ratios
- D: the sum of A1 and A2's common-mode rejection ratios
- E: the product of A1 and A2's common-mode rejection ratios
- F: the square root of the product of A1 and A2's common-mode rejection ratios
- G: the size of A2's common-mode rejection ratio
- H: the size of A1's common-mode rejection ratio
- I: The difference in the common-mode rejection ratio of A1 and A2 themselves
- J: input resistance

H. Benchmarks for Data Expansion

Table 11. Benchmark List for Data Supplementation in SuperGPQA Annotation.

| Benchmark Name | Title | Year |
|------------------|--|------|
| LawBench | LawBench: Benchmarking Legal Knowledge of Large Language Models Fei et al. [2023] | 2023 |
| MedMCQA | MedMCQA: A Large-scale Multi-Subject Multi-Choice Dataset for Medical domain Question Answering Pal et al. [2022] | 2022 |
| MedQA | What Disease does this Patient Have? A Large-scale Open Domain Question Answering Dataset from Medical Exams Jin et al. [2020] | 2020 |
| MMLU-Pro | MMLU-Pro: A More Robust and Challenging Multi-Task Language Understanding Benchmark Wang et al. [2024b] | 2024 |
| MMLU-CF | MMLU-CF: A Contamination-free Multi-task Language Understanding Benchmark Zhao et al. [2024] | 2024 |
| ShoppingMMLU | Shopping MMLU: A Massive Multi-Task Online Shopping Benchmark for Large Language Models Jin et al. [2024] | 2024 |
| UTMath | UTMath: Math Evaluation with Unit Test via Reasoning-to-Coding Thoughts Yang et al. [2024b] | 2024 |
| MusicTheoryBench | ChatMusician: Understanding and Generating Music Intrinsically with LLM Yuan et al. [2024] | 2024 |
| Omni-Math | Omni-MATH: A Universal Olympiad Level Mathematical Benchmark For Large Language Models Gao et al. [2024] | 2024 |
| U-MATH | U-MATH: A University-Level Benchmark for Evaluating Mathematical Skills in LLMs Chernyshev et al. [2024] | 2024 |

| | | |
|-----------------------|--|------|
| Putnam-AXIOM | Putnam-AXIOM: A Functional and Static Benchmark for Measuring Higher Level Mathematical Reasoning Fronsdal et al. [2024] | 2024 |
| Short-form Factuality | Measuring short-form factuality in large language models Wei et al. [2024b] | 2024 |
| Chinese SimpleQA | Chinese SimpleQA: A Chinese Factuality Evaluation for Large Language Models He et al. [2024b] | 2024 |
| AIME-AOPS | AIME Problems and Solutions of Problem Solving [2024] | 2024 |
| AIMO Validation AIME | AIMO Validation AIME: Internal Validation Set for AIMO Progress Prize AI-MO [2024] | 2024 |

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I. More Comprehensive Analysis of Baseline Performances

In addition to the models discussed in the [subsection 4.2](#), [Table 12](#) and [Table 13](#) provide a more comprehensive analysis of baseline performances, including evaluations of models from the Yi-1.5 (6B, 9B), OLMo-2 (7B), Mistral (Small), granite-3.1 (2B), Gemma-2 (2B, 9B), Llama-3.1 (8B), Mixtral (8x7B), and K2 [\[Liu et al., 2025\]](#).

| Model | Overall (sample) | Overall (subfield) | Overall (field) | Overall (discipline) | Easy (sample) | Middle (sample) | Hard (sample) |
|-----------------------------|---------------------|-----------------------|--------------------|-------------------------|------------------|--------------------|------------------|
| Reasoning Models | | | | | | | |
| DeepSeek-R1 | 61.82 | 62.61 | 61.23 | 59.95 | 63.59 | 63.63 | 56.87 |
| o1-2024-12-17 | 60.24 | 61.25 | <u>59.94</u> | 59.44 | 64.40 | <u>61.44</u> | 53.67 |
| DeepSeek-R1-Zero | 60.24 | 61.62 | 60.95 | 60.99 | 65.06 | 62.61 | 50.99 |
| o3-mini-2025-01-31-high | 55.22 | 54.94 | 52.11 | 48.32 | 53.05 | 56.09 | 56.16 |
| o3-mini-2025-01-31-medium | 52.69 | 52.66 | 49.95 | 46.07 | 51.30 | 53.79 | 52.37 |
| o3-mini-2025-01-31-low | 48.03 | 48.51 | 45.89 | 42.63 | 48.80 | 50.21 | 43.53 |
| o1-mini-2024-09-12 | 45.22 | 45.46 | 42.53 | 39.33 | 46.77 | 47.34 | 40.00 |
| QwQ | 43.59 | 44.40 | 43.19 | 41.63 | 46.46 | 47.40 | 34.07 |
| Chat Models | | | | | | | |
| Doubaot-1.5-pro-32k-250115 | 55.09 | 56.55 | 55.62 | 54.39 | 57.70 | 60.15 | 43.80 |
| Doubaot-1.5-pro-32k-241225 | 50.93 | 52.41 | 51.76 | 51.24 | 53.54 | 56.56 | 38.70 |
| qwen-max-2025-01-25 | 50.08 | 52.75 | 52.47 | <u>51.65</u> | 58.16 | <u>54.95</u> | 33.09 |
| claude-3.5-sonnet-20241022 | 48.16 | 51.38 | 51.23 | 53.15 | 59.04 | 51.91 | 29.99 |
| gemini-2.0-flash | 47.73 | 48.70 | 47.80 | 46.10 | 53.06 | 49.56 | 38.84 |
| DeepSeek-V3 | 47.40 | 49.10 | 48.31 | 47.35 | 55.63 | 50.11 | 33.86 |
| MiniMax-Text-01 | 45.11 | 47.46 | 46.97 | 47.06 | 54.51 | 48.60 | 28.98 |
| gpt-4o-2024-11-20 | 44.40 | 47.62 | 47.50 | 48.84 | 56.84 | 48.75 | 23.50 |
| Llama-3.1-405B-Instruct | 43.14 | 46.43 | 45.83 | 47.35 | 56.06 | 46.31 | 23.70 |
| gpt-4o-2024-08-06 | 41.64 | 44.79 | 44.91 | 46.29 | 55.22 | 45.11 | 20.98 |
| Qwen2.5-72B-Instruct | 40.75 | 43.66 | 43.32 | 42.10 | 48.84 | 45.42 | 24.10 |
| Mistral-Large-Instruct-2411 | 40.65 | 43.38 | 43.13 | 43.37 | 52.92 | 43.28 | 22.81 |
| qwen-max-2024-09-19 | 39.96 | 42.93 | 42.16 | 41.62 | 50.23 | 43.63 | 22.60 |
| gpt-4o-2024-05-13 | 39.76 | 43.19 | 43.13 | 45.23 | 53.37 | 42.38 | 20.45 |
| Qwen2.5-32B-Instruct | 38.76 | 41.18 | 40.40 | 39.43 | 47.42 | 43.05 | 22.13 |
| Llama-3.3-70B-Instruct | 37.69 | 40.56 | 40.15 | 41.12 | 49.68 | 40.68 | 19.55 |
| phi-4 | 37.65 | 39.59 | 38.61 | 37.66 | 45.43 | 40.91 | 23.69 |
| Qwen2.5-14B-Instruct | 35.15 | 37.72 | 37.41 | 36.07 | 44.82 | 37.90 | 19.97 |
| Llama-3.1-70B-Instruct | 34.86 | 38.94 | 39.18 | 40.57 | 48.22 | 37.85 | 15.22 |
| Yi-Lightning | 33.42 | 36.57 | 36.45 | 36.92 | 43.38 | 35.32 | 19.35 |
| Mixtral-8x22B-Instruct-v0.1 | 29.23 | 32.14 | 32.28 | 32.82 | 42.52 | 29.73 | 13.82 |
| Qwen2.5-7B-Instruct | 28.78 | 30.78 | 30.37 | 30.63 | 37.77 | 30.98 | 15.23 |
| gemma-2-27b-it | 27.43 | 30.50 | 30.42 | 31.30 | 40.90 | 27.45 | 12.64 |
| Yi-1.5-34B-Chat | 26.03 | 28.81 | 28.84 | 29.08 | 36.99 | 26.74 | 12.81 |
| Mistral-Small-Instruct-2409 | 25.89 | 28.46 | 28.69 | 28.59 | 37.93 | 25.89 | 12.70 |
| gemma-2-9b-it | 24.04 | 26.89 | 27.06 | 27.74 | 37.81 | 23.05 | 10.60 |
| Qwen2.5-3B-Instruct | 23.31 | 25.45 | 25.86 | 25.57 | 33.10 | 23.50 | 12.24 |
| Yi-1.5-9B-Chat | 23.17 | 25.32 | 25.65 | 26.07 | 32.75 | 24.05 | 11.19 |
| K2-Chat | 22.47 | 24.59 | 24.61 | 24.61 | 30.58 | 21.95 | 14.44 |
| Mixtral-8x7B-Instruct-v0.1 | 22.10 | 24.76 | 24.73 | 26.36 | 34.19 | 20.52 | 11.49 |
| granite-3.1-8b-instruct | 20.83 | 22.85 | 22.92 | 22.26 | 29.48 | 19.79 | 13.09 |
| Llama-3.1-8B-Instruct | 20.50 | 24.07 | 24.52 | 26.12 | 32.82 | 20.37 | 7.22 |
| Yi-1.5-6B-Chat | 19.24 | 21.32 | 21.39 | 22.21 | 27.90 | 18.83 | 10.44 |
| Qwen2.5-1.5B-Instruct | 18.82 | 20.91 | 20.75 | 22.11 | 27.41 | 18.19 | 10.45 |
| OLMo-2-1124-13B-Instruct | 18.66 | 20.46 | 20.60 | 21.80 | 27.10 | 17.85 | 10.74 |
| gemma-2-2b-it | 18.61 | 19.91 | 19.97 | 20.50 | 26.40 | 16.95 | 12.85 |
| granite-3.1-2b-instruct | 17.92 | 19.02 | 19.11 | 19.58 | 23.94 | 17.58 | 11.87 |
| Mistral-7B-Instruct-v0.3 | 17.82 | 19.64 | 19.65 | 20.09 | 26.37 | 16.64 | 10.41 |
| MAP-Neo-7B-Instruct-v0.1 | 17.05 | 18.52 | 18.42 | 18.70 | 23.26 | 16.62 | 10.95 |
| OLMo-2-1124-7B-Instruct | 16.81 | 18.08 | 18.57 | 18.85 | 22.80 | 15.82 | 11.90 |
| Qwen2.5-0.5B-Instruct | 10.77 | 11.92 | 12.47 | 13.47 | 14.90 | 10.88 | 6.07 |
| Base Models | | | | | | | |
| Qwen2.5-72B | 34.33 | 38.08 | 38.70 | 39.54 | 46.20 | 38.12 | 15.01 |
| Qwen2.5-32B | 33.16 | 36.52 | 37.33 | <u>38.29</u> | 45.12 | <u>36.58</u> | 14.34 |
| DeepSeek-V3-Base | 32.14 | 34.79 | 34.58 | 34.71 | 41.28 | 34.50 | 18.20 |
| Qwen2.5-14B | 30.19 | 33.33 | 34.14 | 34.54 | <u>42.27</u> | 31.44 | 14.85 |
| Yi-1.5-34B | 27.62 | 30.78 | 31.03 | 32.55 | 39.68 | 27.95 | 13.86 |
| Llama-3.1-70B | 27.22 | 30.52 | 31.28 | 32.55 | 40.78 | 26.95 | 12.78 |
| Qwen2.5-7B | 25.36 | 28.19 | 28.73 | 29.60 | 36.58 | 25.94 | 12.10 |
| Llama-3.1-405B | 25.23 | 28.09 | 28.33 | 30.15 | 37.58 | 25.12 | 11.86 |
| gemma-2-27b | 24.49 | 27.35 | 27.96 | 28.58 | 36.26 | 24.07 | 12.27 |
| Yi-1.5-9B | 23.10 | 25.40 | 25.69 | 26.17 | 32.52 | 22.98 | 12.96 |
| gemma-2-9b | 22.56 | 25.19 | 25.47 | 26.26 | 33.88 | 21.34 | 12.20 |
| Mixtral-8x22B-v0.1 | 22.41 | 24.71 | 25.04 | 25.02 | 32.78 | 21.67 | 12.26 |
| Mixtral-8x7B-v0.1 | 21.76 | 24.92 | 25.45 | 27.36 | 33.66 | 20.32 | 11.13 |
| K2 | 20.92 | 23.62 | 23.88 | 24.65 | 30.97 | 20.01 | 11.40 |
| Yi-1.5-6B | 20.20 | 22.10 | 22.56 | 23.44 | 28.37 | 19.64 | 12.20 |
| Qwen2.5-3B | 20.14 | 22.81 | 23.30 | 24.42 | 30.42 | 19.81 | 9.40 |
| Llama-3.1-8B | 19.93 | 22.42 | 22.77 | 23.87 | 30.33 | 18.94 | 10.16 |
| Mistral-7B-v0.3 | 19.48 | 21.50 | 21.81 | 22.27 | 27.62 | 18.65 | 11.96 |
| Qwen2.5-1.5B | 17.17 | 19.31 | 19.80 | 21.35 | 24.52 | 16.79 | 9.74 |
| granite-3.1-2b-base | 16.18 | 17.90 | 17.91 | 18.09 | 23.13 | 14.91 | 10.67 |
| OLMo-2-1124-13B | 16.07 | 18.75 | 19.82 | 21.37 | 27.24 | 14.41 | 6.57 |
| MAP-Neo-7B | 15.76 | 17.48 | 18.26 | 19.54 | 22.86 | 14.64 | 9.83 |
| granite-3.1-8b-base | 15.69 | 16.98 | 16.79 | 16.65 | 20.40 | 15.65 | 10.60 |
| OLMo-2-1124-7B | 15.15 | 17.62 | 18.30 | 19.60 | 24.43 | 13.83 | 7.15 |
| gemma-2-2b | 13.57 | 14.98 | 15.43 | 16.21 | 19.12 | 13.47 | 7.63 |
| Qwen2.5-0.5B | 10.74 | 11.88 | 12.09 | 13.25 | 14.41 | 10.78 | 6.65 |

Table 12. Detailed Performance Overview on SuperGPQA- Pivot Table 1. LLMs are scored sample-wise, subfield-wise, field-wise, and discipline-wise levels to ensure fair assessment despite imbalanced question counts. The columns Easy(sample), Middle(sample), and Hard(sample) represent average scores according to difficulty. The highest score in each column is indicated with a **boxed**; the second-best score is in **bold**, and the third-best score is underlined.

| Model | Agr. | Econ. | Edu. | Eng. | Hist. | Law | Lit & Arts | Mgt. | Med. | Mil Sci. | Phil. | Sci. | Soc. | |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------|
| Reasoning Models | | | | | | | | | | | | | | |
| DeepSeek-R1 | 54.43 | 66.09 | 54.75 | 63.10 | 55.19 | 65.24 | 52.45 | 57.09 | 59.93 | 57.07 | 63.11 | [63.69] | 67.13 | |
| DeepSeek-R1-Zero | 53.81 | 66.44 | 60.54 | 60.28 | 58.61 | 66.77 | 56.86 | 59.68 | 60.65 | 58.54 | [63.69] | 59.93 | 67.13 | |
| o1-2024-12-17 | 50.93 | 61.17 | 53.31 | 59.17 | 60.98 | 63.87 | <u>55.79</u> | 57.29 | 62.25 | [60.49] | 61.38 | 61.76 | 64.34 | |
| o3-mini-2025-01-31-high | 41.03 | 54.07 | 46.28 | 56.41 | 36.80 | 45.73 | 39.44 | 51.50 | 51.72 | 46.34 | 51.01 | 61.72 | 46.15 | |
| o3-mini-2025-01-31-medium | 40.62 | 51.32 | 41.74 | 53.83 | 35.01 | 43.60 | 37.11 | 48.50 | 50.34 | 45.85 | 48.13 | 58.79 | 44.06 | |
| o3-mini-2025-01-31-low | 37.32 | 45.25 | 38.43 | 48.20 | 32.94 | 39.79 | 36.22 | 43.71 | 48.09 | 41.46 | 44.09 | 53.24 | 45.45 | |
| o1-mini-2024-09-12 | 34.02 | 45.02 | 36.16 | 45.41 | 26.26 | 35.98 | 32.22 | 40.52 | 44.32 | 39.51 | 39.48 | 51.09 | 41.26 | |
| QwQ | 38.14 | 47.77 | 45.25 | 43.37 | 29.53 | 45.88 | 32.82 | 41.32 | 43.88 | 40.00 | 43.52 | 46.33 | 43.36 | |
| Chat Models | | | | | | | | | | | | | | |
| Douba-1.5-pro-32k-250115 | 50.93 | 65.06 | 55.58 | 55.60 | 42.88 | 58.84 | 42.30 | 53.29 | 59.13 | 54.15 | [61.96] | 55.54 | 51.75 | |
| Douba-1.5-pro-32k-241225 | 47.42 | 60.14 | 54.75 | 50.76 | 37.54 | 54.12 | 38.31 | 52.69 | 54.99 | 53.66 | 57.06 | 51.57 | 53.15 | |
| claude-3-5-sonnet-20241022 | 47.01 | 56.59 | 53.72 | 47.57 | <u>53.56</u> | 60.21 | 50.42 | 51.30 | 49.26 | <u>59.51</u> | 52.45 | 45.02 | 64.34 | |
| qwen-max-2025-01-25 | 44.33 | 57.50 | 56.40 | 50.81 | 44.81 | 54.12 | 44.93 | 54.69 | 56.37 | 49.27 | 56.20 | 47.51 | 54.55 | |
| Llama-3.1-405B-Instruct | 43.09 | 49.71 | 45.45 | 41.89 | 50.00 | <u>55.34</u> | 43.20 | 47.70 | 49.04 | 52.20 | 48.41 | 39.80 | 49.65 | |
| gpt-4o-2024-11-20 | 42.27 | 46.74 | 50.00 | 42.83 | 52.52 | 53.81 | 46.72 | 47.31 | 52.52 | 52.20 | 52.74 | 40.67 | 54.55 | |
| gpt-4o-2024-05-13 | 41.44 | 40.78 | 44.21 | 37.47 | 50.74 | 52.90 | 45.11 | 41.32 | 48.82 | 50.73 | 45.24 | 35.41 | 53.85 | |
| DeepSeek-V3 | 41.24 | 49.48 | 43.80 | 47.21 | 47.18 | 51.07 | 45.23 | 48.50 | 46.10 | 48.29 | 43.23 | 48.30 | 55.94 | |
| Qwen2.5-72B-Instruct | 41.24 | 46.62 | 44.42 | 41.12 | 30.71 | 45.88 | 34.90 | 42.32 | 45.74 | 45.37 | 43.52 | 39.33 | 46.15 | |
| MiniMax-Text-01 | 39.79 | 49.60 | 47.52 | 44.88 | 45.25 | 54.27 | 43.02 | 48.90 | 47.08 | 48.29 | 45.53 | 43.81 | 53.85 | |
| gpt-4o-2024-08-06 | 39.59 | 40.78 | 44.42 | 38.84 | <u>50.89</u> | 54.12 | <u>46.30</u> | 45.51 | 50.49 | 50.73 | 47.84 | 38.41 | 53.85 | |
| Mistral-Large-Instruct-2411 | 38.76 | 42.27 | 42.15 | 39.66 | 44.96 | 47.87 | 41.11 | 43.31 | 43.23 | 48.78 | 42.07 | 39.24 | 50.35 | |
| gemini-2.0-flash | 38.56 | 45.93 | 42.36 | 48.37 | 45.25 | 49.24 | 43.68 | 41.32 | 43.77 | 51.22 | 45.53 | <u>50.20</u> | 53.85 | |
| Llama-3.1-70B-Instruct | 37.11 | 41.12 | 41.94 | 33.88 | 33.09 | 45.88 | 35.08 | 46.11 | 44.21 | 47.80 | 42.94 | 30.04 | 48.25 | |
| Llama-3.3-70B-Instruct | 36.70 | 40.55 | 40.29 | 36.44 | 41.25 | 44.66 | 38.54 | 45.51 | 43.77 | 46.34 | 42.94 | 34.96 | 42.66 | |
| qwen-max-2024-09-19 | 36.49 | 45.02 | 45.66 | 39.84 | 35.16 | 44.05 | 39.08 | 45.11 | 43.41 | 47.32 | 43.23 | 38.24 | 38.46 | |
| Qwen2.5-32B-Instruct | 36.49 | 43.07 | 45.45 | 38.93 | 30.71 | 41.92 | <u>32.76</u> | 39.52 | 42.21 | 44.88 | 39.19 | 38.24 | 39.16 | |
| Qwen2.5-14B-Instruct | 36.08 | 37.69 | 39.26 | 35.87 | 26.41 | 37.04 | 31.44 | 41.52 | 36.91 | 38.05 | 38.04 | 34.20 | 36.36 | |
| Yi-Lighting | 33.81 | 39.18 | 35.95 | 32.53 | 36.05 | 37.35 | 36.34 | 38.12 | 36.95 | 42.44 | 37.75 | 30.85 | 42.66 | |
| phi-4 | 32.78 | 40.21 | 39.26 | 37.27 | 30.27 | 41.46 | 31.62 | 39.12 | 37.79 | 39.02 | 40.63 | 38.87 | 41.26 | |
| gemma-2-27B-it | 31.13 | 29.32 | 30.99 | 26.72 | 24.78 | 35.06 | 29.42 | 34.93 | 31.00 | 39.02 | 35.45 | 24.81 | 34.27 | |
| Qwen2.5-7B-Instruct | 29.28 | 34.59 | 35.33 | 28.38 | 22.85 | 32.62 | 24.28 | 33.33 | 32.60 | 32.68 | 34.58 | 27.54 | 30.07 | |
| Mistral-Small-Instruct-2409 | 28.87 | 26.23 | 26.86 | 25.25 | 25.96 | 30.95 | 27.57 | 30.54 | 28.53 | 34.15 | 29.68 | 24.17 | 32.87 | |
| Yi-1.5-34B-Chat | 28.87 | 31.27 | 30.99 | 25.67 | 23.00 | 34.45 | 27.15 | 31.54 | 29.73 | 33.17 | 30.26 | 23.27 | 28.67 | |
| Mixtral-8x22B-Instruct-v0.1 | 28.25 | 33.45 | 33.68 | 29.02 | 30.86 | 34.60 | 30.55 | 35.13 | 30.53 | 44.39 | 32.85 | 26.95 | 36.36 | |
| Mixtral-8x7B-Instruct-v0.1 | 27.22 | 24.51 | 28.31 | 21.16 | 25.37 | 30.79 | 26.85 | 26.15 | 26.13 | 30.73 | 25.94 | 18.70 | 30.77 | |
| gemma-2-9b-it | 27.01 | 27.15 | 32.64 | 23.24 | 22.26 | 28.51 | 27.45 | 32.14 | 27.44 | 34.15 | 29.39 | 21.26 | 27.97 | |
| Qwen2.5-3B-Instruct | 25.36 | 26.35 | 30.99 | 22.83 | 18.55 | 25.61 | 22.32 | 30.94 | 26.82 | 27.32 | 27.09 | 21.64 | 26.57 | |
| granite-3.1-8b-instruct | 24.74 | 20.16 | 23.76 | 21.60 | 16.32 | 24.70 | 20.53 | 25.15 | 20.58 | 27.80 | 21.33 | 19.70 | 23.08 | |
| Llama-3.1-8B-Instruct | 24.74 | 24.40 | 29.55 | 19.07 | 20.03 | 26.68 | 20.94 | 34.13 | 30.20 | 34.63 | 27.67 | 16.08 | 31.47 | |
| gemma-2-2b-it | 24.33 | 21.31 | 19.42 | 18.30 | 17.06 | 21.80 | 19.21 | 21.56 | 19.27 | 26.83 | 19.60 | 17.53 | 20.28 | |
| Yi-1.5-9B-Chat | 24.12 | 29.90 | 30.99 | 23.04 | 16.91 | 28.20 | 20.70 | 31.94 | 25.74 | 28.29 | 27.09 | 21.23 | 30.77 | |
| K2-Chat | 22.68 | 23.37 | 27.27 | 23.10 | 16.02 | 30.49 | 23.39 | 28.74 | 23.99 | 28.29 | 27.09 | 20.32 | 25.17 | |
| Qwen2.5-1.5B-Instruct | 22.27 | 22.57 | 27.27 | 17.64 | 16.47 | 26.37 | 17.84 | 24.95 | 22.58 | 25.37 | 27.67 | 16.85 | 19.58 | |
| OLMo-2-1124-13B-Instruct | 20.82 | 22.68 | 25.21 | 18.18 | 16.91 | 22.10 | 19.57 | 21.96 | 21.81 | 25.85 | 27.38 | 16.39 | 24.48 | |
| OLMo-2-1124-7B-Instruct | 20.82 | 14.66 | 20.25 | 16.52 | 16.32 | 18.45 | 18.08 | 22.95 | 17.82 | 23.41 | 21.90 | 15.64 | 18.18 | |
| Yi-1.5-6B-Chat | 20.41 | 23.83 | 25.62 | 18.50 | 13.95 | 25.61 | 18.79 | 24.15 | 21.89 | 29.27 | 25.36 | 17.60 | 23.78 | |
| Mistral-7B-Instruct-v0.3 | 20.00 | 17.75 | 18.18 | 17.28 | 15.88 | 21.19 | 21.12 | 23.55 | 20.04 | 26.83 | 22.19 | 16.18 | 20.98 | |
| granite-3.1-2b-instruct | 18.14 | 19.93 | 19.83 | 17.64 | 16.77 | 23.02 | 19.03 | 23.15 | 17.46 | 22.44 | 19.02 | 17.09 | 20.98 | |
| MAP-Neo-7B-Instruct-v0.1 | 17.94 | 17.64 | 21.69 | 16.79 | 13.50 | 21.19 | 16.35 | 20.96 | 18.91 | 25.85 | 21.61 | 15.99 | 14.69 | |
| Qwen2.5-0.5B-Instruct | 16.91 | 16.49 | 17.98 | 9.77 | 10.09 | 12.89 | 15.97 | 14.92 | 11.78 | 12.23 | 16.59 | 15.56 | 8.74 | 13.99 |
| Base Models | | | | | | | | | | | | | | |
| Qwen2.5-32B | 38.76 | 40.89 | <u>45.87</u> | 32.70 | 28.49 | 39.94 | 30.91 | 40.72 | 38.84 | 47.80 | 43.52 | 29.45 | 39.86 | |
| Qwen2.5-72B | 36.29 | 44.33 | 45.25 | 33.39 | 31.31 | 44.21 | <u>35.50</u> | 43.51 | 43.12 | 46.34 | 42.94 | 29.38 | 38.46 | |
| Qwen2.5-14B | 34.02 | 34.82 | 40.08 | 30.26 | 28.49 | 36.89 | 28.94 | 40.32 | 34.37 | 40.00 | 37.75 | 26.68 | 36.36 | |
| Llama-3.1-405B | 29.28 | 27.95 | 31.20 | 23.61 | <u>34.12</u> | 34.30 | 30.79 | 34.13 | 29.47 | 39.51 | 31.70 | 21.47 | 24.48 | |
| Llama-3.1-70B | 28.87 | 29.67 | 36.36 | 26.19 | 32.94 | 33.38 | <u>32.64</u> | 36.73 | 30.96 | 40.98 | 36.89 | 23.30 | 34.27 | |
| gemma-2-27b | 28.87 | 27.26 | 30.79 | 24.09 | 22.85 | 28.96 | 27.51 | 32.73 | 27.80 | 37.56 | 31.70 | 21.38 | 30.07 | |
| DeepSeek-V3-Base | 28.66 | 35.17 | 39.05 | 31.87 | 30.12 | <u>37.20</u> | 33.65 | 37.33 | 34.70 | 37.07 | 38.62 | [30.08] | 37.76 | |
| Qwen2.5-7B | 28.25 | 31.96 | 38.02 | 24.89 | 22.55 | 30.34 | 25.04 | 28.54 | 30.56 | 30.56 | 31.71 | 36.60 | 22.04 | 34.27 |
| Yi-1.5-34B | 28.25 | <u>35.85</u> | 37.60 | 27.32 | 24.63 | 34.45 | 30.25 | 36.13 | 31.18 | 40.49 | 35.45 | 23.80 | <u>37.76</u> | |
| Mixtral-8x7B-v0.1 | 28.04 | 24.97 | 29.34 | 20.67 | 23.89 | 30.79 | 27.27 | 30.74 | 25.05 | 37.56 | 30.84 | 17.87 | 28.67 | |
| gemma-2-9b | 27.22 | 26.23 | 30.99 | 21.79 | 21.81 | 26.83 | 23.81 | 28.94 | 26.06 | 32.68 | 27.09 | 20.01 | 27.97 | |
| Mistral-7B-v0.3 | 25.98 | 20.96 | 25.62 | 19.02 | 14.84 | 24.24 | 20.11 | 23.55 | 22.61 | 30.24 | 25.94 | 17.47 | 18.88 | |
| Yi-1.5-9B | 25.77 | 26.12 | 34.71 | 23.59 | 18.69 | 25.15 | 23.21 | 30.54 | 23.85 | 31.22 | 28.53 | 20.86 | 27.97 | |
| Mixtral-8x22B-v0.1 | 23.92 | 23.94 | 27.27 | 22.02 | 20.33 | 27.59 | 24.64 | 30.14 | 22.50 | 28.78 | 24.50 | 20.96 | 28.67 | |
| Llama-3.1-8B | 23.30 | 22.22 | 25.00 | 19.56 | 20.92 | 26.98 | 21.48 | 25.95 | 24.54 | 33.17 | 26.80 | 16.62 | 23.78 | |
| K2 | 22.68 | 20.62 | 28.93 | 20.50 | 17.80 | 28.35 | 24.40 | 27.74 | 22.94 | 33.17 | 29.11 | 18.39 | 25.87 | |
| Qwen2.5-3B | 22.47 | 23.83 | 28.31 | 19.74 | 18.40 | 26.37 | 21.60 | 28.14 | 25.41 | 30.73 | 29.39 | 16.54 | 26.57 | |
| Yi-1.5-6B | 22.06 | 25.89 | 27.07 | 19.93 | 14.99 | 25.46 | 21.36 | 26.75 | 21.92 | 30.73 | 26.80 | 17.98 | 23.78 | |
| MAP-Neo-7B | 20.21 | 18.10 | 23.35</td | | | | | | | | | | | |

J. Ranking of the Top Five Models in Each of the 285 Subfields

Table 14. Detailed Listing of the Top Five Models in Each of the 285 Subfields.

| Model | Score | Model | Score | Model | Score |
|--|-------|--|-------|--|-------|
| Animal Nutrition and Feed Science | | Applied Optics | | Pharmaceutics | |
| DeepSeek-R1 | 50.00 | DeepSeek-R1 | 58.06 | DeepSeek-R1-Zero | 75.34 |
| DeepSeek-R1-Zero | 50.00 | o3-mini-2025-01-31-high | 57.26 | qwen-max-2025-01-25 | 69.86 |
| claude-3-5-sonnet-20241022 | 48.08 | o1-2024-12-17 | 56.45 | Doubao-1.5-pro-32k-250115 | 68.49 |
| o3-mini-2025-01-31-medium | 48.08 | o3-mini-2025-01-31-medium | 53.23 | Doubao-1.5-pro-32k-241225 | 67.12 |
| Qwen2.5-72B-Instruct | 48.08 | o3-mini-2025-01-31-low | 51.61 | DeepSeek-R1 | 64.38 |
| Animal Rearing and Breeding | | Laser Technology | | Pharmacology | |
| Doubao-1.5-pro-32k-250115 | 49.02 | DeepSeek-R1 | 82.00 | DeepSeek-R1-Zero | 56.36 |
| Doubao-1.5-pro-32k-241225 | 47.06 | o3-mini-2025-01-31-high | 76.00 | DeepSeek-R1 | 54.55 |
| DeepSeek-R1 | 47.06 | o1-2024-12-17 | 70.00 | o1-2024-12-17 | 52.73 |
| MiniMax-Text-01 | 45.10 | DeepSeek-R1-Zero | 70.00 | claude-3-5-sonnet-20241022 | 52.73 |
| DeepSeek-R1-Zero | 45.10 | o3-mini-2025-01-31-medium | 68.00 | qwen-max-2025-01-25 | 52.73 |
| Aquaculture | | Optoelectronic Technology | | Epidemiology and Health Statistics | |
| DeepSeek-R1 | 53.57 | o3-mini-2025-01-31-medium | 53.73 | DeepSeek-R1 | 56.63 |
| DeepSeek-R1-Zero | 53.57 | DeepSeek-V3 | 50.75 | Doubao-1.5-pro-32k-241225 | 55.42 |
| o1-2024-12-17 | 46.43 | qwen-max-2025-01-25 | 49.25 | DeepSeek-R1-Zero | 54.22 |
| claude-3-5-sonnet-20241022 | 42.86 | o3-mini-2025-01-31-low | 47.76 | o1-2024-12-17 | 51.81 |
| Doubao-1.5-pro-32k-250115 | 42.86 | o3-mini-2025-01-31-high | 46.27 | qwen-max-2025-01-25 | 51.81 |
| Crop Science | | Theoretical Optics | | Health Toxicology and Environmental Health | |
| Doubao-1.5-pro-32k-250115 | 53.10 | DeepSeek-R1 | 63.70 | o1-2024-12-17 | 73.75 |
| DeepSeek-R1-Zero | 53.10 | o3-mini-2025-01-31-high | 60.00 | Llama-3.1-405B-Instruct | 68.75 |
| DeepSeek-R1 | 50.34 | DeepSeek-R1-Zero | 57.78 | o3-mini-2025-01-31-high | 67.50 |
| o1-2024-12-17 | 49.66 | o3-mini-2025-01-31-medium | 57.04 | gpt-4o-2024-11-20 | 67.50 |
| qwen-max-2025-01-25 | 46.90 | o1-2024-12-17 | 54.81 | claude-3-5-sonnet-20241022 | 65.00 |
| Forest Cultivation and Genetic Breeding | | Oil and Gas Field Development and Storage & Transportation Engineering | | Maternal, Child and Adolescent Health | |
| DeepSeek-R1 | 56.79 | DeepSeek-R1 | 59.68 | o1-2024-12-17 | 73.42 |
| o1-2024-12-17 | 54.32 | o1-2024-12-17 | 56.45 | claude-3-5-sonnet-20241022 | 72.15 |
| Doubao-1.5-pro-32k-250115 | 51.85 | DeepSeek-R1-Zero | 56.45 | DeepSeek-R1-Zero | 69.62 |
| DeepSeek-R1-Zero | 51.85 | qwen-max-2025-01-25 | 51.61 | Doubao-1.5-pro-32k-250115 | 68.35 |
| Doubao-1.5-pro-32k-241225 | 50.62 | o3-mini-2025-01-31-medium | 50.00 | gpt-4o-2024-11-20 | 68.35 |
| Landscape Plants and Ornamental Horticulture | | Poromechanics and Reservoir Physics | | Nutrition and Food Hygiene | |
| DeepSeek-R1-Zero | 68.00 | o1-2024-12-17 | 68.00 | DeepSeek-R1-Zero | 82.00 |
| DeepSeek-R1 | 66.00 | DeepSeek-R1 | 68.00 | claude-3-5-sonnet-20241022 | 72.00 |
| claude-3-5-sonnet-20241022 | 64.00 | DeepSeek-R1-Zero | 68.00 | o1-2024-12-17 | 70.00 |

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| | | | | | |
|-----------------------------|-------|---------------------------------|-------|--|-------|
| gpt-4o-2024-05-13 | 64.00 | Doubao-1.5-pro-32k-250115 | 66.00 | o3-mini-2025-01-31-medium | 70.00 |
| Mistral-Large-Instruct-2411 | 62.00 | Doubao-1.5-pro-32k-241225 | 64.00 | Doubao-1.5-pro-32k-241225 | 70.00 |
| Veterinary Medicine | | Engineering Fluid Mechanics | | Basic Stomatology | |
| o1-2024-12-17 | 64.00 | o3-mini-2025-01-31-medium | 71.43 | qwen-max-2025-01-25 | 54.72 |
| DeepSeek-R1 | 64.00 | DeepSeek-R1 | 67.86 | o1-2024-12-17 | 52.83 |
| Doubao-1.5-pro-32k-241225 | 58.00 | o3-mini-2025-01-31-low | 66.67 | Doubao-1.5-pro-32k-250115 | 52.83 |
| Doubao-1.5-pro-32k-250115 | 58.00 | o3-mini-2025-01-31-high | 64.29 | claude-3-5-sonnet-20241022 | 49.06 |
| DeepSeek-R1-Zero | 58.00 | o1-2024-12-17 | 63.10 | gpt-4o-2024-08-06 | 47.17 |
| Economic Statistics | | Engineering Thermophysics | | Clinical Stomatology | |
| o1-2024-12-17 | 80.00 | DeepSeek-R1 | 69.86 | o1-2024-12-17 | 55.70 |
| DeepSeek-R1 | 74.00 | DeepSeek-R1-Zero | 65.07 | DeepSeek-R1 | 55.70 |
| o3-mini-2025-01-31-high | 72.00 | o3-mini-2025-01-31-high | 60.96 | Doubao-1.5-pro-32k-250115 | 53.16 |
| o3-mini-2025-01-31-medium | 72.00 | o1-2024-12-17 | 60.27 | qwen-max-2025-01-25 | 51.90 |
| DeepSeek-R1-Zero | 70.00 | o3-mini-2025-01-31-medium | 55.48 | DeepSeek-R1-Zero | 48.10 |
| Finance | | Fluid Machinery and Engineering | | Traditional Chinese Health Preservation | |
| DeepSeek-R1 | 68.18 | DeepSeek-R1 | 68.75 | o1-2024-12-17 | 81.36 |
| DeepSeek-R1-Zero | 68.18 | o1-2024-12-17 | 64.06 | DeepSeek-R1-Zero | 81.36 |
| Doubao-1.5-pro-32k-250115 | 67.61 | o3-mini-2025-01-31-high | 56.25 | DeepSeek-R1 | 79.66 |
| o1-2024-12-17 | 66.48 | o3-mini-2025-01-31-medium | 56.25 | Doubao-1.5-pro-32k-250115 | 79.66 |
| o3-mini-2025-01-31-high | 62.50 | gemini-2.0-flash | 51.56 | qwen-max-2025-01-25 | 69.49 |
| Industrial Economics | | Heat Transfer | | Traditional Chinese Medicine Theory | |
| DeepSeek-R1-Zero | 66.67 | DeepSeek-R1 | 73.64 | DeepSeek-R1-Zero | 70.00 |
| DeepSeek-R1 | 65.48 | o1-2024-12-17 | 70.54 | qwen-max-2025-01-25 | 67.78 |
| Doubao-1.5-pro-32k-250115 | 65.48 | o3-mini-2025-01-31-high | 63.57 | DeepSeek-R1 | 66.67 |
| Doubao-1.5-pro-32k-241225 | 64.29 | DeepSeek-R1-Zero | 63.57 | o1-2024-12-17 | 63.33 |
| qwen-max-2025-01-25 | 63.10 | o3-mini-2025-01-31-medium | 61.24 | Doubao-1.5-pro-32k-241225 | 60.00 |
| International Trade | | Internal Combustion Engineering | | Traditional Chinese Pharmacy | |
| DeepSeek-R1 | 71.01 | Doubao-1.5-pro-32k-250115 | 68.00 | Doubao-1.5-pro-32k-250115 | 63.87 |
| DeepSeek-R1-Zero | 71.01 | gemini-2.0-flash | 66.00 | DeepSeek-R1-Zero | 62.18 |
| Doubao-1.5-pro-32k-250115 | 69.57 | o1-2024-12-17 | 64.00 | DeepSeek-R1 | 60.50 |
| Doubao-1.5-pro-32k-241225 | 66.67 | claude-3-5-sonnet-20241022 | 64.00 | o1-2024-12-17 | 57.98 |
| qwen-max-2025-01-25 | 62.32 | DeepSeek-R1 | 64.00 | qwen-max-2025-01-25 | 55.46 |
| Labor Economics | | Power Machinery and Engineering | | Military Command and Information Systems | |
| DeepSeek-R1 | 63.51 | DeepSeek-R1 | 46.15 | DeepSeek-R1-Zero | 58.00 |
| Doubao-1.5-pro-32k-250115 | 59.46 | DeepSeek-R1-Zero | 46.15 | Doubao-1.5-pro-32k-241225 | 56.00 |
| DeepSeek-R1-Zero | 59.46 | o3-mini-2025-01-31-medium | 42.31 | claude-3-5-sonnet-20241022 | 54.00 |
| o1-2024-12-17 | 55.41 | Doubao-1.5-pro-32k-250115 | 42.31 | gemini-2.0-flash | 54.00 |
| claude-3-5-sonnet-20241022 | 54.05 | o3-mini-2025-01-31-high | 38.46 | Qwen2.5-72B-Instruct | 54.00 |

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| National and Defense Economics | | Refrigeration and Cryogenic Engineering | | Military Logistics and Equipment | |
|---------------------------------------|-------|--|-------|--------------------------------------|-------|
| DeepSeek-R1 | 68.00 | o3-mini-2025-01-31-medium | 48.00 | o1-2024-12-17 | 55.56 |
| o1-2024-12-17 | 66.00 | DeepSeek-R1 | 48.00 | claude-3-5-sonnet-20241022 | 53.70 |
| DeepSeek-R1-Zero | 66.00 | Doubao-1.5-pro-32k-250115 | 46.00 | gpt-4o-2024-08-06 | 50.00 |
| Doubao-1.5-pro-32k-241225 | 62.00 | DeepSeek-R1-Zero | 44.00 | gpt-4o-2024-05-13 | 50.00 |
| Doubao-1.5-pro-32k-250115 | 60.00 | DeepSeek-V3 | 42.00 | Llama-3.1-405B-Instruct | 50.00 |
| Public Finance | | Thermal Energy Engineering | | Military Management | |
| Doubao-1.5-pro-32k-250115 | 65.00 | DeepSeek-R1 | 63.30 | claude-3-5-sonnet-20241022 | 70.00 |
| DeepSeek-R1-Zero | 64.17 | o3-mini-2025-01-31-high | 58.72 | qwen-max-2024-09-19 | 70.00 |
| Doubao-1.5-pro-32k-241225 | 60.83 | DeepSeek-R1-Zero | 55.96 | DeepSeek-V3 | 68.00 |
| DeepSeek-R1 | 59.17 | Doubao-1.5-pro-32k-250115 | 55.05 | Doubao-1.5-pro-32k-241225 | 68.00 |
| o1-2024-12-17 | 55.00 | o1-2024-12-17 | 54.13 | gemini-2.0-flash | 66.00 |
| Quantitative Economics | | Cartography and Geographic Information Engineering | | Military Thought and History | |
| DeepSeek-R1-Zero | 67.00 | o3-mini-2025-01-31-low | 66.00 | o1-2024-12-17 | 76.47 |
| DeepSeek-R1 | 66.00 | Doubao-1.5-pro-32k-241225 | 66.00 | DeepSeek-R1 | 70.59 |
| o3-mini-2025-01-31-high | 65.00 | o1-2024-12-17 | 64.00 | DeepSeek-R1-Zero | 70.59 |
| Doubao-1.5-pro-32k-250115 | 65.00 | o3-mini-2025-01-31-high | 62.00 | Doubao-1.5-pro-32k-250115 | 62.75 |
| o1-2024-12-17 | 64.00 | o3-mini-2025-01-31-medium | 62.00 | claude-3-5-sonnet-20241022 | 60.78 |
| Economic History | | Digital Surveying and Remote Sensing Applications | | Ethics | |
| DeepSeek-R1 | 78.00 | DeepSeek-R1 | 61.76 | o1-2024-12-17 | 63.24 |
| DeepSeek-R1-Zero | 78.00 | o1-2024-12-17 | 60.29 | gpt-4o-2024-11-20 | 58.82 |
| claude-3-5-sonnet-20241022 | 72.00 | DeepSeek-R1-Zero | 60.29 | qwen-max-2025-01-25 | 55.88 |
| Doubao-1.5-pro-32k-250115 | 72.00 | claude-3-5-sonnet-20241022 | 55.88 | DeepSeek-R1 | 55.88 |
| Doubao-1.5-pro-32k-241225 | 68.00 | qwen-max-2025-01-25 | 54.41 | Doubao-1.5-pro-32k-241225 | 54.41 |
| Political Economy | | Geodesy and Surveying Engineering | | Logic | |
| DeepSeek-R1 | 60.00 | o1-2024-12-17 | 74.00 | o1-2024-12-17 | 64.29 |
| Doubao-1.5-pro-32k-250115 | 60.00 | DeepSeek-R1 | 74.00 | DeepSeek-R1 | 62.86 |
| Doubao-1.5-pro-32k-241225 | 58.00 | DeepSeek-R1-Zero | 72.00 | Doubao-1.5-pro-32k-250115 | 61.43 |
| DeepSeek-R1-Zero | 56.00 | o3-mini-2025-01-31-high | 70.00 | o3-mini-2025-01-31-high | 58.57 |
| DeepSeek-V3 | 54.00 | Doubao-1.5-pro-32k-250115 | 70.00 | DeepSeek-R1-Zero | 55.71 |
| Western Economics | | Textile Chemistry and Dyeing Engineering | | Philosophical Aesthetics | |
| Mistral-Large-Instruct-2411 | 64.00 | DeepSeek-R1 | 62.00 | DeepSeek-R1-Zero | 61.47 |
| DeepSeek-R1-Zero | 64.00 | claude-3-5-sonnet-20241022 | 56.00 | DeepSeek-R1 | 59.63 |
| qwen-max-2025-01-25 | 58.00 | DeepSeek-R1-Zero | 56.00 | Doubao-1.5-pro-32k-250115 | 52.29 |
| DeepSeek-R1 | 58.00 | o1-2024-12-17 | 52.00 | o1-2024-12-17 | 50.46 |
| Doubao-1.5-pro-32k-250115 | 58.00 | Doubao-1.5-pro-32k-250115 | 52.00 | Doubao-1.5-pro-32k-241225 | 49.54 |
| Educational Technology and Principles | | Textile Materials Science | | Philosophy of Science and Technology | |

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|--------------------------------------|-------|---|-------|---|-------|
| DeepSeek-R1 | 61.46 | DeepSeek-R1-Zero | 80.00 | DeepSeek-R1-Zero | 80.00 |
| Doubao-1.5-pro-32k-241225 | 60.42 | o1-2024-12-17 | 78.00 | Doubao-1.5-pro-32k-241225 | 78.00 |
| DeepSeek-R1-Zero | 60.42 | Doubao-1.5-pro-32k-250115 | 78.00 | Doubao-1.5-pro-32k-250115 | 76.00 |
| qwen-max-2025-01-25 | 55.21 | qwen-max-2025-01-25 | 74.00 | o1-2024-12-17 | 74.00 |
| Doubao-1.5-pro-32k-250115 | 54.17 | DeepSeek-R1 | 74.00 | gpt-4o-2024-11-20 | 70.00 |
| Preschool Education | | Road and Railway Engineering | | Religious Studies | |
| qwen-max-2025-01-25 | 68.00 | DeepSeek-R1-Zero | 56.00 | Doubao-1.5-pro-32k-250115 | 80.00 |
| gpt-4o-2024-11-20 | 66.00 | DeepSeek-R1 | 54.00 | DeepSeek-R1 | 76.00 |
| DeepSeek-R1-Zero | 60.00 | qwen-max-2025-01-25 | 52.00 | DeepSeek-R1-Zero | 76.00 |
| MiniMax-Text-01 | 58.00 | Doubao-1.5-pro-32k-241225 | 50.00 | qwen-max-2025-01-25 | 72.00 |
| DeepSeek-R1 | 58.00 | o1-2024-12-17 | 46.00 | phi-4 | 72.00 |
| Special Education | | Traffic Information Engineering and Control | | Astronomical Observation and Technology | |
| DeepSeek-R1-Zero | 64.00 | DeepSeek-R1 | 56.92 | DeepSeek-R1-Zero | 72.00 |
| qwen-max-2024-09-19 | 62.00 | o1-2024-12-17 | 55.38 | MiniMax-Text-01 | 66.00 |
| qwen-max-2025-01-25 | 62.00 | DeepSeek-R1-Zero | 52.31 | o1-2024-12-17 | 65.00 |
| Qwen2.5-72B | 62.00 | o3-mini-2025-01-31-high | 47.69 | o3-mini-2025-01-31-high | 65.00 |
| claude-3-5-sonnet-20241022 | 60.00 | Doubao-1.5-pro-32k-241225 | 46.15 | DeepSeek-V3 | 64.00 |
| Theory of Curriculum and Instruction | | Transportation Planning and Management | | Astrophysics | |
| DeepSeek-R1-Zero | 66.67 | o1-2024-12-17 | 66.28 | o3-mini-2025-01-31-medium | 60.87 |
| DeepSeek-R1 | 62.75 | DeepSeek-R1-Zero | 66.28 | o1-2024-12-17 | 59.42 |
| Doubao-1.5-pro-32k-250115 | 62.75 | qwen-max-2025-01-25 | 65.12 | DeepSeek-R1 | 57.97 |
| qwen-max-2025-01-25 | 58.82 | Doubao-1.5-pro-32k-241225 | 60.47 | o3-mini-2025-01-31-high | 56.52 |
| o1-2024-12-17 | 56.86 | DeepSeek-R1 | 59.30 | MiniMax-Text-01 | 55.07 |
| Physical Education and Training | | Vehicle Operation Engineering | | Cosmology | |
| qwen-max-2025-01-25 | 50.00 | o1-2024-12-17 | 66.00 | o3-mini-2025-01-31-high | 71.79 |
| DeepSeek-R1-Zero | 50.00 | o3-mini-2025-01-31-high | 64.00 | DeepSeek-R1 | 70.51 |
| o1-2024-12-17 | 48.00 | DeepSeek-R1 | 62.00 | Doubao-1.5-pro-32k-250115 | 69.23 |
| o3-mini-2025-01-31-low | 46.00 | DeepSeek-R1-Zero | 62.00 | o1-2024-12-17 | 66.67 |
| DeepSeek-R1 | 44.00 | gemini-2.0-flash | 60.00 | qwen-max-2025-01-25 | 64.10 |
| Sports Humanities and Sociology | | Military Chemistry and Pyrotechnics | | Solar System Science | |
| DeepSeek-R1-Zero | 66.00 | claude-3-5-sonnet-20241022 | 68.00 | o3-mini-2025-01-31-high | 69.32 |
| gpt-4o-2024-11-20 | 60.00 | gpt-4o-2024-05-13 | 68.00 | DeepSeek-R1 | 67.05 |
| o1-2024-12-17 | 56.00 | o1-2024-12-17 | 62.00 | o1-2024-12-17 | 62.50 |
| claude-3-5-sonnet-20241022 | 56.00 | gpt-4o-2024-11-20 | 62.00 | o3-mini-2025-01-31-medium | 60.23 |
| gpt-4o-2024-08-06 | 56.00 | DeepSeek-R1-Zero | 62.00 | DeepSeek-R1-Zero | 56.82 |
| Sports Science and Medicine | | Weapon Systems Science and Engineering | | Stellar and Interstellar Evolution | |
| Doubao-1.5-pro-32k-250115 | 72.00 | phi-4 | 58.00 | o3-mini-2025-01-31-medium | 67.14 |
| DeepSeek-R1-Zero | 70.00 | o1-2024-12-17 | 56.00 | o1-2024-12-17 | 65.71 |
| Doubao-1.5-pro-32k-241225 | 68.00 | gemini-2.0-flash | 54.00 | DeepSeek-R1 | 64.29 |

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| claude-3-5-sonnet-20241022 | 66.00 | o1-mini-2024-09-12 | 52.00 | DeepSeek-R1-Zero | 64.29 |
| qwen-max-2024-09-19 | 66.00 | gpt-4o-2024-08-06 | 52.00 | o3-mini-2025-01-31-high | 60.00 |
| Psychology | | Archaeology and Museology | | Atmospheric Physics and Atmospheric Environment | |
| Doubao-1.5-pro-32k-250115 | 56.32 | DeepSeek-R1-Zero | 73.08 | claude-3-5-sonnet-20241022 | 55.07 |
| Doubao-1.5-pro-32k-241225 | 54.02 | DeepSeek-R1 | 72.12 | Doubao-1.5-pro-32k-250115 | 52.17 |
| DeepSeek-R1-Zero | 52.87 | o1-2024-12-17 | 70.19 | Doubao-1.5-pro-32k-241225 | 50.72 |
| claude-3-5-sonnet-20241022 | 50.57 | qwen-max-2025-01-25 | 60.58 | DeepSeek-R1-Zero | 50.72 |
| o1-2024-12-17 | 48.28 | claude-3-5-sonnet-20241022 | 59.62 | DeepSeek-R1 | 49.28 |
| Aeronautical and Astronautical Science and Technology | | Historical Geography | | Dynamic Meteorology | |
| DeepSeek-R1 | 65.55 | o1-2024-12-17 | 54.93 | DeepSeek-R1 | 72.00 |
| DeepSeek-R1-Zero | 57.14 | claude-3-5-sonnet-20241022 | 54.23 | o1-2024-12-17 | 66.00 |
| o1-2024-12-17 | 56.30 | Llama-3.1-405B-Instruct | 53.52 | DeepSeek-R1-Zero | 66.00 |
| o3-mini-2025-01-31-high | 54.62 | DeepSeek-R1-Zero | 49.30 | claude-3-5-sonnet-20241022 | 64.00 |
| o3-mini-2025-01-31-medium | 52.94 | gpt-4o-2024-11-20 | 47.18 | Doubao-1.5-pro-32k-241225 | 64.00 |
| Agricultural Environment and Soil-Water Engineering | | World History | | Meteorology | |
| DeepSeek-R1-Zero | 64.81 | o1-2024-12-17 | 60.75 | DeepSeek-R1 | 67.86 |
| o1-2024-12-17 | 57.41 | DeepSeek-R1-Zero | 58.18 | DeepSeek-R1-Zero | 65.48 |
| DeepSeek-R1 | 55.56 | DeepSeek-R1 | 54.44 | claude-3-5-sonnet-20241022 | 54.76 |
| MiniMax-Text-01 | 53.70 | gpt-4o-2024-11-20 | 53.27 | Doubao-1.5-pro-32k-250115 | 54.76 |
| o3-mini-2025-01-31-high | 53.70 | claude-3-5-sonnet-20241022 | 51.87 | Doubao-1.5-pro-32k-241225 | 52.38 |
| Agricultural Mechanization Engineering | | Civil and Commercial Law | | Biochemistry and Molecular Biology | |
| o3-mini-2025-01-31-high | 70.00 | DeepSeek-R1-Zero | 62.71 | DeepSeek-R1 | 68.69 |
| DeepSeek-R1 | 70.00 | MiniMax-Text-01 | 59.32 | Doubao-1.5-pro-32k-250115 | 64.65 |
| o1-2024-12-17 | 66.00 | o1-2024-12-17 | 58.47 | o1-2024-12-17 | 63.64 |
| o3-mini-2025-01-31-medium | 66.00 | DeepSeek-R1 | 58.47 | DeepSeek-R1-Zero | 63.64 |
| DeepSeek-V3 | 64.00 | claude-3-5-sonnet-20241022 | 57.63 | Doubao-1.5-pro-32k-241225 | 62.63 |
| Architectural Design and Theory | | Constitutional and Administrative Law | | Biophysics | |
| qwen-max-2024-09-19 | 60.00 | DeepSeek-R1-Zero | 72.00 | o1-2024-12-17 | 72.00 |
| Doubao-1.5-pro-32k-250115 | 60.00 | DeepSeek-R1 | 70.00 | DeepSeek-R1 | 72.00 |
| Llama-3.1-405B-Instruct | 58.00 | claude-3-5-sonnet-20241022 | 66.00 | DeepSeek-R1-Zero | 70.00 |
| DeepSeek-R1-Zero | 58.00 | qwen-max-2025-01-25 | 62.00 | o1-mini-2024-09-12 | 68.00 |
| o1-2024-12-17 | 56.00 | Doubao-1.5-pro-32k-250115 | 62.00 | DeepSeek-V3 | 68.00 |
| Architectural History | | Contract Law | | Botany | |
| DeepSeek-R1-Zero | 67.74 | DeepSeek-R1-Zero | 78.00 | o1-2024-12-17 | 54.82 |
| DeepSeek-R1 | 66.13 | o1-2024-12-17 | 74.00 | DeepSeek-R1 | 54.22 |
| o1-2024-12-17 | 61.29 | claude-3-5-sonnet-20241022 | 70.00 | DeepSeek-R1-Zero | 53.61 |
| Doubao-1.5-pro-32k-250115 | 61.29 | DeepSeek-R1 | 70.00 | Doubao-1.5-pro-32k-241225 | 49.40 |

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| qwen-max-2025-01-25 | 56.45 | Llama-3.3-70B-Instruct | 70.00 | Douba-1.5-pro-32k-250115 | 46.99 |
| Urban Planning and Design | | Criminal Law | | Cell Biology | |
| DeepSeek-R1 | 68.00 | DeepSeek-R1 | 68.10 | DeepSeek-R1 | 59.77 |
| qwen-max-2025-01-25 | 64.00 | Douba-1.5-pro-32k-250115 | 67.24 | o1-2024-12-17 | 56.32 |
| DeepSeek-R1-Zero | 64.00 | DeepSeek-R1-Zero | 62.93 | o3-mini-2025-01-31-low | 54.02 |
| Douba-1.5-pro-32k-250115 | 60.00 | o1-2024-12-17 | 62.07 | Douba-1.5-pro-32k-250115 | 52.87 |
| MiniMax-Text-01 | 58.00 | qwen-max-2025-01-25 | 58.62 | DeepSeek-R1-Zero | 52.87 |
| Chemical Transport Engineering | | International Law | | Ecology | |
| DeepSeek-R1 | 76.00 | DeepSeek-R1-Zero | 56.14 | o1-2024-12-17 | 56.94 |
| o3-mini-2025-01-31-high | 70.00 | o1-2024-12-17 | 50.88 | DeepSeek-R1-Zero | 55.56 |
| o1-2024-12-17 | 66.00 | DeepSeek-R1 | 50.88 | DeepSeek-R1 | 50.00 |
| o3-mini-2025-01-31-medium | 66.00 | claude-3-5-sonnet-20241022 | 47.37 | Douba-1.5-pro-32k-250115 | 50.00 |
| gemini-2.0-flash | 64.00 | Douba-1.5-pro-32k-241225 | 47.37 | o3-mini-2025-01-31-high | 47.22 |
| Elements of Chemical Reaction Engineering | | Law and Social Governance | | Genetics | |
| o1-2024-12-17 | 70.09 | o1-2024-12-17 | 74.00 | DeepSeek-R1 | 66.85 |
| o3-mini-2025-01-31-high | 70.09 | qwen-max-2025-01-25 | 68.00 | o1-2024-12-17 | 65.22 |
| DeepSeek-R1 | 67.29 | DeepSeek-R1-Zero | 68.00 | DeepSeek-R1-Zero | 64.13 |
| DeepSeek-R1-Zero | 66.36 | gemini-2.0-flash | 66.00 | Douba-1.5-pro-32k-250115 | 63.04 |
| o3-mini-2025-01-31-medium | 64.49 | DeepSeek-R1 | 66.00 | o3-mini-2025-01-31-high | 61.96 |
| Fluid Flow and Heat Transfer in Chemical Engineering | | Legal Theory and Legal History | | Microbiology | |
| DeepSeek-R1 | 62.62 | DeepSeek-R1 | 78.00 | o1-2024-12-17 | 49.69 |
| DeepSeek-R1-Zero | 58.88 | DeepSeek-R1-Zero | 72.00 | Douba-1.5-pro-32k-250115 | 49.69 |
| Douba-1.5-pro-32k-250115 | 54.21 | o1-2024-12-17 | 70.00 | DeepSeek-R1 | 49.07 |
| o1-2024-12-17 | 51.40 | claude-3-5-sonnet-20241022 | 70.00 | o3-mini-2025-01-31-medium | 48.45 |
| Douba-1.5-pro-32k-241225 | 51.40 | Llama-3.1-405B-Instruct | 68.00 | Douba-1.5-pro-32k-241225 | 47.20 |
| Mass Transport and Separation Process in Chemical Engineering | | Military Law | | Physiology | |
| DeepSeek-R1 | 72.60 | DeepSeek-R1-Zero | 82.00 | o1-2024-12-17 | 61.67 |
| DeepSeek-R1-Zero | 71.23 | claude-3-5-sonnet-20241022 | 76.00 | DeepSeek-R1 | 61.67 |
| o1-2024-12-17 | 65.75 | Douba-1.5-pro-32k-250115 | 76.00 | Douba-1.5-pro-32k-250115 | 57.50 |
| o3-mini-2025-01-31-high | 60.96 | gpt-4o-2024-11-20 | 76.00 | o3-mini-2025-01-31-high | 53.33 |
| Douba-1.5-pro-32k-250115 | 58.90 | Llama-3.1-405B-Instruct | 76.00 | DeepSeek-R1-Zero | 53.33 |
| Bridge and Tunnel Engineering | | Procedural Law | | Zoology | |
| Douba-1.5-pro-32k-250115 | 58.82 | o1-2024-12-17 | 78.00 | o1-2024-12-17 | 57.80 |
| Douba-1.5-pro-32k-241225 | 54.90 | claude-3-5-sonnet-20241022 | 74.00 | DeepSeek-R1 | 53.21 |
| o1-2024-12-17 | 52.94 | DeepSeek-R1 | 68.00 | DeepSeek-R1-Zero | 53.21 |
| DeepSeek-R1-Zero | 52.94 | DeepSeek-R1-Zero | 68.00 | Douba-1.5-pro-32k-241225 | 47.71 |
| DeepSeek-R1 | 50.98 | gpt-4o-2024-11-20 | 62.00 | Douba-1.5-pro-32k-250115 | 47.71 |
| Geotechnical Engineering | | Political Science | | Analytical Chemistry | |
| DeepSeek-R1 | 60.34 | DeepSeek-R1-Zero | 60.00 | DeepSeek-R1 | 58.33 |

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| DeepSeek-R1-Zero | 51.96 | DeepSeek-R1 | 58.46 | DeepSeek-R1-Zero | 55.56 |
| Doubao-1.5-pro-32k-250115 | 49.72 | gpt-4o-2024-11-20 | 55.38 | Doubao-1.5-pro-32k-250115 | 54.80 |
| o1-2024-12-17 | 49.16 | o1-2024-12-17 | 53.85 | o1-2024-12-17 | 54.04 |
| claude-3-5-sonnet-20241022 | 46.93 | DeepSeek-V3 | 53.85 | o3-mini-2025-01-31-high | 52.27 |
| Structural Engineering | | Broadcasting and Television Art | | Electrochemistry | |
| DeepSeek-R1 | 56.14 | o1-2024-12-17 | 66.00 | o3-mini-2025-01-31-high | 50.90 |
| Doubao-1.5-pro-32k-250115 | 54.39 | DeepSeek-R1-Zero | 64.00 | o1-2024-12-17 | 48.65 |
| Doubao-1.5-pro-32k-241225 | 52.63 | gpt-4o-2024-08-06 | 62.00 | DeepSeek-R1 | 47.75 |
| DeepSeek-R1-Zero | 52.63 | gpt-4o-2024-05-13 | 62.00 | DeepSeek-R1-Zero | 47.30 |
| o1-2024-12-17 | 43.86 | Mistral-Large-Instruct-2411 | 60.00 | Doubao-1.5-pro-32k-250115 | 46.85 |
| Urban Infrastructure Engineering | | Dance Studies | | Inorganic Chemistry | |
| DeepSeek-R1-Zero | 61.97 | o1-2024-12-17 | 46.00 | o1-2024-12-17 | 56.52 |
| claude-3-5-sonnet-20241022 | 52.11 | gpt-4o-2024-08-06 | 46.00 | DeepSeek-R1 | 55.80 |
| qwen-max-2025-01-25 | 52.11 | claude-3-5-sonnet-20241022 | 42.00 | o3-mini-2025-01-31-high | 51.45 |
| Qwen2.5-72B-Instruct | 50.70 | gpt-4o-2024-05-13 | 42.00 | o3-mini-2025-01-31-low | 49.28 |
| DeepSeek-R1 | 49.30 | DeepSeek-R1-Zero | 40.00 | Doubao-1.5-pro-32k-250115 | 47.83 |
| Advanced Programming Languages | | Design Arts | | Organic Chemistry | |
| o1-2024-12-17 | 82.00 | DeepSeek-R1 | 46.77 | DeepSeek-R1 | 57.31 |
| o3-mini-2025-01-31-high | 78.00 | o1-2024-12-17 | 45.16 | DeepSeek-R1-Zero | 56.73 |
| o3-mini-2025-01-31-medium | 76.00 | claude-3-5-sonnet-20241022 | 45.16 | o3-mini-2025-01-31-high | 54.39 |
| DeepSeek-R1-Zero | 76.00 | DeepSeek-R1-Zero | 45.16 | o1-2024-12-17 | 52.05 |
| o3-mini-2025-01-31-low | 74.00 | Mistral-Large-Instruct-2411 | 40.32 | o3-mini-2025-01-31-medium | 49.71 |
| Computer Architecture | | Drama and Opera Studies | | Physical Chemistry | |
| o1-2024-12-17 | 72.00 | DeepSeek-R1 | 58.54 | DeepSeek-R1-Zero | 47.31 |
| DeepSeek-R1-Zero | 72.00 | DeepSeek-R1-Zero | 58.54 | o3-mini-2025-01-31-high | 46.46 |
| DeepSeek-R1 | 64.00 | o1-2024-12-17 | 57.32 | o1-2024-12-17 | 46.18 |
| QwQ | 62.00 | claude-3-5-sonnet-20241022 | 54.88 | DeepSeek-R1 | 45.04 |
| qwen-max-2025-01-25 | 60.00 | Doubao-1.5-pro-32k-250115 | 53.66 | Doubao-1.5-pro-32k-250115 | 44.48 |
| Computer Networks | | Film Studies | | Polymer Chemistry and Physics | |
| DeepSeek-R1 | 64.41 | DeepSeek-R1-Zero | 65.82 | DeepSeek-R1 | 67.11 |
| o1-2024-12-17 | 62.71 | o1-2024-12-17 | 60.13 | o3-mini-2025-01-31-medium | 55.26 |
| MiniMax-Text-01 | 59.32 | DeepSeek-R1 | 56.33 | DeepSeek-R1-Zero | 55.26 |
| o3-mini-2025-01-31-low | 59.32 | claude-3-5-sonnet-20241022 | 55.06 | o1-2024-12-17 | 53.95 |
| o3-mini-2025-01-31-medium | 57.63 | DeepSeek-V3 | 54.43 | o3-mini-2025-01-31-high | 53.95 |
| Computer Software and Theory | | Fine Arts | | Radiochemistry | |
| DeepSeek-R1 | 56.96 | claude-3-5-sonnet-20241022 | 61.69 | o3-mini-2025-01-31-high | 60.00 |
| o1-2024-12-17 | 55.70 | o1-2024-12-17 | 58.21 | o1-2024-12-17 | 58.33 |
| claude-3-5-sonnet-20241022 | 53.16 | DeepSeek-R1-Zero | 56.22 | DeepSeek-R1 | 58.33 |
| o3-mini-2025-01-31-high | 51.90 | gpt-4o-2024-08-06 | 53.23 | o3-mini-2025-01-31-medium | 55.00 |
| DeepSeek-R1-Zero | 51.90 | gpt-4o-2024-11-20 | 53.23 | DeepSeek-R1-Zero | 55.00 |
| Data Structures | | Communication and Broadcasting | | Human Geography | |
| DeepSeek-R1 | 65.66 | o1-2024-12-17 | 62.07 | gpt-4o-2024-11-20 | 80.00 |

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| o3-mini-2025-01-31-high | 62.63 | DeepSeek-R1-Zero | 51.72 | DeepSeek-R1-Zero | 80.00 |
| o1-2024-12-17 | 59.60 | gemini-2.0-flash | 46.55 | o1-2024-12-17 | 72.00 |
| o3-mini-2025-01-31-medium | 57.58 | gpt-4o-2024-11-20 | 46.55 | gpt-4o-2024-08-06 | 72.00 |
| DeepSeek-R1-Zero | 56.57 | DeepSeek-V3 | 43.10 | Doubao-1.5-pro-32k-241225 | 72.00 |
| Databases | | History and Theory of Journalism and Media Management | | Physical Geography | |
| DeepSeek-R1 | 66.88 | DeepSeek-R1-Zero | 54.24 | DeepSeek-R1-Zero | 56.63 |
| qwen-max-2025-01-25 | 64.97 | DeepSeek-R1 | 52.54 | o1-2024-12-17 | 55.42 |
| DeepSeek-R1-Zero | 64.97 | o1-2024-12-17 | 50.85 | DeepSeek-R1 | 55.42 |
| o3-mini-2025-01-31-high | 63.69 | qwen-max-2025-01-25 | 50.85 | claude-3-5-sonnet-20241022 | 53.01 |
| Doubao-1.5-pro-32k-250115 | 62.42 | MiniMax-Text-01 | 45.76 | DeepSeek-V3 | 46.99 |
| Formal Languages | | Journalism and News Practice | | Geochemistry | |
| o3-mini-2025-01-31-high | 69.23 | o1-2024-12-17 | 58.89 | gpt-4o-2024-05-13 | 64.00 |
| o3-mini-2025-01-31-medium | 65.38 | DeepSeek-R1-Zero | 55.56 | o1-2024-12-17 | 62.00 |
| o1-2024-12-17 | 61.54 | gpt-4o-2024-05-13 | 52.22 | gpt-4o-2024-08-06 | 62.00 |
| DeepSeek-R1 | 61.54 | claude-3-5-sonnet-20241022 | 51.11 | DeepSeek-R1 | 62.00 |
| DeepSeek-R1-Zero | 59.62 | gpt-4o-2024-11-20 | 51.11 | Llama-3.3-70B-Instruct | 62.00 |
| Operating Systems | | Classical Chinese Literature | | Mineralogy, Petrology, and Economic Geology | |
| DeepSeek-R1-Zero | 63.53 | DeepSeek-R1-Zero | 68.00 | o1-2024-12-17 | 57.85 |
| qwen-max-2025-01-25 | 60.00 | Doubao-1.5-pro-32k-241225 | 58.00 | DeepSeek-R1-Zero | 56.20 |
| o1-2024-12-17 | 58.82 | Doubao-1.5-pro-32k-250115 | 58.00 | DeepSeek-R1 | 54.55 |
| o3-mini-2025-01-31-high | 58.82 | DeepSeek-R1 | 56.00 | Doubao-1.5-pro-32k-241225 | 52.07 |
| o3-mini-2025-01-31-medium | 58.82 | DeepSeek-V3 | 48.00 | qwen-max-2025-01-25 | 50.41 |
| Pattern Recognition | | French Language and Literature | | Paleontology and Stratigraphy | |
| o1-2024-12-17 | 82.00 | gemini-2.0-flash | 64.00 | o3-mini-2025-01-31-high | 46.00 |
| claude-3-5-sonnet-20241022 | 80.00 | o1-2024-12-17 | 60.00 | o3-mini-2025-01-31-medium | 46.00 |
| Mistral-Large-Instruct-2411 | 80.00 | Llama-3.1-405B-Instruct | 60.00 | qwen-max-2025-01-25 | 46.00 |
| Doubao-1.5-pro-32k-250115 | 80.00 | gpt-4o-2024-08-06 | 58.00 | Doubao-1.5-pro-32k-250115 | 46.00 |
| Llama-3.1-405B-Instruct | 80.00 | Mistral-Large-Instruct-2411 | 58.00 | QwQ | 46.00 |
| Principles of Computer Organization | | Linguistics and Applied Linguistics | | Principles of Seismic Exploration | |
| DeepSeek-R1 | 67.07 | claude-3-5-sonnet-20241022 | 70.00 | DeepSeek-R1-Zero | 68.00 |
| DeepSeek-R1-Zero | 65.85 | gpt-4o-2024-11-20 | 64.00 | o1-2024-12-17 | 62.00 |
| Doubao-1.5-pro-32k-250115 | 63.41 | Llama-3.1-405B-Instruct | 64.00 | Doubao-1.5-pro-32k-250115 | 62.00 |
| claude-3-5-sonnet-20241022 | 60.98 | o1-2024-12-17 | 62.00 | claude-3-5-sonnet-20241022 | 60.00 |
| o3-mini-2025-01-31-medium | 60.98 | gpt-4o-2024-08-06 | 62.00 | qwen-max-2025-01-25 | 58.00 |
| Control Theory and Control Engineering | | Literary History | | Structural Geology | |
| DeepSeek-R1 | 83.15 | DeepSeek-R1-Zero | 71.01 | DeepSeek-R1 | 60.00 |
| o3-mini-2025-01-31-high | 82.02 | Doubao-1.5-pro-32k-250115 | 62.32 | o1-2024-12-17 | 54.29 |
| o3-mini-2025-01-31-medium | 77.53 | o1-2024-12-17 | 60.87 | DeepSeek-R1-Zero | 54.29 |
| DeepSeek-R1-Zero | 77.53 | DeepSeek-R1 | 60.87 | Doubao-1.5-pro-32k-241225 | 51.43 |

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| o1-2024-12-17 | 76.40 | Doubao-1.5-pro-32k-241225 | 50.72 | Doubao-1.5-pro-32k-250115 | 50.00 |
| Guidance, Navigation and Control | | Literary Theory | | Solid Earth Geophysics | |
| DeepSeek-R1 | 74.51 | DeepSeek-R1 | 68.75 | o3-mini-2025-01-31-high | 82.00 |
| DeepSeek-R1-Zero | 72.55 | DeepSeek-R1-Zero | 65.62 | o1-2024-12-17 | 76.00 |
| o1-2024-12-17 | 66.67 | o1-2024-12-17 | 60.94 | qwen-max-2025-01-25 | 74.00 |
| o3-mini-2025-01-31-high | 66.67 | Doubao-1.5-pro-32k-241225 | 60.94 | o3-mini-2025-01-31-medium | 72.00 |
| o1-mini-2024-09-12 | 62.75 | claude-3-5-sonnet-20241022 | 59.38 | o3-mini-2025-01-31-low | 72.00 |
| Operations Research and Cybernetics | | Modern and Contemporary Chinese Literature | | Space physics | |
| o3-mini-2025-01-31-medium | 86.00 | DeepSeek-R1-Zero | 58.00 | o1-2024-12-17 | 56.00 |
| o3-mini-2025-01-31-high | 84.00 | Doubao-1.5-pro-32k-241225 | 54.00 | o3-mini-2025-01-31-high | 54.00 |
| DeepSeek-R1 | 82.00 | Doubao-1.5-pro-32k-250115 | 54.00 | Qwen2.5-72B-Instruct | 54.00 |
| o1-2024-12-17 | 78.00 | DeepSeek-R1 | 52.00 | gemini-2.0-flash | 50.00 |
| DeepSeek-R1-Zero | 74.00 | o1-2024-12-17 | 48.00 | DeepSeek-R1 | 50.00 |
| Electrical Theory and New Technologies | | Philology and Bibliography | | Advanced Algebra | |
| DeepSeek-R1 | 50.00 | DeepSeek-R1-Zero | 72.00 | DeepSeek-R1-Zero | 84.16 |
| o3-mini-2025-01-31-high | 45.26 | Doubao-1.5-pro-32k-250115 | 64.00 | DeepSeek-R1 | 82.67 |
| DeepSeek-R1-Zero | 45.26 | qwen-max-2025-01-25 | 60.00 | o3-mini-2025-01-31-high | 81.19 |
| o1-2024-12-17 | 44.74 | claude-3-5-sonnet-20241022 | 58.00 | o1-mini-2024-09-12 | 77.72 |
| Doubao-1.5-pro-32k-241225 | 43.68 | MiniMax-Text-01 | 58.00 | o3-mini-2025-01-31-medium | 77.72 |
| High Voltage and Insulation Technology | | Russian Language and Literature | | Combinatorial Mathematics | |
| DeepSeek-R1 | 47.73 | claude-3-5-sonnet-20241022 | 50.88 | o3-mini-2025-01-31-high | 78.01 |
| qwen-max-2025-01-25 | 46.59 | DeepSeek-R1 | 50.88 | o3-mini-2025-01-31-medium | 73.30 |
| DeepSeek-R1-Zero | 46.59 | o1-2024-12-17 | 49.12 | DeepSeek-R1 | 72.77 |
| o1-2024-12-17 | 45.45 | DeepSeek-R1-Zero | 49.12 | o1-2024-12-17 | 71.20 |
| DeepSeek-V3 | 45.45 | Llama-3.1-405B-Instruct | 47.37 | o1-mini-2024-09-12 | 64.40 |
| Power Electronics and Electrical Drives | | Composition | | Computational Mathematics | |
| DeepSeek-R1 | 58.79 | o3-mini-2025-01-31-high | 56.00 | o3-mini-2025-01-31-high | 72.00 |
| DeepSeek-R1-Zero | 56.04 | o1-2024-12-17 | 54.00 | DeepSeek-R1 | 72.00 |
| o3-mini-2025-01-31-high | 50.00 | DeepSeek-R1-Zero | 50.00 | o3-mini-2025-01-31-medium | 70.00 |
| o3-mini-2025-01-31-medium | 48.90 | DeepSeek-V3 | 48.00 | o3-mini-2025-01-31-low | 70.00 |
| o1-2024-12-17 | 47.80 | o3-mini-2025-01-31-medium | 48.00 | o1-2024-12-17 | 68.00 |
| Power Systems and Automation | | Harmony | | Cryptography | |
| DeepSeek-R1-Zero | 55.21 | DeepSeek-R1 | 51.67 | o1-2024-12-17 | 78.00 |
| DeepSeek-R1 | 54.17 | o1-2024-12-17 | 48.33 | o3-mini-2025-01-31-high | 76.00 |
| o1-2024-12-17 | 41.67 | DeepSeek-R1-Zero | 48.33 | DeepSeek-V3 | 76.00 |
| qwen-max-2025-01-25 | 40.62 | MiniMax-Text-01 | 43.33 | o3-mini-2025-01-31-medium | 76.00 |
| o3-mini-2025-01-31-high | 38.54 | o3-mini-2025-01-31-medium | 43.33 | DeepSeek-R1 | 76.00 |
| Circuits and Systems | | Instrumentation and Performance | | Discrete Mathematics | |

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| DeepSeek-R1 | 67.59 | o1-2024-12-17 | 61.54 | o3-mini-2025-01-31-high | 80.90 |
| o3-mini-2025-01-31-high | 61.11 | DeepSeek-R1 | 55.38 | o3-mini-2025-01-31-medium | 76.40 |
| DeepSeek-R1-Zero | 61.11 | gemini-2.0-flash | 52.31 | o1-2024-12-17 | 74.16 |
| o1-2024-12-17 | 59.26 | DeepSeek-R1-Zero | 50.77 | DeepSeek-R1 | 73.03 |
| o3-mini-2025-01-31-medium | 57.41 | gpt-4o-2024-11-20 | 49.23 | o3-mini-2025-01-31-low | 67.42 |
| Electromagnetic Field and Microwave Technology | | Music History, Education, and Technology | | Functions of Complex Variables | |
| DeepSeek-R1 | 81.82 | o1-2024-12-17 | 62.07 | DeepSeek-R1 | 86.07 |
| o3-mini-2025-01-31-high | 78.41 | DeepSeek-R1-Zero | 55.86 | o3-mini-2025-01-31-high | 81.97 |
| DeepSeek-R1-Zero | 77.27 | gpt-4o-2024-11-20 | 53.10 | o3-mini-2025-01-31-medium | 81.97 |
| o1-2024-12-17 | 76.14 | gpt-4o-2024-08-06 | 51.03 | DeepSeek-R1-Zero | 80.33 |
| o3-mini-2025-01-31-medium | 71.59 | DeepSeek-R1 | 51.03 | o1-mini-2024-09-12 | 77.87 |
| Microelectronics and Solid-State Electronics | | Musical Forms and Analysis | | Functions of Real Variables | |
| DeepSeek-R1 | 76.00 | claude-3-5-sonnet-20241022 | 56.00 | o1-2024-12-17 | 79.10 |
| o1-2024-12-17 | 68.00 | o1-2024-12-17 | 52.00 | o3-mini-2025-01-31-high | 77.61 |
| gemini-2.0-flash | 68.00 | o3-mini-2025-01-31-high | 52.00 | DeepSeek-R1 | 77.61 |
| o3-mini-2025-01-31-high | 66.00 | DeepSeek-R1 | 52.00 | o3-mini-2025-01-31-medium | 76.12 |
| Doubaot-1.5-pro-32k-250115 | 66.00 | Qwen2.5-72B-Instruct | 52.00 | o1-mini-2024-09-12 | 74.63 |
| Environmental Engineering | | Pitch and Scales | | Fundamental Mathematics | |
| DeepSeek-R1 | 67.42 | DeepSeek-R1-Zero | 48.21 | DeepSeek-R1 | 83.76 |
| DeepSeek-R1-Zero | 65.17 | o3-mini-2025-01-31-high | 42.86 | o3-mini-2025-01-31-high | 80.71 |
| o1-2024-12-17 | 60.67 | Llama-3.1-405B-Instruct | 42.86 | o3-mini-2025-01-31-medium | 80.71 |
| o3-mini-2025-01-31-high | 56.18 | DeepSeek-R1 | 41.07 | o1-2024-12-17 | 78.68 |
| Doubaot-1.5-pro-32k-241225 | 55.06 | o1-2024-12-17 | 39.29 | DeepSeek-R1-Zero | 77.16 |
| Environmental Science | | Business and Accounting Management | | Fuzzy Mathematics | |
| DeepSeek-R1-Zero | 78.00 | DeepSeek-R1-Zero | 58.70 | o3-mini-2025-01-31-high | 82.00 |
| o1-2024-12-17 | 76.00 | o1-2024-12-17 | 53.26 | DeepSeek-R1 | 78.00 |
| DeepSeek-R1 | 74.00 | Doubaot-1.5-pro-32k-241225 | 53.26 | DeepSeek-R1-Zero | 78.00 |
| Doubaot-1.5-pro-32k-250115 | 74.00 | Doubaot-1.5-pro-32k-250115 | 52.17 | o3-mini-2025-01-31-medium | 74.00 |
| qwen-max-2025-01-25 | 72.00 | DeepSeek-R1 | 50.00 | o3-mini-2025-01-31-low | 74.00 |
| Environmental and Resource Protection | | Tourism Management and Technological Economics Management | | Geometry and Topology | |
| claude-3-5-sonnet-20241022 | 64.00 | o1-2024-12-17 | 56.00 | o3-mini-2025-01-31-high | 75.47 |
| o1-2024-12-17 | 62.00 | Doubaot-1.5-pro-32k-250115 | 56.00 | DeepSeek-R1 | 71.32 |
| gpt-4o-2024-05-13 | 62.00 | o3-mini-2025-01-31-medium | 54.00 | o1-2024-12-17 | 69.43 |
| Doubaot-1.5-pro-32k-250115 | 62.00 | qwen-max-2025-01-25 | 54.00 | o3-mini-2025-01-31-medium | 68.30 |
| DeepSeek-V3 | 60.00 | o3-mini-2025-01-31-high | 52.00 | o1-mini-2024-09-12 | 63.77 |
| Food Biochemistry | | Information Management Science | | Graph Theory | |
| o1-2024-12-17 | 88.00 | qwen-max-2025-01-25 | 34.00 | o3-mini-2025-01-31-high | 68.63 |

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| Doubao-1.5-pro-32k-241225 | 86.00 | DeepSeek-R1-Zero | 34.00 | o3-mini-2025-01-31-medium | 66.67 |
| DeepSeek-R1 | 86.00 | Qwen2.5-32B-Instruct | 32.00 | DeepSeek-R1 | 62.75 |
| Doubao-1.5-pro-32k-250115 | 86.00 | Qwen2.5-72B-Instruct | 32.00 | o1-2024-12-17 | 58.82 |
| DeepSeek-R1-Zero | 86.00 | MiniMax-Text-01 | 30.00 | DeepSeek-V3 | 54.90 |
| Food Processing and Storage Engineering | | Information Management and Communication | | Group Theory | |
| Doubao-1.5-pro-32k-250115 | 54.24 | o1-2024-12-17 | 92.00 | DeepSeek-R1 | 68.00 |
| DeepSeek-R1 | 52.54 | claude-3-5-sonnet-20241022 | 84.00 | o3-mini-2025-01-31-high | 60.00 |
| Doubao-1.5-pro-32k-241225 | 50.85 | DeepSeek-V3 | 84.00 | o3-mini-2025-01-31-medium | 58.00 |
| DeepSeek-R1-Zero | 50.85 | qwen-max-2025-01-25 | 84.00 | DeepSeek-R1-Zero | 58.00 |
| o1-2024-12-17 | 47.46 | DeepSeek-R1 | 84.00 | o1-2024-12-17 | 56.00 |
| Forest Engineering | | Library and Archival Science | | Mathematical Analysis | |
| o1-2024-12-17 | 66.00 | o3-mini-2025-01-31-high | 58.00 | o3-mini-2025-01-31-high | 87.50 |
| gpt-4o-2024-08-06 | 62.00 | qwen-max-2025-01-25 | 52.00 | DeepSeek-R1 | 86.11 |
| o3-mini-2025-01-31-medium | 62.00 | DeepSeek-R1-Zero | 52.00 | o1-2024-12-17 | 82.64 |
| qwen-max-2025-01-25 | 62.00 | o1-2024-12-17 | 48.00 | o3-mini-2025-01-31-medium | 82.29 |
| o3-mini-2025-01-31-high | 58.00 | o3-mini-2025-01-31-medium | 48.00 | DeepSeek-R1-Zero | 80.21 |
| Wood Science and Technology | | Management Science and Engineering | | Number Theory | |
| o1-2024-12-17 | 72.00 | DeepSeek-R1-Zero | 70.69 | o3-mini-2025-01-31-high | 90.00 |
| claude-3-5-sonnet-20241022 | 66.00 | DeepSeek-R1 | 68.97 | o3-mini-2025-01-31-medium | 88.18 |
| o3-mini-2025-01-31-high | 66.00 | o1-2024-12-17 | 62.07 | o1-2024-12-17 | 86.82 |
| o3-mini-2025-01-31-medium | 66.00 | o3-mini-2025-01-31-high | 62.07 | DeepSeek-R1 | 83.18 |
| DeepSeek-R1-Zero | 66.00 | Doubao-1.5-pro-32k-250115 | 62.07 | o3-mini-2025-01-31-low | 74.09 |
| Geological Resources and Geological Engineering | | Education Economics, Management and Social Security | | Numerical Analysis | |
| gemini-2.0-flash | 66.00 | DeepSeek-R1 | 66.00 | DeepSeek-R1 | 85.07 |
| DeepSeek-R1-Zero | 66.00 | DeepSeek-R1-Zero | 60.00 | o1-2024-12-17 | 74.63 |
| o1-2024-12-17 | 64.00 | o1-2024-12-17 | 56.00 | o3-mini-2025-01-31-high | 74.63 |
| claude-3-5-sonnet-20241022 | 64.00 | Doubao-1.5-pro-32k-241225 | 56.00 | o3-mini-2025-01-31-medium | 74.63 |
| DeepSeek-R1 | 62.00 | MiniMax-Text-01 | 54.00 | DeepSeek-R1-Zero | 73.13 |
| Hydraulics and Hydrology | | Land Resource Management and Administrative Management | | Ordinary Differential Equations | |
| DeepSeek-R1 | 66.91 | DeepSeek-R1-Zero | 66.67 | o3-mini-2025-01-31-high | 82.50 |
| Doubao-1.5-pro-32k-250115 | 62.50 | qwen-max-2025-01-25 | 58.82 | DeepSeek-R1 | 81.25 |
| DeepSeek-R1-Zero | 61.03 | DeepSeek-R1 | 58.82 | o3-mini-2025-01-31-medium | 80.62 |
| o1-2024-12-17 | 59.56 | o1-2024-12-17 | 56.86 | o1-2024-12-17 | 78.75 |
| o3-mini-2025-01-31-high | 58.82 | DeepSeek-V3 | 52.94 | DeepSeek-R1-Zero | 78.12 |
| Water conservancy and Hydropower Engineering | | Social Medicine and Health Management | | Polynomials and Series Expansions | |
| DeepSeek-R1 | 53.66 | qwen-max-2025-01-25 | 70.00 | o3-mini-2025-01-31-high | 82.12 |
| DeepSeek-R1-Zero | 50.00 | o1-2024-12-17 | 68.00 | DeepSeek-R1 | 82.12 |

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| o1-mini-2024-09-12 | 47.56 | DeepSeek-R1 | 68.00 | o3-mini-2025-01-31-medium | 79.89 |
| o3-mini-2025-01-31-high | 46.34 | MiniMax-Text-01 | 64.00 | DeepSeek-R1-Zero | 79.33 |
| o1-2024-12-17 | 45.12 | qwen-max-2024-09-19 | 64.00 | o1-2024-12-17 | 76.54 |
| Antenna and Radio Communication | | Forensic Medicine | | Probability and Statistics | |
| DeepSeek-R1 | 73.68 | o1-2024-12-17 | 68.00 | DeepSeek-R1 | 82.14 |
| o1-2024-12-17 | 69.30 | qwen-max-2025-01-25 | 62.00 | o3-mini-2025-01-31-high | 80.36 |
| o3-mini-2025-01-31-high | 69.30 | gemini-2.0-flash | 60.00 | DeepSeek-R1-Zero | 76.79 |
| o3-mini-2025-01-31-medium | 69.30 | DeepSeek-R1 | 60.00 | o1-2024-12-17 | 76.34 |
| DeepSeek-R1-Zero | 68.42 | gpt-4o-2024-11-20 | 60.00 | o1-mini-2024-09-12 | 72.77 |
| Communication Principles | | Human Anatomy and Histology-Embryology | | Special Number Theory | |
| DeepSeek-R1 | 75.86 | o1-2024-12-17 | 61.90 | DeepSeek-R1 | 86.00 |
| DeepSeek-R1-Zero | 68.10 | DeepSeek-R1 | 60.32 | o1-2024-12-17 | 80.00 |
| o3-mini-2025-01-31-high | 66.38 | DeepSeek-R1-Zero | 59.79 | o3-mini-2025-01-31-high | 78.00 |
| o3-mini-2025-01-31-medium | 63.79 | Doubao-1.5-pro-32k-250115 | 59.26 | o1-mini-2024-09-12 | 68.00 |
| o1-2024-12-17 | 61.21 | qwen-max-2025-01-25 | 53.97 | o3-mini-2025-01-31-medium | 68.00 |
| Communication and Information Systems | | Immunology | | Stochastic Processes | |
| DeepSeek-R1 | 71.01 | Doubao-1.5-pro-32k-250115 | 56.52 | o1-2024-12-17 | 88.00 |
| o1-2024-12-17 | 66.67 | o1-2024-12-17 | 53.62 | o3-mini-2025-01-31-high | 88.00 |
| DeepSeek-R1-Zero | 66.67 | DeepSeek-R1 | 53.62 | o3-mini-2025-01-31-medium | 88.00 |
| Doubao-1.5-pro-32k-250115 | 59.42 | Llama-3.1-405B-Instruct | 52.17 | o3-mini-2025-01-31-low | 88.00 |
| o3-mini-2025-01-31-high | 56.52 | DeepSeek-R1-Zero | 52.17 | DeepSeek-R1 | 88.00 |
| Optical Fiber Communication | | Pathogen Biology | | Hydrogeology | |
| o3-mini-2025-01-31-medium | 84.00 | o1-2024-12-17 | 59.57 | o1-2024-12-17 | 78.00 |
| DeepSeek-R1 | 82.00 | DeepSeek-R1 | 59.57 | DeepSeek-R1 | 76.00 |
| Doubao-1.5-pro-32k-250115 | 82.00 | DeepSeek-R1-Zero | 58.51 | Doubao-1.5-pro-32k-250115 | 76.00 |
| o3-mini-2025-01-31-high | 80.00 | Doubao-1.5-pro-32k-241225 | 54.26 | o3-mini-2025-01-31-high | 74.00 |
| o1-2024-12-17 | 76.00 | qwen-max-2025-01-25 | 53.19 | Doubao-1.5-pro-32k-241225 | 72.00 |
| Signal and Information Processing | | Pathology and Pathophysiology | | Marine Biology | |
| DeepSeek-R1 | 81.29 | o1-2024-12-17 | 66.09 | qwen-max-2025-01-25 | 90.00 |
| o3-mini-2025-01-31-high | 78.06 | Doubao-1.5-pro-32k-250115 | 64.35 | Yi-Lighting | 88.00 |
| DeepSeek-R1-Zero | 78.06 | Doubao-1.5-pro-32k-241225 | 60.87 | gpt-4o-2024-11-20 | 88.00 |
| o1-2024-12-17 | 74.19 | DeepSeek-R1 | 55.65 | Doubao-1.5-pro-32k-250115 | 86.00 |
| o3-mini-2025-01-31-medium | 72.26 | qwen-max-2025-01-25 | 54.78 | Llama-3.1-70B-Instruct | 86.00 |
| Instrument Science and Technology | | Radiation Medicine | | Marine Chemistry | |
| o1-2024-12-17 | 66.00 | o1-2024-12-17 | 86.00 | Doubao-1.5-pro-32k-250115 | 72.00 |
| DeepSeek-R1 | 66.00 | Doubao-1.5-pro-32k-241225 | 84.00 | claude-3-5-sonnet-20241022 | 70.00 |
| DeepSeek-R1-Zero | 60.00 | qwen-max-2025-01-25 | 84.00 | Llama-3.1-70B-Instruct | 70.00 |
| o3-mini-2025-01-31-low | 52.00 | DeepSeek-R1-Zero | 84.00 | MiniMax-Text-01 | 68.00 |
| qwen-max-2025-01-25 | 52.00 | Doubao-1.5-pro-32k-250115 | 82.00 | Mistral-Large-Instruct-2411 | 68.00 |
| Materials Physics and Chemistry | | Anesthesiology | | Underwater Acoustics | |

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| DeepSeek-R1 | 65.33 | DeepSeek-R1 | 74.00 | o1-2024-12-17 | 78.00 |
| o3-mini-2025-01-31-high | 57.79 | DeepSeek-R1-Zero | 74.00 | DeepSeek-R1 | 76.00 |
| DeepSeek-R1-Zero | 57.29 | o1-2024-12-17 | 72.00 | o3-mini-2025-01-31-high | 70.00 |
| o1-2024-12-17 | 56.78 | o3-mini-2025-01-31-medium | 68.00 | DeepSeek-R1-Zero | 68.00 |
| o3-mini-2025-01-31-medium | 53.27 | o3-mini-2025-01-31-low | 68.00 | o3-mini-2025-01-31-medium | 64.00 |
| Materials Processing Engineering | | Clinical Laboratory Diagnostics | | Physical Oceanography | |
| DeepSeek-R1-Zero | 63.33 | o1-2024-12-17 | 70.00 | o1-2024-12-17 | 70.00 |
| DeepSeek-R1 | 62.22 | o3-mini-2025-01-31-high | 66.00 | o3-mini-2025-01-31-medium | 70.00 |
| Doubao-1.5-pro-32k-250115 | 61.11 | DeepSeek-R1 | 66.00 | DeepSeek-R1 | 68.00 |
| o1-2024-12-17 | 58.89 | o3-mini-2025-01-31-medium | 64.00 | DeepSeek-R1-Zero | 66.00 |
| Doubao-1.5-pro-32k-241225 | 55.56 | o3-mini-2025-01-31-low | 62.00 | claude-3-5-sonnet-20241022 | 64.00 |
| Manufacturing Automation | | Dermatology and Venereology | | Acoustics | |
| DeepSeek-R1 | 72.22 | o3-mini-2025-01-31-low | 74.24 | o3-mini-2025-01-31-high | 55.92 |
| Doubao-1.5-pro-32k-250115 | 70.63 | o1-2024-12-17 | 71.21 | DeepSeek-R1-Zero | 55.10 |
| DeepSeek-R1-Zero | 70.63 | o3-mini-2025-01-31-medium | 68.18 | DeepSeek-R1 | 51.84 |
| Doubao-1.5-pro-32k-241225 | 69.05 | DeepSeek-R1 | 68.18 | o1-2024-12-17 | 51.43 |
| o1-2024-12-17 | 68.25 | o1-mini-2024-09-12 | 66.67 | o3-mini-2025-01-31-medium | 47.76 |
| Mechatronic Engineering | | Emergency Medicine | | Atomic and Molecular Physics | |
| o1-2024-12-17 | 64.00 | o3-mini-2025-01-31-medium | 60.61 | DeepSeek-R1 | 56.19 |
| DeepSeek-R1 | 62.00 | DeepSeek-R1 | 60.61 | o1-2024-12-17 | 53.33 |
| Doubao-1.5-pro-32k-250115 | 62.00 | Doubao-1.5-pro-32k-250115 | 60.61 | o3-mini-2025-01-31-high | 52.86 |
| gemini-2.0-flash | 60.00 | o1-2024-12-17 | 59.09 | DeepSeek-R1-Zero | 51.90 |
| DeepSeek-R1-Zero | 60.00 | o3-mini-2025-01-31-high | 59.09 | o3-mini-2025-01-31-medium | 51.43 |
| Fundamentals of Dynamics and Control | | Geriatric Medicine | | Electrodynamics | |
| o3-mini-2025-01-31-medium | 47.55 | o1-2024-12-17 | 78.00 | DeepSeek-R1 | 58.83 |
| o3-mini-2025-01-31-high | 46.69 | o3-mini-2025-01-31-high | 74.00 | o3-mini-2025-01-31-high | 57.46 |
| DeepSeek-R1 | 45.82 | DeepSeek-R1 | 72.00 | o3-mini-2025-01-31-medium | 55.40 |
| Doubao-1.5-pro-32k-250115 | 45.82 | DeepSeek-R1-Zero | 72.00 | o1-2024-12-17 | 54.72 |
| o1-2024-12-17 | 45.53 | DeepSeek-V3 | 68.00 | DeepSeek-R1-Zero | 53.17 |
| Rigid Body Mechanics | | Imaging and Nuclear Medicine | | Fluid Physics | |
| o1-2024-12-17 | 52.60 | DeepSeek-R1 | 50.75 | o3-mini-2025-01-31-high | 59.70 |
| o3-mini-2025-01-31-high | 50.29 | o1-2024-12-17 | 47.76 | o1-2024-12-17 | 54.48 |
| DeepSeek-R1-Zero | 46.82 | o3-mini-2025-01-31-high | 47.76 | DeepSeek-R1 | 54.48 |
| DeepSeek-R1 | 46.24 | o3-mini-2025-01-31-medium | 47.76 | Doubao-1.5-pro-32k-250115 | 53.73 |
| o3-mini-2025-01-31-medium | 42.77 | Doubao-1.5-pro-32k-250115 | 46.27 | DeepSeek-R1-Zero | 53.73 |
| Solid Mechanics | | Internal Medicine | | Particle and Nuclear Physics | |
| DeepSeek-R1 | 61.29 | Doubao-1.5-pro-32k-250115 | 57.92 | o3-mini-2025-01-31-medium | 62.67 |
| o1-2024-12-17 | 59.14 | o1-2024-12-17 | 55.45 | DeepSeek-R1 | 62.22 |
| o3-mini-2025-01-31-medium | 59.14 | Doubao-1.5-pro-32k-241225 | 53.47 | o1-2024-12-17 | 61.33 |
| o3-mini-2025-01-31-high | 56.99 | qwen-max-2025-01-25 | 53.47 | o3-mini-2025-01-31-high | 60.00 |
| DeepSeek-R1-Zero | 55.91 | DeepSeek-R1-Zero | 52.97 | DeepSeek-R1-Zero | 59.11 |

Continued

| Theoretical Fluid Mechanics | | Neurology | | Polymer Physics | |
|---|-------|-------------------------------------|-------|------------------------------|-------|
| DeepSeek-R1 | 77.86 | o1-2024-12-17 | 59.79 | DeepSeek-R1 | 69.72 |
| o1-2024-12-17 | 72.86 | DeepSeek-R1 | 59.79 | DeepSeek-R1-Zero | 61.47 |
| o3-mini-2025-01-31-high | 72.14 | DeepSeek-R1-Zero | 57.67 | o1-2024-12-17 | 60.55 |
| Douba1-1.5-pro-32k-250115 | 72.14 | gpt-4o-2024-05-13 | 57.14 | o3-mini-2025-01-31-high | 60.55 |
| DeepSeek-R1-Zero | 72.14 | Llama-3.3-70B-Instruct | 55.56 | o3-mini-2025-01-31-medium | 59.63 |
| Theoretical Mechanics | | Nursing and Rehabilitation Medicine | | Quantum Mechanics | |
| o3-mini-2025-01-31-high | 58.71 | qwen-max-2025-01-25 | 64.00 | o3-mini-2025-01-31-high | 55.83 |
| DeepSeek-R1 | 56.13 | DeepSeek-R1 | 64.00 | DeepSeek-R1 | 55.83 |
| DeepSeek-R1-Zero | 56.13 | Douba1-1.5-pro-32k-250115 | 64.00 | o1-2024-12-17 | 54.85 |
| o1-2024-12-17 | 53.55 | o1-2024-12-17 | 62.00 | o3-mini-2025-01-31-medium | 54.85 |
| o3-mini-2025-01-31-medium | 53.55 | claude-3-5-sonnet-20241022 | 58.00 | Douba1-1.5-pro-32k-250115 | 54.85 |
| Iron and Steel Metallurgy | | Obstetrics and Gynecology | | Relativity | |
| DeepSeek-R1 | 50.48 | DeepSeek-R1-Zero | 58.82 | o3-mini-2025-01-31-high | 72.15 |
| DeepSeek-R1-Zero | 49.52 | Douba1-1.5-pro-32k-241225 | 56.86 | DeepSeek-R1 | 70.89 |
| o3-mini-2025-01-31-high | 43.81 | Douba1-1.5-pro-32k-250115 | 56.86 | o1-2024-12-17 | 69.62 |
| Douba1-1.5-pro-32k-250115 | 42.86 | o1-2024-12-17 | 54.90 | Douba1-1.5-pro-32k-250115 | 69.62 |
| o1-2024-12-17 | 40.95 | qwen-max-2025-01-25 | 54.90 | o3-mini-2025-01-31-medium | 68.35 |
| Non-ferrous Metallurgy | | Oncology | | Semiconductor Physics | |
| o1-2024-12-17 | 60.00 | o1-2024-12-17 | 63.79 | DeepSeek-R1 | 60.66 |
| DeepSeek-R1-Zero | 60.00 | Douba1-1.5-pro-32k-250115 | 62.07 | o3-mini-2025-01-31-high | 55.74 |
| DeepSeek-R1 | 58.00 | Douba1-1.5-pro-32k-241225 | 58.62 | o1-2024-12-17 | 54.10 |
| Douba1-1.5-pro-32k-250115 | 56.00 | DeepSeek-R1-Zero | 58.62 | DeepSeek-R1-Zero | 54.10 |
| qwen-max-2025-01-25 | 52.00 | o3-mini-2025-01-31-high | 56.90 | o3-mini-2025-01-31-medium | 47.54 |
| Physical Chemistry of Metallurgical Process | | Ophthalmology | | Solid State Physics | |
| DeepSeek-R1-Zero | 68.00 | o3-mini-2025-01-31-medium | 68.00 | DeepSeek-R1 | 61.90 |
| o1-2024-12-17 | 64.00 | DeepSeek-R1-Zero | 62.00 | o1-2024-12-17 | 58.50 |
| DeepSeek-R1 | 64.00 | o3-mini-2025-01-31-high | 60.00 | o3-mini-2025-01-31-high | 57.82 |
| Douba1-1.5-pro-32k-250115 | 64.00 | gpt-4o-2024-11-20 | 60.00 | DeepSeek-R1-Zero | 56.46 |
| o3-mini-2025-01-31-high | 62.00 | gpt-4o-2024-05-13 | 58.00 | o3-mini-2025-01-31-medium | 53.74 |
| Principles of Metallurgy | | Otorhinolaryngology | | Statistical Mechanics | |
| Douba1-1.5-pro-32k-250115 | 76.00 | o1-2024-12-17 | 70.00 | DeepSeek-R1 | 84.00 |
| DeepSeek-R1 | 72.00 | o3-mini-2025-01-31-low | 68.00 | o3-mini-2025-01-31-high | 80.00 |
| o1-2024-12-17 | 70.00 | o3-mini-2025-01-31-high | 66.00 | o3-mini-2025-01-31-medium | 78.00 |
| gpt-4o-2024-11-20 | 70.00 | o3-mini-2025-01-31-medium | 66.00 | DeepSeek-R1-Zero | 76.00 |
| o1-mini-2024-09-12 | 68.00 | DeepSeek-R1-Zero | 66.00 | o1-2024-12-17 | 74.00 |
| Mineral Processing Engineering | | Pediatrics | | Subatomic and Atomic Physics | |
| qwen-max-2025-01-25 | 74.00 | o1-2024-12-17 | 72.00 | o3-mini-2025-01-31-high | 72.55 |
| Douba1-1.5-pro-32k-250115 | 74.00 | qwen-max-2025-01-25 | 72.00 | o3-mini-2025-01-31-medium | 72.55 |
| o1-2024-12-17 | 66.00 | Douba1-1.5-pro-32k-250115 | 72.00 | DeepSeek-R1 | 72.55 |

Continued

| | | | | | |
|--|-------|---------------------------------------|-------|--|-------|
| DeepSeek-R1-Zero | 66.00 | Doubao-1.5-pro-32k-241225 | 70.00 | Doubao-1.5-pro-32k-250115 | 72.55 |
| Doubao-1.5-pro-32k-241225 | 62.00 | DeepSeek-R1 | 68.00 | DeepSeek-R1-Zero | 72.55 |
| Mining and Safety Engineering | | Psychiatry and Mental Health | | Thermodynamics | |
| DeepSeek-R1-Zero | 70.00 | qwen-max-2025-01-25 | 76.00 | o1-2024-12-17 | 56.74 |
| DeepSeek-R1 | 68.00 | gpt-4o-2024-08-06 | 72.00 | DeepSeek-R1 | 55.35 |
| Doubao-1.5-pro-32k-241225 | 66.00 | gpt-4o-2024-05-13 | 72.00 | o3-mini-2025-01-31-high | 53.95 |
| qwen-max-2025-01-25 | 66.00 | DeepSeek-R1-Zero | 72.00 | DeepSeek-R1-Zero | 52.56 |
| Doubao-1.5-pro-32k-250115 | 64.00 | claude-3-5-sonnet-20241022 | 70.00 | o3-mini-2025-01-31-medium | 50.70 |
| Marine Engineering | | Surgery | | Thermodynamics and Statistical Physics | |
| qwen-max-2025-01-25 | 52.00 | qwen-max-2025-01-25 | 54.41 | DeepSeek-R1 | 54.53 |
| DeepSeek-R1-Zero | 52.00 | o1-2024-12-17 | 52.94 | o3-mini-2025-01-31-high | 53.40 |
| o1-2024-12-17 | 50.00 | DeepSeek-R1-Zero | 52.94 | o1-2024-12-17 | 52.64 |
| DeepSeek-R1 | 50.00 | Doubao-1.5-pro-32k-250115 | 51.47 | DeepSeek-R1-Zero | 52.08 |
| MiniMax-Text-01 | 48.00 | DeepSeek-R1 | 50.00 | o3-mini-2025-01-31-medium | 51.89 |
| Ship Mechanics and Design Principles | | Medicinal Chemistry | | Systems Science | |
| qwen-max-2025-01-25 | 56.82 | o1-2024-12-17 | 64.00 | o1-2024-12-17 | 76.00 |
| o1-2024-12-17 | 53.41 | DeepSeek-R1 | 64.00 | DeepSeek-R1 | 72.00 |
| DeepSeek-R1-Zero | 52.27 | DeepSeek-R1-Zero | 64.00 | DeepSeek-R1-Zero | 72.00 |
| Doubao-1.5-pro-32k-250115 | 51.14 | qwen-max-2025-01-25 | 60.00 | o3-mini-2025-01-31-high | 70.00 |
| DeepSeek-R1 | 48.86 | o3-mini-2025-01-31-medium | 56.00 | o3-mini-2025-01-31-medium | 70.00 |
| Nuclear Energy and Reactor Technology | | Microbiology and Biochemical Pharmacy | | Demography and Anthropology | |
| DeepSeek-R1 | 70.18 | o1-2024-12-17 | 60.00 | DeepSeek-R1-Zero | 72.00 |
| o3-mini-2025-01-31-high | 63.16 | Doubao-1.5-pro-32k-250115 | 60.00 | o1-2024-12-17 | 70.00 |
| DeepSeek-R1-Zero | 63.16 | o3-mini-2025-01-31-high | 56.00 | claude-3-5-sonnet-20241022 | 70.00 |
| o1-2024-12-17 | 61.40 | o3-mini-2025-01-31-medium | 54.00 | DeepSeek-R1 | 70.00 |
| o3-mini-2025-01-31-medium | 59.65 | DeepSeek-R1 | 52.00 | qwen-max-2025-01-25 | 64.00 |
| Radiation Protection and Nuclear Technology Applications | | Pharmaceutical Analysis | | Social and Folklore Studies | |
| o1-2024-12-17 | 66.00 | DeepSeek-R1 | 68.00 | DeepSeek-R1 | 65.59 |
| o3-mini-2025-01-31-high | 64.00 | DeepSeek-R1-Zero | 68.00 | DeepSeek-R1-Zero | 64.52 |
| DeepSeek-R1 | 64.00 | claude-3-5-sonnet-20241022 | 66.00 | o1-2024-12-17 | 61.29 |
| DeepSeek-R1-Zero | 62.00 | Doubao-1.5-pro-32k-250115 | 66.00 | claude-3-5-sonnet-20241022 | 61.29 |
| claude-3-5-sonnet-20241022 | 60.00 | o1-2024-12-17 | 64.00 | DeepSeek-V3 | 53.76 |

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|---|---|--|--|
| Agronomy(54.43) | Animal Husbandry(48.54) | Animal Nutrition and Feed Science(50.00) Animal Rearing and Breeding(47.06) | Engineering(63.10) | Geological Resources and Geological Engineering(62.00) Hydraulic Engineering(61.93) | Geological Resources and Geological Engineering(62.00) Hydraulics and Hydrology(66.91) Water conservancy and Hydropower Engineering(53.66) Antenna and Radio Communication(73.68) |
| | Aquaculture(53.57) Crop Science(50.34) | Aquaculture(53.57) Crop Science(50.34) | Information and Communication Engineering(76.98) | | Communication Principles(75.86) Communication and Information Systems(71.01) Optical Fiber Communication(82.00) Signal and Information Processing(81.29) |
| | Forestry(60.31) | Forest Cultivation and Genetic Breeding(56.79) Landscape Plants and Ornamental Horticulture(66.00) | | | |
| Economics(66.09) | Veterinary Medicine(64.00) | Veterinary Medicine(64.00) | Instrument Science and Technology(66.00) | | Instrument Science and Technology(66.00) |
| | Applied Economics(66.25) | Economic Statistics(74.00) Finance(68.18) | Materials Science and Engineering(64.36) | | Materials Physics and Chemistry(65.33) |
| | | Industrial Economics(65.48) | Mechanical Engineering(69.32) | | Materials Processing Engineering(62.22) |
| | | International Trade(71.01) Labor Economics(63.51) | Mechanics(54.19) | | Manufacturing Automation(72.22) Mechatronic Engineering(62.00) Fundamentals of Dynamics and Control(45.82) Rigid Body Mechanics(46.24) Solid Mechanics(61.29) |
| | | National and Defense Economics(68.00) Public Finance(59.17) | | | Theoretical Fluid Mechanics(77.86) Theoretical Mechanics(56.13) |
| | | Quantitative Economics(66.00) | Metallurgical Engineering(58.82) | | Iron and Steel Metallurgy(50.48) Non-ferrous Metallurgy(58.00) Physical Chemistry of Metallurgical Process(64.00) Principles of Metallurgy(72.00) |
| | Theoretical Economics(65.33) | Economic History(78.00) | Mining Engineering(62.00) | | Mineral Processing Engineering(56.00) Mining and Safety Engineering(68.00) |
| | | Political Economy(60.00) | Naval Architecture and Ocean Engineering(49.28) | | Marine Engineering(50.00) |
| | | Western Economics(58.00) | | | Ship Mechanics and Design Principles(48.86) |
| Education(54.75) | Education(60.32) | Educational Technology and Principles(61.46) Preschool Education(58.00) Special Education(58.00) | Nuclear Science and Technology(67.29) | | Nuclear Energy and Reactor Technology(70.18) |
| | Physical Education(54.00) | Theory of Curriculum and Instruction(62.75) Physical Education and Training(44.00) Sports Humanities and Sociology(54.00) | | | Radiation Protection and Nuclear Technology Applications(64.00) |
| | | Sports Science and Medicine(64.00) | Optical Engineering(60.64) | | Applied Optics(58.06) |
| | Psychology(40.23) | Psychology(40.23) | | | Laser Technology(82.00) Optoelectronic Technology(43.28) Theoretical Optics(63.70) |
| Engineering(63.10) | Aeronautical and Astronautical Science and Technology(65.55) Agricultural Engineering(62.50) | Aeronautical and Astronautical Science and Technology(65.55) Agricultural Environment and Soil-Water Engineering(55.56) Agricultural Mechanization Engineering(70.00) | Petroleum and Natural Gas Engineering(63.39) | | Polymer Science and Technology(62.00) Oil and Gas Field Development and Storage & Transportation Engineering(59.68) Poromechanics and Reservoir Physics(68.00) Engineering Fluid Mechanics(67.86) |
| | Architecture(63.58) | Architectural Design and Theory(56.00) Architectural History(66.13) | Power Engineering and Engineering Thermodynamics(65.35) | | Engineering Thermodynamics(69.86) |
| | Chemical Engineering and Technology(69.02) | Urban Planning and Design(68.00) Chemical Transport Engineering(76.00) | | | Fluid Machinery and Engineering(68.75) Heat Transfer(73.64) Internal Combustion Engineering(64.00) Power Machinery and Engineering(46.15) |
| | | Elements of Chemical Reaction Engineering(67.29) Fluid Flow and Heat Transfer in Chemical Engineering(62.62) | | | Refrigeration and Cryogenic Engineering(48.00) |
| | | Mass Transport and Separation Process in Chemical Engineering(72.60) | Surveying and Mapping Science and Technology(65.48) | | Thermal Energy Engineering(63.30) Cartography and Geographic Information Engineering(62.00) |
| | Civil Engineering(56.15) | Bridge and Tunnel Engineering(50.98) Geotechnical Engineering(60.34) Structural Engineering(56.14) | | | Digital Surveying and Remote Sensing Applications(61.76) |
| | | Urban Infrastructure Engineering(49.30) | Textile Science and Engineering(68.00) | | Geodesy and Surveying Engineering(74.00) Textile Chemistry and Dyeing Engineering(62.00) |
| | Computer Science and Technology(65.01) | Advanced Programming Languages(74.00) Computer Architecture(64.00) Computer Networks(64.41) | | | Textile Materials Science(74.00) |
| | | Computer Software and Theory(56.96) Data Structures(65.66) | Transportation Engineering(58.17) | | Road and Railway Engineering(54.00) Traffic Information Engineering and Control(56.92) Transportation Planning and Management(59.30) Vehicle Operation Engineering(62.00) |
| | | Databases(66.88) | | | |
| | | Formal Languages(61.54) | Weapon Science and Technology(51.00) | | Weapon Science and Technology(52.00) |
| | | Operating Systems(58.82) Pattern Recognition(74.00) | | | Weapon Systems Science and Engineering(50.00) |
| | | Principles of Computer Organization(67.07) | | | Archaeology and Museology(72.12) |
| | Control Science and Engineering(80.53) | Control Theory and Control Engineering(83.15) | | | Historical Geography(45.07) |
| | | Guidance, Navigation and Control(74.51) | | | World History(54.44) |
| | | Operations Research and Cybernetics(82.00) | | | |
| Electrical Engineering(53.24) | Electrical Theory and New Technologies(50.00) High Voltage and Insulation Technology(47.73) | History(55.19) | Law(65.24) | Law(65.99) | Civil and Commercial Law(58.47) |
| | Power Electronics and Electrical Drives(58.79) | | | | Constitutional and Administrative Law(70.00) |
| | | Power Systems and Automation(54.17) | | | Contract Law(70.00) |
| Electronic Science and Technology(74.39) | Circuits and Systems(67.59) | | | | Criminal Law(68.10) |
| | Electromagnetic Field and Microwave Technology(81.82) | | | | International Law(50.88) |
| | Microelectronics and Solid-State Electronics(76.00) | | | | Law and Social Governance(66.00) |
| Environmental Science and Engineering(67.20) | Environmental Engineering(67.42) | | | | Legal Theory and Legal History(78.00) |
| | Environmental Science(74.00) | | | | Military Law(74.00) |
| | Environmental and Resource Protection(60.00) | | | | Procedural Law(68.00) |
| Food Science and Engineering(67.89) | Food Biochemistry(86.00) | | | | Political Science(58.46) |
| | Food Processing and Storage Engineering(52.54) | | | | |
| Forestry Engineering(61.00) | Forest Engineering(58.00) | | | | |
| Engineering(63.10) | Wood Science and Technology(64.00) | | | | |

Table 15. Model Scores Across Three Levels of Disciplines: DeepSeek-R1.

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| Discipline | Field | Subfield | Discipline | Field | Subfield | |
|--|---|--|-------------------|-------------------|--|--|
| Literature and Arts(52.45) | Art Studies(51.74) | Broadcasting and Television Art(58.00) | Philosophy(63.11) | Philosophy(63.11) | Religious Studies(76.00) | |
| | | Dance Studies(36.00) | | | Astronomical Observation and Technology(64.00) | |
| | | Design Arts(46.77) | | | Astrophysics(57.97) | |
| | | Drama and Opera Studies(58.54) | | | Cosmology(70.51) | |
| | | Film Studies(56.33) | | | Solar System Science(67.05) | |
| | Journalism and Communication(47.83) | Fine Arts(49.25) | | | Stellar and Interstellar Evolution(64.29) | |
| | | Communication and Broadcasting(43.10) | | | Atmospheric Physics and Atmospheric Environment(49.28) | |
| | | History and Theory of Journalism and Media Management(52.54) | | | Dynamic Meteorology(72.00) | |
| | | Journalism and News Practice(47.78) | | | Meteorology(67.86) | |
| | | Classical Chinese Literature(56.00) | | | Biochemistry and Molecular Biology(68.69) | |
| Management(57.09) | Language and Literature(57.73) | French Language and Literature(58.00) | | | Biophysics(72.00) | |
| | | Linguistics and Applied Linguistics(58.00) | | | Botany(54.22) | |
| | | Literary History(60.87) | | | Cell Biology(59.77) | |
| | | Literary Theory(68.75) | | | Ecology(50.00) | |
| | | Modern and Contemporary Chinese Literature(52.00) | | | Genetics(66.85) | |
| | Musicology(50.23) | Philology and Bibliography(54.00) | | | Microbiology(49.07) | |
| | | Russian Language and Literature(50.88) | | | Physiology(61.67) | |
| | | Composition(48.00) | | | Zoology(53.21) | |
| | | Harmony(51.67) | | | Analytical Chemistry(58.33) | |
| | | Instrumentation and Performance(55.38) | | | Electrochemistry(47.75) | |
| Medicine(59.93) | Business Administration(50.70) | Music History, Education, and Technology(51.03) | | | Inorganic Chemistry(55.80) | |
| | | Musical Forms and Analysis(52.00) | | | Organic Chemistry(57.31) | |
| | | Pitch and Scales(41.07) | | | Physical Chemistry(45.04) | |
| | | Business and Accounting Management(50.00) | | | Polymer Chemistry and Physics(67.11) | |
| | | Tourism Management and Technological Economics Management(52.00) | | | Radiochemistry(58.33) | |
| | Library, Information and Archival Management(51.33) | Information Management Science(22.00) | | | Geography(58.65) Human Geography(64.00) | |
| | | Information Management and Communication(84.00) | | | Physical Geography(55.42) | |
| | | Library and Archival Science(48.00) | | | Geochimistry(62.00) | |
| | | Management Science and Engineering(68.97) | | | Mineralogy, Petrology, and Economic Geology(54.55) | |
| | | Education Economics, Management and Social Security(66.00) | | | Paleontology and Stratigraphy(44.00) | |
| Pharmacy(60.79) | Management Science and Engineering(68.97) | Land Resource Management and Administrative Management(58.82) | | | Principles of Seismic Exploration(58.00) | |
| | | Social Medicine and Health Management(68.00) | | | Structural Geology(60.00) | |
| | | Forensic Medicine(60.00) | | | Geophysics(60.00) Solid Earth Geophysics(70.00) | |
| | | Human Anatomy and Histology-Embryology(60.32) | | | Space physics(50.00) | |
| | | Immunology(53.62) | | | Advanced Algebra(82.67) | |
| | Clinical Medicine(58.37) | Pathogen Biology(59.57) | | | Combinatorial Mathematics(72.77) | |
| | | Pathology and Pathophysiology(55.65) | | | Computational Mathematics(72.00) | |
| | | Radiation Medicine(80.00) | | | Cryptography(76.00) | |
| | | Anesthesiology(74.00) | | | Discrete Mathematics(73.03) | |
| | | Clinical Laboratory Diagnostics(66.00) | | | Functions of Complex Variables(86.07) | |
| Public Health and Preventive Medicine(62.33) | Public Administration(64.24) | Dermatology and Venereology(68.18) | | | Functions of Real Variables(77.61) | |
| | | Emergency Medicine(60.61) | | | Fundamental Mathematics(83.76) | |
| | | Geriatric Medicine(72.00) | | | Fuzzy Mathematics(78.00) | |
| | | Imaging and Nuclear Medicine(50.75) | | | Geometry and Topology(71.32) | |
| | | Internal Medicine(49.01) | | | Graph Theory(62.75) | |
| | Pharmacy(60.79) | Neurology(59.79) | | | Group Theory(68.00) | |
| | | Nursing and Rehabilitation Medicine(64.00) | | | Mathematical Analysis(86.11) | |
| | | Obstetrics and Gynecology(51.96) | | | Number Theory(83.18) | |
| | | Oncology(53.45) | | | Numerical Analysis(85.07) | |
| | | Ophthalmology(58.00) | | | Ordinary Differential Equations(81.25) | |
| Military Science(57.07) | Stomatology(52.27) | Otorhinolaryngology(60.00) | | | Polynomials and Series Expansions(82.12) | |
| | | Pediatrics(68.00) | | | Probability and Statistics(82.14) | |
| | | Psychiatry and Mental Health(62.00) | | | Special Number Theory(86.00) | |
| | | Surgery(50.00) | | | Stochastic Processes(88.00) | |
| | | Medicinal Chemistry(64.00) | | | Hydrogeology(76.00) | |
| | Traditional Chinese Medicine(66.79) | Microbiology and Biochemical Pharmacy(52.00) | | | Marine Biology(84.00) | |
| | | Pharmaceutical Analysis(68.00) | | | Marine Chemistry(64.00) | |
| | | Pharmacetics(64.38) | | | Underwater Acoustics(76.00) | |
| | | Pharmacology(54.55) | | | Physical Oceanography(68.00) | |
| | | Epidemiology and Health Statistics(56.63) | | | Acoustics(51.84) | |
| Philosophy(63.11) | Military Science(57.07) | Health Toxicology and Environmental Health(60.00) | | | Atomic and Molecular Physics(56.19) | |
| | | Maternal, Child and Adolescent Health(67.09) | | | Electrodynamics(58.83) | |
| | | Nutrition and Food Hygiene(68.00) | | | Fluid Physics(54.48) | |
| | | Basic Stomatology(47.17) | | | Particle and Nuclear Physics(62.22) | |
| | | Clinical Stomatology(55.70) | | | Polymer Physics(69.72) | |
| | Systems Science(72.00) | Traditional Chinese Medicine(79.66) | | | Quantum Mechanics(55.83) | |
| | | Traditional Chinese Medicine Theory(66.67) | | | Relativity(70.89) | |
| | | Traditional Chinese Pharmacy(60.50) | | | Semiconductor Physics(60.66) | |
| | | Military Command and Information Systems(48.00) | | | Solid State Physics(61.90) | |
| | | Military Logistics and Equipment(48.15) | | | Statistical Mechanics(94.00) | |
| Sociology(67.13) | Philosophy(63.11) | Military Management(62.00) | | | Subatomic and Atomic Physics(72.55) | |
| | | Military Thought and History(70.59) | | | Thermodynamics(55.35) | |
| | | Ethics(55.88) | | | Thermodynamics and Statistical Physics(54.53) | |
| | | Logic(62.86) | | | Systems Science(72.00) | |
| Philosophy(63.11) | | Philosophical Aesthetics(59.63) | | | Demography and Anthropology(70.00) | |
| | | Philosophy of Science and Technology(68.00) | | | Social and Folklore Studies(65.59) | |

Table 15. Continued: Model Scores Across Three Levels of Disciplines: DeepSeek-R1.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|------------------|--|--|--------------------------|---|---|
| Agronomy(53.81) | Animal Husbandry(47.57) | Animal Nutrition and Feed Science(50.00) | Engineering(60.28) | Geological Resources and Geological Engineering(66.00) | Geological Resources and Geological Engineering(66.00) |
| | | Animal Rearing and Breeding(45.10) | | | Hydraulics and Hydrology(61.03) |
| | Aquaculture(53.57) | Aquaculture(53.57) | | Water conservancy and Hydropower Engineering(50.00) | Water conservancy and Hydropower Engineering(50.00) |
| | | Crop Science(53.10) | | | Antenna and Radio Communication(68.42) |
| | Forestry(58.02) | Forest Cultivation and Genetic Breeding(51.85) | | Communication Principles(68.10) | Communication Principles(68.10) |
| | | Landscape Plants and Ornamental Horticulture(68.00) | | | Communication and Information Systems(66.67) |
| | Veterinary Medicine(58.00) | Veterinary Medicine(58.00) | | Optical Fiber Communication(70.00) | Optical Fiber Communication(70.00) |
| | | Economic Statistics(70.00) | | | Signal and Information Processing(78.06) |
| | Economics(66.44) | Finance(68.18) | | Instrument Science and Technology(60.00) | Instrument Science and Technology(60.00) |
| | | Industrial Economics(66.67) | | | Materials Physics and Chemistry(57.29) |
| | | International Trade(71.01) | | Materials Processing Engineering(63.33) | Materials Processing Engineering(63.33) |
| | | Labor Economics(59.46) | | | Mechanical Engineering(70.63) |
| | | National and Defense Economics(66.00) | | Mechatronic Engineering(60.00) | Mechatronic Engineering(60.00) |
| | | Public Finance(64.17) | | | Fundamentals of Dynamics and Control(43.52) |
| | | Quantitative Economics(67.00) | | Rigid Body Mechanics(46.82) | Rigid Body Mechanics(46.82) |
| | | Theoretical Economics(66.00) | | | Solid Mechanics(55.91) |
| | | Economic History(78.00) | | Theoretical Fluid Mechanics(72.14) | Theoretical Fluid Mechanics(72.14) |
| | | Political Economy(56.00) | | | Theoretical Mechanics(56.13) |
| Education(60.54) | Applied Economics(66.53) | Western Economics(64.00) | | Iron and Steel Metallurgy(49.52) | Iron and Steel Metallurgy(49.52) |
| | | Theoretical Economics(66.00) | | | Non-ferrous Metallurgy(60.00) |
| | Education(62.35) | Educational Technology and Principles(60.42) | | Physical Chemistry of Metallurgical Process(68.00) | Physical Chemistry of Metallurgical Process(68.00) |
| | | Preschool Education(60.00) | | | Principles of Metallurgy(68.00) |
| | Physical Education(62.00) | Special Education(64.00) | | Mineral Processing Engineering(66.00) | Mineral Processing Engineering(66.00) |
| | | Theory of Curriculum and Instruction(66.67) | | | Mining and Safety Engineering(70.00) |
| | Psychology(52.87) | Physical Education and Training(50.00) | | Naval Architecture and Ocean Engineering(52.17) | Naval Architecture and Ocean Engineering(52.00) |
| | | Sports Humanities and Sociology(66.00) | | | Marine Engineering(52.00) |
| | | Sports Science and Medicine(70.00) | | Ship Mechanics and Design Principles(52.27) | Ship Mechanics and Design Principles(52.27) |
| | Engineering(60.28) | Psychology(52.87) | | | Nuclear Energy and Reactor Technology(63.16) |
| | Aeronautical and Astronautical Science and Technology(57.14) | Aeronautical and Astronautical Science and Technology(57.14) | | Radiation Protection and Nuclear Technology Applications(62.00) | Radiation Protection and Nuclear Technology Applications(62.00) |
| | | Agricultural Environment and Soil-Water Engineering(64.81) | | | Optical Engineering(54.26) |
| | Agricultural Engineering(63.46) | Agricultural Mechanization Engineering(62.00) | | Applied Optics(50.81) | Applied Optics(50.81) |
| | | Architecture(63.58) | | | Laser Technology(70.00) |
| | Chemical Engineering and Technology(65.37) | Architectural Design and Theory(58.00) | | Optoelectronic Technology(41.79) | Optoelectronic Technology(41.79) |
| | | Architectural History(67.74) | | | Theoretical Optics(57.78) |
| | Civil Engineering(54.19) | Urban Planning and Design(64.00) | | Petroleum and Natural Gas Engineering(61.61) | Petroleum and Natural Gas Engineering(61.61) |
| | | Chemical Transport Engineering(60.00) | | | Oil and Gas Field Development and Storage & Transportation Engineering(56.45) |
| | Computer Science and Technology(63.70) | Elements of Chemical Reaction Engineering(66.36) | | Poromechanics and Reservoir Physics(68.00) | Poromechanics and Reservoir Physics(68.00) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(58.88) | | | Engineering Fluid Mechanics(63.10) |
| | | Mass Transport and Separation Process in Chemical Engineering(71.23) | | Power Engineering and Engineering Thermophysics(58.48) | Engineering Thermophysics(65.07) |
| | | Bridge and Tunnel Engineering(52.94) | | | Fluid Machinery and Engineering(51.56) |
| | | Geotechnical Engineering(51.96) | | | Heat Transfer(63.57) |
| | | Structural Engineering(52.63) | | | Internal Combustion Engineering(60.00) |
| | | Urban Infrastructure Engineering(61.97) | | | Power Machinery and Engineering(46.15) |
| | | Advanced Programming Languages(76.00) | | Refrigeration and Cryogenic Engineering(44.00) | Refrigeration and Cryogenic Engineering(44.00) |
| | | Computer Architecture(72.00) | | | Thermal Energy Engineering(55.96) |
| | | Computer Networks(57.63) | | Surveying and Mapping Science and Technology(63.69) | Cartography and Geographic Information Engineering(60.00) |
| | | Computer Software and Theory(51.90) | | | Digital Surveying and Remote Sensing Applications(60.29) |
| | Control Science and Engineering(75.26) | Data Structures(56.57) | | | Geodesy and Surveying Engineering(72.00) |
| | | Databases(64.97) | | | Textile Chemistry and Dyeing Engineering(56.00) |
| | | Formal Languages(59.62) | | Textile Science and Engineering(68.00) | Textile Materials Science(80.00) |
| | | Operating Systems(63.33) | | | Transportation Engineering(59.76) |
| | | Pattern Recognition(80.00) | | Road and Railway Engineering(56.00) | Road and Railway Engineering(56.00) |
| | | Principles of Computer Organization(65.85) | | | Traffic Information Engineering and Control(52.31) |
| | | Control Theory and Control Engineering(77.53) | | | Transportation Planning and Management(66.28) |
| | | Guidance, Navigation and Control(72.55) | | Vehicle Operation Engineering(62.00) | Vehicle Operation Engineering(62.00) |
| | | Operations Research and Cybernetics(74.00) | | | Weapon Science and Technology(57.00) |
| | | Electrical Theory and New Technologies(45.26) | History(58.61) | Military Chemistry and Pyrotechnics(62.00) | Military Chemistry and Pyrotechnics(62.00) |
| | Electrical Engineering(50.72) | High Voltage and Insulation Technology(46.59) | | | Weapon Systems Science and Engineering(52.00) |
| | | Power Electronics and Electrical Drives(56.04) | | Archaeology and Museology(73.08) | Archaeology and Museology(73.08) |
| | | Power Systems and Automation(55.21) | | | Historical Geography(49.30) |
| | | Circuits and Systems(61.11) | | World History(58.18) | World History(58.18) |
| | | Electromagnetic Field and Microwave Technology(77.27) | Law(66.77) | Civil and Commercial Law(62.71) | Civil and Commercial Law(62.71) |
| | | Microelectronics and Solid-State Electronics(64.00) | | | Constitutional and Administrative Law(72.00) |
| | | Environmental Science and Engineering(67.20) | | Contract Law(78.00) | Contract Law(78.00) |
| | | Environmental Engineering(65.17) | | | Criminal Law(62.93) |
| | | Environmental Science(78.00) | | International Law(56.14) | International Law(56.14) |
| | | Environmental and Resource Protection(60.00) | | | Law and Social Governance(68.00) |
| | Food Science and Engineering(66.97) | Food Biochemistry(86.00) | | | Legal Theory and Legal History(72.00) |
| | | Food Processing and Storage Engineering(50.85) | Political Science(60.00) | Military Law(82.00) | Military Law(82.00) |
| | | Forest Engineering(56.00) | | | Procedural Law(68.00) |
| | Forestry Engineering(61.00) | Wood Science and Technology(66.00) | | | Political Science(60.00) |
| | | - | | | - |

Table 16. Model Scores Across Three Levels of Disciplines: DeepSeek-R1-Zero.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|-------------------|--|
| Literature and Arts(56.86) | Art Studies(57.21) | Broadcasting and Television Art(64.00) | Philosophy(63.69) | Philosophy(63.69) | Religious Studies(76.00) |
| | | Dance Studies(40.00) | | | Astronomical Observation and Technology(72.00) |
| | | Design Arts(45.16) | | | Astrophysics(55.07) |
| | | Drama and Opera Studies(58.54) | | | Cosmology(61.54) |
| | | Film Studies(65.82) | | | Solar System Science(56.82) |
| | Journalism and Communication(54.11) | Fine Arts(56.22) | | | Stellar and Interstellar Evolution(64.29) |
| | | Communication and Broadcasting(51.72) | | | Atmospheric Physics and Atmospheric Environment(50.72) |
| | | History and Theory of Journalism and Media Management(54.24) | | | Dynamic Meteorology(66.00) |
| | | Journalism and News Practice(55.56) | | | Meteorology(65.48) |
| | | Classical Chinese Literature(68.00) | | | Biochemistry and Molecular Biology(63.64) |
| Management(59.68) | Language and Literature(62.50) | French Language and Literature(58.00) | | | Biophysics(70.00) |
| | | Linguistics and Applied Linguistics(56.00) | | | Botany(53.61) |
| | | Literary History(71.01) | | | Cell Biology(52.87) |
| | | Literary Theory(65.62) | | | Ecology(56.56) |
| | | Modern and Contemporary Chinese Literature(58.00) | | | Genetics(64.13) |
| | Musicology(51.88) | Philology and Bibliography(72.00) | | | Microbiology(46.58) |
| | | Russian Language and Literature(49.12) | | | Physiology(53.33) |
| | | Composition(50.00) | | | Zoology(53.21) |
| | | Harmony(48.33) | | | Analytical Chemistry(55.56) |
| | | Instrumentation and Performance(50.77) | | | Electrochemistry(47.30) |
| Medicine(60.65) | Business Administration(55.63) | Music History, Education, and Technology(55.86) | | | Inorganic Chemistry(47.83) |
| | | Musical Forms and Analysis(52.00) | | | Organic Chemistry(56.73) |
| | | Pitch and Scales(48.21) | | | Physical Chemistry(47.31) |
| | | Business and Accounting Management(58.70) | | | Polymer Chemistry and Physics(55.26) |
| | | Tourism Management and Technological Economics Management(50.00) | | | Radiochemistry(55.00) |
| | Library, Information and Archival Management(56.00) | Information Management Science(34.00) | | | Geography(65.41) Human Geography(80.00) |
| | | Information Management and Communication(82.00) | | | Physical Geography(56.63) |
| | | Library and Archival Science(52.00) | | | Geology(56.01) Geochemistry(60.00) |
| | | Management Science and Engineering(70.69) | | | Mineralogy, Petrology, and Economic Geology(56.20) |
| | | Education Economics, Management and Social Security(60.00) | | | Paleontology and Stratigraphy(42.00) |
| Pharmacy(63.31) | Public Administration(62.91) | Land Resource Management and Administrative Management(66.67) | | | Principles of Seismic Exploration(68.00) |
| | | Social Medicine and Health Management(62.00) | | | Structural Geology(54.29) |
| | | Forensic Medicine(60.00) | | | Geophysics(57.00) Solid Earth Geophysics(72.00) |
| | | Human Anatomy and Histology-Embryology(59.79) | | | Space physics(42.00) |
| | | Immunology(52.17) | | | Advanced Algebra(84.16) |
| | Clinical Medicine(59.03) | Pathogen Biology(58.51) | | | Combinatorial Mathematics(53.40) |
| | | Pathology and Pathophysiology(53.04) | | | Computational Mathematics(66.00) |
| | | Radiation Medicine(84.00) | | | Cryptography(76.00) |
| | | Anesthesiology(74.00) | | | Discrete Mathematics(55.06) |
| | | Clinical Laboratory Diagnostics(62.00) | | | Functions of Complex Variables(80.33) |
| Public Health and Preventive Medicine(65.75) | Stomatology(46.97) | Dermatology and Venereology(59.09) | | | Functions of Real Variables(70.15) |
| | | Emergency Medicine(57.58) | | | Fundamental Mathematics(77.16) |
| | | Geriatric Medicine(72.00) | | | Fuzzy Mathematics(78.00) |
| | | Imaging and Nuclear Medicine(43.28) | | | Geometry and Topology(63.77) |
| | | Internal Medicine(52.97) | | | Graph Theory(49.02) |
| | Traditional Chinese Medicine(69.03) | Neurology(57.67) | | | Group Theory(58.00) |
| | | Nursing and Rehabilitation Medicine(58.00) | | | Mathematical Analysis(80.21) |
| | | Obstetrics and Gynecology(58.82) | | | Number Theory(61.82) |
| | | Oncology(58.62) | | | Numerical Analysis(73.13) |
| | | Ophthalmology(62.00) | | | Ordinary Differential Equations(78.12) |
| Military Science(58.54) | Pharmacy(63.31) | Otorhinolaryngology(66.00) | | | Polynomials and Series Expansions(79.33) |
| | | Pediatrics(68.00) | | | Probability and Statistics(76.79) |
| | | Psychiatry and Mental Health(72.00) | | | Special Number Theory(62.00) |
| | | Surgery(52.94) | | | Stochastic Processes(84.00) |
| | | Medicinal Chemistry(64.00) | | | Hydrogeology(70.00) |
| | Philosophy(63.69) | Microbiology and Biochemical Pharmacy(48.00) | | | Marine Biology(84.00) |
| | | Pharmaceutical Analysis(68.00) | | | Marine Chemistry(66.00) |
| | | Pharmacetics(75.34) | | | Underwater Acoustics(68.00) |
| | | Pharmacology(56.36) | | | Physical Oceanography(66.00) |
| | | Epidemiology and Health Statistics(54.22) | | | Acoustics(55.10) |
| Philosophy(63.69) | Military Science(58.54) | Health Toxicology and Environmental Health(63.75) | | | Atomic and Molecular Physics(51.90) |
| | | Maternal, Child and Adolescent Health(69.62) | | | Electrodynamics(53.17) |
| | | Nutrition and Food Hygiene(82.00) | | | Fluid Physics(53.73) |
| | | Basic Stomatology(45.28) | | | Particle and Nuclear Physics(59.11) |
| | | Clinical Stomatology(48.10) | | | Polymer Physics(61.47) |
| | Systems Science(72.00) | Traditional Chinese Medicine(81.36) | | | Quantum Mechanics(53.40) |
| | | Traditional Chinese Medicine Theory(70.00) | | | Relativity(65.82) |
| | | Traditional Chinese Pharmacy(62.18) | | | Semiconductor Physics(54.10) |
| | | Military Command and Information Systems(58.00) | | | Solid State Physics(56.46) |
| | | Military Logistics and Equipment(48.15) | | | Statistical Mechanics(76.00) |
| Philosophy(63.69) | Philosophy(63.69) | Military Management(58.00) | | | Subatomic and Atomic Physics(72.55) |
| | | Military Thought and History(70.59) | | | Thermodynamics(52.56) |
| | | Ethics(54.41) | | | Thermodynamics and Statistical Physics(52.08) |
| | | Logic(55.71) | | | Systems Science(72.00) |
| Philosophy(63.69) | Philosophy(63.69) | Philosophical Aesthetics(61.47) | Sociology(67.13) | Sociology(67.13) | Demography and Anthropology(72.00) |
| | | Philosophy of Science and Technology(80.00) | | | Social and Folklore Studies(64.52) |

Table 16. Continued: Model Scores Across Three Levels of Disciplines: DeepSeek-R1-Zero.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|--|---|
| Agronomy(50.93) | Animal Husbandry(41.75) | Animal Nutrition and Feed Science(44.23) | Engineering(59.17) | Geological Resources and Geological Engineering(64.00) | Geological Resources and Geological Engineering(64.00) |
| | | Animal Rearing and Breeding(39.22) | | | Hydraulics and Hydrology(59.56) |
| | Aquaculture(46.43) | Aquaculture(46.43) | | Hydraulic Engineering(54.13) | Water conservancy and Hydropower Engineering(45.12) |
| | | Crop Science(49.66) | | | Antenna and Radio Communication(69.30) |
| | Forestry(56.49) | Forest Cultivation and Genetic Breeding(54.32) | | Information and Communication Engineering(69.25) | Communication Principles(61.21) |
| | | Landscape Plants and Ornamental Horticulture(60.00) | | | Communication and Information Systems(66.67) |
| | Veterinary Medicine(64.00) | Veterinary Medicine(64.00) | | Optical Fiber Communication(76.00) | Optical Fiber Communication(76.00) |
| | | Economic Statistics(80.00) | | | Signal and Information Processing(74.19) |
| | Economics(61.17) | Finance(66.48) | | Instrument Science and Technology(66.00) | Instrument Science and Technology(66.00) |
| | | Industrial Economics(58.33) | | | Materials Physics and Chemistry(56.78) |
| | | International Trade(59.42) | | Materials Science and Engineering(57.44) | Materials Processing Engineering(58.89) |
| | | Labor Economics(55.41) | | | Mechanical Engineering(67.05) |
| | | National and Defense Economics(66.00) | | Manufacturing Automation(68.25) | Mechatronic Engineering(64.00) |
| | | Public Finance(55.00) | | | Fundamentals of Dynamics and Control(45.53) |
| | | Quantitative Economics(64.00) | | Rigid Body Mechanics(52.60) | Rigid Body Mechanics(52.60) |
| | | Theoretical Economics(55.33) | | | Solid Mechanics(59.14) |
| | | Economic History(66.00) | | Solid Mechanics(59.14) | Theoretical Fluid Mechanics(72.86) |
| | | Political Economy(48.00) | | | Theoretical Mechanics(53.55) |
| | | Western Economics(52.00) | | Metallurgical Engineering(54.90) | Iron and Steel Metallurgy(40.95) |
| Education(53.31) | Education(54.66) | Educational Technology and Principles(52.08) | | | Non-ferrous Metallurgy(60.00) |
| | | Preschool Education(56.00) | | Physical Chemistry of Metallurgical Process(64.00) | Physical Chemistry of Metallurgical Process(64.00) |
| | Physical Education(54.00) | Special Education(56.00) | | | Principles of Metallurgy(70.00) |
| | | Theory of Curriculum and Instruction(56.86) | | Mining Engineering(63.00) | Mineral Processing Engineering(66.00) |
| | | Physical Education and Training(48.00) | | | Mining and Safety Engineering(60.00) |
| | | Sports Humanities and Sociology(56.00) | | Naval Architecture and Ocean Engineering(52.17) | Marine Engineering(50.00) |
| | | Sports Science and Medicine(58.00) | | | Ship Mechanics and Design Principles(53.41) |
| | Psychology(48.28) | Psychology(48.28) | | Nuclear Science and Technology(63.55) | Nuclear Energy and Reactor Technology(61.40) |
| | | | | | Radiation Protection and Nuclear Technology Applications(66.00) |
| Engineering(59.17) | Aeronautical and Astronautical Science and Technology(56.30) | Aeronautical and Astronautical Science and Technology(56.30) | | Optical Engineering(55.59) | Applied Optics(56.45) |
| | | Agricultural Engineering(61.54) | | | Laser Technology(70.00) |
| | Architecture(58.02) | Agricultural Environment and Soil-Water Engineering(57.41) | | Petroleum and Natural Gas Engineering(61.61) | Optoelectronic Technology(44.78) |
| | | Agricultural Mechanization Engineering(66.00) | | | Theoretical Optics(54.81) |
| | Chemical Engineering and Technology(63.17) | Architectural Design and Theory(56.00) | | Power Engineering and Engineering Thermophysics(58.77) | Oil and Gas Field Development and Storage & Transportation Engineering(56.45) |
| | | Architectural History(61.29) | | | Poromechanics and Reservoir Physics(68.00) |
| | Civil Engineering(48.04) | Urban Planning and Design(56.00) | | | Engineering Fluid Mechanics(63.10) |
| | | Chemical Transport Engineering(66.00) | | | Engineering Thermophysics(60.27) |
| | Computer Science and Technology(63.04) | Elements of Chemical Reaction Engineering(70.09) | | Surveying and Mapping Science and Technology(65.48) | Fluid Machinery and Engineering(64.06) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(51.40) | | | Heat Transfer(70.54) |
| Control Science and Engineering(74.21) | Computer Science and Technology(63.04) | Mass Transport and Separation Process in Chemical Engineering(65.75) | | | Internal Combustion Engineering(64.00) |
| | | Civil Engineering(48.04) | | | Power Machinery and Engineering(36.54) |
| | Control Science and Engineering(74.21) | Bridge and Tunnel Engineering(52.94) | | Textile Science and Engineering(65.00) | Refrigeration and Cryogenic Engineering(38.00) |
| | | Geotechnical Engineering(49.16) | | | Thermal Energy Engineering(54.13) |
| | Control Science and Engineering(74.21) | Structural Engineering(43.86) | | Transportation Engineering(59.36) | Cartography and Geographic Information Engineering(64.00) |
| | | Urban Infrastructure Engineering(45.07) | | | Digital Surveying and Remote Sensing Applications(60.29) |
| | Control Science and Engineering(74.21) | Computer Science and Technology(63.04) | | | Geodesy and Surveying Engineering(74.00) |
| | | Advanced Programming Languages(82.00) | | | Textile Chemistry and Dyeing Engineering(52.00) |
| | Control Science and Engineering(74.21) | Computer Architecture(72.00) | | | Textile Materials Science(78.00) |
| | | Computer Networks(62.71) | | | Road and Railway Engineering(46.00) |
| Electrical Engineering(45.32) | Control Science and Engineering(74.21) | Computer Software and Theory(55.70) | | | Traffic Information Engineering and Control(55.38) |
| | | Data Structures(59.60) | | | Transportation Planning and Management(66.28) |
| | Control Science and Engineering(74.21) | Databases(61.78) | | | Vehicle Operation Engineering(66.00) |
| | | Formal Languages(61.54) | | Weapon Science and Technology(59.00) | Weapon Science and Technology(56.00) |
| | Control Science and Engineering(74.21) | Operating Systems(58.82) | | | Military Chemistry and Pyrotechnics(62.00) |
| | | Pattern Recognition(82.00) | | | Weapon Systems Science and Engineering(56.00) |
| | Control Science and Engineering(74.21) | Principles of Computer Organization(53.66) | | History(60.98) | Archaeology and Museology(70.19) |
| | | Control Theory and Control Engineering(76.40) | | | Historical Geography(54.93) |
| | Control Science and Engineering(74.21) | Guidance, Navigation and Control(66.67) | | Law(63.87) | World History(60.75) |
| | | Operations Research and Cybernetics(78.00) | | | |
| Electrical Engineering(45.32) | Control Science and Engineering(74.21) | Electrical Engineering and New Technologies(44.74) | | Law(64.97) | Civil and Commercial Law(58.47) |
| | | High Voltage and Insulation Technology(45.45) | | | Constitutional and Administrative Law(58.00) |
| | Control Science and Engineering(74.21) | Power Electronics and Electrical Drives(47.80) | | Law(64.97) | Contract Law(74.00) |
| | | Power Systems and Automation(41.67) | | | Criminal Law(62.07) |
| | Control Science and Engineering(74.21) | Circuits and Systems(59.26) | | Political Science(53.85) | International Law(50.88) |
| | | Electromagnetic Field and Microwave Technology(76.14) | | | Law and Social Governance(74.00) |
| | Control Science and Engineering(74.21) | Microelectronics and Solid-State Electronics(68.00) | | | Legal Theory and Legal History(70.00) |
| | | Environmental Science and Engineering(65.08) | | | Military Law(74.00) |
| | Control Science and Engineering(74.21) | Environmental Engineering(60.67) | | | Procedural Law(78.00) |
| | | Environmental Science(76.00) | | | Political Science(53.85) |
| Electrical Engineering(45.32) | Control Science and Engineering(74.21) | Environmental and Resource Protection(62.00) | | | |
| | | Food Biochemistry(88.00) | | | |
| | Control Science and Engineering(74.21) | Food Processing and Storage Engineering(47.46) | | Political Science(53.85) | |
| | | Forest Engineering(66.00) | | | |
| | Control Science and Engineering(74.21) | Wood Science and Technology(72.00) | | | |
| | | Forestry Engineering(69.00) | | | |
| | Control Science and Engineering(74.21) | Forestry Engineering(69.00) | | | |
| | | Forestry Engineering(69.00) | | | |

Table 17. Model Scores Across Three Levels of Disciplines: o1-2024-12-17.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|-------------------|-------------------|--|
| Literature and Arts(55.79) | Art Studies(56.88) | Broadcasting and Television Art(66.00) | Philosophy(61.38) | Philosophy(61.38) | Religious Studies(66.00) |
| | | Dance Studies(46.00) | | | Astronomical Observation and Technology(65.00) |
| | | Design Arts(45.16) | | | Astrophysics(59.42) |
| | | Drama and Opera Studies(57.32) | | | Cosmology(66.67) |
| | | Film Studies(60.13) | | | Solar System Science(62.50) |
| | Journalism and Communication(57.49) | Fine Arts(58.21) | | | Stellar and Interstellar Evolution(65.71) |
| | | Communication and Broadcasting(62.07) | | | Atmospheric Physics and Atmospheric Environment(42.03) |
| | | History and Theory of Journalism and Media Management(50.85) | | | Dynamic Meteorology(66.00) |
| | | Journalism and News Practice(58.89) | | | Meteorology(51.19) |
| | | Classical Chinese Literature(36.00) | | | Biochemistry and Molecular Biology(63.64) |
| Management(57.29) | Language and Literature(54.32) | French Language and Literature(60.00) | | | Biophysics(72.00) |
| | | Linguistics and Applied Linguistics(62.00) | | | Botany(54.82) |
| | | Literary History(60.87) | | | Cell Biology(56.32) |
| | | Literary Theory(60.94) | | | Ecology(56.94) |
| | | Modern and Contemporary Chinese Literature(48.00) | | | Genetics(65.22) |
| | Musicology(54.93) | Phylogeny and Bibliography(54.00) | | | Microbiology(49.69) |
| | | Russian Language and Literature(49.12) | | | Physiology(61.67) |
| | | Composition(54.00) | | | Zoology(57.80) |
| | | Harmony(48.33) | | | Chemistry(50.37) |
| | | Instrumentation and Performance(61.54) | | | Analytical Chemistry(54.04) |
| Medicine(62.25) | Business Administration(54.23) | Music History, Education, and Technology(62.07) | | | Electrochemistry(48.65) |
| | | Musical Forms and Analysis(52.00) | | | Inorganic Chemistry(56.52) |
| | | Pitch and Scales(59.29) | | | Organic Chemistry(52.05) |
| | | Business and Accounting Management(53.26) | | | Physical Chemistry(46.18) |
| | | Tourism Management and Technological Economics Management(56.00) | | | Polymer Chemistry and Physics(53.95) |
| | Library, Information and Archival Management(55.33) | Information Management Science(26.00) | | | Radiochemistry(58.33) |
| | | Information Management and Communication(92.00) | | | Geography(61.65) |
| | | Library and Archival Science(48.00) | | | Human Geography(72.00) |
| | | Management Science and Engineering(62.07) | | | Physical Geography(55.42) |
| | | Education Economics, Management and Social Security(56.00) | | | Geology(56.30) |
| Medicine(62.25) | Public Administration(60.26) | Land Resource Management and Administrative Management(56.86) | | | Geochemistry(62.00) |
| | | Social Medicine and Health Management(68.00) | | | Mineralogy, Petrology, and Economic Geology(57.85) |
| | | Forensic Medicine(68.00) | | | Paleontology and Stratigraphy(44.00) |
| | | Human Anatomy and Histology-Embryology(61.90) | | | Principles of Seismic Exploration(62.00) |
| | | Immunology(53.62) | | | Structural Geology(54.29) |
| | Clinical Medicine(61.17) | Pathogen Biology(59.57) | | | Geophysics(66.00) |
| | | Pathology and Pathophysiology(66.09) | | | Solid Earth Geophysics(76.00) |
| | | Radiation Medicine(86.00) | | | Space physics(56.00) |
| | | Anesthesiology(72.00) | | | Advanced Algebra(76.24) |
| | | Clinical Laboratory Diagnostics(70.00) | | | Combinatorial Mathematics(71.20) |
| Medicine(62.25) | Pharmacy(59.71) | Dermatology and Venereology(71.21) | | | Computational Mathematics(68.00) |
| | | Emergency Medicine(59.09) | | | Cryptography(78.00) |
| | | Geriatric Medicine(78.00) | | | Discrete Mathematics(74.16) |
| | | Imaging and Nuclear Medicine(47.76) | | | Functions of Complex Variables(77.05) |
| | | Internal Medicine(55.45) | | | Functions of Real Variables(79.10) |
| | Public Health and Preventive Medicine(66.78) | Neurology(59.79) | | | Fundamental Mathematics(78.68) |
| | | Nursing and Rehabilitation Medicine(62.00) | | | Fuzzy Mathematics(72.00) |
| | | Obstetrics and Gynecology(54.90) | | | Geometry and Topology(69.43) |
| | | Oncology(63.79) | | | Graph Theory(58.82) |
| | | Ophthalmology(54.00) | | | Group Theory(56.00) |
| Medicine(62.25) | Pharmacy(59.71) | Otorhinolaryngology(70.00) | | | Mathematical Analysis(82.64) |
| | | Pediatrics(72.00) | | | Number Theory(86.82) |
| | | Psychiatry and Mental Health(68.00) | | | Numerical Analysis(74.63) |
| | | Surgery(52.94) | | | Ordinary Differential Equations(78.75) |
| | | Medicinal Chemistry(64.00) | | | Polynomials and Series Expansions(76.54) |
| | Public Health and Preventive Medicine(66.78) | Microbiology and Biochemical Pharmacy(60.00) | | | Probability and Statistics(76.34) |
| | | Pharmaceutical Analysis(64.00) | | | Special Number Theory(80.00) |
| | | Pharmacetics(58.90) | | | Stochastic Processes(88.00) |
| | | Pharmacology(52.73) | | | Hydrogeology(78.00) |
| | | Epidemiology and Health Statistics(51.81) | | | Marine Biology(84.00) |
| Medicine(62.25) | Stomatology(54.55) | Health Toxicology and Environmental Health(73.75) | | | Marine Chemistry(62.00) |
| | | Maternal, Child and Adolescent Health(73.42) | | | Underwater Acoustics(78.00) |
| | | Nutrition and Food Hygiene(70.00) | | | Physical Oceanography(70.00) |
| | | Basic Stomatology(52.83) | | | Acoustics(51.43) |
| | | Clinical Stomatology(55.70) | | | Atomic and Molecular Physics(53.33) |
| | Traditional Chinese Medicine(64.93) | Traditional Chinese Health Preservation(81.36) | | | Electrodynamics(54.72) |
| | | Traditional Chinese Medicine Theory(63.33) | | | Fluid Physics(54.48) |
| | | Traditional Chinese Pharmacy(57.98) | | | Particle and Nuclear Physics(61.33) |
| | | Military Science(60.49) | | | Polymer Physics(60.55) |
| | | Military Command and Information Systems(48.00) | | | Quantum Mechanics(54.85) |
| Military Science(60.49) | Philosophy(61.38) | Military Logistics and Equipment(55.56) | | | Relativity(69.62) |
| | | Military Management(62.00) | | | Semiconductor Physics(54.10) |
| | | Military Thought and History(76.47) | | | Solid State Physics(58.50) |
| | | Ethics(63.24) | | | Statistical Mechanics(74.00) |
| | | Logic(64.29) | | | Subatomic and Atomic Physics(66.67) |
| | Philosophy(61.38) | Philosophical Aesthetics(50.46) | | | Thermodynamics(56.74) |
| | | Philosophy of Science and Technology(74.00) | | | Thermodynamics and Statistical Physics(52.64) |
| | | Systems Science(76.00) | | | Systems Science(76.00) |
| | | Sociology(64.34) | | | Demography and Anthropology(70.00) |
| | | Sociology(64.34) | | | Social and Folklore Studies(61.29) |

Table 17. Continued: Model Scores Across Three Levels of Disciplines: o1-2024-12-17.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|---|---|
| Agronomy(41.03) | Animal Husbandry(40.78) | Animal Nutrition and Feed Science(42.31) | Engineering(56.41) | Geological Resources and Geological Engineering(56.00) | Geological Resources and Geological Engineering(56.00) |
| | | Animal Rearing and Breeding(39.22) | | | Hydraulics and Hydrology(58.82) |
| | Aquaculture(17.86) Crop Science(40.00) | Aquaculture(17.86) | | Water conservancy and Hydropower Engineering(46.34) | Water conservancy and Hydropower Engineering(46.34) |
| | | Crop Science(40.00) | | | Antenna and Radio Communication(69.30) |
| | Forestry(46.56) | Forest Cultivation and Genetic Breeding(43.21) | | Communication Principles(66.38) | Communication Principles(66.38) |
| | | Landscape Plants and Ornamental Horticulture(52.00) | | | Communication and Information Systems(56.52) |
| | Veterinary Medicine(56.00) | Veterinary Medicine(56.00) | | Optical Fiber Communication(80.00) | Optical Fiber Communication(80.00) |
| | | Economic Statistics(72.00) | | | Signal and Information Processing(78.06) |
| | Economics(54.07) | Finance(62.50) | | Instrument Science and Technology(46.00) | Instrument Science and Technology(46.00) |
| | | Industrial Economics(57.14) | | | Materials Physics and Chemistry(57.79) |
| | | International Trade(44.93) | | Materials Processing Engineering(54.44) | Materials Processing Engineering(54.44) |
| | | Labor Economics(51.35) | | | Manufacturing Automation(50.79) |
| | | National and Defense Economics(56.00) | | Mechatronic Engineering(58.00) | Mechatronic Engineering(58.00) |
| | | Public Finance(45.83) | | | Fundamentals of Dynamics and Control(46.69) |
| | | Quantitative Economics(65.00) | | Rigid Body Mechanics(50.29) | Rigid Body Mechanics(50.29) |
| | | Theoretical Economics(40.67) | | | Solid Mechanics(56.99) |
| | | Economic History(40.00) | | Theoretical Fluid Mechanics(72.14) | Theoretical Fluid Mechanics(72.14) |
| | | Political Economy(36.00) | | | Theoretical Mechanics(58.71) |
| | | Western Economics(46.00) | | Metallurgical Engineering(51.37) | Iron and Steel Metallurgy(43.81) |
| Education(46.28) | Education(45.34) | Educational Technology and Principles(45.83) | | | Non-ferrous Metallurgy(46.00) |
| | | Preschool Education(42.00) | | | Physical Chemistry of Metallurgical Process(62.00) |
| | Physical Education(48.00) | Special Education(50.00) | | | Principles of Metallurgy(62.00) |
| | | Theory of Curriculum and Instruction(43.14) | | Mining Engineering(51.00) | Mineral Processing Engineering(52.00) |
| | Psychology(45.98) | Physical Education and Training(42.00) | | | Mining and Safety Engineering(50.00) |
| | | Sports Humanities and Sociology(36.00) | | | Naval Architecture and Ocean Engineering(42.03) |
| | | Sports Science and Medicine(66.00) | | | Marine Engineering(44.00) |
| | Engineering(56.41) | Psychology(45.98) | | | Ship Mechanics and Design Principles(40.91) |
| | | Aeronautical and Astronautical Science and Technology(54.62) | | | Nuclear Energy and Reactor Technology(63.16) |
| | Chemical Engineering and Technology(60.98) | Agricultural Environment and Soil-Water Engineering(53.70) | | Radiation Protection and Nuclear Technology Applications(64.00) | Radiation Protection and Nuclear Technology Applications(64.00) |
| | | Agricultural Mechanization Engineering(70.00) | | | Optical Engineering(58.78) |
| | | Architecture(45.06) | | Applied Optics(57.26) | Laser Technology(76.00) |
| | | Architectural Design and Theory(50.00) | | | Optoelectronic Technology(46.27) |
| | | Architectural History(32.26) | | | Theoretical Optics(60.00) |
| | | Urban Planning and Design(56.00) | | Petroleum and Natural Gas Engineering(49.11) | Polymerization and Reservoir Physics(54.00) |
| | | Chemical Transport Engineering(70.00) | | | Engineering Fluid Mechanics(64.29) |
| | | Elements of Chemical Reaction Engineering(70.09) | | | Engineering Thermodynamics(60.96) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(47.66) | | | Fluid Machinery and Engineering(56.25) |
| | | Mass Transport and Separation Process in Chemical Engineering(60.96) | | | Heat Transfer(63.57) |
| Control Science and Engineering(78.42) | Civil Engineering(41.06) | Bridge and Tunnel Engineering(33.33) | | | Internal Combustion Engineering(58.00) |
| | | Geotechnical Engineering(43.02) | | | Power Machinery and Engineering(38.46) |
| | Computer Science and Technology(61.86) | Structural Engineering(42.11) | | | Refrigeration and Cryogenic Engineering(40.00) |
| | | Urban Infrastructure Engineering(40.85) | | Surveying and Mapping Science and Technology(55.36) | Thermal Energy Engineering(58.72) |
| | Electrical Engineering(45.32) | Advanced Programming Languages(78.00) | | | Cartography and Geographic Information Engineering(62.00) |
| | | Computer Architecture(56.00) | | | Digital Surveying and Remote Sensing Applications(39.71) |
| | | Computer Networks(50.85) | | | Geodesy and Surveying Engineering(70.00) |
| | | Computer Software and Theory(51.90) | | | Textile Chemistry and Dyeing Engineering(50.00) |
| | | Data Structures(62.63) | | | Textile Materials Science(68.00) |
| | | Databases(63.69) | | Textile Science and Engineering(59.00) | Transportation Engineering(48.21) |
| Engineering(56.41) | Environmental Science and Engineering(57.14) | Formal Languages(69.23) | | | Road and Railway Engineering(24.00) |
| | | Operating Systems(58.82) | | | Traffic Information Engineering and Control(47.69) |
| | Food Science and Engineering(58.72) | Pattern Recognition(76.00) | | | Transportation Planning and Management(53.49) |
| | | Principles of Computer Organization(58.54) | | | Vehicle Operation Engineering(64.00) |
| | Forestry Engineering(62.00) | Control Theory and Control Engineering(82.02) | | Weapon Science and Technology(51.00) | Military Chemistry and Pyrotechnics(52.00) |
| | | Guidance, Navigation and Control(66.67) | | | Weapon Systems Science and Engineering(50.00) |
| | Electronic Science and Technology(68.29) | Operations Research and Cybernetics(84.00) | | History(36.80) | Archaeology and Museology(40.38) |
| | | Electrical Theory and New Technologies(45.26) | | | Historical Geography(31.69) |
| | Environmental Science and Engineering(57.14) | High Voltage and Insulation Technology(43.18) | | Law(45.73) | World History(37.62) |
| | | Power Electronics and Electrical Drives(50.00) | | | Civil and Commercial Law(46.61) |
| | Food Science and Engineering(58.72) | Power Systems and Automation(38.54) | | Law(46.87) | Constitutional and Administrative Law(42.00) |
| | | Circuits and Systems(61.11) | | | Contract Law(48.00) |
| | Engineering(56.41) | Electromagnetic Field and Microwave Technology(78.41) | | Political Science(35.38) | Criminal Law(42.24) |
| | | Microelectronics and Solid-State Electronics(66.00) | | | International Law(33.33) |
| | Forestry Engineering(62.00) | Environmental Engineering(56.18) | | | Law and Social Governance(60.00) |
| | | Environmental Science(62.00) | | | Legal Theory and Legal History(52.00) |
| | Forestry Engineering(62.00) | Environmental and Resource Protection(54.00) | | | Military Law(72.00) |
| | | Food Biochemistry(82.00) | | | Procedural Law(34.00) |
| | Forestry Engineering(62.00) | Food Processing and Storage Engineering(38.98) | | | Political Science(35.38) |
| | | Forest Engineering(58.00) | | | - |
| | | Wood Science and Technology(66.00) | | | - |

Table 18. Model Scores Across Three Levels of Disciplines: o3-mini-2025-01-31-high.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|-------------------|--|
| Literature and Arts(39.44) | Art Studies(40.13) | Broadcasting and Television Art(52.00) | Philosophy(51.01) | Philosophy(51.01) | Religious Studies(60.00) |
| | | Dance Studies(36.00) | | | Astronomical Observation and Technology(65.00) |
| | | Design Arts(38.71) | | | Astrophysics(56.52) |
| | | Drama and Opera Studies(47.56) | | | Cosmology(71.79) |
| | | Film Studies(47.47) | | | Solar System Science(69.32) |
| | Journalism and Communication(32.37) | Fine Arts(29.85) | | | Stellar and Interstellar Evolution(60.00) |
| | | Communication and Broadcasting(31.03) | | | Atmospheric Physics and Atmospheric Environment(43.48) |
| | | History and Theory of Journalism and Media Management(32.20) | | | Dynamic Meteorology(56.00) |
| | | Journalism and News Practice(33.33) | | | Meteorology(51.19) |
| | | Classical Chinese Literature(38.00) | | | Biochemistry and Molecular Biology(61.62) |
| Management(51.50) | Language and Literature(40.45) | French Language and Literature(52.00) | | | Biophysics(66.00) |
| | | Linguistics and Applied Linguistics(56.00) | | | Botany(39.16) |
| | | Literary History(34.78) | | | Cell Biology(47.13) |
| | | Literary Theory(42.19) | | | Ecology(47.22) |
| | | Modern and Contemporary Chinese Literature(28.00) | | | Genetics(61.96) |
| | Musicology(40.85) | Philology and Bibliography(38.00) | | | Microbiology(45.34) |
| | | Russian Language and Literature(36.84) | | | Physiology(53.33) |
| | | Composition(26.00) | | | Zoology(59.45) |
| | | Harmony(40.00) | | | Chemistry(50.25) |
| | | Instrumentation and Performance(32.31) | | | Analytical Chemistry(52.27) |
| Medicine(51.72) | Business Administration(48.74) | Music History, Education, and Technology(35.17) | | | Electrochemistry(50.90) |
| | | Musical Forms and Analysis(52.00) | | | Inorganic Chemistry(51.45) |
| | | Pitch and Scales(42.86) | | | Organic Chemistry(54.39) |
| | | Business and Accounting Management(46.74) | | | Physical Chemistry(46.46) |
| | | Tourism Management and Technological Economics Management(52.00) | | | Polymer Chemistry and Physics(53.95) |
| | Library, Information and Archival Management(52.00) | Information Management Science(24.00) | | | Radiochemistry(60.00) |
| | | Information Management and Communication(74.00) | | | Geography(48.12) |
| | | Library and Archival Science(58.00) | | | Human Geography(68.00) |
| | | Management Science and Engineering(62.07) | | | Physical Geography(36.14) |
| | | Education Economics, Management and Social Security(48.00) | | | Geology(49.56) |
| Pharmacy(49.28) | Management Science and Engineering(62.07) | Land Resource Management and Administrative Management(43.14) | | | Geochemistry(60.00) |
| | | Social Medicine and Health Management(58.00) | | | Mineralogy, Petrology, and Economic Geology(44.63) |
| | | Forensic Medicine(56.00) | | | Paleontology and Stratigraphy(46.00) |
| | | Human Anatomy and Histology-Embryology(52.91) | | | Principles of Seismic Exploration(56.00) |
| | | Immunology(42.03) | | | Structural Geology(48.57) |
| | Clinical Medicine(55.25) | Pathogen Biology(52.13) | | | Geophysics(68.00) |
| | | Pathology and Pathophysiology(46.09) | | | Solid Earth Geophysics(82.00) |
| | | Radiation Medicine(74.00) | | | Space physics(54.00) |
| | | Anesthesiology(62.00) | | | Advanced Algebra(81.19) |
| | | Clinical Laboratory Diagnostics(66.00) | | | Combinatorial Mathematics(78.01) |
| Public Health and Preventive Medicine(57.88) | Public Administration(49.67) | Dermatology and Venereology(66.67) | | | Computational Mathematics(72.00) |
| | | Emergency Medicine(59.09) | | | Cryptography(76.00) |
| | | Geriatric Medicine(74.00) | | | Discrete Mathematics(80.90) |
| | | Imaging and Nuclear Medicine(47.76) | | | Functions of Complex Variables(81.97) |
| | | Internal Medicine(47.52) | | | Functions of Real Variables(77.61) |
| | Stomatology(43.18) | Neurology(53.97) | | | Fundamental Mathematics(80.71) |
| | | Nursing and Rehabilitation Medicine(50.00) | | | Fuzzy Mathematics(82.00) |
| | | Obstetrics and Gynecology(46.08) | | | Geometry and Topology(75.47) |
| | | Oncology(56.90) | | | Graph Theory(68.63) |
| | | Ophthalmology(60.00) | | | Group Theory(60.00) |
| Military Science(46.34) | Traditional Chinese Medicine(34.70) | Otorhinolaryngology(66.00) | | | Mathematical Analysis(87.50) |
| | | Pediatrics(62.00) | | | Number Theory(90.00) |
| | | Psychiatry and Mental Health(60.00) | | | Numerical Analysis(74.63) |
| | | Surgery(44.12) | | | Ordinary Differential Equations(82.50) |
| | | Medicinal Chemistry(50.00) | | | Polynomials and Series Expansions(82.12) |
| | Philosophy(51.01) | Microbiology and Biochemical Pharmacy(56.00) | | | Probability and Statistics(80.36) |
| | | Pharmaceutical Analysis(58.00) | | | Special Number Theory(78.00) |
| | | Pharmacetics(39.73) | | | Stochastic Processes(88.00) |
| | | Pharmacology(47.27) | | | Hydrogeology(74.00) |
| | | Epidemiology and Health Statistics(40.96) | | | Marine Biology(80.00) |
| Philosophy(51.01) | Military Science(46.34) | Health Toxicology and Environmental Health(67.50) | | | Marine Chemistry(60.00) |
| | | Maternal, Child and Adolescent Health(64.56) | | | Underwater Acoustics(70.00) |
| | | Nutrition and Food Hygiene(60.00) | | | Physical Oceanography(60.00) |
| | | Basic Stomatology(45.28) | | | Acoustics(55.92) |
| | | Clinical Stomatology(41.77) | | | Atomic and Molecular Physics(52.86) |
| | Systems Science(70.00) | Traditional Chinese Health Preservation(40.68) | | | Electrodynamics(57.46) |
| | | Traditional Chinese Medicine Theory(32.22) | | | Fluid Physics(59.70) |
| | | Traditional Chinese Pharmacy(33.61) | | | Particle and Nuclear Physics(60.00) |
| | | Military Command and Information Systems(52.00) | | | Polymer Physics(60.55) |
| | | Military Logistics and Equipment(31.48) | | | Quantum Mechanics(55.83) |
| Philosophy(51.01) | Sociology(46.15) | Military Management(52.00) | | | Relativity(72.15) |
| | | Military Thought and History(50.98) | | | Semiconductor Physics(55.74) |
| | | Ethics(44.12) | | | Solid State Physics(57.82) |
| | | Logic(58.57) | | | Statistical Mechanics(80.00) |
| Philosophy(51.01) | Sociology(46.15) | Philosophical Aesthetics(39.45) | | | Subatomic and Atomic Physics(72.55) |
| | | Philosophy of Science and Technology(66.00) | | | Thermodynamics(53.95) |
| | | Sociology(46.15) | | | Thermodynamics and Statistical Physics(53.40) |
| | | Sociology(46.15) | | | Systems Science(70.00) |
| | | Sociology(46.15) | | | Demography and Anthropology(52.00) |
| | | Sociology(46.15) | | | Social and Folklore Studies(43.01) |

Table 18. Continued: Model Scores Across Three Levels of Disciplines: o3-mini-2025-01-31-high.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|--|--|---------------------------------------|--|---|
| Agronomy(50.93) | Animal Husbandry(42.72) | Animal Nutrition and Feed Science(36.54) | Engineering(55.60) | Geological Resources and Geological Engineering(62.00) | Geological Resources and Geological Engineering(62.00) |
| | | Animal Rearing and Breeding(49.02) | | | Hydraulics and Hydrology(62.50) |
| | Aquaculture(42.86) | Aquaculture(42.86) | | Water conservancy and Hydropower Engineering(41.46) | Water conservancy and Hydropower Engineering(41.46) |
| | | Crop Science(53.10) | | | Antenna and Radio Communication(58.77) |
| | Forestry(55.73) | Forest Cultivation and Genetic Breeding(51.85) | | Communication Principles(61.21) | Communication Principles(61.21) |
| | | Landscape Plants and Ornamental Horticulture(62.00) | | | Communication and Information Systems(59.42) |
| | Veterinary Medicine(58.00) | Veterinary Medicine(58.00) | | Optical Fiber Communication(82.00) | Optical Fiber Communication(82.00) |
| | | Economic Statistics(68.00) | | | Signal and Information Processing(70.97) |
| | Economics(65.06) | Finance(67.61) | | Instrument Science and Technology(46.00) | Instrument Science and Technology(46.00) |
| | | Industrial Economics(65.48) | | | Materials Physics and Chemistry(50.25) |
| | | International Trade(69.57) | | Materials Processing Engineering(61.11) | Materials Processing Engineering(61.11) |
| | | Labor Economics(59.46) | | | Manufacturing Automation(70.63) |
| | | National and Defense Economics(60.00) | | Mechatronic Engineering(62.00) | Mechatronic Engineering(62.00) |
| | | Public Finance(65.00) | | | Fundamentals of Dynamics and Control(45.82) |
| | | Quantitative Economics(65.00) | | Rigid Body Mechanics(38.15) | Rigid Body Mechanics(38.15) |
| | | Theoretical Economics(63.33) | | | Solid Mechanics(52.69) |
| | | Economic History(72.00) | | Theoretical Fluid Mechanics(72.14) | Theoretical Fluid Mechanics(72.14) |
| | | Political Economy(60.00) | | | Theoretical Mechanics(46.45) |
| | | Western Economics(58.00) | | Metallurgical Engineering(56.08) | Iron and Steel Metallurgy(42.86) |
| Education(55.58) | Education(55.06) | Educational Technology and Principles(54.17) | | | Non-ferrous Metallurgy(56.00) |
| | | Preschool Education(54.00) | | | Physical Chemistry of Metallurgical Process(64.00) |
| | Physical Education(56.00) | Special Education(50.00) | | | Principles of Metallurgy(76.00) |
| | | Theory of Curriculum and Instruction(62.75) | | Mining Engineering(69.00) | Mineral Processing Engineering(74.00) |
| | | Physical Education and Training(40.00) | | | Mining and Safety Engineering(64.00) |
| | Psychology(56.32) | Sports Humanities and Sociology(56.00) | | Naval Architecture and Ocean Engineering(47.10) | Marine Engineering(40.00) |
| | | Sports Science and Medicine(72.00) | | | Ship Mechanics and Design Principles(51.14) |
| Engineering(55.60) | Aeronautical and Astronautical Science and Technology(48.74) | Psychology(56.32) | Nuclear Science and Technology(59.81) | Nuclear Energy and Reactor Technology(59.65) | Radiation Protection and Nuclear Technology Applications(60.00) |
| | | Aeronautical and Astronautical Science and Technology(48.74) | | | Applied Optics(51.61) |
| | | Agricultural Environment and Soil-Water Engineering(53.70) | | Optical Engineering(52.93) | Laser Technology(62.00) |
| | | Agricultural Mechanization Engineering(64.00) | | | Optoelectronic Technology(44.78) |
| | Architecture(60.49) | Architectural Design and Theory(60.00) | | | Theoretical Optics(54.81) |
| | | Architectural History(61.29) | | Petroleum and Natural Gas Engineering(53.57) | Oil and Gas Field Development and Storage & Transportation Engineering(43.55) |
| | Chemical Engineering and Technology(56.10) | Urban Planning and Design(60.00) | | | Poromechanics and Reservoir Physics(66.00) |
| | | Chemical Transport Engineering(54.00) | | | Engineering Fluid Mechanics(55.95) |
| | | Elements of Chemical Reaction Engineering(55.14) | | Power Engineering and Engineering Thermophysics(54.68) | Engineering Thermophysics(53.42) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(54.21) | | | Fluid Machinery and Engineering(50.00) |
| | | Mass Transport and Separation Process in Chemical Engineering(58.90) | | | Heat Transfer(60.47) |
| | | Civil Engineering(51.40) | | | Internal Combustion Engineering(68.00) |
| | Computer Science and Technology(56.88) | Bridge and Tunnel Engineering(58.82) | | Refrigeration and Cryogenic Engineering(46.00) | Power Machinery and Engineering(42.31) |
| | | Geotechnical Engineering(49.72) | | | Refrigeration and Cryogenic Engineering(46.00) |
| | | Structural Engineering(54.39) | | Surveying and Mapping Science and Technology(61.31) | Thermal Energy Engineering(55.05) |
| | | Urban Infrastructure Engineering(47.89) | | | Cartography and Geographic Information Engineering(62.00) |
| | | Computer Science and Technology(56.88) | | | Digital Surveying and Remote Sensing Applications(54.41) |
| | | Advanced Programming Languages(70.00) | | Textile Science and Engineering(65.00) | Geodesy and Surveying Engineering(70.00) |
| | | Computer Architecture(58.00) | | | Textile Chemistry and Dyeing Engineering(52.00) |
| | | Computer Networks(52.54) | | | Textile Materials Science(78.00) |
| | | Computer Software and Theory(46.84) | | Transportation Engineering(51.39) | Road and Railway Engineering(44.00) |
| | | Data Structures(49.49) | | | Traffic Information Engineering and Control(41.54) |
| | Control Science and Engineering(68.42) | Databases(62.42) | | | Transportation Planning and Management(59.30) |
| | | Formal Languages(38.46) | | | Vehicle Operation Engineering(58.00) |
| | | Operating Systems(50.59) | | Weapon Science and Technology(55.00) | Military Chemistry and Pyrotechnics(58.00) |
| | | Pattern Recognition(80.00) | | | Weapon Systems Science and Engineering(52.00) |
| | | Principles of Computer Organization(63.41) | | History(42.88) | Archaeology and Museology(50.96) |
| | | Control Theory and Control Engineering(74.16) | | | Historical Geography(40.85) |
| | Electrical Engineering(43.35) | Guidance, Navigation and Control(60.78) | | | World History(41.59) |
| | | Operations Research and Cybernetics(66.00) | | Law(58.84) | Civil and Commercial Law(54.24) |
| | | Electrical Engineering(43.35) | | | Constitutional and Administrative Law(62.00) |
| | | Electrical Theory and New Technologies(43.68) | | Law(60.91) | Contract Law(66.00) |
| | | High Voltage and Insulation Technology(38.64) | | | Criminal Law(67.24) |
| | | Power Electronics and Electrical Drives(47.80) | | Law(60.91) | International Law(47.37) |
| | | Power Systems and Automation(38.54) | | | Law and Social Governance(64.00) |
| | | Circuits and Systems(56.48) | | Political Science(40.00) | Legal Theory and Legal History(60.00) |
| | | Electromagnetic Field and Microwave Technology(69.32) | | | Military Law(76.00) |
| | | Microelectronics and Solid-State Electronics(66.00) | | | Procedural Law(54.00) |
| | Environmental Science and Engineering(60.85) | Environmental Engineering(52.81) | | | Political Science(40.00) |
| | | Environmental Science(74.00) | | | - |
| | | Environmental and Resource Protection(62.00) | | | - |
| | | Food Biochemistry(86.00) | | | - |
| | Food Science and Engineering(68.81) | Food Processing and Storage Engineering(54.24) | | | - |
| | | Forest Engineering(52.00) | | | - |
| | | Wood Science and Technology(60.00) | | | - |
| Engineering(55.60) | Forestry Engineering(56.00) | - | - | - | - |

Table 19. Model Scores Across Three Levels of Disciplines: Doubao-1.5-pro-32k-250115.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|---|------------------------------|------------------------------|---|
| Literature and Arts(42.30) | Art Studies(38.14) | Broadcasting and Television Art(44.00) Dance Studies(30.00) Design Arts(30.65) Drama and Opera Studies(53.66) Film Studies(41.77) Fine Arts(31.84) | Philosophy(61.96) | Philosophy(61.96) | Religious Studies(80.00) |
| | Journalism and Communication(31.88) | Communication and Broadcasting(22.41) History and Theory of Journalism and Media Management(44.07) | Science(55.54) | Astronomy(53.33) | Astronomical Observation and Technology(51.00) Astrophysics(50.72) Cosmology(69.23) Solar System Science(45.45) Stellar and Interstellar Evolution(51.43) |
| | Language and Literature(56.59) | Journalism and News Practice(30.00) Classical Chinese Literature(58.00) French Language and Literature(54.00) Linguistics and Applied Linguistics(56.00) Literary History(62.32) Literary Theory(59.38) Modern and Contemporary Chinese Literature(54.00) Philology and Bibliography(64.00) Russian Language and Literature(43.86) | Atmospheric Science(56.16) | Atmospheric Science(56.16) | Atmospheric Physics and Atmospheric Environment(52.17) Dynamic Meteorology(64.00) |
| | Musicology(38.50) | Composition(36.00) Harmony(31.67) Instrumentation and Performance(46.15) Music History, Education, and Technology(40.00) Musical Forms and Analysis(36.00) Pitch and Scales(37.50) | Biology(54.55) | Biology(54.55) | Meteorology(54.76) Biochemistry and Molecular Biology(64.65) Biophysics(68.00) Botany(46.99) Cell Biology(52.87) Ecology(50.00) Genetics(63.04) Microbiology(49.69) Physiology(57.30) Zoology(47.71) |
| Management(53.29) | Business Administration(53.52) | Business and Accounting Management(52.17) Tourism Management and Technological Economics Management(56.00) | Chemistry(48.22) | Chemistry(48.22) | Analytical Chemistry(54.80) Electrochemistry(46.85) Inorganic Chemistry(47.83) Organic Chemistry(49.71) Physical Chemistry(44.48) Polymer Chemistry and Physics(53.95) Radiochemistry(43.33) |
| | Library, Information and Archival Management(51.33) | Information Management Science(26.00) Information Management and Communication(82.00) Library and Archival Science(46.00) | Geography(54.89) | Geography(54.89) | Human Geography(68.00) |
| | Management Science and Engineering(62.07) | Management Science and Engineering(62.07) | Geology(49.85) | Geology(49.85) | Physical Geography(46.99) Geochemistry(50.00) Mineralogy, Petrology, and Economic Geology(46.28) Paleontology and Stratigraphy(46.00) Principles of Seismic Exploration(62.00) |
| Medicine(59.13) | Basic Medicine(59.26) | Education Economics, Management and Social Security(46.00) Land Resource Management and Administrative Management(50.98) Social Medicine and Health Management(58.00) Forensic Medicine(50.00) Human Anatomy and Histology-Embryology(59.26) Immunology(65.52) Pathogen Biology(47.87) Pathology and Pathophysiology(64.35) Radiation Medicine(62.00) | Geophysics(52.00) | Geophysics(52.00) | Structural Geology(50.00) Solid Earth Geophysics(68.00) Space physics(36.00) |
| | Clinical Medicine(57.96) | Anesthesiology(66.00) Clinical Laboratory Diagnostics(60.00) Dermatology and Venereology(59.09) Emergency Medicine(60.61) Geriatric Medicine(66.00) Imaging and Nuclear Medicine(46.27) Internal Medicine(57.92) Neurology(52.91) Nursing and Rehabilitation Medicine(64.00) Obstetrics and Gynecology(56.86) Oncology(62.07) Ophthalmology(52.00) Otorhinolaryngology(56.00) Pediatrics(72.00) Psychiatry and Mental Health(64.00) Surgery(51.47) | Mathematics(64.34) | Mathematics(64.34) | Advanced Algebra(77.72) Combinatorial Mathematics(43.46) Computational Mathematics(58.00) Cryptography(70.00) Discrete Mathematics(47.19) Functions of Complex Variables(73.77) Functions of Real Variables(71.64) Fundamental Mathematics(73.10) Fuzzy Mathematics(66.00) Geometry and Topology(53.58) Graph Theory(47.06) Group Theory(44.00) Mathematical Analysis(73.61) Number Theory(55.45) Numerical Analysis(64.18) Ordinary Differential Equations(73.75) Polynomials and Series Expansions(64.80) Probability and Statistics(69.64) Special Number Theory(66.00) Stochastic Processes(76.00) |
| | Pharmacy(60.07) | Medicinal Chemistry(54.00) Microbiology and Biochemical Pharmacy(60.00) Pharmaceutical Analysis(66.00) Pharmacetics(68.49) Pharmacology(49.09) | Oceanography(74.50) | Oceanography(74.50) | Hydrogeology(76.00) Marine Biology(86.00) Marine Chemistry(72.00) Underwater Acoustics(64.00) |
| | Public Health and Preventive Medicine(60.27) | Epidemiology and Health Statistics(51.81) Health Toxicology and Environmental Health(55.00) Maternal, Child and Adolescent Health(68.35) Nutrition and Food Hygiene(70.00) | Physical Oceanography(64.00) | Physical Oceanography(64.00) | Physical Oceanography(64.00) |
| | Stomatology(53.03) | Basic Stomatology(52.83) Clinical Stomatology(53.16) | Physics(51.85) | Physics(51.85) | Acoustics(47.35) |
| | Traditional Chinese Medicine(64.93) | Traditional Chinese Health Preservation(79.66) Traditional Chinese Medicine Theory(56.67) Traditional Chinese Pharmacy(63.87) | | | Atomic and Molecular Physics(47.62) Electrodynamics(51.63) Fluid Physics(53.73) Particle and Nuclear Physics(53.33) Polymer Physics(59.63) Quantum Mechanics(54.85) Relativity(69.62) Semiconductor Physics(42.62) Solid State Physics(53.06) |
| Military Science(54.15) | Military Science(54.15) | Military Command and Information Systems(52.00) Military Logistics and Equipment(37.04) Military Management(66.00) Military Thought and History(62.75) | | | Statistical Mechanics(70.00) Subatomic and Atomic Physics(72.55) Thermodynamics(47.91) |
| Philosophy(61.96) | Philosophy(61.96) | Ethics(54.41) Logic(61.43) Philosophical Aesthetics(52.29) Philosophy of Science and Technology(76.00) | Sociology(51.75) | Sociology(51.75) | Thermodynamics and Statistical Physics(47.92) Systems Science(64.00) Demography and Anthropology(62.00) Social and Folklore Studies(46.24) |

Table 19. Continued: Model Scores Across Three Levels of Disciplines:

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|--|---|
| Agronomy(40.62) | Animal Husbandry(40.78) | Animal Nutrition and Feed Science(48.08) | Engineering(53.83) | Geological Resources and Geological Engineering(56.00) | Geological Resources and Geological Engineering(56.00) |
| | | Animal Rearing and Breeding(33.33) | | | Hydraulics and Hydrology(58.09) |
| | Aquaculture(21.43) Crop Science(37.24) | Aquaculture(21.43) | | Water conservancy and Hydropower Engineering(43.90) | Water conservancy and Hydropower Engineering(43.90) |
| | | Crop Science(37.24) | | | Antenna and Radio Communication(69.30) |
| | Forestry(48.85) | Forest Cultivation and Genetic Breeding(49.38) | | Communication Principles(63.79) | Communication Principles(63.79) |
| | | Landscape Plants and Ornamental Horticulture(48.00) | | | Communication and Information Systems(56.52) |
| | Veterinary Medicine(50.00) | Veterinary Medicine(50.00) | | Optical Fiber Communication(84.00) | Optical Fiber Communication(84.00) |
| | | Economic Statistics(72.00) | | | Signal and Information Processing(72.26) |
| | Economics(51.32) | Finance(60.23) | | Instrument Science and Technology(46.00) | Instrument Science and Technology(46.00) |
| | | Industrial Economics(55.95) | | | Materials Physics and Chemistry(53.27) |
| | | International Trade(44.93) | | Materials Processing Engineering(51.11) | Materials Processing Engineering(51.11) |
| | | Labor Economics(47.30) | | | Manufacturing Automation(43.65) |
| | | National and Defense Economics(54.00) | | Mechatronic Engineering(58.00) | Mechatronic Engineering(58.00) |
| | | Public Finance(45.00) | | | Fundamentals of Dynamics and Control(47.55) |
| | | Quantitative Economics(56.00) | | Rigid Body Mechanics(42.77) | Rigid Body Mechanics(42.77) |
| | | Theoretical Economics(37.33) | | | Solid Mechanics(59.14) |
| | | Economic History(28.00) | | Theoretical Fluid Mechanics(69.29) | Theoretical Fluid Mechanics(69.29) |
| | | Political Economy(32.00) | | | Theoretical Mechanics(53.55) |
| | | Western Economics(52.00) | | Iron and Steel Metallurgy(40.00) | Iron and Steel Metallurgy(40.00) |
| Education(41.74) | Education(42.11) | Educational Technology and Principles(39.58) | | | Non-ferrous Metallurgy(44.00) |
| | | Preschool Education(44.00) | | | Physical Chemistry of Metallurgical Process(54.00) |
| | | Special Education(46.00) | | | Principles of Metallurgy(66.00) |
| | | Theory of Curriculum and Instruction(41.18) | | Mining Engineering(51.00) | Mineral Processing Engineering(52.00) |
| | Physical Education(45.33) | Physical Education and Training(38.00) | | | Mining and Safety Engineering(50.00) |
| | | Sports Humanities and Sociology(32.00) | | | Naval Architecture and Ocean Engineering(41.30) |
| | | Sports Science and Medicine(66.00) | | | Marine Engineering(42.00) |
| | | Psychology(34.48) | | | Ship Mechanics and Design Principles(40.91) |
| Engineering(53.83) | Aeronautical and Astronautical Science and Technology(52.94) | Aeronautical and Astronautical Science and Technology(52.94) | | Nuclear Science and Technology(59.81) | Nuclear Energy and Reactor Technology(59.65) |
| | | Agricultural Environment and Soil-Water Engineering(53.70) | | | Radiation Protection and Nuclear Technology Applications(60.00) |
| | | Agricultural Mechanization Engineering(66.00) | | Optical Engineering(56.65) | Applied Optics(53.23) |
| | | Architecture(41.36) | | | Laser Technology(68.00) |
| | Chemical Engineering and Technology(57.56) | Architectural Design and Theory(50.00) | | | Optoelectronic Technology(53.73) |
| | | Architectural History(33.87) | | | Theoretical Optics(57.04) |
| | | Urban Planning and Design(42.00) | | Petroleum and Natural Gas Engineering(52.68) | Oil and Gas Field Development and Storage & Transportation Engineering(50.00) |
| | | Chemical Transport Engineering(66.00) | | | Poromechanics and Reservoir Physics(56.00) |
| | Civil Engineering(37.71) | Elements of Chemical Reaction Engineering(64.49) | | | Engineering Fluid Mechanics(71.43) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(46.73) | | | Engineering Thermophysics(55.12) |
| | | Mass Transport and Separation Process in Chemical Engineering(57.53) | | | Engineering Thermophysics(55.48) |
| | | Bridge and Tunnel Engineering(31.37) | | Surveying and Mapping Science and Technology(53.57) | Fluid Machinery and Engineering(56.25) |
| | | Geotechnical Engineering(38.55) | | | Heat Transfer(61.24) |
| | | Structural Engineering(40.35) | | | Internal Combustion Engineering(52.00) |
| | | Urban Infrastructure Engineering(38.03) | | | Power Machinery and Engineering(42.31) |
| Computer Science and Technology(59.11) | Computer Science and Technology(59.11) | Advanced Programming Languages(76.00) | | Textile Science and Engineering(52.00) | Refrigeration and Cryogenic Engineering(48.00) |
| | | Computer Architecture(50.00) | | | Thermal Energy Engineering(44.95) |
| | | Computer Networks(57.63) | | | Cartography and Geographic Information Engineering(62.00) |
| | | Computer Software and Theory(45.57) | | | Digital Surveying and Remote Sensing Applications(38.24) |
| | Control Science and Engineering(75.79) | Data Structures(57.58) | | | Geodesy and Surveying Engineering(66.00) |
| | | Databases(56.69) | | | Textile Chemistry and Dyeing Engineering(40.00) |
| | | Formal Languages(65.38) | | | Textile Materials Science(64.00) |
| | | Operating Systems(58.82) | | Transportation Engineering(43.82) | Transportation Engineering(43.82) |
| Electrical Engineering(43.71) | Electrical Engineering(43.71) | Pattern Recognition(76.00) | | | Road and Railway Engineering(30.00) |
| | | Principles of Computer Organization(60.98) | | | Traffic Information Engineering and Control(38.46) |
| | | Control Theory and Control Engineering(77.53) | | | Transportation Planning and Management(48.84) |
| | | Guidance, Navigation and Control(62.75) | | | Vehicle Operation Engineering(56.00) |
| | Control Science and Engineering(75.79) | Operations Research and Cybernetics(86.00) | | Weapon Science and Technology(48.00) | Military Chemistry and Pyrotechnics(46.00) |
| | | Electrical Theory and New Technologies(42.63) | | | Weapon Systems Science and Engineering(50.00) |
| | | High Voltage and Insulation Technology(42.05) | | | Archaeology and Museology(34.62) |
| | | Power Electronics and Electrical Drives(48.90) | | | Historical Geography(28.17) |
| Electronic Science and Technology(63.01) | Electronic Science and Technology(63.01) | Power Systems and Automation(37.50) | | | World History(37.38) |
| | | Circuits and Systems(57.41) | | Law(44.50) | Civil and Commercial Law(38.98) |
| | | Electromagnetic Field and Microwave Technology(71.59) | | | Constitutional and Administrative Law(44.00) |
| | | Microelectronics and Solid-State Electronics(60.00) | | | Contract Law(42.00) |
| | Environmental Science and Engineering(53.97) | Environmental Engineering(49.44) | | | Criminal Law(39.66) |
| | | Environmental Science(62.00) | | | International Law(58.60) |
| | | Environmental and Resource Protection(54.00) | | | Law and Social Governance(60.00) |
| | | Food Biochemistry(80.00) | | | Legal Theory and Legal History(46.00) |
| Food Science and Engineering(54.13) | Food Science and Engineering(54.13) | Food Processing and Storage Engineering(32.20) | | Political Science(35.38) | Military Law(66.00) |
| | | Forest Engineering(62.00) | | | Procedural Law(40.00) |
| | | Wood Science and Technology(66.00) | | | Political Science(35.38) |
| | | - | | | - |
| | Forestry Engineering(64.00) | - | | - | - |
| | | - | | | - |
| | | - | | | - |
| | | - | | | - |

Table 20. Model Scores Across Three Levels of Disciplines: o3-mini-2025-01-31-medium.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|---------------------|--|--|
| Literature and Arts(37.11) | Art Studies(36.98) | Broadcasting and Television Art(48.00) | Philosophy(48.13) | Philosophy(48.13) | Religious Studies(64.00) |
| | | Dance Studies(34.00) | | Astronomy(60.74) | Astronomical Observation and Technology(58.00) |
| | | Design Arts(30.65) | | Astrophysics(60.87) | Cosmology(58.97) |
| | | Drama and Opera Studies(46.34) | | Solar System Science(60.23) | Stellar and Interstellar Evolution(67.14) |
| | | Film Studies(42.41) | | Atmospheric Science(49.26) | Atmospheric Physics and Atmospheric Environment(46.38) |
| | Journalism and Communication(35.27) | Fine Arts(28.86) | | | Dynamic Meteorology(56.00) |
| | | Communication and Broadcasting(32.76) | | | Meteorology(47.62) |
| | | History and Theory of Journalism and Media Management(42.37) | | | Biochemistry and Molecular Biology(57.58) |
| | | Journalism and News Practice(32.22) | | | Biophysics(62.00) |
| | | Classical Chinese Literature(32.00) | | | Botany(42.17) |
| Language and Literature(37.27) | French Language and Literature(50.00) | French Language and Literature(50.00) | Biology(49.11) | Cell Biology(50.57) | Cell Biology(50.57) |
| | | Linguistics and Applied Linguistics(54.00) | | Ecology(44.75) | Ecology(44.75) |
| | | Literary History(31.88) | | Genetics(60.87) | Genetics(60.87) |
| | | Literary Theory(35.94) | | Microbiology(48.45) | Microbiology(48.45) |
| | | Modern and Contemporary Chinese Literature(26.00) | | Physiology(48.33) | Physiology(48.33) |
| | Musicology(38.03) | Philology and Bibliography(38.00) | | Zoology(33.94) | Zoology(33.94) |
| | | Russian Language and Literature(33.33) | | Chemistry(46.41) | Analytical Chemistry(49.49) |
| | | Composition(48.00) | | Electrochemistry(44.14) | Electrochemistry(44.14) |
| | | Harmony(43.33) | | Inorganic Chemistry(45.65) | Inorganic Chemistry(45.65) |
| | | Instrumentation and Performance(38.46) | | Organic Chemistry(49.71) | Organic Chemistry(49.71) |
| Management(48.50) | Business Administration(44.37) | Music History, Education, and Technology(33.10) | | Physical Chemistry(43.06) | Physical Chemistry(43.06) |
| | | Musical Forms and Analysis(38.00) | | Polymer Chemistry and Physics(55.26) | Polymer Chemistry and Physics(55.26) |
| | | Pitch and Scales(35.71) | | Radiochemistry(55.00) | Radiochemistry(55.00) |
| | | Business and Accounting Management(39.13) | Geography(50.38) | Human Geography(62.00) | Human Geography(62.00) |
| | | Tourism Management and Technological Economics Management(54.00) | | Physical Geography(43.37) | Physical Geography(43.37) |
| | Library, Information and Archival Management(47.33) | Information Management Science(20.00) | | Geochemistry(58.00) | Geochemistry(58.00) |
| | | Information Management and Communication(74.00) | | Mineralogy, Petrology, and Economic Geology(40.50) | Mineralogy, Petrology, and Economic Geology(40.50) |
| | | Library and Archival Science(48.00) | | Paleontology and Stratigraphy(46.00) | Paleontology and Stratigraphy(46.00) |
| | | Management Science and Engineering(56.90) | | Principles of Seismic Exploration(54.00) | Principles of Seismic Exploration(54.00) |
| | | Public Administration(50.33) | | Structural Geology(40.00) | Structural Geology(40.00) |
| Medicine(50.34) | Basic Medicine(48.85) | Education Economics, Management and Social Security(48.00) | | Solid Earth Geophysics(72.00) | Solid Earth Geophysics(72.00) |
| | | Land Resource Management and Administrative Management(47.06) | | Space physics(48.00) | Space physics(48.00) |
| | | Social Medicine and Health Management(56.00) | | Mathematics(77.12) | Advanced Algebra(77.72) |
| | | Forensic Medicine(50.00) | | Combinatorial Mathematics(73.30) | Combinatorial Mathematics(73.30) |
| | | Human Anatomy and Histology-Embryology(50.79) | | Computational Mathematics(70.00) | Computational Mathematics(70.00) |
| | Clinical Medicine(54.76) | Immunology(34.78) | | Cryptography(76.00) | Cryptography(76.00) |
| | | Pathogen Biology(48.94) | | Discrete Mathematics(76.40) | Discrete Mathematics(76.40) |
| | | Pathology and Pathophysiology(46.09) | | Functions of Complex Variables(81.97) | Functions of Complex Variables(81.97) |
| | | Radiation Medicine(66.00) | | Functions of Real Variables(76.12) | Functions of Real Variables(76.12) |
| | | Anesthesiology(68.00) | | Fundamental Mathematics(80.71) | Fundamental Mathematics(80.71) |
| Pharmacy(46.40) | Clinical Laboratory Diagnostics(64.00) | Clinical Laboratory Diagnostics(64.00) | Geophysics(60.00) | Fuzzy Mathematics(74.00) | Fuzzy Mathematics(74.00) |
| | | Dermatology and Venereology(68.18) | | Geometry and Topology(68.30) | Geometry and Topology(68.30) |
| | | Emergency Medicine(60.61) | | Graph Theory(66.67) | Graph Theory(66.67) |
| | | Geriatric Medicine(66.00) | | Group Theory(58.00) | Group Theory(58.00) |
| | | Imaging and Nuclear Medicine(47.76) | | Mathematical Analysis(82.29) | Mathematical Analysis(82.29) |
| | Pharmacology(49.09) | Internal Medicine(47.03) | | Number Theory(88.18) | Number Theory(88.18) |
| | | Neurology(53.44) | | Numerical Analysis(74.63) | Numerical Analysis(74.63) |
| | | Nursing and Rehabilitation Medicine(52.00) | | Ordinary Differential Equations(80.62) | Ordinary Differential Equations(80.62) |
| | | Obstetrics and Gynecology(47.06) | | Polynomials and Series Expansions(79.89) | Polynomials and Series Expansions(79.89) |
| | | Oncology(53.45) | | Probability and Statistics(72.32) | Probability and Statistics(72.32) |
| Public Health and Preventive Medicine(59.93) | Ophthalmology(68.00) | Ophthalmology(68.00) | Geophysics(60.00) | Special Number Theory(68.00) | Special Number Theory(68.00) |
| | | Otorhinolaryngology(66.00) | | Stochastic Processes(88.00) | Stochastic Processes(88.00) |
| | | Pediatrics(62.00) | | Oceanography(66.00) | Hydrogeology(64.00) |
| | | Psychiatry and Mental Health(58.00) | | Marine Biology(74.00) | Marine Biology(74.00) |
| | | Surgery(33.82) | | Marine Chemistry(62.00) | Marine Chemistry(62.00) |
| | Pharmacology(49.09) | Medicinal Chemistry(56.00) | | Underwater Acoustics(64.00) | Underwater Acoustics(64.00) |
| | | Microbiology and Biochemical Pharmacy(54.00) | | Physical Oceanography(70.00) | Physical Oceanography(70.00) |
| | | Pharmaceutical Analysis(50.00) | | Physics(54.83) | Acoustics(47.76) |
| | | Pharmaceutics(30.14) | | | |
| | | Pharmacology(49.09) | | | |
| Stomatology(43.94) | Health Toxicology and Environmental Health(65.00) | Health Toxicology and Environmental Health(65.00) | Oceanography(66.00) | Atomic and Molecular Physics(51.43) | Atomic and Molecular Physics(51.43) |
| | | Maternal, Child and Adolescent Health(64.56) | | Electrodynamics(55.40) | Electrodynamics(55.40) |
| | | Nutrition and Food Hygiene(70.00) | | Fluid Physics(52.99) | Fluid Physics(52.99) |
| | | Basic Stomatology(45.28) | | Particle and Nuclear Physics(62.67) | Particle and Nuclear Physics(62.67) |
| | | Clinical Stomatology(43.04) | | Polymer Physics(59.63) | Polymer Physics(59.63) |
| | Traditional Chinese Medicine(30.22) | Traditional Chinese Health Preservation(33.90) | | Quantum Mechanics(54.85) | Quantum Mechanics(54.85) |
| | | Traditional Chinese Medicine Theory(26.67) | | Relativity(68.35) | Relativity(68.35) |
| | | Traditional Chinese Pharmacy(31.09) | | Semiconductor Physics(47.54) | Semiconductor Physics(47.54) |
| | | Military Command and Information Systems(44.00) | | Solid State Physics(53.74) | Solid State Physics(53.74) |
| | | Military Logistics and Equipment(40.74) | | | |
| Military Science(45.85) | Military Thought and History(43.14) | Military Management(56.00) | | Statistical Mechanics(78.00) | Statistical Mechanics(78.00) |
| | | Military Thought and History(43.14) | | Subatomic and Atomic Physics(72.55) | Subatomic and Atomic Physics(72.55) |
| | | Ethics(45.59) | | Thermodynamics(50.70) | Thermodynamics(50.70) |
| | | Logic(50.00) | | Thermodynamics and Statistical Physics(51.89) | Thermodynamics and Statistical Physics(51.89) |
| Philosophy(48.13) | Philosophy(48.13) | Philosophical Aesthetics(36.70) | Sociology(44.06) | Systems Science(70.00) | Systems Science(70.00) |
| | | Philosophy of Science and Technology(58.00) | | Sociology(44.06) | Demography and Anthropology(50.00) |
| | | | | | Social and Folklore Studies(40.86) |

Table 20. Continued: Model Scores Across Three Levels of Disciplines:

o3-mini-2025-01-31-medium.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|-------------------------------|--|--|--------------------|--|---|
| Agronomy(47.42) | Animal Husbandry(41.75) | Animal Nutrition and Feed Science(36.54) | Engineering(50.76) | Geological Resources and Geological Engineering(58.00) | Geological Resources and Geological Engineering(58.00) |
| | | Animal Rearing and Breeding(47.06) | | | Hydraulics and Hydrology(49.26) |
| | Aquaculture(39.29) | Aquaculture(39.29) | | Hydraulic Engineering(47.25) | Water conservancy and Hydropower Engineering(43.90) |
| | | Crop Science(45.52) | | | Antenna and Radio Communication(56.14) |
| | Forestry(53.44) | Forest Cultivation and Genetic Breeding(50.62) | | Information and Communication Engineering(58.93) | Communication Principles(57.76) |
| | | Landscape Plants and Ornamental Horticulture(58.00) | | | Communication and Information Systems(55.07) |
| | Veterinary Medicine(58.00) | Veterinary Medicine(58.00) | | Optical Fiber Communication(76.00) | Optical Fiber Communication(76.00) |
| | | Economic Statistics(66.00) | | | Signal and Information Processing(58.06) |
| | Economics(60.14) | Finance(61.36) | | Instrument Science and Technology(44.00) | Instrument Science and Technology(44.00) |
| | | Industrial Economics(64.29) | | | Materials Science and Chemistry(45.23) |
| | | International Trade(66.67) | | Mechanical Engineering(64.20) | Materials Processing Engineering(55.56) |
| | | Labor Economics(43.24) | | | Manufacturing Automation(69.05) |
| | | National and Defense Economics(62.00) | | Mechanics(46.04) | Mechatronic Engineering(52.00) |
| | | Public Finance(60.83) | | | Fundamentals of Dynamics and Control(40.06) |
| | | Quantitative Economics(58.00) | | | Rigid Body Mechanics(37.57) |
| | | Theoretical Economics(60.00) | | | Solid Mechanics(44.09) |
| | | Economic History(68.00) | | Metallurgical Engineering(48.63) | Theoretical Fluid Mechanics(67.14) |
| | | Political Economy(58.00) | | | Theoretical Mechanics(50.97) |
| Education(54.75) | Education(55.47) | Western Economics(54.00) | | | Iron and Steel Metallurgy(37.14) |
| | | Educational Technology and Principles(60.42) | | Mining Engineering(64.00) | Non-ferrous Metallurgy(50.00) |
| | Physical Education(54.00) | Preschool Education(46.00) | | | Physical Chemistry of Metallurgical Process(56.00) |
| | | Special Education(58.00) | | | Principles of Metallurgy(64.00) |
| | Psychology(54.02) | Theory of Curriculum and Instruction(52.94) | | Naval Architecture and Ocean Engineering(42.75) | Mineral Processing Engineering(62.00) |
| | | Physical Education and Training(42.00) | | | Mining and Safety Engineering(66.00) |
| | | Sports Humanities and Sociology(52.00) | | | Marine Engineering(40.00) |
| | | Sports Science and Medicine(68.00) | | Nuclear Science and Technology(48.60) | Ship Mechanics and Design Principles(44.32) |
| | Engineering(50.76) | Psychology(54.02) | | | Nuclear Energy and Reactor Technology(42.11) |
| | | Aeronautical and Astronautical Science and Technology(41.18) | | Optical Engineering(47.87) | Radiation Protection and Nuclear Technology Applications(56.00) |
| | | Agricultural Engineering(51.92) | | | Applied Optics(48.39) |
| | | Agricultural Environment and Soil-Water Engineering(48.15) | | Petroleum and Natural Gas Engineering(53.57) | Laser Technology(56.00) |
| | | Agricultural Mechanization Engineering(56.00) | | | Optoelectronic Technology(40.30) |
| | | Architecture(48.77) | | | Theoretical Optics(48.15) |
| | | Architectural Design and Theory(50.00) | | Power Engineering and Engineering Thermophysics(45.91) | Oil and Gas Field Development and Storage & Transportation Engineering(45.16) |
| | | Architectural History(48.39) | | | Poromechanics and Reservoir Physics(64.00) |
| | | Urban Planning and Design(48.00) | | | Engineering Fluid Mechanics(52.38) |
| | | Chemical Engineering and Technology(50.73) | | | Engineering Thermophysics(45.21) |
| Electrical Engineering(41.91) | Computer Science and Technology(50.59) | Chemical Transport Engineering(52.00) | | Surveying and Mapping Science and Technology(60.71) | Fluid Machinery and Engineering(40.62) |
| | | Elements of Chemical Reaction Engineering(44.86) | | | Heat Transfer(44.96) |
| | Control Science and Engineering(66.32) | Fluid Flow and Heat Transfer in Chemical Engineering(51.40) | | | Internal Combustion Engineering(58.00) |
| | | Mass Transport and Separation Process in Chemical Engineering(54.11) | | | Power Machinery and Engineering(26.92) |
| | Civil Engineering(48.32) | Civil Engineering(48.32) | | Textile Science and Engineering(60.00) | Refrigeration and Cryogenic Engineering(42.00) |
| | | Bridge and Tunnel Engineering(54.90) | | | Thermal Energy Engineering(51.38) |
| | | Geotechnical Engineering(46.93) | | | Cartography and Geographic Information Engineering(66.00) |
| | | Structural Engineering(52.63) | | | Digital Surveying and Remote Sensing Applications(52.94) |
| | | Urban Infrastructure Engineering(43.66) | | | Geodesy and Surveying Engineering(66.00) |
| | | Computer Science and Technology(50.59) | | | Textile Chemistry and Dyeing Engineering(50.00) |
| Engineering(50.76) | Environmental Science and Engineering(57.67) | Formal Languages(42.31) | | | Textile Materials Science(70.00) |
| | | Operating Systems(42.35) | | Transportation Engineering(54.18) | Road and Railway Engineering(50.00) |
| | Food Science and Engineering(66.97) | Pattern Recognition(68.00) | | | Traffic Information Engineering and Control(46.15) |
| | | Principles of Computer Organization(56.10) | | | Transportation Planning and Management(60.47) |
| | Forestry Engineering(54.00) | Control Theory and Control Engineering(70.79) | | | Vehicle Operation Engineering(58.00) |
| | | Guidance, Navigation and Control(56.86) | | Weapon Science and Technology(48.00) | Military Chemistry and Pyrotechnics(44.00) |
| | | Operations Research and Cybernetics(68.00) | | | Weapon Systems Science and Engineering(52.00) |
| | Electronic Science and Technology(57.32) | Electrical Theory and New Technologies(43.68) | | History(37.54) | Archaeology and Museology(40.38) |
| | | High Voltage and Insulation Technology(35.23) | | | Historical Geography(35.21) |
| | | Power Electronics and Electrical Drives(46.15) | | | World History(37.62) |
| | Food Science and Engineering(66.97) | Power Systems and Automation(36.46) | | Law(54.12) | Civil and Commercial Law(49.15) |
| | | Circuits and Systems(52.78) | | | Constitutional and Administrative Law(52.00) |
| | Forestry Engineering(54.00) | Electromagnetic Field and Microwave Technology(60.23) | | Law(54.99) | Contract Law(62.00) |
| | | Microelectronics and Solid-State Electronics(62.00) | | | Criminal Law(55.17) |
| | Engineering(50.76) | Environmental Engineering(55.06) | | Political Science(46.15) | International Law(47.37) |
| | | Environmental Science(66.00) | | | Law and Social Governance(60.00) |
| | | Environmental and Resource Protection(54.00) | | | Legal Theory and Legal History(60.00) |
| | | Food Biochemistry(86.00) | | | Military Law(74.00) |
| | | Food Processing and Storage Engineering(50.85) | | | Procedural Law(44.00) |
| | | Forest Engineering(44.00) | | | Political Science(46.15) |
| | | Wood Science and Technology(64.00) | | | - |

Table 21. Model Scores Across Three Levels of Disciplines: Doubao-1.5-pro-32k-241225.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|-------------------|--|--|
| Literature and Arts(38.31) | Art Studies(33.50) | Broadcasting and Television Art(42.00) | Philosophy(57.06) | Philosophy(57.06) | Religious Studies(60.00) |
| | | Dance Studies(26.00) | | Astronomy(48.15) | Astronomical Observation and Technology(47.00) |
| | | Design Arts(29.03) | | Astrophysics(47.83) | Cosmology(62.82) |
| | | Drama and Opera Studies(45.12) | | Solar System Science(38.64) | Stellar and Interstellar Evolution(45.71) |
| | | Film Studies(34.81) | | Atmospheric Science(54.68) | Atmospheric Physics and Atmospheric Environment(50.72) |
| | Journalism and Communication(29.47) | Fine Arts(28.86) | | | Dynamic Meteorology(64.00) |
| | | Communication and Broadcasting(15.52) | | | Meteorology(52.38) |
| | | History and Theory of Journalism and Media Management(45.76) | | | Biochemistry and Molecular Biology(62.63) |
| | | Journalism and News Practice(27.78) | | | Biophysics(62.00) |
| | | Classical Chinese Literature(58.00) | | | Botany(49.40) |
| Management(52.69) | Language and Literature(52.50) | French Language and Literature(52.00) | Biology(51.70) | Cell Biology(51.72) | Cell Biology(51.72) |
| | | Linguistics and Applied Linguistics(48.00) | | Ecology(42.36) | Ecology(42.36) |
| | | Literary History(50.72) | | Genetics(58.15) | Genetics(58.15) |
| | | Literary Theory(60.94) | | Microbiology(47.20) | Microbiology(47.20) |
| | | Modern and Contemporary Chinese Literature(54.00) | | Physiology(52.80) | Physiology(52.80) |
| | Musicology(34.74) | Philology and Bibliography(58.00) | | Zoology(47.71) | Zoology(47.71) |
| | | Russian Language and Literature(38.60) | | Chemistry(45.45) | Analytical Chemistry(52.02) |
| | | Musicology(40.00) | | Electrochemistry(41.14) | Electrochemistry(41.14) |
| | | Harmony(33.33) | | Inorganic Chemistry(46.38) | Inorganic Chemistry(46.38) |
| | | Instrumentation and Performance(35.38) | | Organic Chemistry(45.61) | Organic Chemistry(45.61) |
| Medicine(54.99) | Business Administration(50.70) | Music History, Education, and Technology(35.17) | | Physical Chemistry(41.78) | Physical Chemistry(41.78) |
| | | Musical Forms and Analysis(38.00) | | Polymer Chemistry and Physics(50.00) | Polymer Chemistry and Physics(50.00) |
| | | Pitch and Scales(26.79) | | Radiochemistry(41.67) | Radiochemistry(41.67) |
| | | Business and Accounting Management(53.26) | Geography(48.87) | Human Geography(72.00) | Human Geography(72.00) |
| | | Tourism Management and Technological Economics Management(46.00) | | Physical Geography(34.94) | Physical Geography(34.94) |
| | Library, Information and Archival Management(49.33) | Information Management Science(30.00) | | Geochemistry(52.00) | Geochemistry(52.00) |
| | | Information Management and Communication(70.00) | | Mineralogy, Petrology, and Economic Geology(52.07) | Mineralogy, Petrology, and Economic Geology(52.07) |
| | | Library and Archival Science(48.00) | | Paleontology and Stratigraphy(40.00) | Paleontology and Stratigraphy(40.00) |
| | | Management Science and Engineering(58.62) | | Principles of Seismic Exploration(48.00) | Principles of Seismic Exploration(48.00) |
| | | Public Administration(55.63) | | Structural Geology(51.43) | Structural Geology(51.43) |
| Military Science(53.66) | Basic Medicine(56.26) | Education Economics, Management and Social Security(56.00) | | Solid Earth Geophysics(68.00) | Solid Earth Geophysics(68.00) |
| | | Land Resource Management and Administrative Management(50.98) | | Space physics(36.00) | Space physics(36.00) |
| | | Social Medicine and Health Management(60.00) | | Mathematics(60.49) | Advanced Algebra(74.26) |
| | | Forensic Medicine(50.00) | | Combinatorial Mathematics(46.07) | Combinatorial Mathematics(46.07) |
| | | Human Anatomy and Histology-Embryology(52.38) | | Computational Mathematics(60.00) | Computational Mathematics(60.00) |
| | Clinical Medicine(54.76) | Immunology(46.38) | | Cryptography(70.00) | Cryptography(70.00) |
| | | Pathogen Biology(54.26) | | Discrete Mathematics(48.31) | Discrete Mathematics(48.31) |
| | | Pathology and Pathophysiology(60.87) | | Functions of Complex Variables(67.21) | Functions of Complex Variables(67.21) |
| | | Radiation Medicine(64.00) | | Functions of Real Variables(62.69) | Functions of Real Variables(62.69) |
| | | Anesthesiology(68.00) | | Fundamental Mathematics(68.33) | Fundamental Mathematics(68.33) |
| Philosophy(57.06) | Pharmacy(53.24) | Clinical Laboratory Diagnostics(60.00) | | Fuzzy Mathematics(68.00) | Fuzzy Mathematics(68.00) |
| | | Dermatology and Venereology(56.06) | | Geometry and Topology(46.79) | Geometry and Topology(46.79) |
| | | Emergency Medicine(53.03) | | Graph Theory(47.06) | Graph Theory(47.06) |
| | | Geriatric Medicine(54.00) | | Group Theory(42.00) | Group Theory(42.00) |
| | | Imaging and Nuclear Medicine(40.30) | | Mathematical Analysis(65.97) | Mathematical Analysis(65.97) |
| | Public Health and Preventive Medicine(56.85) | Internal Medicine(53.47) | | Number Theory(52.73) | Number Theory(52.73) |
| | | Neurology(50.79) | | Numerical Analysis(55.22) | Numerical Analysis(55.22) |
| | | Nursing and Rehabilitation Medicine(58.00) | | Ordinary Differential Equations(68.12) | Ordinary Differential Equations(68.12) |
| | | Obstetrics and Gynecology(56.86) | | Polynomials and Series Expansions(58.66) | Polynomials and Series Expansions(58.66) |
| | | Oncology(58.62) | | Probability and Statistics(67.86) | Probability and Statistics(67.86) |
| Back to List of Models | Stomatology(43.94) | Ophthalmology(56.00) | | Special Number Theory(64.00) | Special Number Theory(64.00) |
| | | Otorhinolaryngology(50.00) | | Stochastic Processes(74.00) | Stochastic Processes(74.00) |
| | | Pediatrics(70.00) | | Oceanography(64.50) | Hydrogeology(72.00) |
| | | Psychiatry and Mental Health(62.00) | | Marine Biology(82.00) | Marine Biology(82.00) |
| | | Surgery(48.53) | | Marine Chemistry(54.00) | Marine Chemistry(54.00) |
| | Traditional Chinese Medicine(58.58) | Medicinal Chemistry(42.00) | | Underwater Acoustics(50.00) | Underwater Acoustics(50.00) |
| | | Microbiology and Biochemical Pharmacy(42.00) | | Physical Oceanography(54.00) | Physical Oceanography(54.00) |
| | | Pharmaceutical Analysis(58.00) | | Physics(46.57) | Acoustics(44.49) |
| | | Pharmacaceutics(67.12) | | | |
| | | Pharmacology(50.91) | | | |
| Back to Table of Contents | Military Science(53.66) | Epidemiology and Health Statistics(55.42) | | | |
| | | Health Toxicology and Environmental Health(53.75) | | | |
| | | Maternal, Child and Adolescent Health(53.16) | | | |
| | | Nutrition and Food Hygiene(70.00) | | | |
| | | Basic Stomatology(41.51) | | | |
| | Philosophy(57.06) | Clinical Stomatology(45.57) | | | |
| | | Traditional Chinese Health Preservation(66.10) | | | |
| | | Traditional Chinese Medicine Theory(60.00) | | | |
| | | Traditional Chinese Pharmacy(53.78) | | | |
| | | Military Command and Information Systems(56.00) | | | |
| Philosophy(57.06) | Philosophy(57.06) | Military Logistics and Equipment(35.19) | | | |
| | | Military Management(68.00) | | | |
| | | Military Thought and History(56.86) | | | |
| | | Ethics(54.41) | | | |
| | | Logic(54.29) | | | |
| Philosophy(57.06) | Philosophy(57.06) | Philosophical Aesthetics(49.54) | | | |
| | | Philosophy of Science and Technology(78.00) | | | |
| | | Sociology(53.15) | | Systems Science(62.00) | Thermodynamics and Statistical Physics(44.34) |
| | | Sociology(53.15) | | Sociology(53.15) | Systems Science(62.00) |
| | | | | | Demography and Anthropology(62.00) |
| | | | | | Social and Folklore Studies(48.39) |

Table 21. Continued: Model Scores Across Three Levels of Disciplines:

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|--|--|----------------------------------|--|---|
| Agronomy(44.33) | Animal Husbandry(43.69) | Animal Nutrition and Feed Science(46.15) | Engineering(50.81) | Geological Resources and Geological Engineering(52.00) | Geological Resources and Geological Engineering(52.00) |
| | | Animal Rearing and Breeding(41.18) | | | Hydraulics and Hydrology(50.00) |
| | | Aquaculture(37.50) | | | Water conservancy and Hydropower Engineering(42.68) |
| | Crop Science(46.90) | Crop Science(46.90) | | Information and Communication Engineering(58.93) | Antenna and Radio Communication(46.49) |
| | | Forestry(45.04) | | | Communication Principles(60.34) |
| | Veterinary Medicine(44.00) | Forest Cultivation and Genetic Breeding(40.74) | | | Communication and Information Systems(53.62) |
| | | Landscape Plants and Ornamental Horticulture(52.00) | | | Optical Fiber Communication(76.00) |
| | | Veterinary Medicine(44.00) | | | Signal and Information Processing(63.87) |
| Economics(57.50) | Applied Economics(57.54) | Economic Statistics(58.00) | | Instrument Science and Technology(52.00) | Instrument Science and Technology(52.00) |
| | | Finance(59.09) | | | Materials Physics and Chemistry(46.23) |
| | | Industrial Economics(63.10) | | Mechanical Engineering(58.52) | Materials Processing Engineering(51.11) |
| | | International Trade(62.32) | | | Manufacturing Automation(60.32) |
| | | Labor Economics(54.05) | | Mechanics(41.74) | Mechatronic Engineering(54.00) |
| | | National and Defense Economics(48.00) | | | Fundamentals of Dynamics and Control(37.18) |
| | | Public Finance(52.50) | | | Rigid Body Mechanics(35.26) |
| | | Quantitative Economics(60.00) | | | Solid Mechanics(47.31) |
| | | Theoretical Economics(57.33) | | | Theoretical Fluid Mechanics(60.71) |
| | Education(56.40) | Economic History(66.00) | | | Theoretical Mechanics(38.71) |
| | | Political Economy(48.00) | Metallurgical Engineering(49.02) | Iron and Steel Metallurgy(37.14) | Iron and Steel Metallurgy(37.14) |
| | | Western Economics(58.00) | | | Non-ferrous Metallurgy(52.00) |
| Engineering(50.81) | Education(59.92) | Educational Technology and Principles(55.21) | | Physical Chemistry of Metallurgical Process(56.00) | Physical Chemistry of Metallurgical Process(56.00) |
| | | Preschool Education(68.00) | | | Principles of Metallurgy(64.00) |
| | | Special Education(62.00) | | Mining Engineering(70.00) | Mineral Processing Engineering(74.00) |
| | | Theory of Curriculum and Instruction(58.82) | | | Mining and Safety Engineering(66.00) |
| | | Physical Education(56.00) | | Naval Architecture and Ocean Engineering(55.07) | Marine Engineering(52.00) |
| | | Physical Education and Training(50.00) | | | Ship Mechanics and Design Principles(56.82) |
| | | Sports Humanities and Sociology(56.00) | | Nuclear Science and Technology(47.66) | Nuclear Energy and Reactor Technology(40.35) |
| | | Sports Science and Medicine(62.00) | | | Radiation Protection and Nuclear Technology Applications(56.00) |
| | Psychology(47.13) | Psychology(47.13) | | Optical Engineering(45.21) | Applied Optics(44.35) |
| Engineering(50.81) | Aeronautical and Astronautical Science and Technology(42.02) | Aeronautical and Astronautical Science and Technology(42.02) | | | Laser Technology(50.00) |
| | | Agricultural Engineering(57.69) | | | Optoelectronic Technology(49.25) |
| | | Agricultural Environment and Soil-Water Engineering(51.85) | | | Theoretical Optics(42.22) |
| | | Agricultural Mechanization Engineering(64.00) | | Petroleum and Natural Gas Engineering(57.14) | Oil and Gas Field Development and Storage & Transportation Engineering(51.61) |
| | | Architecture(58.02) | | | Poromechanics and Reservoir Physics(64.00) |
| | | Architectural Design and Theory(54.00) | | | Engineering Fluid Mechanics(48.81) |
| | | Architectural History(56.45) | | | Engineering Thermophysics(50.00) |
| | | Urban Planning and Design(64.00) | | Surveying and Mapping Science and Technology(58.33) | Fluid Machinery and Engineering(39.06) |
| | Chemical Engineering and Technology(50.98) | Chemical Transport Engineering(64.00) | | | Heat Transfer(55.81) |
| | | Elements of Chemical Reaction Engineering(50.47) | | | Internal Combustion Engineering(54.00) |
| Engineering(50.81) | Civil Engineering(46.09) | Fluid Flow and Heat Transfer in Chemical Engineering(42.99) | | | Power Machinery and Engineering(26.92) |
| | | Mass Transport and Separation Process in Chemical Engineering(52.74) | | | Refrigeration and Cryogenic Engineering(36.00) |
| | | Civil Engineering(46.09) | | | Thermal Energy Engineering(42.20) |
| | | Bridge and Tunnel Engineering(45.10) | | | Cartography and Geographic Information Engineering(60.00) |
| | | Geotechnical Engineering(44.69) | | | Digital Surveying and Remote Sensing Applications(54.41) |
| | | Structural Engineering(43.86) | | | Geodesy and Surveying Engineering(62.00) |
| | | Urban Infrastructure Engineering(52.11) | | | Textile Chemistry and Dyeing Engineering(50.00) |
| | | Computer Science and Technology(56.09) | | | Textile Materials Science(74.00) |
| | | Advanced Programming Languages(62.00) | | Textile Science and Engineering(62.00) | Transportation Engineering(55.38) |
| | | Computer Architecture(60.00) | | | Road and Railway Engineering(52.00) |
| | Control Science and Engineering(57.37) | Computer Networks(50.85) | | | Traffic Information Engineering and Control(41.54) |
| | | Computer Software and Theory(50.63) | | | Transportation Planning and Management(65.12) |
| | | Data Structures(40.40) | | | Vehicle Operation Engineering(60.00) |
| | | Databases(64.97) | | Weapon Science and Technology(52.00) | Weapon Science and Technology(54.00) |
| | | Formal Languages(40.38) | | | Military Chemistry and Pyrotechnics(54.00) |
| | | Operating Systems(60.00) | | | Weapon Systems Science and Engineering(50.00) |
| | | Pattern Recognition(78.00) | | History(44.81) | Archaeology and Museology(60.58) |
| | | Principles of Computer Organization(53.66) | | | Historical Geography(35.21) |
| | | Control Theory and Control Engineering(62.92) | | | World History(44.16) |
| | | Guidance, Navigation and Control(50.98) | | Law(54.12) | Civil and Commercial Law(47.46) |
| | | Operations Research and Cybernetics(54.00) | | | Constitutional and Administrative Law(62.00) |
| Engineering(50.81) | Electrical Engineering(41.19) | Electrical Theory and New Technologies(39.47) | | Law(54.12) | Contract Law(48.00) |
| | | High Voltage and Insulation Technology(46.59) | | | Criminal Law(58.62) |
| | | Power Electronics and Electrical Drives(40.66) | | | International Law(40.35) |
| | Electronic Science and Technology(55.28) | Power Systems and Automation(40.62) | | Law(54.99) | Law and Social Governance(68.00) |
| | | Circuits and Systems(52.78) | | | Legal Theory and Legal History(60.00) |
| | | Electromagnetic Field and Microwave Technology(60.23) | | | Military Law(70.00) |
| | Environmental Science and Engineering(58.20) | Microelectronics and Solid-State Electronics(52.00) | | Political Science(46.15) | Procedural Law(48.00) |
| | | Environmental Engineering(55.06) | | | Political Science(46.15) |
| | | Environmental Science(72.00) | | | - |
| | Food Science and Engineering(62.39) | Environmental and Resource Protection(50.00) | | | - |
| | | Food Biochemistry(80.00) | | | - |
| | | Food Processing and Storage Engineering(47.46) | | | - |
| | Forestry Engineering(57.00) | Forest Engineering(62.00) | | | - |
| | | Wood Science and Technology(52.00) | | | - |

Table 22. Model Scores Across Three Levels of Disciplines: qwen-max-2025-01-25.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|--|--|-------------------|--|--|
| Literature and Arts(44.93) | Art Studies(46.60) | Broadcasting and Television Art(50.00) | Philosophy(56.20) | Philosophy(56.20) | Religious Studies(72.00) |
| | | Dance Studies(38.00) | | Astronomy(54.07) | Astronomical Observation and Technology(60.00) |
| | | Design Arts(33.87) | | Astrophysics(47.83) | Cosmology(64.10) |
| | | Drama and Opera Studies(51.22) | | Solar System Science(50.00) | Stellar and Interstellar Evolution(45.71) |
| | | Film Studies(51.27) | | Atmospheric Science(48.77) | Atmospheric Physics and Atmospheric Environment(44.93) |
| | Journalism and Communication(43.96) | Fine Arts(46.27) | | Dynamic Meteorology(54.00) | |
| | | Communication and Broadcasting(37.93) | | Meteorology(48.81) | |
| | Language and Literature(50.45) | History and Theory of Journalism and Media Management(50.85) | Biology(47.14) | Biochemistry and Molecular Biology(52.53) | |
| | | Journalism and News Practice(43.33) | | Biophysics(62.00) | |
| | | Classical Chinese Literature(44.00) | | Botany(43.37) | |
| | | French Language and Literature(54.00) | | Cell Biology(43.68) | |
| | | Linguistics and Applied Linguistics(58.00) | | Ecology(43.75) | |
| Management(54.69) | Musicology(37.32) | Literary History(50.72) | | Genetics(50.00) | |
| | | Literary Theory(57.81) | | Microbiology(44.10) | |
| | | Modern and Contemporary Chinese Literature(46.00) | | Physiology(52.50) | |
| | | Philology and Bibliography(60.00) | | Zoology(42.20) | |
| | | Russian Language and Literature(33.33) | | Chemistry(38.67) | |
| | | Composition(42.00) | | Analytical Chemistry(39.65) | |
| | | Harmony(25.00) | | Electrochemistry(36.49) | |
| | | Instrumentation and Performance(46.15) | | Inorganic Chemistry(40.58) | |
| | | Music History, Education, and Technology(35.86) | | Organic Chemistry(40.94) | |
| | | Musical Forms and Analysis(48.00) | | Physical Chemistry(37.11) | |
| | Business Administration(50.00) | Pitch and Scales(30.36) | | Polymer Chemistry and Physics(40.79) | |
| | | Business and Accounting Management(47.83) | | Radiochemistry(45.00) | |
| | | Tourism Management and Technological Economics Management(54.00) | | Geography(54.14) | Human Geography(68.00) |
| | | Library, Information and Archival Management(56.67) | | Physical Geography(45.78) | |
| | | Information Management Science(34.00) | | Geology(49.85) | Geochemistry(50.00) |
| Medicine(56.37) | Management Science and Engineering(55.17) | Information Management and Communication(84.00) | | Mineralogy, Petrology, and Economic Geology(50.41) | |
| | | Library and Archival Science(52.00) | | Paleontology and Stratigraphy(46.00) | |
| | | Management Science and Engineering(55.17) | | Principles of Seismic Exploration(58.00) | |
| | | Education Economics, Management and Social Security(42.00) | | Structural Geology(45.71) | |
| | | Land Resource Management and Administrative Management(58.82) | | Geophysics(59.00) | Solid Earth Geophysics(74.00) |
| | Public Administration(56.95) | Social Medicine and Health Management(70.00) | | Space physics(44.00) | |
| | | Forensic Medicine(62.00) | | Advanced Algebra(66.34) | |
| | | Human Anatomy and Histology-Embryology(53.97) | | Combinatorial Mathematics(40.31) | |
| | | Immunology(49.28) | | Computational Mathematics(54.00) | |
| | | Pathogen Biology(53.19) | | Cryptography(66.00) | |
| Clinical Medicine(53.78) | Basic Medicine(56.79) | Pathology and Pathophysiology(54.78) | | Discrete Mathematics(41.57) | |
| | | Radiation Medicine(84.00) | | Functions of Complex Variables(63.93) | |
| | | Anesthesiology(62.00) | | Functions of Real Variables(68.66) | |
| | | Clinical Laboratory Diagnostics(52.00) | | Fundamental Mathematics(54.31) | |
| | | Dermatology and Venereology(51.52) | | Fuzzy Mathematics(62.00) | |
| | Pharmacy(58.63) | Emergency Medicine(51.52) | | Geometry and Topology(42.26) | |
| | | Geriatric Medicine(64.00) | | Graph Theory(52.94) | |
| | | Imaging and Nuclear Medicine(40.30) | | Group Theory(44.00) | |
| | | Internal Medicine(53.47) | | Mathematical Analysis(54.86) | |
| | | Neurology(46.03) | | Number Theory(45.00) | |
| Pharmacy(58.63) | Clinical Medicine(53.78) | Nursing and Rehabilitation Medicine(64.00) | | Numerical Analysis(50.75) | |
| | | Obstetrics and Gynecology(54.90) | | Ordinary Differential Equations(64.38) | |
| | | Oncology(50.00) | | Polynomials and Series Expansions(52.51) | |
| | | Ophthalmology(54.00) | | Probability and Statistics(62.50) | |
| | | Otorhinolaryngology(42.00) | | Special Number Theory(64.00) | |
| | Public Health and Preventive Medicine(59.93) | Pediatrics(72.00) | | Stochastic Processes(78.00) | |
| | | Psychiatry and Mental Health(76.00) | | Hydrogeology(68.00) | |
| | | Surgery(54.41) | | Marine Biology(90.00) | |
| | | Medicinal Chemistry(60.00) | | Marine Chemistry(64.00) | |
| | | Microbiology and Biochemical Pharmacy(46.00) | | Underwater Acoustics(56.00) | |
| Stomatology(53.03) | Pharmacy(58.63) | Pharmaceutical Analysis(60.00) | | Physical Oceanography(54.00) | Physical Oceanography(54.00) |
| | | Pharmacetics(69.86) | | Physics(42.71) | Acoustics(39.59) |
| | | Pharmacology(52.73) | | | |
| | | Epidemiology and Health Statistics(51.81) | | | |
| | | Health Toxicology and Environmental Health(60.00) | | | |
| | Traditional Chinese Medicine(62.69) | Maternal, Child and Adolescent Health(62.03) | | | |
| | | Nutrition and Food Hygiene(70.00) | | | |
| | | Basic Stomatology(54.72) | | | |
| | | Clinical Stomatology(51.90) | | | |
| | | Traditional Chinese Medicine(62.69) | | | |
| Military Science(49.27) | Military Science(49.27) | Traditional Chinese Health Preservation(69.49) | | | |
| | | Traditional Chinese Medicine Theory(67.78) | | | |
| | | Traditional Chinese Pharmacy(55.46) | | | |
| | | Military Command and Information Systems(48.00) | | | |
| | | Military Logistics and Equipment(40.74) | | | |
| | Philosophy(56.20) | Military Management(58.00) | | | |
| | | Military Thought and History(50.98) | | | |
| | | Ethics(55.88) | | | |
| | | Logic(48.57) | | | |
| | | Philosophical Aesthetics(49.54) | | | |
| Philosophy(56.20) | Philosophy(56.20) | Philosophy of Science and Technology(66.00) | Sociology(54.55) | Sociology(54.55) | Demography and Anthropology(64.00) |
| | | | | | Social and Folklore Studies(49.46) |
| | | | | | |

Table 22. Continued: Model Scores Across Three Levels of Disciplines: qwen-max-2025-01-25.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|--|--|---|---|---|
| Agronomy(47.01) | Animal Husbandry(42.72) | Animal Nutrition and Feed Science(48.08) | Engineering(47.57) | Geological Resources and Geological Engineering(64.00) | Geological Resources and Geological Engineering(64.00) |
| | | Animal Rearing and Breeding(37.25) | | | Hydraulics and Hydrology(43.38) |
| | | Aquaculture(42.86) | | | Water conservancy and Hydropower Engineering(41.46) |
| | Crop Science(45.52) | Crop Science(45.52) | | Information and Communication Engineering(53.97) | Antenna and Radio Communication(48.25) |
| | | Forestry(51.91) | | | Communication Principles(55.17) |
| | Veterinary Medicine(52.00) | Forest Cultivation and Genetic Breeding(44.44) | | | Communication and Information Systems(49.28) |
| | | Landscape Plants and Ornamental Horticulture(64.00) | | | Optical Fiber Communication(74.00) |
| | | Veterinary Medicine(52.00) | | | Signal and Information Processing(52.90) |
| Economics(56.59) | Applied Economics(56.98) | Economic Statistics(66.00) | | Instrument Science and Technology(42.00) | Instrument Science and Technology(42.00) |
| | | Finance(61.93) | | | Materials Physics and Chemistry(43.72) |
| | | Industrial Economics(54.76) | | Mechanical Engineering(53.41) | Materials Processing Engineering(45.56) |
| | | International Trade(60.87) | | | Manufacturing Automation(53.97) |
| | | Labor Economics(54.05) | | Mechanics(38.44) | Mechatronic Engineering(52.00) |
| | | National and Defense Economics(48.00) | | | Fundamentals of Dynamics and Control(32.56) |
| | | Public Finance(50.00) | | | Rigid Body Mechanics(30.06) |
| | | Quantitative Economics(58.00) | | | Solid Mechanics(46.24) |
| | | Theoretical Economics(54.67) | | | Theoretical Fluid Mechanics(59.29) |
| | Theoretical Economics(54.67) | Economic History(72.00) | | | Theoretical Mechanics(37.42) |
| | | Political Economy(36.00) | Metallurgical Engineering(49.41) | Iron and Steel Metallurgy(39.05) | Iron and Steel Metallurgy(39.05) |
| | | Western Economics(56.00) | | | Non-ferrous Metallurgy(46.00) |
| Education(53.72) | Education(54.66) | Educational Technology and Principles(53.12) | | Physical Chemistry of Metallurgical Process(60.00) | Physical Chemistry of Metallurgical Process(60.00) |
| | | Preschool Education(56.00) | | | Principles of Metallurgy(64.00) |
| | | Special Education(60.00) | | Mining Engineering(56.00) | Mineral Processing Engineering(56.00) |
| | Physical Education(54.00) | Theory of Curriculum and Instruction(50.98) | | | Mining and Safety Engineering(56.00) |
| | | Physical Education and Training(40.00) | | | Naval Architecture and Ocean Engineering(39.86) |
| | | Sports Humanities and Sociology(56.00) | | | Marine Engineering(38.00) |
| | | Sports Science and Medicine(66.00) | | Ship Mechanics and Design Principles(40.91) | Ship Mechanics and Design Principles(40.91) |
| | Psychology(50.57) | Psychology(50.57) | | | Nuclear Energy and Reactor Technology(57.89) |
| | | Aeronautical and Astronautical Science and Technology(45.38) | Nuclear Science and Technology(58.88) | Radiation Protection and Nuclear Technology Applications(60.00) | Radiation Protection and Nuclear Technology Applications(60.00) |
| Engineering(47.57) | Agricultural Engineering(51.92) | Agricultural Environment and Soil-Water Engineering(46.30) | | | Applied Optics(41.94) |
| | | Agricultural Mechanization Engineering(58.00) | | Optical Engineering(44.15) | Laser Technology(58.00) |
| | | Architecture(51.23) | | | Optoelectronic Technology(35.82) |
| | Chemical Engineering and Technology(44.63) | Architectural Design and Theory(50.00) | | | Theoretical Optics(45.19) |
| | | Architectural History(50.00) | | Petroleum and Natural Gas Engineering(50.00) | Petroleum and Natural Gas Engineering(50.00) |
| | | Urban Planning and Design(54.00) | | | Oil and Gas Field Development and Storage & Transportation Engineering(43.55) |
| | Civil Engineering(46.65) | Chemical Transport Engineering(56.00) | | Power Engineering and Engineering Thermophysics(44.15) | Poromechanics and Reservoir Physics(58.00) |
| | | Elements of Chemical Reaction Engineering(47.66) | | | Engineering Fluid Mechanics(51.19) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(37.38) | | | Engineering Thermophysics(41.10) |
| | Computer Science and Technology(54.78) | Mass Transport and Separation Process in Chemical Engineering(43.84) | Surveying and Mapping Science and Technology(60.71) | Fluid Machinery and Engineering(35.94) | Fluid Machinery and Engineering(35.94) |
| | | Civil Engineering(46.65) | | | Heat Transfer(47.29) |
| | | Bridge and Tunnel Engineering(47.06) | | | Internal Combustion Engineering(64.00) |
| | Control Science and Engineering(51.05) | Geotechnical Engineering(46.93) | | | Power Machinery and Engineering(30.77) |
| | | Structural Engineering(38.60) | | Textile Science and Engineering(64.00) | Refrigeration and Cryogenic Engineering(34.00) |
| | | Urban Infrastructure Engineering(52.11) | | | Thermal Energy Engineering(45.87) |
| | Electrical Engineering(34.89) | Computer Science and Technology(54.78) | | Digital Surveying and Remote Sensing Applications(55.88) | Cartography and Geographic Information Engineering(60.00) |
| | | Advanced Programming Languages(72.00) | | | Geodesy and Surveying Engineering(68.00) |
| | | Computer Architecture(58.00) | | | Textile Chemistry and Dyeing Engineering(56.00) |
| | Electronic Science and Technology(52.03) | Computer Networks(52.54) | | Textile Materials Science(72.00) | Textile Materials Science(72.00) |
| | | Computer Software and Theory(53.16) | | | Road and Railway Engineering(44.00) |
| | | Data Structures(43.43) | | | Traffic Information Engineering and Control(38.46) |
| | Environmental Science and Engineering(52.91) | Databases(51.59) | | | Transportation Planning and Management(51.16) |
| | | Formal Languages(44.23) | | Weapon Science and Technology(59.00) | Vehicle Operation Engineering(50.00) |
| | | Operating Systems(50.59) | | | Military Chemistry and Pyrotechnics(68.00) |
| | Food Science and Engineering(56.88) | Pattern Recognition(80.00) | History(53.56) | Weapon Systems Science and Engineering(50.00) | Weapon Systems Science and Engineering(50.00) |
| | | Principles of Computer Organization(60.98) | | | Archaeology and Museology(59.62) |
| | | Control Theory and Control Engineering(61.80) | | | Historical Geography(54.23) |
| | Forestry Engineering(60.00) | Guidance, Navigation and Control(39.22) | | | World History(51.87) |
| | | Operations Research and Cybernetics(44.00) | | Law(60.21) | Civil and Commercial Law(57.63) |
| | | Electrical Engineering(34.89) | | | Constitutional and Administrative Law(66.00) |
| | Food Science and Engineering(56.88) | Electrical Theory and New Technologies(34.21) | | Law(61.42) | Contract Law(70.00) |
| | | High Voltage and Insulation Technology(32.95) | | | Criminal Law(52.59) |
| | | Power Electronics and Electrical Drives(37.91) | | | International Law(47.37) |
| | Forestry Engineering(60.00) | Power Systems and Automation(32.29) | | Political Science(49.23) | Law and Social Governance(58.00) |
| | | Circuits and Systems(47.22) | | | Legal Theory and Legal History(70.00) |
| | | Electromagnetic Field and Microwave Technology(55.68) | | | Military Law(76.00) |
| | Environmental Science and Engineering(52.91) | Microelectronics and Solid-State Electronics(56.00) | | Procedural Law(74.00) | Procedural Law(74.00) |
| | | Environmental Engineering(38.20) | | | Political Science(49.23) |
| | | Environmental Science(68.00) | | | - |
| | Food Science and Engineering(56.88) | Environmental and Resource Protection(64.00) | | | - |
| | | Food Biochemistry(80.00) | | | - |
| | | Food Processing and Storage Engineering(37.29) | | | - |
| | Engineering(47.57) | Forest Engineering(54.00) | | | - |
| | | Wood Science and Technology(66.00) | | | - |

Table 23. Model Scores Across Three Levels of Disciplines: claude-3-5-sonnet-20241022.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|------------------------------|---|---|
| Literature and Arts(50.42) | Art Studies(55.39) | Broadcasting and Television Art(58.00) Dance Studies(42.00) Design Arts(45.16) Drama and Opera Studies(54.88) Film Studies(55.06) Fine Arts(61.69) Communication and Broadcasting(39.66) History and Theory of Journalism and Media Management(44.07) Journalism and News Practice(51.11) Classical Chinese Literature(42.00) French Language and Literature(52.00) Linguistics and Applied Linguistics(70.00) Literary History(37.68) Literary Theory(59.38) Modern and Contemporary Chinese Literature(42.00) Philology and Bibliography(58.00) Russian Language and Literature(50.88) | Philosophy(52.45) | Philosophy(52.45) | Religious Studies(68.00) |
| | Journalism and Communication(45.89) | | Science(45.02) | Astronomy(51.36) | Astronomical Observation and Technology(59.00) Astrophysics(40.58) Cosmology(51.28) Solar System Science(52.27) Stellar and Interstellar Evolution(50.00) Atmospheric Physics and Atmospheric Environment(55.07) |
| | Language and Literature(51.14) | | | Atmospheric Science(57.14) | Dynamic Meteorology(64.00) |
| | Musicology(44.84) | Composition(40.00) Harmony(35.00) Instrumentation and Performance(46.15) Music History, Education, and Technology(50.34) Musical Forms and Analysis(56.00) Pitch and Scales(33.93) | Biology(47.50) | Meteorology(54.76) Biochemistry and Molecular Biology(54.55) Biophysics(64.00) Botany(44.58) Cell Biology(50.57) Ecology(40.28) Genetics(48.91) Microbiology(44.72) Physiology(48.33) Zoology(45.87) | |
| Management(51.30) | Business Administration(48.59) | Business and Accounting Management(47.83) Tourism Management and Technological Economics Management(50.00) | Chemistry(38.33) | Analytical Chemistry(41.92) Electrochemistry(40.99) Inorganic Chemistry(34.78) Organic Chemistry(38.01) Physical Chemistry(35.69) Polymer Chemistry and Physics(38.16) Radiochemistry(45.00) | |
| | Library, Information and Archival Management(50.67) | Information Management Science(24.00) Information Management and Communication(84.00) Library and Archival Science(44.00) | Geography(57.14) | Human Geography(64.00) | |
| | Management Science and Engineering(55.17) | Management Science and Engineering(55.17) | Geology(48.09) | Physical Geography(53.01) Geochemistry(60.00) Mineralogy, Petrology, and Economic Geology(41.32) Paleontology and Stratigraphy(42.00) Principles of Seismic Exploration(60.00) | |
| | Public Administration(52.98) | Education Economics, Management and Social Security(50.00) Land Resource Management and Administrative Management(47.06) Social Medicine and Health Management(62.00) | | | |
| Medicine(49.26) | Basic Medicine(47.97) | Forensic Medicine(56.00) Human Anatomy and Histology-Embryology(43.39) Immunology(43.48) Pathogen Biology(45.74) Pathology and Pathophysiology(45.22) Radiation Medicine(74.00) | Geophysics(57.00) | Structural Geology(47.14) Solid Earth Geophysics(70.00) Space physics(44.00) | |
| | Clinical Medicine(49.34) | Anesthesiology(56.00) Clinical Laboratory Diagnostics(50.00) Dermatology and Venereology(59.09) Emergency Medicine(51.52) Geriatric Medicine(66.00) Imaging and Nuclear Medicine(32.84) Internal Medicine(42.08) Neurology(50.26) Nursing and Rehabilitation Medicine(58.00) Obstetrics and Gynecology(42.16) Oncology(44.83) Ophthalmology(50.00) Otorhinolaryngology(58.00) Pediatrics(60.00) Psychiatry and Mental Health(70.00) Surgery(33.82) | Mathematics(48.02) | Advanced Algebra(55.94) Combinatorial Mathematics(38.74) Computational Mathematics(52.00) Cryptography(70.00) Discrete Mathematics(43.82) Functions of Complex Variables(52.46) Functions of Real Variables(65.67) Fundamental Mathematics(46.70) Fuzzy Mathematics(66.00) Geometry and Topology(38.87) Graph Theory(50.98) Group Theory(44.00) Mathematical Analysis(44.10) Number Theory(29.09) Numerical Analysis(44.78) Ordinary Differential Equations(55.00) Polynomials and Series Expansions(40.78) Probability and Statistics(60.27) Special Number Theory(62.00) Stochastic Processes(80.00) | |
| | Pharmacy(53.60) | Medicinal Chemistry(48.00) Microbiology and Biochemical Pharmacy(46.00) Pharmaceutical Analysis(66.00) Pharmacetics(54.79) Pharmacology(52.73) | Oceanography(70.00) | Hydrogeology(70.00) Marine Biology(80.00) Marine Chemistry(70.00) Underwater Acoustics(60.00) | |
| | Public Health and Preventive Medicine(61.64) | Epidemiology and Health Statistics(42.17) Health Toxicology and Environmental Health(65.00) Maternal, Child and Adolescent Health(72.15) Nutrition and Food Hygiene(72.00) | Physical Oceanography(64.00) | Physical Oceanography(64.00) | |
| | Stomatology(44.70) | Basic Stomatology(49.06) Clinical Stomatology(41.77) | Physics(40.11) | Acoustics(40.00) | |
| | Traditional Chinese Medicine(35.82) | Traditional Chinese Health Preservation(47.46) Traditional Chinese Medicine Theory(31.11) Traditional Chinese Pharmacy(33.61) | | | |
| Military Science(59.51) | Military Science(59.51) | Military Command and Information Systems(54.00) Military Logistics and Equipment(53.70) Military Management(70.00) Military Thought and History(60.78) | | Atomic and Molecular Physics(38.57) Electrodynamics(37.22) Fluid Physics(43.28) Particle and Nuclear Physics(48.89) Polymer Physics(42.20) Quantum Mechanics(39.81) Relativity(49.37) Semiconductor Physics(29.51) Solid State Physics(42.86) | |
| Philosophy(52.45) | Philosophy(52.45) | Ethics(51.47) Logic(41.43) Philosophical Aesthetics(48.62) Philosophy of Science and Technology(62.00) | Sociology(64.34) | Statistical Mechanics(66.00) Subatomic and Atomic Physics(50.98) Thermodynamics(35.81) | |
| | | | | Thermodynamics and Statistical Physics(36.42) Systems Science(52.00) Demography and Anthropology(70.00) Social and Folklore Studies(61.29) | |

Table 23. Continued: Model Scores Across Three Levels of Disciplines:

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|-----------------|--|--|--------------------|--|---|
| Agronomy(37.32) | Animal Husbandry(37.86) | Animal Nutrition and Feed Science(42.31) | Engineering(48.20) | Geological Resources and Geological Engineering(56.00) | Geological Resources and Geological Engineering(56.00) |
| | | Animal Rearing and Breeding(33.33) | | | Hydraulics and Hydrology(46.32) |
| | Aquaculture(21.43) Crop Science(36.55) | Aquaculture(21.43) | | Hydraulic Engineering(43.12) | Water conservancy and Hydropower Engineering(37.80) |
| | | Crop Science(36.55) | | | Antenna and Radio Communication(57.02) |
| | Forestry(41.22) | Forest Cultivation and Genetic Breeding(40.74) | | Information and Communication Engineering(61.11) | Communication Principles(61.21) |
| | | Landscape Plants and Ornamental Horticulture(42.00) | | | Communication and Information Systems(43.48) |
| | Veterinary Medicine(46.00) | Veterinary Medicine(46.00) | | Optical Fiber Communication(74.00) | Optical Fiber Communication(74.00) |
| | | Economic Statistics(56.00) | | | Signal and Information Processing(67.74) |
| | Economics(45.25) | Finance(47.16) | | Instrument Science and Technology(52.00) | Instrument Science and Technology(52.00) |
| | | Industrial Economics(51.19) | | | Materials Physics and Chemistry(47.24) |
| | | International Trade(39.13) | | Materials Science and Engineering(47.06) | Materials Processing Engineering(46.67) |
| | | Labor Economics(37.84) | | | Manufacturing Automation(41.27) |
| | | National and Defense Economics(48.00) | | Mechanical Engineering(44.32) | Mechatronic Engineering(52.00) |
| | | Public Finance(40.83) | | | Fundamentals of Dynamics and Control(41.79) |
| | | Quantitative Economics(52.00) | | Mechanics(44.82) | Rigid Body Mechanics(38.15) |
| | | Theoretical Economics(40.67) | | | Solid Mechanics(53.76) |
| | | Economic History(34.00) | | Metallurgical Engineering(42.75) | Theoretical Fluid Mechanics(60.00) |
| | | Political Economy(40.00) | | | Theoretical Mechanics(40.00) |
| | | Western Economics(48.00) | | Mining Engineering(45.00) | Iron and Steel Metallurgy(32.38) |
| | Education(38.43) | Psychology(27.59) | | | Non-ferrous Metallurgy(42.00) |
| | | Aeronautical and Astronautical Science and Technology(47.90) | | Physical Chemistry of Metallurgical Process(50.00) | Physical Chemistry of Metallurgical Process(50.00) |
| | | Agricultural Engineering(53.85) | | | Principles of Metallurgy(58.00) |
| | | Agricultural Mechanization Engineering(62.00) | | Naval Architecture and Ocean Engineering(35.51) | Mineral Processing Engineering(48.00) |
| | | Architecture(40.12) | | | Mining and Safety Engineering(42.00) |
| | | Architectural Design and Theory(48.00) | | Marine Engineering(40.00) | Marine Engineering(40.00) |
| | | Architectural History(32.26) | | | Ship Mechanics and Design Principles(32.95) |
| | | Urban Planning and Design(42.00) | | Nuclear Science and Technology(53.27) | Nuclear Energy and Reactor Technology(47.37) |
| | | Chemical Engineering and Technology(47.56) | | | Radiation Protection and Nuclear Technology Applications(60.00) |
| | | Chemical Transport Engineering(60.00) | | Optical Engineering(50.27) | Applied Optics(51.61) |
| | Engineering(48.20) | Elements of Chemical Reaction Engineering(54.21) | | | Laser Technology(48.00) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(39.25) | | Petroleum and Natural Gas Engineering(44.64) | Optoelectronic Technology(47.76) |
| | | Mass Transport and Separation Process in Chemical Engineering(44.52) | | | Theoretical Optics(51.11) |
| | | Civil Engineering(34.64) | | Power Engineering and Engineering Thermophysics(48.10) | Polymer Science and Reservoir Physics(52.00) |
| | | Bridge and Tunnel Engineering(21.57) | | | Engineering Fluid Mechanics(66.67) |
| | | Geotechnical Engineering(37.43) | | Surveying and Mapping Science and Technology(48.81) | Engineering Thermophysics(48.63) |
| | | Structural Engineering(36.84) | | | Fluid Machinery and Engineering(39.06) |
| | | Urban Infrastructure Engineering(35.21) | | Textile Science and Engineering(52.00) | Heat Transfer(53.49) |
| | | Computer Science and Technology(55.83) | | | Internal Combustion Engineering(52.00) |
| | | Advanced Programming Languages(74.00) | | Transportation Engineering(35.86) | Power Machinery and Engineering(30.77) |
| | | Computer Architecture(50.00) | | | Refrigeration and Cryogenic Engineering(40.00) |
| | Control Science and Engineering(68.42) | Computer Networks(59.32) | | Thermal Energy Engineering(42.20) | Thermal Energy Engineering(42.20) |
| | | Computer Software and Theory(43.04) | | | Cartography and Geographic Information Engineering(66.00) |
| | | Data Structures(50.51) | | Digital Surveying and Remote Sensing Applications(32.35) | Digital Surveying and Remote Sensing Applications(32.35) |
| | | Databases(57.32) | | | Geodesy and Surveying Engineering(54.00) |
| | | Formal Languages(53.85) | | Textile Chemistry and Dyeing Engineering(38.00) | Textile Chemistry and Dyeing Engineering(38.00) |
| | | Operating Systems(57.65) | | | Textile Materials Science(66.00) |
| | | Pattern Recognition(74.00) | | Transportation Engineering(35.86) | Road and Railway Engineering(28.00) |
| | | Principles of Computer Organization(50.00) | | | Traffic Information Engineering and Control(24.62) |
| | | Control Theory and Control Engineering(69.66) | | | Transportation Planning and Management(39.53) |
| | | Guidance, Navigation and Control(62.75) | | | Vehicle Operation Engineering(52.00) |
| | Electrical Engineering(40.47) | Operations Research and Cybernetics(72.00) | | Weapon Science and Technology(45.00) | Military Chemistry and Pyrotechnics(50.00) |
| | | Electrical Theory and New Technologies(37.37) | | | Weapon Systems Science and Engineering(40.00) |
| | | High Voltage and Insulation Technology(43.18) | History(32.94) | History(32.94) | Archaeology and Museology(37.50) |
| | | Power Electronics and Electrical Drives(45.05) | | | Historical Geography(28.17) |
| | | Power Systems and Automation(35.42) | | Law(39.79) | World History(33.41) |
| | | Circuits and Systems(54.63) | | | Civil and Commercial Law(39.83) |
| | | Electromagnetic Field and Microwave Technology(65.91) | | Law(40.44) | Constitutional and Administrative Law(32.00) |
| | | Microelectronics and Solid-State Electronics(56.00) | | | Contract Law(46.00) |
| | Environmental Science and Engineering(48.68) | Environmental Engineering(41.57) | | Law(40.44) | Criminal Law(29.31) |
| | | Environmental Science(58.00) | | | International Law(35.09) |
| | | Environmental and Resource Protection(52.00) | | Political Science(33.85) | Law and Social Governance(62.00) |
| | | Food Biochemistry(80.00) | | | Legal Theory and Legal History(44.00) |
| | | Food Processing and Storage Engineering(32.20) | | Political Science(33.85) | Military Law(62.00) |
| | | Forest Engineering(52.00) | | | Procedural Law(30.00) |
| | | Wood Science and Technology(60.00) | | | Political Science(33.85) |
| | | - | | | - |
| | | - | | | - |
| | | - | | | - |

Table 24. Model Scores Across Three Levels of Disciplines: o3-mini-2025-01-31-low.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|--|--|
| Literature and Arts(36.22) | Art Studies(36.48) | Broadcasting and Television Art(44.00) | Philosophy(44.09) | Philosophy(44.09) | Religious Studies(60.00) |
| | | Dance Studies(32.00) | | Astronomy(55.80) | Astronomical Observation and Technology(57.00) |
| | | Design Arts(30.65) | | Astrophysics(55.07) | Cosmology(55.13) |
| | | Drama and Opera Studies(45.12) | | Solar System Science(54.55) | Stellar and Interstellar Evolution(57.14) |
| | | Film Studies(44.30) | | Atmospheric Science(45.32) | Atmospheric Physics and Atmospheric Environment(46.38) |
| | Journalism and Communication(32.85) | Fine Arts(27.86) | | Dynamic Meteorology(52.00) | |
| | | Communication and Broadcasting(32.76) | | Meteorology(40.48) | |
| | | History and Theory of Journalism and Media Management(35.59) | | Biochemistry and Molecular Biology(56.57) | |
| | | Journalism and News Practice(31.11) | | Biophysics(56.00) | |
| | | Classical Chinese Literature(36.00) | | Botany(30.12) | |
| Management(43.71) | Language and Literature(37.27) | French Language and Literature(50.00) | | Cell Biology(54.02) | |
| | | Linguistics and Applied Linguistics(54.00) | | Ecology(38.89) | |
| | | Literary History(30.43) | | Genetics(53.80) | |
| | | Literary Theory(39.06) | | Microbiology(44.72) | |
| | | Modern and Contemporary Chinese Literature(34.00) | | Physiology(45.83) | |
| | Musicology(36.38) | Philology and Bibliography(34.00) | | Zoology(59.45) | |
| | | Russian Language and Literature(24.56) | | Chemistry(41.61) | |
| | | Composition(44.00) | | Analytical Chemistry(40.91) | |
| | | Harmony(38.33) | | Electrochemistry(38.29) | |
| | | Instrumentation and Performance(33.85) | | Inorganic Chemistry(49.28) | |
| Medicine(48.09) | Business Administration(40.14) | Music History, Education, and Technology(31.03) | | Organic Chemistry(41.52) | |
| | | Musical Forms and Analysis(44.00) | | Physical Chemistry(39.66) | |
| | | Pitch and Scales(37.50) | | Polymer Chemistry and Physics(51.32) | |
| | | Business and Accounting Management(34.78) | | Radiochemistry(51.67) | |
| | | Tourism Management and Technological Economics Management(50.00) | | Geography(45.11) | |
| | Library, Information and Archival Management(45.33) | Information Management Science(22.00) | | Human Geography(62.00) | |
| | | Information Management and Communication(74.00) | | Physical Geography(34.94) | |
| | | Library and Archival Science(40.00) | | Geology(41.94) | |
| | | Management Science and Engineering(48.28) | | Geochemistry(60.00) | |
| | | Education Economics, Management and Social Security(38.00) | | Mineralogy, Petrology, and Economic Geology(35.54) | |
| Pharmacy(47.12) | Public Administration(43.71) | Land Resource Management and Administrative Management(39.22) | | Paleontology and Stratigraphy(38.00) | |
| | | Social Medicine and Health Management(54.00) | | Principles of Seismic Exploration(52.00) | |
| | | Forensic Medicine(56.00) | | Structural Geology(35.71) | |
| | | Human Anatomy and Histology-Embryology(48.15) | | Geophysics(57.00) | |
| | | Immunology(37.68) | | Solid Earth Geophysics(72.00) | |
| | Clinical Medicine(52.46) | Pathogen Biology(46.81) | | Space physics(42.00) | |
| | | Pathology and Pathophysiology(42.61) | | Advanced Algebra(76.73) | |
| | | Radiation Medicine(68.00) | | Combinatorial Mathematics(57.59) | |
| | | Anesthesiology(68.00) | | Computational Mathematics(70.00) | |
| | | Clinical Laboratory Diagnostics(62.00) | | Cryptography(74.00) | |
| Public Health and Preventive Medicine(54.79) | Stomatology(35.61) | Dermatology and Venereology(74.24) | | Discrete Mathematics(67.42) | |
| | | Emergency Medicine(56.06) | | Functions of Complex Variables(72.95) | |
| | | Geriatric Medicine(68.00) | | Functions of Real Variables(64.18) | |
| | | Imaging and Nuclear Medicine(44.78) | | Fundamental Mathematics(72.59) | |
| | | Internal Medicine(41.58) | | Fuzzy Mathematics(74.00) | |
| | Traditional Chinese Medicine(28.36) | Neurology(52.38) | | Geometry and Topology(58.87) | |
| | | Nursing and Rehabilitation Medicine(52.00) | | Graph Theory(52.94) | |
| | | Obstetrics and Gynecology(42.16) | | Group Theory(50.00) | |
| | | Oncology(51.72) | | Mathematical Analysis(76.74) | |
| | | Ophthalmology(56.00) | | Number Theory(74.09) | |
| Military Science(41.46) | Pharmacy(47.12) | Otorhinolaryngology(68.00) | | Numerical Analysis(68.66) | |
| | | Pediatrics(56.00) | | Ordinary Differential Equations(76.88) | |
| | | Psychiatry and Mental Health(62.00) | | Polynomials and Series Expansions(73.74) | |
| | | Surgery(30.88) | | Probability and Statistics(69.64) | |
| | | Medicinal Chemistry(54.00) | | Special Number Theory(66.00) | |
| | Philosophy(44.09) | Microbiology and Biochemical Pharmacy(48.00) | | Stochastic Processes(88.00) | |
| | | Pharmaceutical Analysis(54.00) | | Hydrogeology(66.00) | |
| | | Pharmacaceutics(36.99) | | Marine Biology(76.00) | |
| | | Pharmacology(47.27) | | Marine Chemistry(64.00) | |
| | | Epidemiology and Health Statistics(40.96) | | Underwater Acoustics(58.00) | |
| Philosophy(44.09) | Public Health and Preventive Medicine(54.79) | Health Toxicology and Environmental Health(60.00) | | Physical Oceanography(60.00) | |
| | | Maternal, Child and Adolescent Health(58.23) | | Physics(48.79) | |
| | | Nutrition and Food Hygiene(64.00) | | Acoustics(44.49) | |
| | | Basic Stomatology(32.08) | | Atomic and Molecular Physics(48.10) | |
| | | Clinical Stomatology(37.97) | | Electrodynamics(47.86) | |
| | Traditional Chinese Medicine(28.36) | Traditional Chinese Health Preservation(27.12) | | Fluid Physics(47.01) | |
| | | Traditional Chinese Medicine Theory(23.33) | | Particle and Nuclear Physics(56.89) | |
| | | Traditional Chinese Pharmacy(32.77) | | Polymer Physics(51.38) | |
| | | Military Command and Information Systems(42.00) | | Quantum Mechanics(46.60) | |
| | | Military Logistics and Equipment(40.74) | | Relativity(60.76) | |
| Military Science(41.46) | Philosophy(44.09) | Military Management(46.00) | | Semiconductor Physics(44.26) | |
| | | Military Thought and History(37.25) | | Solid State Physics(46.94) | |
| | | Ethics(39.71) | | Statistical Mechanics(70.00) | |
| | | Logic(47.14) | | Subatomic and Atomic Physics(54.90) | |
| Philosophy(44.09) | Philosophy(44.09) | Philosophical Aesthetics(33.03) | | Thermodynamics(45.58) | |
| | | Philosophy of Science and Technology(54.00) | | Thermodynamics and Statistical Physics(47.36) | |
| | | Sociology(45.45) | Sociology(45.45) | Systems Science(66.00) | |
| | | Sociology(45.45) | Sociology(45.45) | Demography and Anthropology(50.00) | |
| | | Sociology(45.45) | Sociology(45.45) | Social and Folklore Studies(43.01) | |

Table 24. Continued: Model Scores Across Three Levels of Disciplines: o3-mini-2025-01-31-low.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|--|---|
| Agronomy(38.56) | Animal Husbandry(33.98) | Animal Nutrition and Feed Science(32.69) | Engineering(48.37) | Geological Resources and Geological Engineering(66.00) | Geological Resources and Geological Engineering(66.00) |
| | | Animal Rearing and Breeding(35.29) | | | Hydraulics and Hydrology(46.32) |
| | Aquaculture(37.50) Crop Science(37.24) | Aquaculture(37.50) | | Hydraulic Engineering(42.20) | Water conservancy and Hydropower Engineering(35.37) |
| | | Crop Science(37.24) | | | Antenna and Radio Communication(56.14) |
| | Forestry(41.22) | Forest Cultivation and Genetic Breeding(32.10) | | Information and Communication Engineering(60.52) | Communication Principles(55.17) |
| | | Landscape Plants and Ornamental Horticulture(56.00) | | | Communication and Information Systems(53.62) |
| | Veterinary Medicine(46.00) | Veterinary Medicine(46.00) | | Optical Fiber Communication(72.00) | Optical Fiber Communication(72.00) |
| | | Economic Statistics(60.00) | | | Signal and Information Processing(67.10) |
| | Economics(45.93) | Finance(45.45) | | Instrument Science and Technology(48.00) | Instrument Science and Technology(48.00) |
| | | Industrial Economics(46.43) | | | Materials Physics and Chemistry(45.73) |
| | | International Trade(40.58) | | Materials Science and Engineering(44.98) | Materials Processing Engineering(43.33) |
| | | Labor Economics(29.73) | | | Manufacturing Automation(49.21) |
| | | National and Defense Economics(42.00) | | Mechanics(44.38) | Mechatronic Engineering(60.00) |
| | | Public Finance(48.33) | | | Fundamentals of Dynamics and Control(39.48) |
| | | Quantitative Economics(51.00) | | | Rigid Body Mechanics(35.26) |
| | | Theoretical Economics(48.00) | | | Solid Mechanics(46.24) |
| | | Economic History(46.00) | | Metallurgical Engineering(43.92) | Theoretical Fluid Mechanics(66.43) |
| | | Political Economy(42.00) | | | Theoretical Mechanics(44.52) |
| Education(42.36) | Education(41.70) | Western Economics(56.00) | | | Iron and Steel Metallurgy(27.62) |
| | | Educational Technology and Principles(38.54) | | Non-ferrous Metallurgy(44.00) | Non-ferrous Metallurgy(44.00) |
| | Physical Education(50.00) | Preschool Education(38.00) | | | Physical Chemistry of Metallurgical Process(58.00) |
| | | Special Education(52.00) | | Mining Engineering(54.00) | Principles of Metallurgy(64.00) |
| | | Theory of Curriculum and Instruction(41.18) | | | Mineral Processing Engineering(60.00) |
| | | Physical Education and Training(40.00) | | Naval Architecture and Ocean Engineering(35.51) | Mining and Safety Engineering(48.00) |
| | | Sports Humanities and Sociology(50.00) | | | Marine Engineering(34.00) |
| | | Sports Science and Medicine(60.00) | | Optical Engineering(49.20) | Ship Mechanics and Design Principles(36.36) |
| | Psychology(31.03) | Psychology(31.03) | | | Nuclear Energy and Reactor Technology(56.14) |
| | | Aeronautical and Astronautical Science and Technology(46.22) | | Nuclear Science and Technology(55.14) | Radiation Protection and Nuclear Technology Applications(54.00) |
| Engineering(48.37) | Agricultural Engineering(52.88) | Agricultural Environment and Soil-Water Engineering(44.44) | | | Applied Optics(46.77) |
| | | Agricultural Mechanization Engineering(62.00) | | Petroleum and Natural Gas Engineering(47.32) | Laser Technology(54.00) |
| | Architecture(46.91) | Architectural Design and Theory(46.00) | | | Optoelectronic Technology(44.78) |
| | | Architectural History(48.39) | | Power Engineering and Engineering Thermophysics(47.66) | Theoretical Optics(51.85) |
| | Chemical Engineering and Technology(48.05) | Urban Planning and Design(46.00) | | | Polymer and Natural Gas Engineering(38.71) |
| | | Chemical Transport Engineering(64.00) | | Fluid Flow and Heat Transfer in Chemical Engineering(37.38) | Poromechanics and Reservoir Physics(58.00) |
| | | Elements of Chemical Reaction Engineering(53.27) | | | Engineering Fluid Mechanics(54.76) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(37.38) | | Mass Transport and Separation Process in Chemical Engineering(46.58) | Engineering Thermodynamics(50.00) |
| | Civil Engineering(36.03) | Mass Transport and Separation Process in Chemical Engineering(46.58) | | | Fluid Machinery and Engineering(51.56) |
| | | Bridge and Tunnel Engineering(35.29) | | Civil Engineering(36.03) | Heat Transfer(49.61) |
| Computer Science and Technology(51.11) | Computer Science and Technology(51.11) | Geotechnical Engineering(37.99) | | | Internal Combustion Engineering(66.00) |
| | | Structural Engineering(35.09) | | | Power Machinery and Engineering(25.00) |
| | Control Science and Engineering(64.74) | Urban Infrastructure Engineering(32.39) | | Transportation Engineering(40.64) | Refrigeration and Cryogenic Engineering(34.00) |
| | | Computer Science and Technology(51.11) | | | Thermal Energy Engineering(43.12) |
| | Electrical Engineering(39.21) | Advanced Programming Languages(72.00) | | Surveying and Mapping Science and Technology(54.17) | Cartography and Geographic Information Engineering(56.00) |
| | | Computer Architecture(54.00) | | | Digital Surveying and Remote Sensing Applications(47.06) |
| | Electronic Science and Technology(57.32) | Computer Networks(55.93) | | Textile Science and Engineering(53.00) | Geodesy and Surveying Engineering(62.00) |
| | | Computer Software and Theory(40.51) | | | Textile Chemistry and Dyeing Engineering(48.00) |
| | Environmental Science and Engineering(53.44) | Data Structures(42.42) | | Textile Materials Science(58.00) | Textile Materials Science(58.00) |
| | | Databases(49.68) | | | Road and Railway Engineering(32.00) |
| Engineering(48.37) | Food Science and Engineering(55.05) | Formal Languages(38.46) | | Transportation Engineering(40.64) | Traffic Information Engineering and Control(36.92) |
| | | Operating Systems(48.24) | | | Transportation Planning and Management(37.21) |
| | Food Science and Engineering(55.05) | Pattern Recognition(76.00) | | Weapon Science and Technology(53.00) | Vehicle Operation Engineering(60.00) |
| | | Principles of Computer Organization(52.44) | | | Military Chemistry and Pyrotechnics(52.00) |
| | Control Science and Engineering(64.74) | Control Theory and Control Engineering(68.54) | | History(45.25) | Weapon Systems Science and Engineering(54.00) |
| | | Guidance, Navigation and Control(62.75) | | | Archaeology and Museology(55.77) |
| | Electrical Engineering(39.21) | Operations Research and Cybernetics(60.00) | | Law(49.24) | Historical Geography(43.66) |
| | | Electrical Theory and New Technologies(37.37) | | | World History(43.22) |
| Engineering(48.37) | Electrical Engineering(39.21) | High Voltage and Insulation Technology(42.05) | | Law(49.24) | Civil and Commercial Law(50.85) |
| | | Power Electronics and Electrical Drives(41.76) | | | Constitutional and Administrative Law(42.00) |
| | Electronic Science and Technology(57.32) | Power Systems and Automation(35.42) | | Law(49.75) | Contract Law(58.00) |
| | | Circuits and Systems(47.22) | | | Criminal Law(43.10) |
| | Environmental Science and Engineering(53.44) | Electromagnetic Field and Microwave Technology(63.64) | | Political Science(44.62) | International Law(33.33) |
| | | Microelectronics and Solid-State Electronics(68.00) | | | Law and Social Governance(66.00) |
| | Food Science and Engineering(55.05) | Environmental Engineering(47.19) | | | Legal Theory and Legal History(58.00) |
| | | Environmental Science(64.00) | | | Military Law(70.00) |
| | Forestry Engineering(56.00) | Environmental and Resource Protection(54.00) | | | Procedural Law(36.00) |
| | | Food Biochemistry(82.00) | | | Political Science(44.62) |
| | Forestry Engineering(56.00) | Food Processing and Storage Engineering(32.20) | | | - |
| | | Forest Engineering(52.00) | | | - |
| | Forestry Engineering(56.00) | Wood Science and Technology(60.00) | | | - |

Table 25. Model Scores Across Three Levels of Disciplines: gemini-2.0-flash.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|-------------------|--|
| Literature and Arts(43.68) | Art Studies(43.78) | Broadcasting and Television Art(56.00) | Philosophy(45.53) | Philosophy(45.53) | Religious Studies(62.00) |
| | | Dance Studies(30.00) | | | Astronomical Observation and Technology(58.00) |
| | | Design Arts(33.87) | | | Astrophysics(44.93) |
| | | Drama and Opera Studies(46.34) | | | Cosmology(60.26) |
| | | Film Studies(45.57) | | | Solar System Science(53.41) |
| | Journalism and Communication(41.55) | Fine Arts(44.78) | | | Stellar and Interstellar Evolution(52.86) |
| | | Communication and Broadcasting(46.55) | | | Atmospheric Physics and Atmospheric Environment(44.93) |
| | | History and Theory of Journalism and Media Management(30.51) | | | Dynamic Meteorology(54.00) |
| | | Journalism and News Practice(45.56) | | | Meteorology(40.48) |
| | | Classical Chinese Literature(42.00) | | | Biochemistry and Molecular Biology(47.47) |
| Management(41.32) | Language and Literature(44.77) | French Language and Literature(64.00) | | | Biophysics(64.00) |
| | | Linguistics and Applied Linguistics(48.00) | | | Botany(38.55) |
| | | Literary History(37.68) | | | Cell Biology(48.28) |
| | | Literary Theory(45.31) | | | Ecology(34.72) |
| | | Modern and Contemporary Chinese Literature(28.00) | | | Genetics(51.63) |
| | Musicology(43.43) | Philology and Bibliography(56.00) | | | Microbiology(38.51) |
| | | Russian Language and Literature(40.35) | | | Physiology(39.17) |
| | | Composition(36.00) | | | Zoology(42.20) |
| | | Harmony(40.00) | | | Chemistry(41.61) Analytical Chemistry(43.69) |
| | | Instrumentation and Performance(52.31) | | | Electrochemistry(39.64) |
| Medicine(43.77) | Business Administration(30.99) | Music History, Education, and Technology(48.28) | | | Inorganic Chemistry(44.93) |
| | | Musical Forms and Analysis(44.00) | | | Organic Chemistry(37.43) |
| | | Pitch and Scales(30.36) | | | Physical Chemistry(40.79) |
| | | Business and Accounting Management(28.26) | | | Polymer Chemistry and Physics(44.74) |
| | | Tourism Management and Technological Economics Management(36.00) | | | Radiochemistry(45.00) |
| | Library, Information and Archival Management(44.67) | Information Management Science(18.00) | | | Geography(49.62) Human Geography(62.00) |
| | | Information Management and Communication(80.00) | | | Physical Geography(42.17) |
| | | Library and Archival Science(36.00) | | | Geology(45.16) Geochemistry(60.00) |
| | | Management Science and Engineering(50.00) | | | Mineralogy, Petrology, and Economic Geology(42.98) |
| | | Education Economics, Management and Social Security(44.00) | | | Paleontology and Stratigraphy(36.00) |
| Pharmacy(47.48) | Management Science and Engineering(50.00) | Land Resource Management and Administrative Management(37.25) | | | Principles of Seismic Exploration(56.00) |
| | | Social Medicine and Health Management(52.00) | | | Structural Geology(37.14) |
| | | Forensic Medicine(60.00) | | | Geophysics(57.00) Solid Earth Geophysics(64.00) |
| | | Human Anatomy and Histology-Embryology(46.03) | | | Space physics(50.00) |
| | | Immunology(34.78) | | | Advanced Algebra(69.80) |
| | Clinical Medicine(41.22) | Pathogen Biology(42.55) | | | Combinatorial Mathematics(46.60) |
| | | Pathology and Pathophysiology(38.26) | | | Computational Mathematics(62.00) |
| | | Radiation Medicine(64.00) | | | Cryptography(72.00) |
| | | Anesthesiology(50.00) | | | Discrete Mathematics(44.94) |
| | | Clinical Laboratory Diagnostics(46.00) | | | Functions of Complex Variables(65.57) |
| Public Health and Preventive Medicine(50.68) | Public Administration(44.37) | Dermatology and Venereology(45.45) | | | Functions of Real Variables(64.18) |
| | | Emergency Medicine(45.45) | | | Fundamental Mathematics(68.53) |
| | | Geriatric Medicine(62.00) | | | Fuzzy Mathematics(60.00) |
| | | Imaging and Nuclear Medicine(31.34) | | | Geometry and Topology(53.21) |
| | | Internal Medicine(39.11) | | | Graph Theory(39.22) |
| | Stomatology(41.67) | Neurology(42.86) | | | Group Theory(34.00) |
| | | Nursing and Rehabilitation Medicine(32.00) | | | Mathematical Analysis(67.71) |
| | | Obstetrics and Gynecology(23.53) | | | Number Theory(55.00) |
| | | Oncology(32.76) | | | Numerical Analysis(68.66) |
| | | Ophthalmology(46.00) | | | Ordinary Differential Equations(73.75) |
| Military Science(51.22) | Traditional Chinese Medicine(41.79) | Otorhinolaryngology(44.00) | | | Polynomials and Series Expansions(65.36) |
| | | Pediatrics(44.00) | | | Probability and Statistics(63.84) |
| | | Psychiatry and Mental Health(54.00) | | | Special Number Theory(62.00) |
| | | Surgery(42.65) | | | Stochastic Processes(70.00) |
| | | Medicinal Chemistry(44.00) | | | Hydrogeology(60.00) |
| | Military Science(51.22) | Microbiology and Biochemical Pharmacy(46.00) | | | Marine Biology(78.00) |
| | | Pharmaceutical Analysis(54.00) | | | Marine Chemistry(66.00) |
| | | Pharmacetics(50.68) | | | Underwater Acoustics(60.00) |
| | | Pharmacology(41.82) | | | Physical Oceanography(56.00) |
| | | Epidemiology and Health Statistics(31.33) | | | Acoustics(41.22) |
| Philosophy(45.53) | Military Science(51.22) | Health Toxicology and Environmental Health(57.50) | | | Atomic and Molecular Physics(45.71) |
| | | Maternal, Child and Adolescent Health(56.96) | | | Electrodynamics(45.28) |
| | | Nutrition and Food Hygiene(62.00) | | | Fluid Physics(47.01) |
| | | Basic Stomatology(41.51) | | | Particle and Nuclear Physics(50.22) |
| | | Clinical Stomatology(41.77) | | | Polymer Physics(48.62) |
| | Systems Science(62.00) | Traditional Chinese Health Preservation(45.76) | | | Quantum Mechanics(47.57) |
| | | Traditional Chinese Medicine Theory(43.33) | | | Relativity(65.82) |
| | | Traditional Chinese Pharmacy(38.66) | | | Semiconductor Physics(45.90) |
| | | Military Command and Information Systems(54.00) | | | Solid State Physics(46.94) |
| | | Military Logistics and Equipment(42.59) | | | Statistical Mechanics(70.00) |
| Sociology(53.85) | Philosophy(45.53) | Military Management(66.00) | | | Subatomic and Atomic Physics(60.78) |
| | | Military Thought and History(43.14) | | | Thermodynamics(48.37) |
| | | Ethics(42.65) | | | Thermodynamics and Statistical Physics(42.83) |
| Sociology(53.85) | Philosophy(45.53) | Logic(40.00) | | | Systems Science(62.00) |
| | | Philosophical Aesthetics(40.37) | | | Demography and Anthropology(62.00) |
| | | Philosophy of Science and Technology(52.00) | | | Social and Folklore Studies(49.46) |

Table 25. Continued: Model Scores Across Three Levels of Disciplines: gemini-2.0-flash.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|---|---|--|--|---|
| Agronomy(41.24) | Animal Husbandry(39.81) | Animal Nutrition and Feed Science(38.46) Animal Rearing and Breeding(41.18) | Engineering(47.21) | Geological Resources and Geological Engineering(54.00) Hydraulic Engineering(44.04) | Geological Resources and Geological Engineering(54.00) Hydraulics and Hydrology(47.79) Water conservancy and Hydropower Engineering(37.80) Antenna and Radio Communication(50.88) |
| | Aquaculture(33.93) Crop Science(39.31) | Aquaculture(33.93) Crop Science(39.31) | Information and Communication Engineering(56.75) | | Communication Principles(55.17) Communication and Information Systems(49.28) Optical Fiber Communication(74.00) Signal and Information Processing(60.00) |
| | Forestry(44.27) | Forest Cultivation and Genetic Breeding(37.04) Landscape Plants and Ornamental Horticulture(56.00) | | | Instrument Science and Technology(42.00) |
| Economics(49.48) | Veterinary Medicine(50.00) | Veterinary Medicine(50.00) | | Materials Science and Engineering(46.71) | Materials Physics and Chemistry(45.73) Materials Processing Engineering(48.89) |
| | Applied Economics(48.55) | Economic Statistics(60.00) Finance(49.43) Industrial Economics(50.00) International Trade(49.28) Labor Economics(43.24) National and Defense Economics(56.00) Public Finance(45.83) Quantitative Economics(43.00) | | Mechanical Engineering(55.11) Mechanics(40.09) | Manufacturing Automation(53.97) Mechatronic Engineering(58.00) Fundamentals of Dynamics and Control(35.16) Rigid Body Mechanics(34.68) Solid Mechanics(41.94) Theoretical Fluid Mechanics(55.71) Theoretical Mechanics(41.94) |
| | Theoretical Economics(54.00) | Economic History(64.00) Political Economy(54.00) Western Economics(44.00) | | Metallurgical Engineering(48.24) | Iron and Steel Metallurgy(39.05) Non-ferrous Metallurgy(48.00) Physical Chemistry of Metallurgical Process(54.00) Principles of Metallurgy(62.00) |
| Education(43.80) | Education(46.96) | Educational Technology and Principles(41.67) Preschool Education(42.00) Special Education(60.00) Theory of Curriculum and Instruction(49.02) | | Mining Engineering(51.00) | Mineral Processing Engineering(58.00) Mining and Safety Engineering(44.00) |
| | Physical Education(45.33) | Physical Education and Training(34.00) Sports Humanities and Sociology(52.00) Sports Science and Medicine(50.00) | | Naval Architecture and Ocean Engineering(35.51) | Marine Engineering(38.00) Ship Mechanics and Design Principles(34.09) |
| | Psychology(32.18) | Psychology(32.18) | | Nuclear Science and Technology(50.47) | Nuclear Energy and Reactor Technology(45.61) Radiation Protection and Nuclear Technology Applications(56.00) |
| Engineering(47.21) | Aeronautical and Astronautical Science and Technology(44.54) Agricultural Engineering(54.81) | Aeronautical and Astronautical Science and Technology(44.54) Agricultural Environment and Soil-Water Engineering(46.30) Agricultural Mechanization Engineering(64.00) | | Optical Engineering(46.28) | Applied Optics(43.55) Laser Technology(44.00) Optoelectronic Technology(50.75) Theoretical Optics(47.41) |
| | Architecture(50.62) | Architectural Design and Theory(48.00) Architectural History(48.39) Urban Planning and Design(56.00) | | Petroleum and Natural Gas Engineering(52.68) | Oil and Gas Field Development and Storage & Transportation Engineering(46.77) Poromechanics and Reservoir Physics(60.00) Engineering Fluid Mechanics(52.38) |
| | Chemical Engineering and Technology(44.63) | Chemical Transport Engineering(56.00) Elements of Chemical Reaction Engineering(43.93) Fluid Flow and Heat Transfer in Chemical Engineering(41.12) Mass Transport and Separation Process in Chemical Engineering(43.84) | | Power Engineering and Engineering Thermophysics(42.69) | Engineering Thermophysics(39.04) Fluid Machinery and Engineering(40.62) Heat Transfer(41.86) Internal Combustion Engineering(54.00) Power Machinery and Engineering(34.62) |
| | Civil Engineering(38.83) | Bridge and Tunnel Engineering(47.06) Geotechnical Engineering(34.64) Structural Engineering(35.09) Urban Infrastructure Engineering(46.48) | | | Refrigeration and Cryogenic Engineering(42.00) Thermal Energy Engineering(41.28) Cartography and Geographic Information Engineering(56.00) |
| | Computer Science and Technology(51.11) | Advanced Programming Languages(70.00) Computer Architecture(54.00) Computer Networks(52.54) Computer Software and Theory(39.24) Data Structures(46.46) Databases(54.14) Formal Languages(36.54) Operating Systems(42.35) Pattern Recognition(72.00) Principles of Computer Organization(53.66) | | Surveying and Mapping Science and Technology(54.76) | Digital Surveying and Remote Sensing Applications(44.12) Geodesy and Surveying Engineering(68.00) Textile Chemistry and Dyeing Engineering(44.00) Textile Materials Science(66.00) |
| | Control Science and Engineering(60.53) | Control Theory and Control Engineering(66.29) Guidance, Navigation and Control(54.90) Operations Research and Cybernetics(56.00) | | Textile Science and Engineering(55.00) | Road and Railway Engineering(40.00) Traffic Information Engineering and Control(43.08) Transportation Planning and Management(46.51) Vehicle Operation Engineering(48.00) |
| | Electrical Engineering(38.67) | Electrical Theory and New Technologies(41.05) High Voltage and Insulation Technology(45.45) Power Electronics and Electrical Drives(35.16) | History(47.18) | History(47.18) | Weapon Science and Technology(50.00) Military Chemistry and Pyrotechnics(54.00) Weapon Systems Science and Engineering(46.00) |
| | Electronic Science and Technology(56.91) | Power Systems and Automation(34.38) Circuits and Systems(55.56) | Law(51.07) | Law(50.76) | Archaeology and Museology(59.62) Historical Geography(40.85) World History(46.26) |
| | Environmental Science and Engineering(50.26) | Electromagnetic Field and Microwave Technology(59.09) Microelectronics and Solid-State Electronics(56.00) | | | Civil and Commercial Law(42.37) Constitutional and Administrative Law(58.00) |
| | Food Science and Engineering(58.72) | Environmental Engineering(33.71) Environmental Science(70.00) Environmental and Resource Protection(60.00) Food Biochemistry(80.00) | | | Contract Law(52.00) Criminal Law(47.41) International Law(42.11) |
| | Forestry Engineering(56.00) | Food Processing and Storage Engineering(40.68) Forest Engineering(50.00) | | | Law and Social Governance(50.00) Legal Theory and Legal History(58.00) Military Law(72.00) |
| Engineering(47.21) | Forestry Engineering(56.00) | Wood Science and Technology(62.00) | | Political Science(53.85) | Procedural Law(52.00) Political Science(53.85) |

Table 26. Model Scores Across Three Levels of Disciplines: DeepSeek-V3.

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| Discipline | Field | Subfield | Discipline | Field | Subfield | |
|----------------------------|---|--|------------------------|---|--|--|
| Literature and Arts(45.23) | Art Studies(46.60) | Broadcasting and Television Art(50.00) | Philosophy(43.23) | Philosophy(43.23) | Religious Studies(58.00) | |
| | | Dance Studies(34.00) | | Astronomy(53.58) | Astronomical Observation and Technology(64.00) | |
| | | Design Arts(27.42) | | Astrophysics(49.28) | Cosmology(51.28) | |
| | | Drama and Opera Studies(47.56) | | Solar System Science(52.27) | Stellar and Interstellar Evolution(47.14) | |
| | | Film Studies(54.43) | | Atmospheric Science(48.77) | Atmospheric Physics and Atmospheric Environment(40.58) | |
| | Journalism and Communication(43.48) | Fine Arts(48.26) | | Dynamic Meteorology(56.00) | | |
| | | Communication and Broadcasting(43.10) | | Biology(44.46) | Meteorology(51.19) | |
| | Language and Literature(47.27) | History and Theory of Journalism and Media Management(44.07) | | Biochemistry and Molecular Biology(56.57) | BioPhysics(68.00) | |
| | | Journalism and News Practice(43.33) | | Botany(34.94) | Cell Biology(50.57) | |
| | | Classical Chinese Literature(48.00) | | Ecology(33.33) | Genetics(51.63) | |
| | | French Language and Literature(50.00) | | Microbiology(40.99) | Physiology(45.83) | |
| | | Linguistics and Applied Linguistics(56.00) | | Zoology(58.53) | Zoology(48.83) | |
| Management(48.50) | Musicology(42.02) | Literary History(39.13) | | Chemistry(39.23) | Analytical Chemistry(42.17) | |
| | | Literary Theory(46.88) | | Electrochemistry(40.99) | Inorganic Chemistry(35.51) | |
| | | Modern and Contemporary Chinese Literature(38.00) | | Organic Chemistry(39.77) | Physical Chemistry(37.11) | |
| | | Philology and Bibliography(58.00) | | Polymer Chemistry and Physics(42.11) | Polymer Chemistry(41.67) | |
| | | Russian Language and Literature(45.61) | | Geography(54.89) | Human Geography(68.00) | |
| | Business Administration(38.03) | Composition(48.00) | | Geology(43.99) | Physical Geography(46.99) | |
| | | Harmony(35.00) | | Geochemistry(52.00) | Mineralogy, Petrology, and Economic Geology(41.32) | |
| | | Instrumentation and Performance(46.15) | | Paleontology and Stratigraphy(34.00) | | |
| | | Music History, Education, and Technology(46.90) | | Principles of Seismic Exploration(48.00) | | |
| | | Musical Forms and Analysis(38.00) | | Structural Geology(47.14) | | |
| Medicine(46.10) | Business Administration(38.03) | Pitch and Scales(30.36) | | Geophysics(54.00) | Solid Earth Geophysics(64.00) | |
| | | Business and Accounting Management(33.70) | | Mathematics(59.38) | Space physics(44.00) | |
| | | Tourism Management and Technological Economics Management(46.00) | | Advanced Algebra(65.84) | Combinatorial Mathematics(51.83) | |
| | | Information Management(26.00) | | Computational Mathematics(48.00) | Cryptography(76.00) | |
| | | Information Management and Communication(84.00) | | Discrete Mathematics(50.56) | Functions of Complex Variables(71.31) | |
| | Library, Information and Archival Management(49.33) | Library and Archival Science(38.00) | | Fundamental Mathematics(61.93) | Functions of Real Variables(53.73) | |
| | | Management Science and Engineering(55.17) | | Fuzzy Mathematics(54.00) | Geometry and Topology(49.81) | |
| | | Education Economics, Management and Social Security(50.00) | | Graph Theory(54.90) | Group Theory(56.00) | |
| | | Land Resource Management and Administrative Management(52.94) | | Mathematical Analysis(61.81) | Mathematical Analysis(61.81) | |
| | | Social Medicine and Health Management(62.00) | | Number Theory(51.36) | Number Theory(51.36) | |
| Medicine(46.10) | Basic Medicine(47.62) | Forensic Medicine(56.00) | | Numerical Analysis(56.72) | Numerical Analysis(56.72) | |
| | | Human Anatomy and Histology-Embryology(44.44) | | Ordinary Differential Equations(68.12) | Ordinary Differential Equations(68.12) | |
| | | Immunology(37.68) | | Polynomials and Series Expansions(62.01) | Polynomials and Series Expansions(62.01) | |
| | | Pathogen Biology(47.87) | | Probability and Statistics(64.73) | Probability and Statistics(64.73) | |
| | | Pathology and Pathophysiology(47.83) | | Special Number Theory(52.00) | Special Number Theory(52.00) | |
| | Clinical Medicine(45.65) | Radiation Medicine(64.00) | | Stochastic Processes(76.00) | Stochastic Processes(76.00) | |
| | | Anesthesiology(50.00) | | Hydrogeology(60.00) | Hydrogeology(60.00) | |
| | | Clinical Laboratory Diagnostics(50.00) | | Marine Biology(78.00) | Marine Biology(78.00) | |
| | | Dermatology and Venereology(53.03) | | Marine Chemistry(66.00) | Marine Chemistry(66.00) | |
| | | Emergency Medicine(43.94) | | Underwater Acoustics(58.00) | Underwater Acoustics(58.00) | |
| Medicine(46.10) | Pharmacy(44.60) | Geriatric Medicine(68.00) | | Physical Oceanography(56.00) | Physical Oceanography(56.00) | |
| | | Imaging and Nuclear Medicine(38.81) | | Physics(42.99) | Acoustics(37.55) | |
| | | Internal Medicine(45.54) | | | | |
| | | Neurology(43.92) | | | | |
| | | Nursing and Rehabilitation Medicine(48.00) | | | | |
| | Public Health and Preventive Medicine(54.11) | Obstetrics and Gynecology(34.31) | | | | |
| | | Oncology(34.48) | | | | |
| | | Ophthalmology(50.00) | | | | |
| | | Otorhinolaryngology(42.00) | | | | |
| | | Pediatrics(52.00) | | | | |
| Medicine(46.10) | Pharmacy(44.60) | Psychiatry and Mental Health(54.00) | | | | |
| | | Surgery(42.65) | | | | |
| | | Medicinal Chemistry(54.00) | | | | |
| | | Microbiology and Biochemical Pharmacy(36.00) | | | | |
| | | Pharmaceutical Analysis(52.00) | | | | |
| | Public Health and Preventive Medicine(54.11) | Pharmacetics(42.47) | | | | |
| | | Pharmacology(40.00) | | | | |
| | | Epidemiology and Health Statistics(34.94) | | | | |
| | | Health Toxicology and Environmental Health(58.75) | | | | |
| | | Maternal, Child and Adolescent Health(62.03) | | | | |
| Medicine(46.10) | Stomatology(40.91) | Nutrition and Food Hygiene(66.00) | | | | |
| | | Basic Stomatology(39.62) | | | | |
| | | Clinical Stomatology(41.77) | | | | |
| | | Traditional Chinese Medicine(40.30) | | | | |
| | | Traditional Chinese Health Preservation(57.63) | | | | |
| | Military Science(48.29) | Traditional Chinese Medicine Theory(34.44) | | | | |
| | | Traditional Chinese Pharmacy(36.13) | | | | |
| | | Military Command and Information Systems(42.00) | | | | |
| | | Military Logistics and Equipment(37.04) | | | | |
| | | Military Management(68.00) | | | | |
| Philosophy(43.23) | Philosophy(43.23) | Military Thought and History(47.06) | | | | |
| | | Ethics(42.65) | | | | |
| | | Logic(32.86) | | | | |
| | | Philosophical Aesthetics(37.61) | | | | |
| Philosophy(43.23) | | Philosophy of Science and Technology(56.00) | | | | |
| | | | Systems Science(56.00) | | | |
| | | | | | | |
| | | | | | | |
| Philosophy(43.23) | | | Sociology(55.94) | | | |
| | | | | | | |
| Philosophy(43.23) | | | | | | |
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Table 26. Continued: Model Scores Across Three Levels of Disciplines: DeepSeek-V3.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--|--|--|
| Agronomy(34.02) | Animal Husbandry(33.01) | Animal Nutrition and Feed Science(30.77) Animal Rearing and Breeding(35.29) | Engineering(45.41) | Geological Resources and Geological Engineering(42.00) Hydraulic Engineering(48.62) | Geological Resources and Geological Engineering(42.00) Hydraulics and Hydrology(49.26) Water conservancy and Hydropower Engineering(47.56) Antenna and Radio Communication(49.12) |
| | Aquaculture(17.86) Crop Science(33.10) | Aquaculture(17.86) Crop Science(33.10) | Information and Communication Engineering(57.74) | | Communication Principles(60.34) Communication and Information Systems(47.83) Optical Fiber Communication(72.00) Signal and Information Processing(61.94) |
| | Forestry(38.17) | Forest Cultivation and Genetic Breeding(34.57) Landscape Plants and Ornamental Horticulture(44.00) | | | Instrument Science and Technology(42.00) |
| | Veterinary Medicine(46.00) | Veterinary Medicine(46.00) | | | Materials Physics and Chemistry(41.71) |
| Economics(45.02) | Applied Economics(47.30) | Economic Statistics(54.00) Finance(50.57) Industrial Economics(46.43) International Trade(46.38) Labor Economics(40.54) National and Defense Economics(56.00) Public Finance(34.17) Quantitative Economics(56.00) | | | Materials Processing Engineering(35.56) |
| | Theoretical Economics(34.00) | Economic History(38.00) Political Economy(24.00) Western Economics(40.00) | Mechanical Engineering(40.91) | | Manufacturing Automation(36.51) Mechatronic Engineering(52.00) Fundamentals of Dynamics and Control(39.48) Rigid Body Mechanics(34.68) Solid Mechanics(52.69) |
| Education(36.16) | Education(36.03) | Educational Technology and Principles(34.38) Preschool Education(24.00) Special Education(58.00) Theory of Curriculum and Instruction(29.41) | Mechanics(42.29) | | Theoretical Fluid Mechanics(52.86) Theoretical Mechanics(41.29) |
| | Physical Education(44.67) | Physical Education and Training(38.00) Sports Humanities and Sociology(42.00) Sports Science and Medicine(54.00) | Metallurgical Engineering(41.57) | | Iron and Steel Metallurgy(29.52) Non-ferrous Metallurgy(38.00) Physical Chemistry of Metallurgical Process(44.00) Principles of Metallurgy(68.00) |
| | Psychology(21.84) | Psychology(21.84) | Mining Engineering(44.00) | | Mineral Processing Engineering(44.00) Mining and Safety Engineering(44.00) |
| Engineering(45.41) | Aeronautical and Astronautical Science and Technology(38.66) Agricultural Engineering(48.08) | Aeronautical and Astronautical Science and Technology(38.66) Agricultural Environment and Soil-Water Engineering(42.59) Agricultural Mechanization Engineering(54.00) | Naval Architecture and Ocean Engineering(40.58) | | Marine Engineering(46.00) |
| | Architecture(39.51) | Architectural Design and Theory(42.00) Architectural History(33.87) Urban Planning and Design(44.00) | Nuclear Science and Technology(45.79) | | Ship Mechanics and Design Principles(37.50) Nuclear Energy and Reactor Technology(50.88) |
| | Chemical Engineering and Technology(46.59) | Chemical Transport Engineering(56.00) Elements of Chemical Reaction Engineering(48.60) Fluid Flow and Heat Transfer in Chemical Engineering(38.32) Mass Transport and Separation Process in Chemical Engineering(47.95) | Optical Engineering(44.68) | | Radiation Protection and Nuclear Technology Applications(40.00) Applied Optics(47.58) |
| | Civil Engineering(28.77) | Bridge and Tunnel Engineering(27.45) Geotechnical Engineering(27.93) Structural Engineering(35.09) Urban Infrastructure Engineering(26.76) | Petroleum and Natural Gas Engineering(47.32) | | Laser Technology(50.00) Optoelectronic Technology(35.82) Theoretical Optics(44.44) |
| | Computer Science and Technology(52.82) | Advanced Programming Languages(66.00) Computer Architecture(44.00) Computer Networks(52.54) | Power Engineering and Engineering Thermophysics(44.30) | | Oil and Gas Field Development and Storage & Transportation Engineering(40.32) Poromechanics and Reservoir Physics(56.00) Engineering Fluid Mechanics(58.33) |
| | | Computer Software and Theory(49.37) Data Structures(45.45) Databases(52.87) | | | Engineering Thermophysics(43.84) |
| | | Formal Languages(46.15) Operating Systems(49.41) Pattern Recognition(76.00) | | | Fluid Machinery and Engineering(37.50) Heat Transfer(44.19) Internal Combustion Engineering(46.00) Power Machinery and Engineering(30.77) |
| | Control Science and Engineering(66.32) | Principles of Computer Organization(56.10) Control Theory and Control Engineering(66.29) | | | Refrigeration and Cryogenic Engineering(38.00) |
| | | Guidance, Navigation and Control(62.75) | Surveying and Mapping Science and Technology(45.24) | | Thermal Energy Engineering(46.79) Cartography and Geographic Information Engineering(58.00) |
| | | Operations Research and Cybernetics(70.00) | | | Digital Surveying and Remote Sensing Applications(26.47) Geodesy and Surveying Engineering(58.00) |
| Electrical Engineering(37.23) | Electrical Theory and New Technologies(36.32) High Voltage and Insulation Technology(37.50) Power Electronics and Electrical Drives(39.56) | Computer Software and Theory(49.37) Data Structures(45.45) Databases(52.87) | Textile Science and Engineering(53.00) | | Textile Chemistry and Dyeing Engineering(40.00) |
| | | Power Systems and Automation(34.38) | | | Textile Materials Science(66.00) |
| Electronic Science and Technology(54.47) | Circuits and Systems(46.30) | | Transportation Engineering(37.45) | | Road and Railway Engineering(30.00) Traffic Information Engineering and Control(30.77) Transportation Planning and Management(36.05) Vehicle Operation Engineering(56.00) |
| | | Electromagnetic Field and Microwave Technology(62.50) Microelectronics and Solid-State Electronics(58.00) | Weapon Science and Technology(51.00) | | Weapon Science and Technology(51.00) |
| Environmental Science and Engineering(48.68) | Environmental Engineering(46.07) | | | | Military Chemistry and Pyrotechnics(50.00) |
| Food Science and Engineering(53.21) | Environmental Science(56.00) Environmental and Resource Protection(46.00) Food Biochemistry(84.00) | | | | Weapon Systems Science and Engineering(52.00) |
| Forestry Engineering(47.00) | Food Processing and Storage Engineering(27.12) Forest Engineering(46.00) | | History(26.26) | History(26.26) | Archaeology and Museology(31.73) Historical Geography(20.42) World History(26.87) |
| Engineering(45.41) | Forestry Engineering(47.00) | Wood Science and Technology(48.00) | Law(35.98) | Law(37.39) | Civil and Commercial Law(24.58) Constitutional and Administrative Law(34.00) |
| | | | | | Contract Law(52.00) Criminal Law(37.93) |
| | | | | | International Law(31.58) |
| | | | | | Law and Social Governance(48.00) Legal Theory and Legal History(46.00) Military Law(62.00) |
| | | | | Political Science(23.08) | Procedural Law(18.00) Political Science(23.08) |
| | | | | | |

Table 27. Model Scores Across Three Levels of Disciplines: o1-mini-2024-09-12.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|-------------------|--|
| Literature and Arts(32.22) | Art Studies(32.17) | Broadcasting and Television Art(46.00) | Philosophy(39.48) | Philosophy(39.48) | Religious Studies(52.00) |
| | | Dance Studies(34.00) | | | Astronomical Observation and Technology(48.00) |
| | | Design Arts(27.42) | | | Astrophysics(49.28) |
| | | Drama and Opera Studies(25.61) | | | Cosmology(62.82) |
| | | Film Studies(38.61) | | | Solar System Science(50.00) |
| | Journalism and Communication(25.60) | Fine Arts(27.36) | | | Stellar and Interstellar Evolution(55.71) |
| | | Communication and Broadcasting(22.41) | | | Atmospheric Physics and Atmospheric Environment(47.83) |
| | | History and Theory of Journalism and Media Management(32.20) | | | Dynamic Meteorology(38.00) |
| | | Journalism and News Practice(23.33) | | | Meteorology(42.86) |
| | | Classical Chinese Literature(30.00) | | | Biochemistry and Molecular Biology(54.55) |
| Management(40.52) | Language and Literature(30.68) | French Language and Literature(48.00) | | | Biophysics(68.00) |
| | | Linguistics and Applied Linguistics(44.00) | | | Botany(31.33) |
| | | Literary History(20.29) | | | Cell Biology(41.38) |
| | | Literary Theory(21.88) | | | Ecology(35.42) |
| | | Modern and Contemporary Chinese Literature(26.00) | | | Genetics(48.91) |
| | Musicology(37.09) | Philology and Bibliography(34.00) | | | Microbiology(44.10) |
| | | Russian Language and Literature(28.07) | | | Physiology(40.00) |
| | | Composition(36.00) | | | Zoology(36.70) |
| | | Harmony(35.00) | | | Chemistry(38.21) Analytical Chemistry(40.66) |
| | | Instrumentation and Performance(36.92) | | | Electrochemistry(34.23) |
| Medicine(44.32) | Business Administration(40.14) | Music History, Education, and Technology(35.86) | | | Inorganic Chemistry(44.93) |
| | | Musical Forms and Analysis(46.00) | | | Organic Chemistry(34.50) |
| | | Pitch and Scales(35.71) | | | Physical Chemistry(37.54) |
| | | Business and Accounting Management(39.13) | | | Polymer Chemistry and Physics(32.89) |
| | | Tourism Management and Technological Economics Management(42.00) | | | Radiochemistry(46.67) |
| | Library, Information and Archival Management(42.00) | Information Management Science(22.00) | | | Geography(45.86) Human Geography(58.00) |
| | | Information Management and Communication(68.00) | | | Physical Geography(38.55) |
| | | Library and Archival Science(36.00) | | | Geology(34.90) Geochemistry(52.00) |
| | | Management Science and Engineering(50.00) | | | Mineralogy, Petrology, and Economic Geology(30.58) |
| | | Education Economics, Management and Social Security(36.00) | | | Paleontology and Stratigraphy(28.00) |
| Pharmacy(42.09) | Public Administration(35.76) | Land Resource Management and Administrative Management(25.49) | | | Principles of Seismic Exploration(40.00) |
| | | Social Medicine and Health Management(46.00) | | | Structural Geology(31.43) |
| | | Forensic Medicine(52.00) | | | Geophysics(55.00) Solid Earth Geophysics(68.00) |
| | | Human Anatomy and Histology-Embryology(40.21) | | | Space physics(42.00) |
| | | Immunology(39.13) | | | Advanced Algebra(77.72) |
| | Clinical Medicine(48.60) | Pathogen Biology(51.06) | | | Combinatorial Mathematics(64.40) |
| | | Pathology and Pathophysiology(38.26) | | | Computational Mathematics(60.00) |
| | | Radiation Medicine(62.00) | | | Cryptography(72.00) |
| | | Anesthesiology(62.00) | | | Discrete Mathematics(55.06) |
| | | Clinical Laboratory Diagnostics(56.00) | | | Functions of Complex Variables(77.87) |
| Public Health and Preventive Medicine(49.32) | Pharmacy(42.09) | Dermatology and Venereology(66.67) | | | Functions of Real Variables(74.63) |
| | | Emergency Medicine(54.55) | | | Fundamental Mathematics(76.65) |
| | | Geriatric Medicine(64.00) | | | Fuzzy Mathematics(70.00) |
| | | Imaging and Nuclear Medicine(40.30) | | | Geometry and Topology(63.77) |
| | | Internal Medicine(40.59) | | | Graph Theory(52.94) |
| | Stomatology(31.82) | Neurology(50.79) | | | Group Theory(50.00) |
| | | Nursing and Rehabilitation Medicine(38.00) | | | Mathematical Analysis(75.00) |
| | | Obstetrics and Gynecology(38.24) | | | Number Theory(70.91) |
| | | Oncology(50.00) | | | Numerical Analysis(68.66) |
| | | Ophthalmology(56.00) | | | Ordinary Differential Equations(76.88) |
| Military Science(39.51) | Traditional Chinese Medicine(27.61) | Otorhinolaryngology(52.00) | | | Polynomials and Series Expansions(72.63) |
| | | Pediatrics(48.00) | | | Probability and Statistics(72.77) |
| | | Psychiatry and Mental Health(52.00) | | | Special Number Theory(68.00) |
| | | Surgery(36.76) | | | Stochastic Processes(84.00) |
| | | Medicinal Chemistry(42.00) | | | Hydrogeology(54.00) |
| | Philosophy(39.48) | Microbiology and Biochemical Pharmacy(46.00) | | | Marine Biology(82.00) |
| | | Pharmaceutical Analysis(48.00) | | | Marine Chemistry(56.00) |
| | | Pharmacetics(31.51) | | | Underwater Acoustics(52.00) |
| | | Pharmacology(47.27) | | | Physical Oceanography(46.00) |
| | | Epidemiology and Health Statistics(32.53) | | | Acoustics(40.00) |
| Philosophy(39.48) | Military Science(39.51) | Health Toxicology and Environmental Health(58.75) | | | Atomic and Molecular Physics(42.38) |
| | | Maternal, Child and Adolescent Health(59.49) | | | Electrodynamics(47.51) |
| | | Nutrition and Food Hygiene(46.00) | | | Fluid Physics(44.78) |
| | | Basic Stomatology(32.08) | | | Particle and Nuclear Physics(50.22) |
| | | Clinical Stomatology(31.65) | | | Polymer Physics(33.94) |
| | Systems Science(60.00) | Traditional Chinese Health Preservation(33.90) | | | Quantum Mechanics(46.60) |
| | | Traditional Chinese Medicine Theory(20.00) | | | Relativity(60.76) |
| | | Traditional Chinese Pharmacy(30.25) | | | Semiconductor Physics(40.98) |
| | | Military Command and Information Systems(48.00) | | | Solid State Physics(42.18) |
| | | Military Logistics and Equipment(33.33) | | | Statistical Mechanics(74.00) |
| Sociology(41.26) | Sociology(41.26) | Military Management(54.00) | | | Subatomic and Atomic Physics(58.82) |
| | | Military Thought and History(23.53) | | | Thermodynamics(46.05) |
| | | Ethics(30.88) | | | Thermodynamics and Statistical Physics(44.15) |
| | | Logic(42.86) | | | Systems Science(60.00) |
| Philosophy(39.48) | Philosophy(39.48) | Philosophical Aesthetics(34.86) | | | Demography and Anthropology(50.00) |
| | | Philosophy of Science and Technology(44.00) | | | Social and Folklore Studies(36.56) |

Table 27. Continued: Model Scores Across Three Levels of Disciplines: o1-mini-2024-09-12.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|-------------------------------|---|--|----------------------------------|--|---|
| Agronomy(39.79) | Animal Husbandry(42.72) | Animal Nutrition and Feed Science(40.38) | Engineering(44.88) | Geological Resources and Geological Engineering(52.00) | Geological Resources and Geological Engineering(52.00) |
| | | Animal Rearing and Breeding(45.10) | | | Hydraulics and Hydrology(49.26) |
| | Aquaculture(26.79) Crop Science(39.31) | Aquaculture(26.79) | | Hydraulic Engineering(43.12) | Water conservancy and Hydropower Engineering(32.93) |
| | | Crop Science(39.31) | | | Antenna and Radio Communication(53.51) |
| | Forestry(42.75) | Forest Cultivation and Genetic Breeding(34.57) | | Information and Communication Engineering(51.19) | Communication Principle(43.97) |
| | | Landscape Plants and Ornamental Horticulture(56.00) | | | Communication and Information Systems(52.17) |
| | Veterinary Medicine(42.00) | Veterinary Medicine(42.00) | | Optical Fiber Communication(66.00) | Optical Fiber Communication(66.00) |
| | | Economic Statistics(58.00) | | | Signal and Information Processing(49.68) |
| | Economics(49.60) | Finance(49.43) | | Instrument Science and Technology(48.00) | Instrument Science and Technology(48.00) |
| | | Industrial Economics(46.43) | | | Materials Physics and Chemistry(42.21) |
| | | International Trade(53.62) | | Materials Science and Engineering(41.87) | Materials Processing Engineering(41.11) |
| | | Labor Economics(41.89) | | | Manufacturing Automation(53.17) |
| | | National and Defense Economics(44.00) | | Mechanics(38.22) | Mechatronic Engineering(56.00) |
| | | Public Finance(44.17) | | | Fundamentals of Dynamics and Control(35.16) |
| | | Quantitative Economics(55.00) | | | Rigid Body Mechanics(28.90) |
| | | Theoretical Economics(53.33) | | | Solid Mechanics(43.01) |
| | | Economic History(60.00) | | | Theoretical Fluid Mechanics(55.71) |
| | | Political Economy(44.00) | | | Theoretical Mechanics(36.77) |
| | | Western Economics(56.00) | | | Iron and Steel Metallurgy(37.14) |
| Education(47.52) | Education(48.58) | Educational Technology and Principles(44.79) | Metallurgical Engineering(45.88) | Non-ferrous Metallurgy(38.00) | Non-ferrous Metallurgy(38.00) |
| | | Preschool Education(58.00) | | | Physical Chemistry of Metallurgical Process(54.00) |
| | Physical Education(49.33) | Special Education(52.00) | | Principles of Metallurgy(64.00) | Principles of Metallurgy(64.00) |
| | | Theory of Curriculum and Instruction(43.14) | | | Mining Engineering(57.00) |
| | Psychology(41.38) | Physical Education and Training(42.00) | | Mineral Processing Engineering(60.00) | Mineral Processing Engineering(60.00) |
| | | Sports Humanities and Sociology(48.00) | | | Mining and Safety Engineering(54.00) |
| | | Sports Science and Medicine(58.00) | | Naval Architecture and Ocean Engineering(39.86) | Naval Architecture and Ocean Engineering(48.00) |
| | Engineering(44.88) | Psychology(41.38) | | | Marine Engineering(48.00) |
| | | Aeronautical and Astronautical Science and Technology(46.22) | | | Ship Mechanics and Design Principles(35.23) |
| | | Agricultural Engineering(54.81) | | Nuclear Science and Technology(46.73) | Nuclear Energy and Reactor Technology(38.60) |
| | | Agricultural Environment and Soil-Water Engineering(53.70) | | | Radiation Protection and Nuclear Technology Applications(56.00) |
| | | Agricultural Mechanization Engineering(56.00) | | Optical Engineering(44.95) | Applied Optics(41.13) |
| | | Architecture(46.91) | | | Laser Technology(58.00) |
| | | Architectural Design and Theory(52.00) | | | Optoelectronic Technology(44.78) |
| | | Architectural History(33.87) | | | Theoretical Optics(43.70) |
| | | Urban Planning and Design(58.00) | | Petroleum and Natural Gas Engineering(44.64) | Petroleum and Natural Gas Engineering(41.94) |
| | | Chemical Transport Engineering(52.00) | | | Poromechanics and Reservoir Physics(48.00) |
| Engineering(44.88) | Chemical Engineering and Technology(40.24) | Elements of Chemical Reaction Engineering(37.38) | | | Engineering Fluid Mechanics(47.62) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(36.45) | | | Engineering Thermophysics(43.84) |
| | Civil Engineering(37.71) | Mass Transport and Separation Process in Chemical Engineering(41.10) | | Power Engineering and Engineering Thermophysics(41.52) | Fluid Machinery and Engineering(39.06) |
| | | Civil Engineering(37.71) | | | Heat Transfer(44.19) |
| | Computer Science and Technology(49.54) | Bridge and Tunnel Engineering(39.22) | | | Internal Combustion Engineering(54.00) |
| | | Geotechnical Engineering(37.99) | | | Power Machinery and Engineering(21.15) |
| | | Structural Engineering(28.07) | | Refrigeration and Cryogenic Engineering(38.00) | Refrigeration and Cryogenic Engineering(38.00) |
| | | Urban Infrastructure Engineering(43.66) | | | Thermal Energy Engineering(37.61) |
| | Control Science and Engineering(56.84) | Advanced Programming Languages(68.00) | | Surveying and Mapping Science and Technology(48.21) | Cartography and Geographic Information Engineering(60.00) |
| | | Computer Architecture(58.00) | | | Digital Surveying and Remote Sensing Applications(39.71) |
| | | Computer Networks(59.32) | | | Geodesy and Surveying Engineering(48.00) |
| | | Computer Software and Theory(39.24) | | | Textile Chemistry and Dyeing Engineering(40.00) |
| | | Data Structures(41.41) | | | Textile Materials Science(68.00) |
| | | Databases(51.59) | | Textile Science and Engineering(54.00) | Transportation Engineering(45.02) |
| | | Formal Languages(34.62) | | | Road and Railway Engineering(34.00) |
| | | Operating Systems(34.12) | | | Traffic Information Engineering and Control(40.00) |
| | | Pattern Recognition(78.00) | | | Transportation Planning and Management(47.67) |
| | | Principles of Computer Organization(50.00) | | | Vehicle Operation Engineering(58.00) |
| Electrical Engineering(35.07) | Control Theory and Control Engineering(61.80) | Control Theory and Control Engineering(61.80) | History(45.25) | Weapon Science and Technology(53.00) | Weapon Science and Technology(53.00) |
| | | Guidance, Navigation and Control(52.94) | | | Military Chemistry and Pyrotechnics(58.00) |
| | Computer Science and Technology(49.54) | Operations Research and Cybernetics(52.00) | | | Weapon Systems Science and Engineering(48.00) |
| | | Electrical Engineering(35.07) | | History(45.25) | Archaeology and Museology(47.12) |
| | Control Science and Engineering(56.84) | Electrical Theory and New Technologies(33.16) | | | Historical Geography(43.66) |
| | | High Voltage and Insulation Technology(39.77) | | | World History(45.33) |
| | | Power Electronics and Electrical Drives(37.36) | | Law(54.27) | Civil and Commercial Law(59.32) |
| | | Power Systems and Automation(30.21) | | | Constitutional and Administrative Law(58.00) |
| | Electronic Science and Technology(50.00) | Circuits and Systems(46.30) | | | Contract Law(56.00) |
| | | Electromagnetic Field and Microwave Technology(52.27) | | | Criminal Law(56.90) |
| Engineering(44.88) | Environmental Science and Engineering(46.03) | Microelectronics and Solid-State Electronics(54.00) | | Law(55.84) | International Law(36.84) |
| | | Environmental Engineering(39.33) | | | Law and Social Governance(52.00) |
| | Food Science and Engineering(60.55) | Environmental Science(58.00) | | Political Science(40.00) | Legal Theory and Legal History(56.00) |
| | | Environmental and Resource Protection(46.00) | | | Military Law(74.00) |
| | Food Science and Engineering(60.55) | Food Biochemistry(78.00) | | Political Science(40.00) | Procedural Law(48.00) |
| | | Food Processing and Storage Engineering(45.76) | | | Political Science(40.00) |
| | Forestry Engineering(49.00) | Forest Engineering(46.00) | | | - |
| | | Wood Science and Technology(52.00) | | | - |

Table 28. Model Scores Across Three Levels of Disciplines: MiniMax-Text-01.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|------------------------|--|--|
| Literature and Arts(43.02) | Art Studies(43.62) | Broadcasting and Television Art(56.00) | Philosophy(45.53) | Philosophy(45.53) | Religious Studies(58.00) |
| | | Dance Studies(34.00) | | Astronomy(52.35) | Astronomical Observation and Technology(66.00) |
| | | Design Arts(35.48) | | Astrophysics(55.07) | Cosmology(46.15) |
| | | Drama and Opera Studies(41.46) | | Solar System Science(46.59) | Stellar and Interstellar Evolution(44.29) |
| | | Film Studies(48.73) | | Atmospheric Science(46.80) | Atmospheric Physics and Atmospheric Environment(42.03) |
| | Journalism and Communication(39.61) | Fine Arts(42.29) | | Dynamic Meteorology(62.00) | |
| | | Communication and Broadcasting(37.93) | | Biology(43.04) | Meteorology(41.67) |
| | Language and Literature(45.45) | History and Theory of Journalism and Media Management(45.76) | | Biochemistry and Molecular Biology(43.43) | Biophysics(66.00) |
| | | Journalism and News Practice(36.67) | | Botany(38.55) | Cell Biology(47.13) |
| | | Classical Chinese Literature(42.00) | | Ecology(40.97) | Genetics(41.85) |
| | | French Language and Literature(54.00) | | Microbiology(43.48) | Physiology(40.00) |
| | | Linguistics and Applied Linguistics(54.00) | | Zoology(43.12) | Zoology(43.12) |
| Management(48.90) | Business Administration(40.14) | Literary History(36.23) | | Analytical Chemistry(38.64) | |
| | | Literary Theory(48.44) | | Electrochemistry(39.19) | |
| | | Modern and Contemporary Chinese Literature(36.00) | | Inorganic Chemistry(37.68) | |
| | | Philology and Bibliography(58.00) | | Organic Chemistry(40.94) | |
| | | Russian Language and Literature(38.60) | | Physical Chemistry(33.71) | |
| | Musicology(41.31) | Composition(44.00) | | Polymer Chemistry and Physics(42.11) | |
| | | Harmony(43.33) | | Radiochemistry(45.00) | |
| | | Instrumentation and Performance(43.08) | | Geography(49.62) | Human Geography(68.00) |
| | | Music History, Education, and Technology(46.21) | | Physical Geography(38.55) | |
| | | Musical Forms and Analysis(36.00) | | Geology(41.94) | Geochemistry(56.00) |
| Medicine(47.08) | Business Administration(40.14) | Pitch and Scales(26.79) | | Mineralogy, Petrology, and Economic Geology(42.15) | |
| | | Business and Accounting Management(36.96) | | Paleontology and Stratigraphy(30.00) | |
| | | Tourism Management and Technological Economics Management(46.00) | | Principles of Seismic Exploration(54.00) | |
| | | Information Management(30.00) | | Structural Geology(31.43) | |
| | | Information Management and Communication(82.00) | | Geophysics(45.00) | Solid Earth Geophysics(62.00) |
| | Library, Information and Archival Management(51.33) | Library and Archival Science(42.00) | | Mathematics(49.05) | Space physics(28.00) |
| | | Management Science and Engineering(56.90) | | | Advanced Algebra(55.94) |
| | | Education Economics, Management and Social Security(54.00) | | | Combinatorial Mathematics(38.22) |
| | | Land Resource Management and Administrative Management(37.25) | | | Computational Mathematics(50.00) |
| | | Social Medicine and Health Management(64.00) | | | Cryptography(68.00) |
| Medicine(47.08) | Clinical Medicine(46.55) | Forensic Medicine(50.00) | | | Discrete Mathematics(39.33) |
| | | Human Anatomy and Histology-Embryology(44.44) | | | Functions of Complex Variables(53.28) |
| | | Immunology(42.03) | | | Functions of Real Variables(56.72) |
| | | Pathogen Biology(43.62) | | | Fundamental Mathematics(50.25) |
| | | Pathology and Pathophysiology(46.96) | | | Fuzzy Mathematics(42.00) |
| | Pharmacy(48.92) | Radiation Medicine(78.00) | | | Geometry and Topology(35.85) |
| | | Anesthesiology(52.00) | | | Graph Theory(47.06) |
| | | Clinical Laboratory Diagnostics(54.00) | | | Group Theory(40.00) |
| | | Dermatology and Venereology(59.09) | | | Mathematical Analysis(52.08) |
| | | Emergency Medicine(56.06) | | | Number Theory(40.00) |
| Medicine(47.08) | Pharmacy(48.92) | Geriatric Medicine(56.00) | | | Numerical Analysis(49.25) |
| | | Imaging and Nuclear Medicine(32.84) | | | Ordinary Differential Equations(53.75) |
| | | Internal Medicine(46.04) | | | Polynomials and Series Expansions(53.07) |
| | | Neurology(41.27) | | | Probability and Statistics(56.25) |
| | | Nursing and Rehabilitation Medicine(50.00) | | | Special Number Theory(58.00) |
| | Public Health and Preventive Medicine(51.03) | Obstetrics and Gynecology(34.31) | | | Stochastic Processes(74.00) |
| | | Oncology(43.10) | | | Hydrogeology(68.00) |
| | | Ophthalmology(40.00) | | | Marine Biology(80.00) |
| | | Otorhinolaryngology(50.00) | | | Marine Chemistry(68.00) |
| | | Pediatrics(64.00) | | | Underwater Acoustics(54.00) |
| Medicine(47.08) | Public Health and Preventive Medicine(51.03) | Psychiatry and Mental Health(56.00) | | | Physical Oceanography(54.00) |
| | | Surgery(39.71) | | | Physics(39.72) |
| | | Surgical Chemistry(46.00) | | | |
| | | Microbiology and Biochemical Pharmacy(40.00) | | | |
| | | Pharmaceutical Analysis(54.00) | | | |
| | Stomatology(40.15) | Pharmacetics(54.79) | | | |
| | | Pharmacology(47.27) | | | |
| | | Epidemiology and Health Statistics(42.17) | | | |
| | | Health Toxicology and Environmental Health(50.00) | | | |
| | | Maternal, Child and Adolescent Health(56.96) | | | |
| Medicine(47.08) | Traditional Chinese Medicine(44.78) | Nutrition and Food Hygiene(58.00) | | | |
| | | Basic Stomatology(45.28) | | | |
| | | Clinical Stomatology(36.71) | | | |
| | | Traditional Chinese Medicine(52.54) | | | |
| | | Traditional Chinese Medicine Theory(48.89) | | | |
| | Military Science(48.29) | Traditional Chinese Pharmacy(37.82) | | | |
| | | Military Command and Information Systems(48.00) | | | |
| | | Military Logistics and Equipment(46.30) | | | |
| | | Military Management(54.00) | | | |
| | | Military Thought and History(45.10) | | | |
| Philosophy(45.53) | Philosophy(45.53) | Ethics(47.06) | Systems Science(60.00) | | |
| | | Logic(32.86) | | | |
| | | Philosophical Aesthetics(43.12) | | | |
| | | Philosophy of Science and Technology(54.00) | | | |
| Military Science(48.29) | Military Science(48.29) | Sociology(53.85) | Sociology(53.85) | | |
| | | Demography and Anthropology(62.00) | | | |
| Philosophy(45.53) | Philosophy(45.53) | Social and Folklore Studies(49.46) | | | |

Table 28. Continued: Model Scores Across Three Levels of Disciplines: MiniMax-Text-01.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|--|---|
| Agronomy(42.27) | Animal Husbandry(42.72) | Animal Nutrition and Feed Science(48.08) | Engineering(42.83) | Geological Resources and Geological Engineering(58.00) | Geological Resources and Geological Engineering(58.00) |
| | | Animal Rearing and Breeding(37.25) | | | Hydraulics and Hydrology(39.71) |
| | Aquaculture(35.71) Crop Science(35.86) | Aquaculture(35.71) | | Hydraulic Engineering(38.53) | Water conservancy and Hydropower Engineering(36.59) |
| | | Crop Science(35.86) | | | Antenna and Radio Communication(50.00) |
| | Forestry(48.09) | Forest Cultivation and Genetic Breeding(41.98) | | Information and Communication Engineering(50.40) | Communication Principles(44.83) |
| | | Landscape Plants and Ornamental Horticulture(58.00) | | | Communication and Information Systems(53.62) |
| | Veterinary Medicine(52.00) | Veterinary Medicine(52.00) | | Optical Fiber Communication(72.00) | Optical Fiber Communication(72.00) |
| | | Economic Statistics(62.00) | | | Signal and Information Processing(46.45) |
| | Economics(46.74) | Finance(50.00) | | Instrument Science and Technology(46.00) | Instrument Science and Technology(46.00) |
| | | Industrial Economics(50.00) | | | Materials Physics and Chemistry(35.68) |
| | | International Trade(40.58) | | Materials Science and Engineering(39.10) | Materials Processing Engineering(46.67) |
| | | Labor Economics(45.95) | | | Manufacturing Automation(45.24) |
| | | National and Defense Economics(52.00) | | Mechanics(34.80) | Mechatronic Engineering(50.00) |
| | | Public Finance(40.83) | | | Fundamentals of Dynamics and Control(30.55) |
| | | Quantitative Economics(39.00) | | | Rigid Body Mechanics(29.48) |
| | | Theoretical Economics(47.33) | | | Solid Mechanics(36.56) |
| | | Economic History(50.00) | | | Theoretical Fluid Mechanics(52.86) |
| | | Political Economy(38.00) | | | Theoretical Mechanics(32.90) |
| | | Western Economics(54.00) | | Metallurgical Engineering(45.88) | Iron and Steel Metallurgy(36.19) |
| | Education(50.00) | Educational Technology and Principles(44.79) | | | Non-ferrous Metallurgy(40.00) |
| | | Preschool Education(66.00) | | Mining Engineering(54.00) | Physical Chemistry of Metallurgical Process(48.00) |
| | | Special Education(56.00) | | | Principles of Metallurgy(70.00) |
| | | Theory of Curriculum and Instruction(47.06) | | Naval Architecture and Ocean Engineering(37.68) | Mineral Processing Engineering(54.00) |
| | | Physical Education and Training(38.00) | | | Mining and Safety Engineering(54.00) |
| | | Sports Humanities and Sociology(60.00) | | | Marine Engineering(38.00) |
| | | Sports Science and Medicine(58.00) | | | Ship Mechanics and Design Principles(37.50) |
| | | Psychology(41.38) | | Nuclear Science and Technology(42.06) | Nuclear Energy and Reactor Technology(29.82) |
| | | Psychology(41.38) | | | Radiation Protection and Nuclear Technology Applications(56.00) |
| Engineering(42.83) | Aeronautical and Astronautical Science and Technology(42.02) | Aeronautical and Astronautical Science and Technology(42.02) | | Optical Engineering(38.30) | Applied Optics(41.94) |
| | | Agricultural Engineering(46.15) | | | Laser Technology(44.00) |
| | Architecture(51.23) | Agricultural Environment and Soil-Water Engineering(35.19) | | Petroleum and Natural Gas Engineering(48.21) | Optoelectronic Technology(38.81) |
| | | Agricultural Mechanization Engineering(58.00) | | | Theoretical Optics(32.59) |
| | Chemical Engineering and Technology(38.78) | Architectural Design and Theory(52.00) | | Power Engineering and Engineering Thermophysics(38.45) | Oil and Gas Field Development and Storage & Transportation Engineering(40.32) |
| | | Architectural History(48.39) | | | Poromechanics and Reservoir Physics(58.00) |
| | Civil Engineering(39.11) | Urban Planning and Design(54.00) | | | Engineering Fluid Mechanics(41.67) |
| | | Chemical Transport Engineering(52.00) | | | Engineering Thermophysics(40.41) |
| | Computer Science and Technology(48.10) | Elements of Chemical Reaction Engineering(37.38) | | Surveying and Mapping Science and Technology(44.64) | Fluid Machinery and Engineering(26.56) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(34.58) | | | Heat Transfer(44.96) |
| Control Science and Engineering(46.84) | Computer Science and Technology(48.10) | Mass Transport and Separation Process in Chemical Engineering(38.36) | | Textile Science and Engineering(55.00) | Internal Combustion Engineering(54.00) |
| | | Civil Engineering(39.11) | | | Power Machinery and Engineering(17.31) |
| | Control Science and Engineering(46.84) | Bridge and Tunnel Engineering(45.10) | | Transportation Engineering(43.43) | Refrigeration and Cryogenic Engineering(32.00) |
| | | Geotechnical Engineering(36.87) | | | Thermal Energy Engineering(38.53) |
| | Control Science and Engineering(46.84) | Structural Engineering(36.84) | | Textile Science and Engineering(55.00) | Cartography and Geographic Information Engineering(48.00) |
| | | Urban Infrastructure Engineering(42.25) | | | Digital Surveying and Remote Sensing Applications(36.76) |
| | Control Science and Engineering(46.84) | Advanced Programming Languages(64.00) | | Geodesy and Surveying Engineering(52.00) | Geodesy and Surveying Engineering(52.00) |
| | | Computer Architecture(56.00) | | | Textile Chemistry and Dyeing Engineering(42.00) |
| Electrical Engineering(32.19) | Control Science and Engineering(46.84) | Computer Networks(38.98) | | Textile Materials Science(68.00) | Textile Materials Science(68.00) |
| | | Computer Software and Theory(48.10) | | | Transportation Engineering(43.43) |
| | Control Science and Engineering(46.84) | Data Structures(38.38) | | Weapon Science and Technology(56.00) | Road and Railway Engineering(34.00) |
| | | Databases(49.04) | | | Traffic Information Engineering and Control(35.38) |
| | Control Science and Engineering(46.84) | Formal Languages(40.38) | | Weapon Science and Technology(56.00) | Transportation Planning and Management(47.67) |
| | | Operating Systems(47.06) | | | Vehicle Operation Engineering(56.00) |
| | Control Science and Engineering(46.84) | Pattern Recognition(76.00) | | Military Chemistry and Pyrotechnics(62.00) | Military Chemistry and Pyrotechnics(62.00) |
| | | Principles of Computer Organization(39.02) | | | Weapon Systems Science and Engineering(50.00) |
| Environmental Science and Engineering(52.91) | Control Science and Engineering(46.84) | Control Theory and Control Engineering(49.44) | | Archaeology and Museology(56.73) | Archaeology and Museology(56.73) |
| | | Guidance, Navigation and Control(41.18) | | | Historical Geography(47.18) |
| | Control Science and Engineering(46.84) | Operations Research and Cybernetics(48.00) | | World History(53.27) | World History(53.27) |
| | | Electrical Engineering(32.19) | | | |
| | Control Science and Engineering(46.84) | Electrical Theory and New Technologies(35.26) | History(52.52) | Law(53.81) | Civil and Commercial Law(46.61) |
| | | High Voltage and Insulation Technology(32.95) | | | Constitutional and Administrative Law(54.00) |
| | Control Science and Engineering(46.84) | Power Electronics and Electrical Drives(31.32) | | Law(53.64) | Contract Law(58.00) |
| | | Power Systems and Automation(27.08) | | | Criminal Law(51.72) |
| Food Science and Engineering(60.55) | Control Science and Engineering(46.84) | Circuits and Systems(40.74) | | Political Science(55.38) | International Law(36.84) |
| | | Electromagnetic Field and Microwave Technology(50.00) | | | Law and Social Governance(54.00) |
| | Control Science and Engineering(46.84) | Microelectronics and Solid-State Electronics(54.00) | | | Legal Theory and Legal History(56.00) |
| | | Environmental Science and Engineering(41.57) | | | Military Law(76.00) |
| | Control Science and Engineering(46.84) | Environmental Science(68.00) | | Political Science(55.38) | Procedural Law(62.00) |
| | | Environmental and Resource Protection(58.00) | | | Political Science(55.38) |
| | Control Science and Engineering(46.84) | Food Biochemistry(80.00) | | | |
| | | Food Processing and Storage Engineering(44.07) | | | |
| | Control Science and Engineering(46.84) | Forest Engineering(56.00) | | | |
| | | Wood Science and Technology(62.00) | | | |
| Engineering(42.83) | Forestry Engineering(59.00) | Forestry Engineering(59.00) | | - | - |

Table 29. Model Scores Across Three Levels of Disciplines: gpt-4o-2024-11-20.

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| Discipline | Field | Subfield | Discipline | Field | Subfield | |
|----------------------------|---|--|-------------------|-------------------|--|--|
| Literature and Arts(46.72) | Art Studies(48.26) | Broadcasting and Television Art(54.00) | Philosophy(52.74) | Philosophy(52.74) | Religious Studies(64.00) | |
| | | Dance Studies(38.00) | | | Astronomical Observation and Technology(58.00) | |
| | | Design Arts(37.10) | | | Astrophysics(39.13) | |
| | | Drama and Opera Studies(50.00) | | | Cosmology(50.00) | |
| | | Film Studies(46.84) | | | Solar System Science(46.59) | |
| | Journalism and Communication(47.34) | Fine Arts(53.23) | | | Stellar and Interstellar Evolution(35.71) | |
| | | Communication and Broadcasting(46.55) | | | Atmospheric Physics and Atmospheric Environment(40.58) | |
| | | History and Theory of Journalism and Media Management(42.37) | | | Dynamic Meteorology(58.00) | |
| | | Journalism and News Practice(51.11) | | | Meteorology(42.86) | |
| | | Classical Chinese Literature(32.00) | | | Biochemistry and Molecular Biology(51.52) | |
| Management(47.31) | Language and Literature(45.91) | French Language and Literature(52.00) | | | Biophysics(64.00) | |
| | | Linguistics and Applied Linguistics(64.00) | | | Botany(37.35) | |
| | | Literary History(42.03) | | | Cell Biology(47.13) | |
| | | Literary Theory(57.81) | | | Ecology(43.75) | |
| | | Modern and Contemporary Chinese Literature(32.00) | | | Genetics(42.39) | |
| | Musicology(45.07) | Phonology and Bibliography(48.00) | | | Microbiology(41.61) | |
| | | Russian Language and Literature(38.60) | | | Physiology(47.30) | |
| | | Composition(42.00) | | | Zoology(41.28) | |
| | | Harmony(35.00) | | | Analytical Chemistry(36.36) | |
| | | Instrumentation and Performance(49.23) | | | Electrochemistry(31.53) | |
| Medicine(52.52) | Business Administration(44.37) | Music History, Education, and Technology(53.10) | | | Inorganic Chemistry(32.61) | |
| | | Musical Forms and Analysis(50.00) | | | Organic Chemistry(36.26) | |
| | | Pitch and Scales(28.57) | | | Physical Chemistry(31.87) | |
| | | Business and Accounting Management(42.39) | | | Polymer Chemistry and Physics(27.63) | |
| | | Tourism Management and Technological Economics Management(48.00) | | | Radiochemistry(50.00) | |
| | Library, Information and Archival Management(49.33) | Information Management Science(24.00) | | | Geography(55.64) Human Geography(80.00) | |
| | | Information Management and Communication(84.00) | | | Physical Geography(40.96) | |
| | | Library and Archival Science(40.00) | | | Geochemistry(62.00) | |
| | | Management Science and Engineering(46.55) | | | Mineralogy, Petrology, and Economic Geology(46.28) | |
| | | Education Economics, Management and Social Security(44.00) | | | Paleontology and Stratigraphy(40.00) | |
| Medicine(52.52) | Public Administration(48.34) | Land Resource Management and Administrative Management(43.14) | | | Principles of Seismic Exploration(56.00) | |
| | | Social Medicine and Health Management(58.00) | | | Structural Geology(38.57) | |
| | | Forensic Medicine(60.00) | | | Geophysics(54.00) Solid Earth Geophysics(64.00) | |
| | | Human Anatomy and Histology-Embryology(51.85) | | | Space physics(44.00) | |
| | | Immunology(37.68) | | | Advanced Algebra(49.01) | |
| | Clinical Medicine(53.37) | Pathogen Biology(52.13) | | | Combinatorial Mathematics(26.70) | |
| | | Pathology and Pathophysiology(48.70) | | | Computational Mathematics(54.00) | |
| | | Radiation Medicine(80.00) | | | Cryptography(68.00) | |
| | | Anesthesiology(66.00) | | | Discrete Mathematics(33.71) | |
| | | Clinical Laboratory Diagnostics(60.00) | | | Functions of Complex Variables(41.80) | |
| Medicine(52.52) | Pharmacy(47.84) | Dermatology and Venereology(63.64) | | | Functions of Real Variables(52.24) | |
| | | Emergency Medicine(53.03) | | | Fundamental Mathematics(44.16) | |
| | | Geriatric Medicine(58.00) | | | Fuzzy Mathematics(50.00) | |
| | | Imaging and Nuclear Medicine(41.79) | | | Geometry and Topology(27.55) | |
| | | Internal Medicine(48.51) | | | Graph Theory(35.29) | |
| | Public Health and Preventive Medicine(58.22) | Neurology(54.50) | | | Group Theory(32.00) | |
| | | Nursing and Rehabilitation Medicine(52.00) | | | Mathematical Analysis(39.93) | |
| | | Obstetrics and Gynecology(42.16) | | | Number Theory(33.18) | |
| | | Oncology(48.28) | | | Numerical Analysis(34.33) | |
| | | Ophthalmology(60.00) | | | Ordinary Differential Equations(49.38) | |
| Medicine(52.52) | Stomatology(44.70) | Otorhinolaryngology(64.00) | | | Polynomials and Series Expansions(39.66) | |
| | | Pediatrics(64.00) | | | Probability and Statistics(49.55) | |
| | | Psychiatry and Mental Health(68.00) | | | Special Number Theory(48.00) | |
| | | Surgery(39.71) | | | Stochastic Processes(66.00) | |
| | | Medicinal Chemistry(46.00) | | | Hydrogeology(70.00) | |
| | Public Health and Preventive Medicine(58.22) | Microbiology and Biochemical Pharmacy(42.00) | | | Marine Biology(88.00) | |
| | | Pharmaceutical Analysis(54.00) | | | Marine Chemistry(58.00) | |
| | | Pharmacetics(50.68) | | | Underwater Acoustics(62.00) | |
| | | Pharmacology(45.45) | | | Physical Oceanography(54.00) | |
| | | Epidemiology and Health Statistics(38.55) | | | Acoustics(33.06) | |
| Military Science(52.20) | Traditional Chinese Medicine(50.75) | Health Toxicology and Environmental Health(67.50) | | | Atomic and Molecular Physics(38.10) | |
| | | Maternal, Child and Adolescent Health(68.35) | | | Electrodynamics(34.46) | |
| | | Nutrition and Food Hygiene(60.00) | | | Fluid Physics(38.81) | |
| | | Basic Stomatology(45.28) | | | Particle and Nuclear Physics(48.44) | |
| | | Clinical Stomatology(44.30) | | | Polymer Physics(33.03) | |
| | Military Science(52.20) | Traditional Chinese Health Preservation(66.10) | | | Quantum Mechanics(38.83) | |
| | | Traditional Chinese Medicine Theory(50.00) | | | Relativity(53.16) | |
| | | Traditional Chinese Pharmacy(43.70) | | | Semiconductor Physics(26.23) | |
| | | Military Command and Information Systems(46.00) | | | Solid State Physics(36.73) | |
| | | Military Logistics and Equipment(48.15) | | | Statistical Mechanics(58.00) | |
| Philosophy(52.74) | Philosophy(52.74) | Military Management(60.00) | | | Subatomic and Atomic Physics(50.98) | |
| | | Military Thought and History(54.90) | | | Thermodynamics(35.81) | |
| | | Ethics(58.82) | | | Thermodynamics and Statistical Physics(34.91) | |
| | | Logic(44.29) | | | Systems Science(52.00) | |
| Philosophy(52.74) | | Philosophical Aesthetics(41.28) | Sociology(54.55) | Sociology(54.55) | Demography and Anthropology(64.00) | |
| | | Philosophy of Science and Technology(70.00) | | | Social and Folklore Studies(49.46) | |

Table 29. Continued: Model Scores Across Three Levels of Disciplines: gpt-4o-2024-11-20.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|--|---|
| Agronomy(38.14) | Animal Husbandry(35.92) | Animal Nutrition and Feed Science(30.77) | Engineering(43.37) | Geological Resources and Geological Engineering(42.00) | Geological Resources and Geological Engineering(42.00) |
| | | Animal Rearing and Breeding(41.18) | | | Hydraulics and Hydrology(45.59) |
| | Aquaculture(28.57) Crop Science(37.93) | Aquaculture(28.57) | | Hydraulic Engineering(43.58) | Water conservancy and Hydropower Engineering(40.24) |
| | | Crop Science(37.93) | | | Antenna and Radio Communication(44.74) |
| | Forestry(38.93) | Forest Cultivation and Genetic Breeding(33.33) | | Information and Communication Engineering(53.37) | Communication Principle(53.45) |
| | | Landscape Plants and Ornamental Horticulture(48.00) | | | Communication and Information Systems(49.28) |
| | Veterinary Medicine(52.00) | Veterinary Medicine(52.00) | | Optical Fiber Communication(72.00) | Optical Fiber Communication(72.00) |
| | | Economic Statistics(66.00) | | | Signal and Information Processing(55.48) |
| | Economics(47.77) | Finance(54.55) | | Instrument Science and Technology(38.00) | Instrument Science and Technology(38.00) |
| | | Industrial Economics(58.33) | | | Materials Physics and Chemistry(39.70) |
| | | International Trade(46.38) | | Materials Science and Engineering(40.83) | Materials Processing Engineering(43.33) |
| | | Labor Economics(28.38) | | | Manufacturing Automation(42.86) |
| | | National and Defense Economics(34.00) | | Mechanical Engineering(43.75) | Mechatronic Engineering(46.00) |
| | | Public Finance(45.00) | | | Fundamentals of Dynamics and Control(36.60) |
| | | Quantitative Economics(51.00) | | Mechanics(40.31) | Rigid Body Mechanics(32.95) |
| | | Theoretical Economics(42.67) | | | Solid Mechanics(43.01) |
| | | Economic History(42.00) | | Metallurgical Engineering(42.35) | Theoretical Fluid Mechanics(57.14) |
| | | Political Economy(42.00) | | | Theoretical Mechanics(40.00) |
| Education(45.25) | Applied Economics(48.82) | Western Economics(44.00) | | Iron and Steel Metallurgy(40.00) | Iron and Steel Metallurgy(40.00) |
| | | Theoretical Economics(42.67) | | | Non-ferrous Metallurgy(48.00) |
| | Education(47.37) | Educational Technology and Principles(42.71) | | Physical Chemistry of Metallurgical Process(36.00) | Physical Chemistry of Metallurgical Process(36.00) |
| | | Preschool Education(52.00) | | | Principles of Metallurgy(48.00) |
| | Physical Education(44.00) | Special Education(54.00) | | Mining Engineering(51.00) | Mineral Processing Engineering(52.00) |
| | | Theory of Curriculum and Instruction(45.10) | | | Mining and Safety Engineering(50.00) |
| | Psychology(41.38) | Physical Education and Training(40.00) | | Naval Architecture and Ocean Engineering(28.99) | Marine Engineering(24.00) |
| | | Sports Humanities and Sociology(46.00) | | | Ship Mechanics and Design Principles(31.82) |
| | Psychology(41.38) | Sports Science and Medicine(46.00) | | Nuclear Science and Technology(42.06) | Nuclear Energy and Reactor Technology(35.09) |
| | | Psychology(41.38) | | | Radiation Protection and Nuclear Technology Applications(50.00) |
| Engineering(43.37) | Aeronautical and Astronautical Science and Technology(36.13) | Aeronautical and Astronautical Science and Technology(36.13) | | Optical Engineering(39.89) | Applied Optics(40.32) |
| | | Agricultural Environment and Soil-Water Engineering(40.74) | | | Laser Technology(40.00) |
| | Agricultural Engineering(45.19) | Agricultural Mechanization Engineering(50.00) | | Petroleum and Natural Gas Engineering(46.43) | Optoelectronic Technology(34.33) |
| | | Architecture(46.30) | | | Theoretical Optics(42.22) |
| | Chemical Engineering and Technology(38.54) | Architectural Design and Theory(40.00) | | Power Engineering and Engineering Thermophysics(39.04) | Petroleum and Natural Gas Oil and Gas Field Development and Storage & Transportation Engineering(45.16) |
| | | Architectural History(48.39) | | | Poromechanics and Reservoir Physics(48.00) |
| | Civil Engineering(37.99) | Urban Planning and Design(50.00) | | | Engineering Fluid Mechanics(40.48) |
| | | Chemical Transport Engineering(38.00) | | | Engineering Thermophysics(36.30) |
| | Computer Science and Technology(51.38) | Elements of Chemical Reaction Engineering(40.19) | | Surveying and Mapping Science and Technology(51.79) | Fluid Machinery and Engineering(34.38) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(35.51) | | | Heat Transfer(45.74) |
| Control Science and Engineering(58.95) | Computer Science and Technology(51.38) | Mass Transport and Separation Process in Chemical Engineering(39.73) | | Textile Science and Engineering(45.00) | Internal Combustion Engineering(42.00) |
| | | Civil Engineering(37.99) | | | Power Machinery and Engineering(26.92) |
| | Computer Software and Theory(30.38) | Bridge and Tunnel Engineering(39.22) | | Transportation Engineering(44.62) | Refrigeration and Cryogenic Engineering(26.00) |
| | | Geotechnical Engineering(33.52) | | | Thermal Energy Engineering(46.79) |
| | Control Science and Engineering(58.95) | Structural Engineering(40.35) | | Digital Surveying and Remote Sensing Applications(47.06) | Cartography and Geographic Information Engineering(52.00) |
| | | Urban Infrastructure Engineering(46.48) | | | Digital Surveying and Remote Sensing Applications(47.06) |
| | Control Science and Engineering(58.95) | Computer Architecture(62.00) | | Geodesy and Surveying Engineering(58.00) | Geodesy and Surveying Engineering(58.00) |
| | | Computer Networks(42.37) | | | Textile Chemistry and Dyeing Engineering(28.00) |
| Electrical Engineering(32.91) | Control Science and Engineering(58.95) | Computer Software and Theory(30.38) | | Textile Materials Science(62.00) | Textile Materials Science(62.00) |
| | | Data Structures(45.45) | | | Transportation Engineering(44.62) Road and Railway Engineering(36.00) |
| | Control Science and Engineering(58.95) | Databases(59.87) | | Traffic Information Engineering and Control(43.08) | Traffic Information Engineering and Control(43.08) |
| | | Formal Languages(40.38) | | | Transportation Planning and Management(47.67) |
| | Control Science and Engineering(58.95) | Operating Systems(43.53) | | Vehicle Operation Engineering(50.00) | Vehicle Operation Engineering(50.00) |
| | | Pattern Recognition(74.00) | | | Weapon Science and Technology(43.00) Military Chemistry and Pyrotechnics(42.00) |
| | Control Science and Engineering(58.95) | Principles of Computer Organization(57.32) | | Weapon Systems Science and Engineering(44.00) | Weapon Systems Science and Engineering(44.00) |
| | | Control Theory and Control Engineering(65.17) | | | Archaeology and Museology(29.81) |
| Engineering(43.37) | Control Science and Engineering(58.95) | Guidance, Navigation and Control(49.02) | | History(29.53) | Historical Geography(26.06) |
| | | Operations Research and Cybernetics(58.00) | | | World History(30.61) |
| | Control Science and Engineering(58.95) | Power Systems and Automation(32.29) | | Law(45.88) | Civil and Commercial Law(46.61) |
| | | Circuits and Systems(39.81) | | | Constitutional and Administrative Law(48.00) |
| | Control Science and Engineering(58.95) | Electromagnetic Field and Microwave Technology(52.27) | | Law(46.36) | Contract Law(48.00) |
| | | Microelectronics and Solid-State Electronics(56.00) | | | Criminal Law(49.14) |
| | Control Science and Engineering(58.95) | Environmental Engineering(39.33) | | Political Science(41.54) | International Law(29.82) |
| | | Environmental Science(64.00) | | | Law and Social Governance(48.00) |
| | Control Science and Engineering(58.95) | Environmental and Resource Protection(52.00) | | | Legal Theory and Legal History(62.00) |
| | | Food Biochemistry(72.00) | | | Military Law(58.00) |
| Engineering(43.37) | Control Science and Engineering(58.95) | Food Processing and Storage Engineering(40.68) | | Procedural Law(26.00) | Procedural Law(26.00) |
| | | Forest Engineering(42.00) | | | Political Science(41.54) |
| | Control Science and Engineering(58.95) | Wood Science and Technology(42.00) | | | Political Science(41.54) |
| | | - | | | - |

Table 30. Model Scores Across Three Levels of Disciplines: QwQ.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|-------------------------------------|--|------------------------|--|--|
| Literature and Arts(32.82) | Art Studies(29.68) | Broadcasting and Television Art(32.00) | Philosophy(43.52) | Philosophy(43.52) | Religious Studies(52.00) |
| | | Dance Studies(24.00) | | Astronomy(43.46) | Astronomical Observation and Technology(42.00) |
| | | Design Arts(25.81) | | Astrophysics(46.38) | Cosmology(56.41) |
| | | Drama and Opera Studies(42.68) | | Solar System Science(42.05) | Stellar and Interstellar Evolution(30.00) |
| | | Film Studies(33.54) | | Atmospheric Science(40.39) | Atmospheric Physics and Atmospheric Environment(44.93) |
| | Journalism and Communication(28.99) | Fine Arts(23.38) | | Dynamic Meteorology(42.00) | |
| | | Communication and Broadcasting(31.03) | | Meteorology(35.71) | |
| | Language and Literature(41.59) | History and Theory of Journalism and Media Management(28.81) | Biology(41.79) | Biochemistry and Molecular Biology(51.52) | |
| | | Journalism and News Practice(27.78) | | Biophysics(54.00) | |
| | | Classical Chinese Literature(42.00) | | Botany(31.33) | |
| | | French Language and Literature(50.00) | | Cell Biology(43.68) | |
| | | Linguistics and Applied Linguistics(48.00) | | Ecology(41.67) | |
| Management(41.32) | Musicology(30.05) | Literary History(42.03) | | Genetics(46.20) | |
| | | Literary Theory(35.94) | | Microbiology(36.65) | |
| | | Modern and Contemporary Chinese Literature(36.00) | | Physiology(47.50) | |
| | | Philology and Bibliography(42.00) | | Zoology(55.78) | |
| | | Russian Language and Literature(38.60) | | Chemistry(37.31) | |
| | | Composition(32.00) | | Analytical Chemistry(41.67) | |
| | | Harmony(30.00) | | Electrochemistry(40.09) | |
| | | Instrumentation and Performance(41.54) | | Inorganic Chemistry(39.86) | |
| | | Music History, Education, and Technology(22.76) | | Organic Chemistry(34.50) | |
| | | Musical Forms and Analysis(34.00) | | Physical Chemistry(34.70) | |
| | Business Administration(33.80) | Pitch and Scales(30.36) | | Polymer Chemistry and Physics(36.84) | |
| | | Business and Accounting Management(33.70) | | Radiochemistry(31.67) | |
| | | Tourism Management and Technological Economics Management(34.00) | | Geography(42.11) | Human Geography(60.00) |
| | | Library, Information and Archival Management(37.33) | | Physical Geography(31.33) | |
| | | Information Management Science(22.00) | | Geology(43.70) | Geochemistry(54.00) |
| Medicine(43.88) | Clinical Medicine(42.86) | Information Management and Communication(60.00) | | Mineralogy, Petrology, and Economic Geology(41.32) | |
| | | Library and Archival Science(30.00) | | Paleontology and Stratigraphy(46.00) | |
| | | Management Science and Engineering(55.17) | | Principles of Seismic Exploration(44.00) | |
| | | Management Science and Engineering(55.17) | | Structural Geology(38.57) | |
| | | Public Administration(47.02) | | Geophysics(48.00) | Solid Earth Geophysics(58.00) |
| | | Education Economics, Management and Social Security(42.00) | | Mathematics(60.45) | Space physics(38.00) |
| | | Land Resource Management and Administrative Management(39.22) | | Advanced Algebra(70.30) | |
| | | Social Medicine and Health Management(60.00) | | Combinatorial Mathematics(47.64) | |
| | | Forensic Medicine(48.00) | | Computational Mathematics(52.00) | |
| | | Human Anatomy and Histology-Embryology(43.92) | | Cryptography(62.00) | |
| Pharmacy(43.17) | Clinical Medicine(42.86) | Immunology(44.93) | | Discrete Mathematics(55.06) | |
| | | Pathogen Biology(41.49) | | Functions of Complex Variables(68.03) | |
| | | Pathology and Pathophysiology(53.91) | | Functions of Real Variables(61.19) | |
| | | Radiation Medicine(64.00) | | Fundamental Mathematics(68.02) | |
| | | Anesthesiology(56.00) | | Fuzzy Mathematics(60.00) | |
| | | Clinical Laboratory Diagnostics(48.00) | | Geometry and Topology(48.30) | |
| | | Dermatology and Venereology(42.42) | | Graph Theory(45.10) | |
| | | Emergency Medicine(39.39) | | Group Theory(38.00) | |
| | | Geriatric Medicine(62.00) | | Mathematical Analysis(62.85) | |
| | | Imaging and Nuclear Medicine(31.34) | | Number Theory(62.27) | |
| Public Health and Preventive Medicine(48.29) | Pharmacy(43.17) | Internal Medicine(44.55) | | Numerical Analysis(52.24) | |
| | | Neurology(40.74) | | Ordinary Differential Equations(64.38) | |
| | | Nursing and Rehabilitation Medicine(44.00) | | Polynomials and Series Expansions(63.69) | |
| | | Obstetrics and Gynecology(36.27) | | Probability and Statistics(67.86) | |
| | | Oncology(32.76) | | Special Number Theory(56.00) | |
| | | Ophthalmology(40.00) | | Stochastic Processes(76.00) | |
| | | Otorhinolaryngology(44.00) | | Hydrogeology(58.00) | |
| | | Pediatrics(58.00) | | Marine Biology(82.00) | |
| | | Psychiatry and Mental Health(50.00) | | Marine Chemistry(62.00) | |
| | | Surgery(33.82) | | Underwater Acoustics(46.00) | |
| Stomatology(29.55) | Traditional Chinese Medicine(43.28) | Medicinal Chemistry(40.00) | | Physical Oceanography(52.00) | Physical Oceanography(52.00) |
| | | Microbiology and Biochemical Pharmacy(38.00) | | Physics(40.56) | Acoustics(36.73) |
| | | Pharmaceutical Analysis(50.00) | | | |
| | | Pharmacetics(47.95) | | | |
| | | Pharmacology(38.18) | | | |
| | | Epidemiology and Health Statistics(37.35) | | | |
| | | Health Toxicology and Environmental Health(53.75) | | | |
| | | Maternal, Child and Adolescent Health(46.84) | | | |
| | | Nutrition and Food Hygiene(60.00) | | | |
| | | Basic Stomatology(26.42) | | | |
| Military Science(40.00) | Military Science(40.00) | Clinical Stomatology(31.65) | | | |
| | | Traditional Chinese Medicine(52.54) | | | |
| | | Traditional Chinese Medicine Theory(37.78) | | | |
| | | Traditional Chinese Pharmacy(42.86) | | | |
| Philosophy(43.52) | Philosophy(43.52) | Military Command and Information Systems(42.00) | Systems Science(60.00) | | |
| | | Military Logistics and Equipment(35.19) | | | |
| | | Military Management(46.00) | | | |
| | | Military Thought and History(37.25) | | | |
| Sociology(43.36) | Sociology(43.36) | Ethics(30.88) | | | |
| | | Logic(51.43) | | | |
| | | Philosophical Aesthetics(35.78) | | | |
| | | Philosophy of Science and Technology(58.00) | | | |
| Military Science(40.00) | Military Science(40.00) | | | | |
| | | | | | |
| Philosophy(43.52) | Philosophy(43.52) | | | | |
| | | | | | |

Table 30. Continued: Model Scores Across Three Levels of Disciplines: QwQ.

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| Discipline | Field | Subfield | Discipline | Field | Subfield | |
|--|--|--|--------------------------|---|---|--|
| Agronomy(43.09) | Animal Husbandry(39.81) | Animal Nutrition and Feed Science(36.54) | Engineering(41.89) | Geological Resources and Geological Engineering(44.00) | Geological Resources and Geological Engineering(44.00) | |
| | | Animal Rearing and Breeding(43.14) | | | Hydraulics and Hydrology(41.18) | |
| | | Aquaculture(37.50) | | | Water conservancy and Hydropower Engineering(37.80) | |
| | Crop Science(42.07) | Crop Science(42.07) | | Information and Communication Engineering(51.19) | Antenna and Radio Communication(46.49) | |
| | | Forestry(48.85) | | | Communication Principles(45.69) | |
| | Veterinary Medicine(44.00) | Forest Cultivation and Genetic Breeding(45.68) | | | Communication and Information Systems(46.38) | |
| | | Landscape Plants and Ornamental Horticulture(54.00) | | | Optical Fiber Communication(72.00) | |
| | | Veterinary Medicine(44.00) | | | Signal and Information Processing(54.19) | |
| Economics(49.71) | Applied Economics(48.55) | Economic Statistics(58.00) | | Instrument Science and Technology(36.00) | Instrument Science and Technology(36.00) | |
| | | Finance(44.32) | | Materials Science and Engineering(34.60) | Materials Physics and Chemistry(32.66) | |
| | | Industrial Economics(50.00) | | Materials Processing Engineering(38.89) | | |
| | | International Trade(57.97) | | Mechanical Engineering(46.59) | Manufacturing Automation(42.86) | |
| | | Labor Economics(43.24) | | Mechanics(31.94) | Mechatronic Engineering(56.00) | |
| | | National and Defense Economics(50.00) | | Fundamentals of Dynamics and Control(30.26) | | |
| | | Public Finance(48.33) | | Rigid Body Mechanics(28.32) | | |
| | | Quantitative Economics(47.00) | | Solid Mechanics(38.71) | | |
| | | Theoretical Economics(55.33) | | Theoretical Fluid Mechanics(41.43) | | |
| | Theoretical Economics(55.33) | Economic History(62.00) | | Theoretical Mechanics(27.10) | | |
| | | Political Economy(48.00) | | Metallurgical Engineering(44.31) | Iron and Steel Metallurgy(34.29) | |
| | | Western Economics(56.00) | | Non-ferrous Metallurgy(38.00) | | |
| Education(45.45) | Education(47.37) | Educational Technology and Principles(42.71) | | Physical Chemistry of Metallurgical Process(54.00) | | |
| | | Preschool Education(56.00) | | Principles of Metallurgy(62.00) | | |
| | | Special Education(50.00) | | Mining Engineering(55.00) | Mineral Processing Engineering(58.00) | |
| | Physical Education(50.00) | Theory of Curriculum and Instruction(45.10) | | Mining and Safety Engineering(52.00) | | |
| | | Physical Education and Training(36.00) | | Naval Architecture and Ocean Engineering(35.51) | Marine Engineering(32.00) | |
| | | Sports Humanities and Sociology(48.00) | | Ship Mechanics and Design Principles(37.50) | | |
| | Psychology(32.18) | Sports Science and Medicine(66.00) | | Nuclear Science and Technology(49.53) | Nuclear Energy and Reactor Technology(43.86) | |
| | | Psychology(32.18) | | Radiation Protection and Nuclear Technology Applications(56.00) | | |
| | | Psychology(32.18) | | Optical Engineering(38.83) | Applied Optics(30.65) | |
| Engineering(41.89) | Aeronautical and Astronautical Science and Technology(43.70) | Aeronautical and Astronautical Science and Technology(43.70) | | Laser Technology(48.00) | | |
| | | Agricultural Environment and Soil-Water Engineering(42.59) | | Optoelectronic Technology(44.78) | | |
| | | Agricultural Mechanization Engineering(56.00) | | Theoretical Optics(40.00) | | |
| | Architecture(51.23) | Architectural Design and Theory(58.00) | | Petroleum and Natural Gas Engineering(50.00) | Oil and Gas Field Development and Storage & Transportation Engineering(43.55) | |
| | | Architectural History(46.77) | | Poromechanics and Reservoir Physics(58.00) | | |
| | | Urban Planning and Design(50.00) | | Engineering Fluid Mechanics(53.57) | | |
| | Chemical Engineering and Technology(38.29) | Chemical Transport Engineering(42.00) | | Engineering Thermophysics(29.45) | | |
| | | Elements of Chemical Reaction Engineering(40.19) | | Fluid Machinery and Engineering(34.38) | | |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(26.17) | | Heat Transfer(41.86) | | |
| | Civil Engineering(38.27) | Mass Transport and Separation Process in Chemical Engineering(44.52) | | Internal Combustion Engineering(48.00) | | |
| | | Civil Engineering(38.27) | | Power Machinery and Engineering(30.77) | | |
| | | Bridge and Tunnel Engineering(43.14) | | Refrigeration and Cryogenic Engineering(32.00) | | |
| Computer Science and Technology(47.58) | Computer Science and Technology(47.58) | Geotechnical Engineering(36.31) | | Surveying and Mapping Science and Technology(43.45) | Thermal Energy Engineering(28.44) | |
| | | Structural Engineering(36.84) | | | Cartography and Geographic Information Engineering(50.00) | |
| | | Urban Infrastructure Engineering(40.85) | | | Digital Surveying and Remote Sensing Applications(32.35) | |
| | Control Science and Engineering(50.53) | Advanced Programming Languages(70.00) | | | Geodesy and Surveying Engineering(52.00) | |
| | | Computer Architecture(58.00) | | | Textile Chemistry and Dyeing Engineering(44.00) | |
| | | Computer Networks(44.07) | | | Textile Materials Science(72.00) | |
| | Control Science and Engineering(50.53) | Computer Software and Theory(39.24) | | Transportation Engineering(44.62) | Road and Railway Engineering(34.00) | |
| | | Data Structures(29.29) | | | Traffic Information Engineering and Control(40.00) | |
| | | Databases(49.68) | | | Transportation Planning and Management(45.35) | |
| Electrical Engineering(32.37) | Control Science and Engineering(50.53) | Formal Languages(26.92) | | | Vehicle Operation Engineering(60.00) | |
| | | Operating Systems(43.53) | | | Weapon Science and Technology(49.00) | |
| | | Pattern Recognition(80.00) | | | Military Chemistry and Pyrotechnics(50.00) | |
| | Electrical Engineering(32.37) | Principles of Computer Organization(53.66) | | | Weapon Systems Science and Engineering(48.00) | |
| | | Control Theory and Control Engineering(56.18) | | | Archaeology and Museology(49.04) | |
| | | Guidance, Navigation and Control(49.02) | | | Historical Geography(53.52) | |
| | Electrical Engineering(32.37) | Operations Research and Cybernetics(42.00) | | | World History(49.07) | |
| | | Electrical Theory and New Technologies(35.26) | History(50.00) | | Civil and Commercial Law(49.15) | |
| | | High Voltage and Insulation Technology(29.55) | | | Constitutional and Administrative Law(50.00) | |
| Electronic Science and Technology(44.72) | Electrical Engineering(32.37) | Power Electronics and Electrical Drives(33.52) | Law(55.34) | Contract Law(66.00) | | |
| | | Power Systems and Automation(27.08) | | Criminal Law(50.86) | | |
| | | Circuits and Systems(38.89) | | International Law(58.60) | | |
| | Electronic Science and Technology(44.72) | Electromagnetic Field and Microwave Technology(47.73) | | Law and Social Governance(66.00) | | |
| | | Microelectronics and Solid-State Electronics(52.00) | | Legal Theory and Legal History(68.00) | | |
| | | Environmental Science and Engineering(31.46) | | Military Law(76.00) | | |
| Environmental Science and Engineering(47.09) | Food Science and Engineering(60.55) | Environmental Science(62.00) | Political Science(50.77) | Procedural Law(56.00) | | |
| | | Environmental and Resource Protection(60.00) | | Political Science(50.77) | | |
| | | Food Biochemistry(80.00) | | - | | |
| | Food Science and Engineering(60.55) | Food Processing and Storage Engineering(44.07) | | - | | |
| | | Forest Engineering(48.00) | | - | | |
| | | Wood Science and Technology(52.00) | | - | | |

Table 31. Model Scores Across Three Levels of Disciplines: Llama-3.1-405B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|-------------------------------------|--|---------------------|--|--|
| Literature and Arts(43.20) | Art Studies(44.11) | Broadcasting and Television Art(60.00) | Philosophy(48.41) | Philosophy(48.41) | Religious Studies(68.00) |
| | | Dance Studies(34.00) | | Astronomy(49.63) | Astronomical Observation and Technology(61.00) |
| | | Design Arts(35.48) | | Astrophysics(47.83) | Cosmology(44.87) |
| | | Drama and Opera Studies(46.34) | | Solar System Science(48.86) | Stellar and Interstellar Evolution(41.43) |
| | | Film Studies(44.30) | | Atmospheric Science(44.83) | Atmospheric Physics and Atmospheric Environment(47.83) |
| | Journalism and Communication(41.55) | Fine Arts(44.28) | | Dynamic Meteorology(42.00) | |
| | | Communication and Broadcasting(36.21) | | Meteorology(44.05) | |
| | Language and Literature(43.41) | History and Theory of Journalism and Media Management(38.98) | Biology(40.80) | Biochemistry and Molecular Biology(48.48) | |
| | | Journalism and News Practice(46.67) | | Biophysics(62.00) | |
| | | Classical Chinese Literature(38.00) | | Botany(36.75) | |
| | | French Language and Literature(60.00) | | Cell Biology(44.83) | |
| | | Linguistics and Applied Linguistics(64.00) | | Ecology(34.03) | |
| Management(47.70) | Musicology(42.49) | Literary History(33.33) | | Genetics(38.59) | |
| | | Literary Theory(39.06) | | Microbiology(39.75) | |
| | | Modern and Contemporary Chinese Literature(26.00) | | Physiology(38.33) | |
| | | Philology and Bibliography(44.00) | | Zoology(44.04) | |
| | | Russian Language and Literature(47.37) | | Chemistry(32.79) | |
| | | Composition(44.00) | | Analytical Chemistry(38.13) | |
| | | Harmony(31.67) | | Electrochemistry(28.83) | |
| | | Instrumentation and Performance(36.92) | | Inorganic Chemistry(29.71) | |
| | | Music History, Education, and Technology(48.97) | | Organic Chemistry(35.67) | |
| | | Musical Forms and Analysis(42.00) | | Physical Chemistry(29.89) | |
| | Business Administration(43.66) | Pitch and Scales(42.86) | | Polymer Chemistry and Physics(36.84) | |
| | | Business and Accounting Management(46.74) | | Radiochemistry(40.00) | |
| | | Tourism Management and Technological Economics Management(38.00) | | Geography(54.14) | Human Geography(68.00) |
| | | Library, Information and Archival Management(46.67) | | Physical Geography(45.78) | |
| | | Information Management Science(30.00) | | Geology(46.33) | Geochemistry(58.00) |
| Medicine(49.04) | Clinical Medicine(49.67) | Information Management and Communication(78.00) | | Mineralogy, Petrology, and Economic Geology(42.15) | |
| | | Library and Archival Science(32.00) | | Paleontology and Stratigraphy(44.00) | |
| | | Management Science and Engineering(48.28) | | Principles of Seismic Exploration(50.00) | |
| | | Education Economics, Management and Social Security(54.00) | | Structural Geology(44.29) | |
| | | Land Resource Management and Administrative Management(45.10) | | Geophysics(44.00) | Solid Earth Geophysics(54.00) |
| | | Social Medicine and Health Management(58.00) | | Mathematics(42.30) | Space physics(34.00) |
| | Pharmacy(48.20) | Forensic Medicine(58.00) | | Advanced Algebra(54.95) | |
| | | Human Anatomy and Histology-Embryology(46.56) | | Combinatorial Mathematics(27.75) | |
| | | Immunology(52.17) | | Computational Mathematics(48.00) | |
| | | Pathogen Biology(42.55) | | Cryptography(68.00) | |
| | | Pathology and Pathophysiology(45.22) | | Discrete Mathematics(39.33) | |
| Public Health and Preventive Medicine(60.96) | Clinical Medicine(49.67) | Radiation Medicine(78.00) | | Functions of Complex Variables(54.10) | |
| | | Anesthesiology(68.00) | | Functions of Real Variables(49.25) | |
| | | Clinical Laboratory Diagnostics(50.00) | | Fundamental Mathematics(42.13) | |
| | | Dermatology and Venereology(48.48) | | Fuzzy Mathematics(60.00) | |
| | | Emergency Medicine(50.00) | | Geometry and Topology(28.30) | |
| | Pharmacy(48.20) | Geriatric Medicine(66.00) | | Graph Theory(33.33) | |
| | | Imaging and Nuclear Medicine(43.28) | | Group Theory(36.00) | |
| | | Internal Medicine(44.06) | | Mathematical Analysis(45.14) | |
| | | Neurology(50.26) | | Number Theory(26.82) | |
| | | Nursing and Rehabilitation Medicine(58.00) | | Numerical Analysis(40.30) | |
| Military Science(52.20) | Stomatology(42.42) | Obstetrics and Gynecology(41.18) | Oceanography(69.50) | Ordinary Differential Equations(47.50) | |
| | | Oncology(50.00) | | Polynomials and Series Expansions(35.75) | |
| | | Ophthalmology(44.00) | | Probability and Statistics(50.00) | |
| | | Otorhinolaryngology(58.00) | | Special Number Theory(46.00) | |
| | | Pediatrics(50.00) | | Stochastic Processes(78.00) | |
| | Traditional Chinese Medicine(35.07) | Psychiatry and Mental Health(68.00) | | Hydrogeology(72.00) | |
| | | Surgery(36.76) | | Marine Biology(64.00) | |
| | | Medicinal Chemistry(50.00) | | Marine Chemistry(64.00) | |
| | | Microbiology and Biochemical Pharmacy(42.00) | | Underwater Acoustics(58.00) | |
| | | Pharmaceutical Analysis(38.00) | | Physical Oceanography(46.00) | |
| Philosophy(48.41) | Military Science(52.20) | Pharmacetics(46.58) | | Acoustics(35.51) | |
| | | Pharmacology(45.45) | | Atomic and Molecular Physics(32.86) | |
| | | Epidemiology and Health Statistics(49.40) | | Electrodynamics(35.85) | |
| | | Health Toxicology and Environmental Health(68.75) | | Fluid Physics(38.81) | |
| | | Maternal, Child and Adolescent Health(64.56) | | Particle and Nuclear Physics(36.44) | |
| | Sociology(49.65) | Nutrition and Food Hygiene(62.00) | Physics(35.75) | Polymer Physics(35.78) | |
| | | Basic Stomatology(45.28) | | Quantum Mechanics(42.23) | |
| | | Clinical Stomatology(40.51) | | Relativity(41.77) | |
| | | Traditional Chinese Health Preservation(44.07) | | Semiconductor Physics(29.51) | |
| | | Traditional Chinese Medicine Theory(34.44) | | Solid State Physics(36.05) | |
| | | Traditional Chinese Pharmacy(31.09) | | Statistical Mechanics(50.00) | |
| | Philosophy(48.41) | Military Command and Information Systems(52.00) | | Subatomic and Atomic Physics(41.18) | |
| | | Military Logistics and Equipment(50.00) | | Thermodynamics(33.49) | |
| | | Military Management(58.00) | | Thermodynamics and Statistical Physics(32.08) | |
| | | Military Thought and History(49.02) | | Systems Science(50.00) | |
| | | Ethics(45.59) | | Demography and Anthropology(52.00) | |
| | | Logic(31.43) | | Social and Folklore Studies(48.39) | |
| | | Philosophical Aesthetics(45.87) | | | |
| | | Philosophy of Science and Technology(62.00) | | | |

Table 31. Continued: Model Scores Across Three Levels of Disciplines: Llama-3.1-405B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|-------------------------------------|--|--|--------------------|--|---|
| Agronomy(39.59) | Animal Husbandry(39.81) | Animal Nutrition and Feed Science(44.23) | Engineering(38.84) | Geological Resources and Geological Engineering(52.00) | Geological Resources and Geological Engineering(52.00) |
| | | Animal Rearing and Breeding(35.29) | | | Hydraulics and Hydrology(38.97) |
| | Aquaculture(37.50) Crop Science(36.55) | Aquaculture(37.50) | | Hydraulic Engineering(34.86) | Water conservancy and Hydropower Engineering(28.05) |
| | | Crop Science(36.55) | | | Antenna and Radio Communication(36.84) |
| | Forestry(40.46) | Forest Cultivation and Genetic Breeding(32.10) | | Information and Communication Engineering(40.28) | Communication Principle(35.34) |
| | | Landscape Plants and Ornamental Horticulture(54.00) | | | Communication and Information Systems(39.13) |
| | Veterinary Medicine(48.00) | Veterinary Medicine(48.00) | | Optical Fiber Communication(62.00) | Optical Fiber Communication(62.00) |
| | | Economic Statistics(58.00) | | | Signal and Information Processing(40.00) |
| | Economics(40.78) | Finance(44.89) | | Instrument Science and Technology(50.00) | Instrument Science and Technology(50.00) |
| | | Industrial Economics(38.10) | | | Materials Physics and Chemistry(31.66) |
| | | International Trade(30.43) | | Materials Science and Engineering(35.99) | Materials Processing Engineering(45.56) |
| | | Labor Economics(44.59) | | | Manufacturing Automation(43.65) |
| | | National and Defense Economics(42.00) | | Mechanical Engineering(44.89) | Mechatronic Engineering(48.00) |
| | | Public Finance(31.67) | | | Fundamentals of Dynamics and Control(26.80) |
| | | Quantitative Economics(40.00) | | Mechanics(31.39) | Rigid Body Mechanics(28.90) |
| | | Theoretical Economics(42.00) | | | Solid Mechanics(39.78) |
| | | Economic History(44.00) | | Metallurgical Engineering(43.92) | Theoretical Fluid Mechanics(42.14) |
| | | Political Economy(34.00) | | | Theoretical Mechanics(29.68) |
| Education(44.42) | Education(41.70) | Western Economics(48.00) | | | Iron and Steel Metallurgy(29.52) |
| | | Educational Technology and Principles(38.54) | | Non-ferrous Metallurgy(40.00) | Non-ferrous Metallurgy(40.00) |
| | | Preschool Education(44.00) | | | Physical Chemistry of Metallurgical Process(56.00) |
| | | Special Education(48.00) | | Mining Engineering(50.00) | Principles of Metallurgy(66.00) |
| | | Theory of Curriculum and Instruction(39.22) | | | Mineral Processing Engineering(46.00) |
| Engineering(38.84) | Physical Education(50.00) | Physical Education and Training(40.00) | | Mining and Safety Engineering(54.00) | Mining and Safety Engineering(54.00) |
| | | Sports Humanities and Sociology(56.00) | | | Naval Architecture and Ocean Engineering(35.51) |
| | | Sports Science and Medicine(54.00) | | Marine Engineering(32.00) | Marine Engineering(32.00) |
| | | Psychology(42.53) | | | Ship Mechanics and Design Principles(37.50) |
| | | Psychology(42.53) | | Nuclear Science and Technology(45.79) | Nuclear Energy and Reactor Technology(40.35) |
| | Chemical Engineering and Technology(33.17) | Aeronautical and Astronautical Science and Technology(36.13) | | | Radiation Protection and Nuclear Technology Applications(52.00) |
| | | Agricultural Environment and Soil-Water Engineering(35.19) | | Optical Engineering(34.57) | Applied Optics(32.26) |
| | | Agricultural Mechanization Engineering(58.00) | | | Laser Technology(44.00) |
| | | Architecture(46.91) | | Petroleum and Natural Gas Engineering(46.43) | Optoelectronic Technology(35.82) |
| | | Architectural Design and Theory(44.00) | | | Theoretical Optics(32.59) |
| Engineering(38.84) | Computer Science and Technology(44.04) | Architectural History(46.77) | | Power Engineering and Engineering Thermophysics(32.60) | Oil and Gas Field Development and Storage & Transportation Engineering(33.87) |
| | | Urban Planning and Design(50.00) | | | Poromechanics and Reservoir Physics(62.00) |
| | | Chemical Transport Engineering(40.00) | | Engineering Thermophysics(34.93) | Engineering Fluid Mechanics(34.52) |
| | | Elements of Chemical Reaction Engineering(26.17) | | | Engineering Thermophysics(34.93) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(28.04) | | Surveying and Mapping Science and Technology(41.67) | Fluid Machinery and Engineering(23.44) |
| | | Mass Transport and Separation Process in Chemical Engineering(39.73) | | | Heat Transfer(34.11) |
| | | Civil Engineering(34.64) | | | Internal Combustion Engineering(46.00) |
| | | Bridge and Tunnel Engineering(27.45) | | | Power Machinery and Engineering(19.23) |
| | | Geotechnical Engineering(33.52) | | Textile Science and Engineering(53.00) | Refrigeration and Cryogenic Engineering(42.00) |
| | | Structural Engineering(31.58) | | | Thermal Energy Engineering(27.52) |
| | Control Science and Engineering(42.11) | Urban Infrastructure Engineering(45.07) | | Transportation Engineering(39.44) | Cartography and Geographic Information Engineering(48.00) |
| | | Computer Science and Technology(44.04) | | | Digital Surveying and Remote Sensing Applications(36.76) |
| | | Advanced Programming Languages(68.00) | | Geodesy and Surveying Engineering(42.00) | Geodesy and Surveying Engineering(42.00) |
| | | Computer Architecture(46.00) | | | Textile Chemistry and Dyeing Engineering(42.00) |
| | | Computer Networks(38.98) | | Textile Materials Science(64.00) | Textile Materials Science(64.00) |
| Engineering(38.84) | Electrical Engineering(28.96) | Computer Software and Theory(44.30) | | | Road and Railway Engineering(30.00) |
| | | Data Structures(35.35) | | | Traffic Information Engineering and Control(27.69) |
| | | Databases(43.95) | | | Transportation Planning and Management(43.02) |
| | | Formal Languages(34.62) | | | Vehicle Operation Engineering(58.00) |
| | | Operating Systems(41.18) | | Weapon Science and Technology(56.00) | Military Chemistry and Pyrotechnics(60.00) |
| | | Pattern Recognition(72.00) | | | Weapon Systems Science and Engineering(52.00) |
| | | Principles of Computer Organization(34.15) | | History(50.89) | Archaeology and Museology(54.81) |
| | | Control Theory and Control Engineering(42.70) | | | Historical Geography(45.77) |
| | | Guidance, Navigation and Control(33.33) | | Law(54.12) | World History(51.64) |
| | | Operations Research and Cybernetics(50.00) | | | Civil and Commercial Law(47.46) |
| Engineering(38.84) | Electronic Science and Technology(43.09) | Electrical Theory and New Technologies(28.95) | | Law(54.65) | Constitutional and Administrative Law(50.00) |
| | | High Voltage and Insulation Technology(35.23) | | | Contract Law(68.00) |
| | | Power Electronics and Electrical Drives(27.47) | | Law(54.65) | Criminal Law(51.72) |
| | | Power Systems and Automation(26.04) | | | International Law(42.11) |
| | | Circuits and Systems(37.96) | | Political Science(49.23) | Law and Social Governance(62.00) |
| | | Electromagnetic Field and Microwave Technology(44.32) | | | Legal Theory and Legal History(60.00) |
| | | Microelectronics and Solid-State Electronics(52.00) | | | Military Law(68.00) |
| | Environmental Science and Engineering(46.03) | Environmental Engineering(29.21) | | Political Science(49.23) | Procedural Law(58.00) |
| | | Environmental Science(70.00) | | | Political Science(49.23) |
| | | Environmental and Resource Protection(52.00) | | | - |
| | | Food Biochemistry(78.00) | | | - |
| | | Food Processing and Storage Engineering(45.76) | | | - |
| Food Science and Engineering(60.55) | Forestry Engineering(61.00) | Forest Engineering(62.00) | | | - |
| | | Wood Science and Technology(60.00) | | | - |

Table 32. Model Scores Across Three Levels of Disciplines: gpt-4o-2024-08-06.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|-------------------|--|
| Literature and Arts(46.30) | Art Studies(51.24) | Broadcasting and Television Art(62.00) | Philosophy(47.84) | Philosophy(47.84) | Religious Studies(64.00) |
| | | Dance Studies(46.00) | | | Astronomical Observation and Technology(61.00) |
| | | Design Arts(37.10) | | | Astrophysics(34.78) |
| | | Drama and Opera Studies(50.00) | | | Cosmology(47.44) |
| | | Film Studies(53.16) | | | Solar System Science(54.55) |
| | Journalism and Communication(45.89) | Fine Arts(53.23) | | | Stellar and Interstellar Evolution(32.86) |
| | | Communication and Broadcasting(43.10) | | | Atmospheric Physics and Atmospheric Environment(34.78) |
| | | History and Theory of Journalism and Media Management(44.07) | | | Dynamic Meteorology(48.00) |
| | | Journalism and News Practice(48.89) | | | Meteorology(45.24) |
| | | Classical Chinese Literature(30.00) | | | Biochemistry and Molecular Biology(52.53) |
| Management(45.51) | Language and Literature(42.95) | French Language and Literature(58.00) | | | Biophysics(56.00) |
| | | Linguistics and Applied Linguistics(62.00) | | | Botany(36.75) |
| | | Literary History(37.68) | | | Cell Biology(48.28) |
| | | Literary Theory(43.75) | | | Ecology(38.19) |
| | | Modern and Contemporary Chinese Literature(32.00) | | | Genetics(37.50) |
| | Musicology(42.96) | Phonology and Bibliography(48.00) | | | Microbiology(45.34) |
| | | Russian Language and Literature(35.09) | | | Physiology(40.83) |
| | | Composition(40.00) | | | Zoology(59.45) |
| | | Harmony(33.33) | | | Analytical Chemistry(34.85) |
| | | Instrumentation and Performance(46.15) | | | Electrochemistry(29.73) |
| Medicine(50.49) | Business Administration(45.07) | Music History, Education, and Technology(51.03) | | | Inorganic Chemistry(35.51) |
| | | Musical Forms and Analysis(42.00) | | | Organic Chemistry(36.26) |
| | | Pitch and Scales(32.14) | | | Physical Chemistry(28.33) |
| | | Business and Accounting Management(42.39) | | | Polymer Chemistry and Physics(25.00) |
| | | Tourism Management and Technological Economics Management(50.00) | | | Radiochemistry(35.00) |
| | Library, Information and Archival Management(47.33) | Information Management Science(24.00) | | | Geography(54.14) Human Geography(72.00) |
| | | Information Management and Communication(82.00) | | | Physical Geography(43.37) |
| | | Library and Archival Science(36.00) | | | Geochimistry(62.00) |
| | | Management Science and Engineering(39.66) | | | Mineralogy, Petrology, and Economic Geology(37.19) |
| | | Education Economics, Management and Social Security(42.00) | | | Paleontology and Stratigraphy(34.00) |
| Pharmacy(46.40) | Management Science and Engineering(39.66) | Land Resource Management and Administrative Management(43.14) | | | Principles of Seismic Exploration(54.00) |
| | | Social Medicine and Health Management(54.00) | | | Structural Geology(45.71) |
| | | Forensic Medicine(56.00) | | | Geophysics(52.00) Solid Earth Geophysics(62.00) |
| | | Human Anatomy and Histology-Embryology(48.15) | | | Space physics(42.00) |
| | | Immunology(42.03) | | | Advanced Algebra(46.04) |
| | Clinical Medicine(51.89) | Pathogen Biology(50.00) | | | Combinatorial Mathematics(27.23) |
| | | Pathology and Pathophysiology(42.61) | | | Computational Mathematics(54.00) |
| | | Radiation Medicine(70.00) | | | Cryptography(60.00) |
| | | Anesthesiology(62.00) | | | Discrete Mathematics(31.46) |
| | | Clinical Laboratory Diagnostics(54.00) | | | Functions of Complex Variables(47.54) |
| Public Health and Preventive Medicine(56.51) | Public Administration(46.36) | Dermatology and Venereology(60.61) | | | Functions of Real Variables(53.73) |
| | | Emergency Medicine(57.58) | | | Fundamental Mathematics(42.64) |
| | | Geriatric Medicine(66.00) | | | Fuzzy Mathematics(44.00) |
| | | Imaging and Nuclear Medicine(40.30) | | | Geometry and Topology(28.30) |
| | | Internal Medicine(48.51) | | | Graph Theory(41.18) |
| | Stomatology(46.21) | Neurology(51.32) | | | Group Theory(16.00) |
| | | Nursing and Rehabilitation Medicine(58.00) | | | Mathematical Analysis(39.58) |
| | | Obstetrics and Gynecology(43.14) | | | Number Theory(35.45) |
| | | Oncology(39.66) | | | Numerical Analysis(35.82) |
| | | Ophthalmology(52.00) | | | Ordinary Differential Equations(47.50) |
| Military Science(50.73) | Pharmacy(46.40) | Otorhinolaryngology(58.00) | | | Polynomials and Series Expansions(34.08) |
| | | Pediatrics(62.00) | | | Probability and Statistics(49.55) |
| | | Psychiatry and Mental Health(72.00) | | | Special Number Theory(52.00) |
| | | Surgery(33.82) | | | Stochastic Processes(60.00) |
| | | Medicinal Chemistry(50.00) | | | Hydrogeology(66.00) |
| | Traditional Chinese Medicine(46.64) | Microbiology and Biochemical Pharmacy(46.00) | | | Marine Biology(82.00) |
| | | Pharmaceutical Analysis(50.00) | | | Marine Chemistry(62.00) |
| | | Pharmacetics(39.73) | | | Underwater Acoustics(52.00) |
| | | Pharmacology(49.09) | | | Physical Oceanography(52.00) |
| | | Epidemiology and Health Statistics(42.17) | | | Acoustics(34.29) |
| Philosophy(47.84) | Military Science(50.73) | Health Toxicology and Environmental Health(61.25) | | | Atomic and Molecular Physics(30.00) |
| | | Maternal, Child and Adolescent Health(64.56) | | | Electrodynamics(32.59) |
| | | Nutrition and Food Hygiene(60.60) | | | Fluid Physics(32.84) |
| | | Basic Stomatology(47.17) | | | Particle and Nuclear Physics(45.33) |
| | | Clinical Stomatology(45.57) | | | Polymer Physics(33.94) |
| | Systems Science(52.00) | Traditional Chinese Health Preservation(57.63) | | | Quantum Mechanics(35.44) |
| | | Traditional Chinese Medicine Theory(48.89) | | | Relativity(43.04) |
| | | Traditional Chinese Pharmacy(39.50) | | | Semiconductor Physics(24.59) |
| | | Military Command and Information Systems(46.00) | | | Solid State Physics(33.33) |
| | | Military Logistics and Equipment(50.00) | | | Statistical Mechanics(44.00) |
| Sociology(53.85) | Philosophy(47.84) | Military Management(56.00) | | | Subatomic and Atomic Physics(29.41) |
| | | Military Thought and History(50.98) | | | Thermodynamics(27.91) |
| | | Ethics(41.18) | | | Thermodynamics and Statistical Physics(32.45) |
| | | Logic(40.00) | | | Systems Science(52.00) |
| Sociology(53.85) | Philosophy(47.84) | Philosophical Aesthetics(44.04) | | | Demography and Anthropology(62.00) |
| | | Philosophy of Science and Technology(60.00) | | | Social and Folklore Studies(49.46) |

Table 32. Continued: Model Scores Across Three Levels of Disciplines: gpt-4o-2024-08-06.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|--|---|
| Agronomy(41.24) | Animal Husbandry(41.75) | Animal Nutrition and Feed Science(48.08) | Engineering(41.12) | Geological Resources and Geological Engineering(44.00) | Geological Resources and Geological Engineering(44.00) |
| | | Animal Rearing and Breeding(35.29) | | | Hydraulics and Hydrology(44.85) |
| | | Aquaculture(33.93) | | | Water conservancy and Hydropower Engineering(39.02) |
| | Crop Science(38.62) | Crop Science(38.62) | | Information and Communication Engineering(49.40) | Antenna and Radio Communication(36.84) |
| | | Forestry(45.80) | | | Communication Principles(50.00) |
| | Veterinary Medicine(44.00) | Forest Cultivation and Genetic Breeding(43.21) | | | Communication and Information Systems(40.58) |
| | | Landscape Plants and Ornamental Horticulture(50.00) | | | Optical Fiber Communication(68.00) |
| | | Veterinary Medicine(44.00) | | | Signal and Information Processing(56.13) |
| | Economics(46.62) | Economic Statistics(56.00) | | Instrument Science and Technology(42.00) | Instrument Science and Technology(42.00) |
| | | Finance(46.59) | | | Materials Physics and Chemistry(33.67) |
| | | Industrial Economics(47.62) | | | Materials Processing Engineering(43.33) |
| | | International Trade(55.07) | | Mechanical Engineering(45.45) | Manufacturing Automation(44.44) |
| | | Labor Economics(40.54) | | | Mechatronic Engineering(48.00) |
| | | National and Defense Economics(44.00) | | | Fundamentals of Dynamics and Control(29.68) |
| | | Public Finance(40.00) | | | Rigid Body Mechanics(21.39) |
| | | Quantitative Economics(43.00) | | | Solid Mechanics(45.16) |
| | | Theoretical Economics(50.67) | | | Theoretical Fluid Mechanics(47.14) |
| | | Economic History(58.00) | | | Theoretical Mechanics(32.26) |
| | | Political Economy(38.00) | | Metallurgical Engineering(41.96) | Iron and Steel Metallurgy(33.33) |
| | | Western Economics(56.00) | | | Non-ferrous Metallurgy(42.00) |
| | | Psychology(32.18) | | | Physical Chemistry of Metallurgical Process(46.00) |
| Education(44.42) | Education(46.56) | Educational Technology and Principles(42.71) | | | Principles of Metallurgy(56.00) |
| | | Preschool Education(54.00) | | Mining Engineering(51.00) | Mineral Processing Engineering(50.00) |
| | | Special Education(56.00) | | | Mining and Safety Engineering(52.00) |
| | Physical Education(48.00) | Theory of Curriculum and Instruction(37.25) | | | Naval Architecture and Ocean Engineering(37.68) |
| | | Physical Education and Training(42.00) | | Naval Architecture and Ocean Engineering(37.68) | Marine Engineering(34.00) |
| | | Sports Humanities and Sociology(42.00) | | | Ship Mechanics and Design Principles(39.77) |
| | | Sports Science and Medicine(60.00) | | Nuclear Science and Technology(45.79) | Nuclear Energy and Reactor Technology(36.84) |
| | Psychology(32.18) | Psychology(32.18) | | | Radiation Protection and Nuclear Technology Applications(56.00) |
| | | Aeronautical and Astronautical Science and Technology(25.21) | | | Applied Optics(37.10) |
| | | Agricultural Engineering(51.92) | | | Laser Technology(38.00) |
| Engineering(41.12) | Aeronautical and Astronautical Science and Technology(25.21) | Aeronautical and Astronautical Science and Technology(25.21) | | Optical Engineering(37.50) | Optoelectronic Technology(44.78) |
| | | Agricultural Environment and Soil-Water Engineering(42.59) | | | Theoretical Optics(34.07) |
| | | Agricultural Mechanization Engineering(62.00) | | Petroleum and Natural Gas Engineering(43.75) | Polymer Mechanics and Reservoir Physics(50.00) |
| | Architecture(48.15) | Architectural Design and Theory(48.00) | | | Engineering Fluid Mechanics(44.05) |
| | | Architectural History(50.00) | | | Engineering Thermophysics(39.73) |
| | | Urban Planning and Design(46.00) | | | Fluid Machinery and Engineering(26.56) |
| | Chemical Engineering and Technology(38.05) | Chemical Transport Engineering(52.00) | | Power Engineering and Engineering Thermophysics(36.84) | Heat Transfer(34.88) |
| | | Elements of Chemical Reaction Engineering(36.45) | | | Internal Combustion Engineering(42.00) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(34.58) | | | Power Machinery and Engineering(25.00) |
| | Civil Engineering(37.71) | Mass Transport and Separation Process in Chemical Engineering(36.99) | | | Refrigeration and Cryogenic Engineering(32.00) |
| | | Bridge and Tunnel Engineering(23.53) | | Surveying and Mapping Science and Technology(51.79) | Thermal Energy Engineering(41.28) |
| | | Geotechnical Engineering(35.20) | | | Cartography and Geographic Information Engineering(56.00) |
| | Computer Science and Technology(46.26) | Structural Engineering(42.11) | | | Digital Surveying and Remote Sensing Applications(36.76) |
| | | Urban Infrastructure Engineering(50.70) | | | Geodesy and Surveying Engineering(68.00) |
| | | Advanced Programming Languages(72.00) | | | Textile Chemistry and Dyeing Engineering(44.00) |
| Control Science and Engineering(50.00) | Computer Science and Technology(46.26) | Computer Architecture(36.00) | | Textile Science and Engineering(57.00) | Textile Materials Science(70.00) |
| | | Computer Networks(40.68) | | | Transportation Engineering(39.84) |
| | | Computer Software and Theory(43.04) | | | Road and Railway Engineering(34.00) |
| | Control Science and Engineering(50.00) | Data Structures(35.35) | | | Traffic Information Engineering and Control(30.77) |
| | | Databases(56.05) | | | Transportation Planning and Management(40.70) |
| | | Formal Languages(38.46) | | | Vehicle Operation Engineering(56.00) |
| | Electrical Engineering(32.73) | Operating Systems(35.29) | | Weapon Science and Technology(46.00) | Military Chemistry and Pyrotechnics(52.00) |
| | | Pattern Recognition(76.00) | | | Weapon Systems Science and Engineering(40.00) |
| | | Principles of Computer Organization(36.59) | | | Archaeology and Museology(32.69) |
| | Environmental Science and Engineering(50.79) | Control Theory and Control Engineering(57.30) | | | Historical Geography(27.46) |
| | | Guidance, Navigation and Control(45.10) | | | World History(31.31) |
| | | Operations Research and Cybernetics(42.00) | | | |
| Engineering(41.12) | Electrical Engineering(32.73) | Electrical Theory and New Technologies(32.63) | History(30.71) | History(30.71) | Military Chemistry and Pyrotechnics(52.00) |
| | | High Voltage and Insulation Technology(36.36) | | | Weapon Systems Science and Engineering(40.00) |
| | | Power Electronics and Electrical Drives(31.32) | | | Archaeology and Museology(32.69) |
| | Electronic Science and Technology(40.65) | Power Systems and Automation(32.29) | | Law(45.88) | Historical Geography(27.46) |
| | | Circuits and Systems(39.81) | | | World History(31.31) |
| | | Electromagnetic Field and Microwave Technology(36.36) | | | |
| | Food Science and Engineering(53.21) | Microelectronics and Solid-State Electronics(50.00) | | Law(47.21) | Civil and Commercial Law(40.68) |
| | | Environmental Engineering(39.33) | | | Constitutional and Administrative Law(50.00) |
| | | Environmental Science(68.00) | | | Contract Law(48.00) |
| | Forestry Engineering(48.00) | Environmental and Resource Protection(54.00) | | Law(47.21) | Criminal Law(51.72) |
| | | Food Biochemistry(80.00) | | | International Law(43.86) |
| | | Food Processing and Storage Engineering(30.51) | | | Law and Social Governance(48.00) |
| | Forestry Engineering(48.00) | Forest Engineering(48.00) | | Political Science(33.85) | Legal Theory and Legal History(50.00) |
| | | Wood Science and Technology(48.00) | | | Military Law(64.00) |

Table 33. Model Scores Across Three Levels of Disciplines: Qwen2.5-72B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|-------------------|--|
| Literature and Arts(34.90) | Art Studies(34.00) | Broadcasting and Television Art(42.00) | Philosophy(43.52) | Philosophy(43.52) | Religious Studies(60.00) |
| | | Dance Studies(28.00) | | | Astronomical Observation and Technology(46.00) |
| | | Design Arts(25.81) | | | Astrophysics(33.33) |
| | | Drama and Opera Studies(36.59) | | | Cosmology(44.87) |
| | | Film Studies(40.51) | | | Solar System Science(35.23) |
| | Journalism and Communication(25.12) | Fine Arts(29.85) | | | Stellar and Interstellar Evolution(41.43) |
| | | Communication and Broadcasting(17.24) | | | Atmospheric Physics and Atmospheric Environment(42.03) |
| | | History and Theory of Journalism and Media Management(33.90) | | | Dynamic Meteorology(52.00) |
| | | Journalism and News Practice(24.44) | | | Meteorology(33.33) |
| | | Classical Chinese Literature(40.00) | | | Biochemistry and Molecular Biology(43.43) |
| Management(42.32) | Language and Literature(40.45) | French Language and Literature(42.00) | Biology(38.48) | Biology(38.48) | Biophysics(60.00) |
| | | Linguistics and Applied Linguistics(50.00) | | | Botany(32.53) |
| | | Literary History(49.28) | | | Cell Biology(40.23) |
| | | Literary Theory(35.94) | | | Ecology(33.33) |
| | | Modern and Contemporary Chinese Literature(32.00) | | | Genetics(37.50) |
| | Musicology(35.21) | Philology and Bibliography(46.00) | | | Microbiology(40.37) |
| | | Russian Language and Literature(28.07) | | | Physiology(40.00) |
| | | Composition(40.00) | | | Zoology(55.78) |
| | | Harmony(33.33) | | | Analytical Chemistry(34.09) |
| | | Instrumentation and Performance(36.92) | | | Electrochemistry(27.48) |
| Medicine(45.74) | Business Administration(33.10) | Music History, Education, and Technology(30.34) | Chemistry(29.68) | Chemistry(29.68) | Inorganic Chemistry(31.16) |
| | | Musical Forms and Analysis(52.00) | | | Organic Chemistry(30.99) |
| | | Pitch and Scales(28.57) | | | Physical Chemistry(27.34) |
| | | Business and Accounting Management(28.26) | | | Polymer Chemistry and Physics(18.42) |
| | | Tourism Management and Technological Economics Management(42.00) | | | Radiochemistry(43.33) |
| | Library, Information and Archival Management(46.00) | Information Management Science(32.00) | | | Geography(47.37) |
| | | Information Management and Communication(76.00) | | | Human Geography(68.00) |
| | | Library and Archival Science(30.00) | | | Physical Geography(34.94) |
| | | Management Science and Engineering(43.10) | | | Geology(41.94) |
| | | Education Economics, Management and Social Security(48.00) | | | Mineralogy, Petrology, and Economic Geology(36.36) |
| Pharmacy(47.12) | Public Administration(47.02) | Land Resource Management and Administrative Management(37.25) | | | Paleontology and Stratigraphy(32.00) |
| | | Social Medicine and Health Management(56.00) | | | Principles of Seismic Exploration(50.00) |
| | | Forensic Medicine(46.00) | | | Structural Geology(42.86) |
| | | Human Anatomy and Histology-Embryology(40.74) | | | Geophysics(57.00) |
| | | Immunology(36.23) | | | Solid Earth Geophysics(60.00) |
| | Clinical Medicine(43.27) | Pathogen Biology(37.23) | | | Space physics(54.00) |
| | | Pathology and Pathophysiology(49.57) | | | Advanced Algebra(51.98) |
| | | Radiation Medicine(76.00) | | | Combinatorial Mathematics(34.55) |
| | | Anesthesiology(54.00) | | | Computational Mathematics(36.00) |
| | | Clinical Laboratory Diagnostics(46.00) | | | Cryptography(66.00) |
| Public Health and Preventive Medicine(47.95) | Pharmacy(47.12) | Dermatology and Venereology(37.88) | | | Discrete Mathematics(38.20) |
| | | Emergency Medicine(42.42) | | | Functions of Complex Variables(64.75) |
| | | Geriatric Medicine(52.00) | | | Functions of Real Variables(52.24) |
| | | Imaging and Nuclear Medicine(29.85) | | | Fundamental Mathematics(49.75) |
| | | Internal Medicine(45.54) | | | Fuzzy Mathematics(50.00) |
| | Stomatology(40.15) | Neurology(42.33) | | | Geometry and Topology(35.85) |
| | | Nursing and Rehabilitation Medicine(46.00) | | | Graph Theory(47.06) |
| | | Obstetrics and Gynecology(45.10) | | | Group Theory(38.00) |
| | | Oncology(32.76) | | | Mathematical Analysis(48.61) |
| | | Ophthalmology(46.00) | | | Number Theory(44.55) |
| Military Science(45.37) | Traditional Chinese Medicine(57.46) | Otorhinolaryngology(40.00) | | | Numerical Analysis(46.27) |
| | | Pediatrics(52.00) | | | Ordinary Differential Equations(55.00) |
| | | Psychiatry and Mental Health(52.00) | | | Polynomials and Series Expansions(43.02) |
| | | Surgery(33.82) | | | Probability and Statistics(54.02) |
| | | Medicinal Chemistry(40.00) | | | Special Number Theory(58.00) |
| | Philosophy(43.52) | Microbiology and Biochemical Pharmacy(40.00) | | | Stochastic Processes(80.00) |
| | | Pharmaceutical Analysis(48.00) | | | Hydrogeology(72.00) |
| | | Pharmacetics(54.79) | | | Marine Biology(78.00) |
| | | Pharmacology(49.09) | | | Marine Chemistry(66.00) |
| | | Epidemiology and Health Statistics(39.76) | | | Underwater Acoustics(56.00) |
| Philosophy(43.52) | Military Science(45.37) | Health Toxicology and Environmental Health(42.50) | | | Physical Oceanography(48.00) |
| | | Maternal, Child and Adolescent Health(49.37) | | | Physics(33.64) |
| | | Nutrition and Food Hygiene(68.00) | | | Oceanography(68.00) |
| | | Basic Stomatology(32.08) | | | Physical Oceanography(48.00) |
| | | Clinical Stomatology(45.57) | | | Acoustics(27.35) |
| | Systems Science(62.00) | Traditional Chinese Health Preservation(62.71) | | | Atomic and Molecular Physics(31.90) |
| | | Traditional Chinese Medicine Theory(60.00) | | | Electrodynamics(33.28) |
| | | Traditional Chinese Pharmacy(52.94) | | | Fluid Physics(37.31) |
| | | Military Command and Information Systems(54.00) | | | Particle and Nuclear Physics(38.22) |
| | | Military Logistics and Equipment(29.63) | | | Polymer Physics(38.53) |
| Sociology(46.15) | Sociology(46.15) | Military Management(62.00) | | | Quantum Mechanics(35.44) |
| | | Military Thought and History(37.25) | | | Relativity(44.30) |
| | | Ethics(32.35) | | | Semiconductor Physics(29.51) |
| | | Logic(40.00) | | | Solid State Physics(35.37) |
| Sociology(46.15) | Sociology(46.15) | Philosophical Aesthetics(38.53) | | | Statistical Mechanics(58.00) |
| | | Philosophy of Science and Technology(58.00) | | | Subatomic and Atomic Physics(33.33) |
| | | | | | Thermodynamics(32.56) |
| | | | | | Thermodynamics and Statistical Physics(29.62) |
| Sociology(46.15) | Sociology(46.15) | | | | Systems Science(62.00) |
| | | | | | Demography and Anthropology(54.00) |
| | | | | | Social and Folklore Studies(41.94) |

Table 33. Continued: Model Scores Across Three Levels of Disciplines: Qwen2.5-72B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|--------------------|--|---|
| Agronomy(38.76) | Animal Husbandry(42.72) | Animal Nutrition and Feed Science(44.23) | Engineering(39.66) | Geological Resources and Geological Engineering(48.00) | Geological Resources and Geological Engineering(48.00) |
| | | Animal Rearing and Breeding(41.18) | | | Hydraulics and Hydrology(41.91) |
| | Aquaculture(26.79) | Aquaculture(26.79) | | Water conservancy and Hydropower Engineering(32.93) | Water conservancy and Hydropower Engineering(32.93) |
| | | Crop Science(37.93) | | | Antenna and Radio Communication(45.61) |
| | Forestry(40.46) | Forest Cultivation and Genetic Breeding(27.16) | | Communication Principle(46.55) | Communication Principle(46.55) |
| | | Landscape Plants and Ornamental Horticulture(62.00) | | | Communication and Information Systems(33.33) |
| | Veterinary Medicine(42.00) | Veterinary Medicine(42.00) | | Optical Fiber Communication(66.00) | Optical Fiber Communication(66.00) |
| | | Economic Statistics(58.00) | | | Signal and Information Processing(55.48) |
| | Economics(42.27) | Finance(35.80) | | Instrument Science and Technology(48.00) | Instrument Science and Technology(48.00) |
| | | Industrial Economics(39.29) | | | Materials Physics and Chemistry(31.66) |
| | | International Trade(43.48) | | Materials Processing Engineering(37.78) | Materials Processing Engineering(37.78) |
| | | Labor Economics(37.84) | | | Manufacturing Automation(45.24) |
| | | National and Defense Economics(36.00) | | Mechatronic Engineering(48.00) | Mechatronic Engineering(48.00) |
| | | Public Finance(39.17) | | | Fundamentals of Dynamics and Control(27.09) |
| | | Quantitative Economics(44.00) | | Rigid Body Mechanics(23.70) | Rigid Body Mechanics(23.70) |
| | | Theoretical Economics(51.33) | | | Solid Mechanics(35.48) |
| | | Economic History(54.00) | | Theoretical Fluid Mechanics(47.86) | Theoretical Fluid Mechanics(47.86) |
| | | Political Economy(36.00) | | | Theoretical Mechanics(27.10) |
| | | Western Economics(64.00) | | Metallurgical Engineering(40.78) | Iron and Steel Metallurgy(30.48) |
| Education(42.15) | Education(42.11) | Educational Technology and Principles(42.71) | | | Non-ferrous Metallurgy(36.00) |
| | | Preschool Education(42.00) | | | Physical Chemistry of Metallurgical Process(54.00) |
| | Physical Education(49.33) | Special Education(50.00) | | | Principles of Metallurgy(54.00) |
| | | Theory of Curriculum and Instruction(33.33) | | Mining Engineering(47.00) | Mineral Processing Engineering(48.00) |
| | Psychology(29.89) | Physical Education and Training(42.00) | | | Mining and Safety Engineering(46.00) |
| | | Sports Humanities and Sociology(52.00) | | | Naval Architecture and Ocean Engineering(34.06) |
| | | Sports Science and Medicine(54.00) | | | Marine Engineering(30.00) |
| | Psychology(29.89) | Psychology(29.89) | | | Ship Mechanics and Design Principles(36.36) |
| | | Aeronautical and Astronautical Science and Technology(36.13) | | Nuclear Science and Technology(45.79) | Nuclear Energy and Reactor Technology(38.60) |
| Engineering(39.66) | Agricultural and Environmental Engineering(52.88) | Agricultural Environment and Soil-Water Engineering(48.15) | | | Radiation Protection and Nuclear Technology Applications(54.00) |
| | | Agricultural Mechanization Engineering(58.00) | | Optical Engineering(34.57) | Applied Optics(35.48) |
| | Architecture(46.91) | Architectural Design and Theory(52.00) | | | Laser Technology(34.00) |
| | | Architectural History(46.77) | | | Optoelectronic Technology(32.84) |
| | Chemical Engineering and Technology(36.59) | Urban Planning and Design(42.00) | | | Theoretical Optics(34.81) |
| | | Chemical Transport Engineering(56.00) | | Petroleum and Natural Gas Engineering(46.43) | Petroleum and Natural Gas Engineering(35.48) |
| | Civil Engineering(34.08) | Elements of Chemical Reaction Engineering(36.45) | | | Oil and Gas Field Development and Storage & Transportation Engineering(35.48) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(29.91) | | | Poromechanics and Reservoir Physics(60.00) |
| | Computer Science and Technology(45.61) | Mass Transport and Separation Process in Chemical Engineering(34.93) | | | Engineering Fluid Mechanics(36.90) |
| | | Civil Engineering(34.08) | | | Engineering Thermodynamics(35.62) |
| Control Science and Engineering(52.11) | Computer Science and Technology(45.61) | Bridge and Tunnel Engineering(31.37) | | Surveying and Mapping Science and Technology(36.90) | Fluid Machinery and Engineering(31.25) |
| | | Geotechnical Engineering(33.52) | | | Heat Transfer(41.09) |
| | Control Science and Engineering(52.11) | Structural Engineering(35.09) | | | Internal Combustion Engineering(44.00) |
| | | Urban Infrastructure Engineering(36.62) | | | Power Machinery and Engineering(19.23) |
| | Electrical Engineering(27.88) | Advanced Programming Languages(64.00) | | Textile Science and Engineering(58.00) | Refrigeration and Cryogenic Engineering(30.00) |
| | | Computer Architecture(42.00) | | | Thermal Energy Engineering(35.78) |
| | Electronics and Communications(42.28) | Computer Networks(42.37) | | | Cartography and Geographic Information Engineering(40.00) |
| | | Computer Software and Theory(39.24) | | | Digital Surveying and Remote Sensing Applications(27.94) |
| | Environmental Science and Engineering(47.62) | Data Structures(33.33) | | | Geodesy and Surveying Engineering(46.00) |
| | | Databases(50.32) | | | Textile Chemistry and Dyeing Engineering(48.00) |
| Engineering(39.66) | Food Science and Engineering(55.96) | Formal Languages(42.31) | | | Textile Materials Science(68.00) |
| | | Operating Systems(36.47) | | Transportation Engineering(41.43) | Transportation Engineering(41.43) |
| | Food Science and Engineering(55.96) | Pattern Recognition(80.00) | | | Road and Railway Engineering(26.00) |
| | | Principles of Computer Organization(41.46) | | | Traffic Information Engineering and Control(38.46) |
| | Forestry Engineering(53.00) | Control Theory and Control Engineering(53.93) | | | Transportation Planning and Management(50.00) |
| | | Guidance, Navigation and Control(49.02) | | | Vehicle Operation Engineering(46.00) |
| | Forestry Engineering(53.00) | Operations Research and Cybernetics(52.00) | | Weapon Science and Technology(44.00) | Weapon Science and Technology(44.00) |
| | | Electrical Theory and New Technologies(26.84) | | | Military Chemistry and Pyrotechnics(48.00) |
| | Forestry Engineering(53.00) | High Voltage and Insulation Technology(36.36) | | | Weapon Systems Science and Engineering(40.00) |
| | | Power Electronics and Electrical Drives(24.73) | | | Archaeology and Museology(50.00) |
| History(44.96) | Power Systems and Automation(28.12) | Power Systems and Automation(28.12) | Law(47.87) | Law(48.90) | Historical Geography(42.25) |
| | | Circuits and Systems(43.52) | | | World History(44.63) |
| | Electromagnetic Field and Microwave Technology(37.50) | Electromagnetic Field and Microwave Technology(37.50) | | Law(48.90) | Civil and Commercial Law(36.44) |
| | | Microelectronics and Solid-State Electronics(48.00) | | | Constitutional and Administrative Law(58.00) |
| | Environmental Science and Engineering(47.62) | Environmental Engineering(33.71) | | Law(48.90) | Contract Law(52.00) |
| | | Environmental Science(68.00) | | | Criminal Law(50.86) |
| | Food Science and Engineering(55.96) | Environmental and Resource Protection(52.00) | | | International Law(35.09) |
| | | Food Biochemistry(80.00) | | | Law and Social Governance(52.00) |
| | Forestry Engineering(53.00) | Food Processing and Storage Engineering(35.59) | | Political Science(38.46) | Legal Theory and Legal History(60.00) |
| | | Forest Engineering(48.00) | | | Military Law(70.00) |
| | Forestry Engineering(53.00) | Wood Science and Technology(58.00) | | | Procedural Law(42.00) |
| | | - | | | Political Science(38.46) |

Table 34. Model Scores Across Three Levels of Disciplines: Mistral-Large-Instruct-2411.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|-------------------------------------|--|-------------------|----------------------------|--|
| Literature and Arts(41.11) | Art Studies(46.43) | Broadcasting and Television Art(60.00) | Philosophy(42.07) | Philosophy(42.07) | Religious Studies(58.00) |
| | | Dance Studies(26.00) | | Science(39.24) | Astronomy(49.14) |
| | | Design Arts(40.32) | | | Astronomical Observation and Technology(62.00) |
| | | Drama and Opera Studies(35.37) | | | Astrophysics(46.38) |
| | | Film Studies(50.00) | | | Cosmology(47.44) |
| | Journalism and Communication(40.58) | Fine Arts(51.74) | | | Solar System Science(46.59) |
| | | Communication and Broadcasting(43.10) | | Atmospheric Science(42.86) | Stellar and Interstellar Evolution(38.57) |
| | | History and Theory of Journalism and Media Management(35.59) | | | Atmospheric Physics and Atmospheric Environment(37.68) |
| | | Journalism and News Practice(42.22) | | | Dynamic Meteorology(46.00) |
| | | Classical Chinese Literature(36.00) | | Biology(40.45) | Meteorology(45.24) |
| Management(43.31) | Language and Literature(40.23) | French Language and Literature(58.00) | | | Biochemistry and Molecular Biology(37.37) |
| | | Linguistics and Applied Linguistics(58.00) | | | Biophysics(62.00) |
| | | Literary History(33.33) | | | Botany(36.75) |
| | | Literary Theory(34.38) | | | Cell Biology(47.13) |
| | | Modern and Contemporary Chinese Literature(32.00) | | | Ecology(38.81) |
| | Musicology(34.74) | Philology and Bibliography(48.00) | | | Genetics(41.30) |
| | | Russian Language and Literature(28.07) | | | Microbiology(37.27) |
| | | Composition(36.00) | | | Physiology(43.33) |
| | | Harmony(30.00) | | Zoology(38.53) | |
| | | Instrumentation and Performance(40.00) | | Chemistry(29.51) | Analytical Chemistry(30.05) |
| Medicine(43.23) | Business Administration(33.10) | Music History, Education, and Technology(36.55) | | | Electrochemistry(24.77) |
| | | Musical Forms and Analysis(36.00) | | | Inorganic Chemistry(31.16) |
| | | Pitch and Scales(26.79) | | | Organic Chemistry(26.32) |
| | | Business and Accounting Management(30.43) | | | Physical Chemistry(28.90) |
| | | Tourism Management and Technological Economics Management(38.00) | | | Polymer Chemistry and Physics(39.47) |
| | Public Administration(47.68) | Library, Information and Archival Management(49.33) | | | Radiochemistry(43.33) |
| | | Information Management Science(30.00) | | Geography(51.88) | Human Geography(68.00) |
| | | Information Management and Communication(74.00) | | | Physical Geography(42.17) |
| | | Library and Archival Science(44.00) | | Geology(43.40) | Geochemistry(60.00) |
| | | Management Science and Engineering(41.38) | | | Mineralogy, Petrology, and Economic Geology(38.84) |
| Military Science(48.78) | Basic Medicine(41.80) | Public Administration(47.68) | | | Paleontology and Stratigraphy(28.00) |
| | | Management Science and Engineering(41.38) | | | Principles of Seismic Exploration(52.00) |
| | | Education Economics, Management and Social Security(46.00) | | | Structural Geology(44.29) |
| | | Land Resource Management and Administrative Management(39.22) | | | Solid Earth Geophysics(58.00) |
| | | Social Medicine and Health Management(58.00) | | | Space physics(32.00) |
| | Clinical Medicine(45.16) | Forensic Medicine(42.00) | | | Mathematics(42.83) |
| | | Human Anatomy and Histology-Embryology(39.15) | | | Advanced Algebra(52.48) |
| | | Immunology(36.23) | | | Combinatorial Mathematics(30.37) |
| | | Pathogen Biology(43.62) | | | Computational Mathematics(52.00) |
| | | Pathology and Pathophysiology(35.65) | | | Cryptography(56.00) |
| Philosophy(42.07) | Pharmacy(38.85) | Radiation Medicine(70.00) | | | Discrete Mathematics(24.72) |
| | | Anesthesiology(48.00) | | | Functions of Complex Variables(57.38) |
| | | Clinical Laboratory Diagnostics(48.00) | | | Functions of Real Variables(49.25) |
| | | Dermatology and Venereology(50.00) | | | Fundamental Mathematics(43.15) |
| | | Emergency Medicine(42.42) | | | Fuzzy Mathematics(44.00) |
| | Traditional Chinese Medicine(33.58) | Geriatric Medicine(60.00) | | | Geometry and Topology(29.81) |
| | | Imaging and Nuclear Medicine(38.81) | | | Graph Theory(45.10) |
| | | Internal Medicine(45.54) | | | Group Theory(34.00) |
| | | Neurology(49.74) | | | Mathematical Analysis(46.53) |
| | | Nursing and Rehabilitation Medicine(44.00) | | | Number Theory(27.73) |
| Sociology(50.35) | Stomatology(38.64) | Obstetrics and Gynecology(32.35) | | | Numerical Analysis(35.82) |
| | | Oncology(44.83) | | | Ordinary Differential Equations(55.00) |
| | | Ophthalmology(40.00) | | | Polynomials and Series Expansions(41.90) |
| | | Otorhinolaryngology(42.00) | | | Probability and Statistics(50.89) |
| | | Pediatrics(48.00) | | | Special Number Theory(46.00) |
| | Military Science(48.78) | Psychiatry and Mental Health(62.00) | | | Stochastic Processes(70.00) |
| | | Surgery(32.35) | | | Oceanography(68.00) |
| | | Medicinal Chemistry(44.00) | | | Hydrogeology(68.00) |
| | | Microbiology and Biochemical Pharmacy(38.00) | | | Marine Biology(84.00) |
| | | Pharmaceutical Analysis(46.00) | | | Marine Chemistry(68.00) |
| Philosophy(42.07) | Military Science(48.78) | Pharmacodynamics(30.14) | | | Underwater Acoustics(52.00) |
| | | Pharmacology(40.00) | | | Physical Oceanography(50.00) |
| | | Epidemiology and Health Statistics(36.14) | | | Physics(36.03) |
| | | Health Toxicology and Environmental Health(56.25) | | | Acoustics(31.43) |
| | | Maternal, Child and Adolescent Health(62.03) | | | |
| | Sociology(50.35) | Nutrition and Food Hygiene(62.00) | | | Atomic and Molecular Physics(38.57) |
| | | Basic Stomatology(35.85) | | | Electrodynamics(34.99) |
| | | Clinical Stomatology(40.51) | | | Fluid Physics(34.33) |
| | | Traditional Chinese Health Preservation(38.98) | | | Particle and Nuclear Physics(40.44) |
| | | Traditional Chinese Medicine Theory(34.44) | | | Polymer Physics(44.04) |
| Philosophy(42.07) | Philosophy(42.07) | Traditional Chinese Pharmacy(30.25) | | | Quantum Mechanics(35.92) |
| | | Military Command and Information Systems(44.00) | | | Relativity(50.63) |
| | | Military Logistics and Equipment(40.74) | | | Semiconductor Physics(29.51) |
| | | Military Management(58.00) | | | Solid State Physics(39.46) |
| | | Military Thought and History(52.94) | | | |
| | Sociology(50.35) | Ethics(39.71) | | | Statistical Mechanics(56.00) |
| | | Logic(28.57) | | | Subatomic and Atomic Physics(39.22) |
| | | Philosophical Aesthetics(37.61) | | | Thermodynamics(32.56) |
| | | Philosophy of Science and Technology(58.00) | | | Thermodynamics and Statistical Physics(32.08) |
| | | | | | Systems Science(56.00) |
| Philosophy(42.07) | Sociology(50.35) | | | | Systems Science(56.00) |
| | | | | | Demography and Anthropology(64.00) |
| | | | | | Social and Folklore Studies(43.01) |
| | | | | | |

Table 34. Continued: Model Scores Across Three Levels of Disciplines:

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--|---|--|
| Agronomy(36.49) | Animal Husbandry(33.01) | Animal Nutrition and Feed Science(36.54) Animal Rearing and Breeding(29.41) | Engineering(39.84) | Geological Resources and Geological Engineering(52.00) Hydraulic Engineering(35.32) | Geological Resources and Geological Engineering(52.00) Hydraulics and Hydrology(38.24) Water conservancy and Hydropower Engineering(30.49) Antenna and Radio Communication(33.33) |
| | Aquaculture(26.79) Crop Science(33.79) | Aquaculture(26.79) Crop Science(33.79) | Information and Communication Engineering(43.65) | | Communication Principle(44.83) Communication and Information Systems(39.13) Optical Fiber Communication(64.00) Signal and Information Processing(45.81) |
| | Forestry(44.27) | Forest Cultivation and Genetic Breeding(38.27) Landscape Plants and Ornamental Horticulture(54.00) | | Instrument Science and Technology(50.00) | Instrument Science and Technology(50.00) |
| Economics(45.02) | Veterinary Medicine(42.00) | Veterinary Medicine(42.00) | Materials Science and Engineering(30.45) | Materials Physics and Chemistry(28.64) | Materials Processing Engineering(34.44) |
| | Applied Economics(44.95) | Economic Statistics(52.00) Finance(45.45) Industrial Economics(40.48) International Trade(56.52) Labor Economics(35.14) National and Defense Economics(42.00) Public Finance(45.83) Quantitative Economics(44.00) | Mechanical Engineering(48.30) | Manufacturing Automation(46.03) Mechatronic Engineering(54.00) | Theoretical Fluid Mechanics(42.14) Theoretical Mechanics(29.68) |
| | Theoretical Economics(45.33) | Economic History(48.00) Political Economy(40.00) Western Economics(48.00) | Mechanics(31.17) | Fundamentals of Dynamics and Control(29.97) Rigid Body Mechanics(22.54) Solid Mechanics(37.63) | Iron and Steel Metallurgy(31.43) Non-ferrous Metallurgy(42.00) Physical Chemistry of Metallurgical Process(54.00) Principles of Metallurgy(60.00) |
| Education(45.66) | Education(48.58) | Educational Technology and Principles(44.79) Preschool Education(50.00) Special Education(62.00) | Mining Engineering(58.00) | Mineral Processing Engineering(60.00) Mining and Safety Engineering(56.00) | Marine Engineering(42.00) |
| | Physical Education(49.33) | Theory of Curriculum and Instruction(41.18) Physical Education and Training(32.00) Sports Humanities and Sociology(50.00) Sports Science and Medicine(66.00) | Naval Architecture and Ocean Engineering(38.41) | | Ship Mechanics and Design Principles(36.36) |
| | Psychology(31.03) | Psychology(31.03) | Nuclear Science and Technology(36.45) | | Nuclear Energy and Reactor Technology(21.05) |
| Engineering(39.84) | Aeronautical and Astronautical Science and Technology(37.82) Agricultural Engineering(49.04) | Aeronautical and Astronautical Science and Technology(37.82) Agricultural Environment and Soil-Water Engineering(38.89) Agricultural Mechanization Engineering(60.00) | Optical Engineering(34.04) | Radiation Protection and Nuclear Technology Applications(54.00) Applied Optics(38.71) | |
| | Architecture(52.47) | Architectural Design and Theory(60.00) Architectural History(46.77) Urban Planning and Design(52.00) | Petroleum and Natural Gas Engineering(42.86) | Laser Technology(38.00) Optoelectronic Technology(32.84) Theoretical Optics(28.89) | |
| | Chemical Engineering and Technology(35.12) | Chemical Transport Engineering(52.00) Elements of Chemical Reaction Engineering(29.91) Fluid Flow and Heat Transfer in Chemical Engineering(28.97) Mass Transport and Separation Process in Chemical Engineering(37.67) | Power Engineering and Engineering Thermophysics(34.80) | Oil and Gas Field Development and Storage & Transportation Engineering(30.65) Poromechanics and Reservoir Physics(58.00) Engineering Fluid Mechanics(36.90) | |
| | Civil Engineering(34.64) | Bridge and Tunnel Engineering(27.45) Geotechnical Engineering(32.96) Structural Engineering(38.60) Urban Infrastructure Engineering(40.85) | | Engineering Thermophysics(34.93) | |
| | Computer Science and Technology(44.95) | Advanced Programming Languages(64.00) Computer Architecture(46.00) Computer Networks(47.46) | | Fluid Machinery and Engineering(29.69) Heat Transfer(34.11) Internal Combustion Engineering(46.00) Power Machinery and Engineering(21.15) | |
| | | Computer Software and Theory(40.51) Data Structures(28.28) Databases(50.96) | | Refrigeration and Cryogenic Engineering(34.00) | |
| | | Formal Languages(36.54) Operating Systems(37.65) Pattern Recognition(74.00) | | Thermal Energy Engineering(38.53) Cartography and Geographic Information Engineering(48.00) | |
| | Control Science and Engineering(48.95) | Principles of Computer Organization(39.02) Control Theory and Control Engineering(51.69) | | Digital Surveying and Remote Sensing Applications(44.12) Geodesy and Surveying Engineering(66.00) | |
| | | Guidance, Navigation and Control(47.06) | | Textile Chemistry and Dyeing Engineering(34.00) | |
| | | Operations Research and Cybernetics(46.00) | | Textile Materials Science(66.00) | |
| Electrical Engineering(31.47) | Electrical Theory and New Technologies(27.89) High Voltage and Insulation Technology(43.18) Power Electronics and Electrical Drives(32.42) | History(35.16) | Transportation Engineering(41.83) | Road and Railway Engineering(30.00) Traffic Information Engineering and Control(40.00) Transportation Planning and Management(40.70) | |
| | | | | Vehicle Operation Engineering(58.00) | |
| | | Power Systems and Automation(26.04) | Weapon Science and Technology(46.00) | Weapon Science and Pyrotechnics(48.00) | |
| Electronic Science and Technology(48.78) | Circuits and Systems(50.93) | Law(44.05) | Law(45.69) | Military Chemistry and Pyrotechnics(48.00) | |
| | Electromagnetic Field and Microwave Technology(44.32) Microelectronics and Solid-State Electronics(52.00) | | | Weapon Systems Science and Engineering(44.00) | |
| Environmental Science and Engineering(46.03) | Environmental Engineering(31.46) | | | Archaeology and Museology(45.19) | |
| | Environmental Science(70.00) Environmental and Resource Protection(48.00) | | | Historical Geography(26.76) | |
| Food Science and Engineering(55.05) | Food Biochemistry(74.00) | | | World History(35.51) | |
| | Food Processing and Storage Engineering(38.98) | | | | |
| Forestry Engineering(50.00) | Forest Engineering(48.00) | | | | |
| Engineering(39.84) | Forestry Engineering(50.00) | Wood Science and Technology(52.00) | | | |

Table 35. Model Scores Across Three Levels of Disciplines: qwen-max-2024-09-19.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|--|--|
| Literature and Arts(39.08) | Art Studies(40.30) | Broadcasting and Television Art(54.00) | Philosophy(43.23) | Philosophy(43.23) | Religious Studies(52.00) |
| | | Dance Studies(36.00) | | Astronomy(40.00) | Astronomical Observation and Technology(45.00) |
| | | Design Arts(20.97) | | Astrophysics(42.03) | Cosmology(46.15) |
| | | Drama and Opera Studies(50.00) | | Solar System Science(32.95) | Stellar and Interstellar Evolution(32.86) |
| | | Film Studies(46.20) | | Atmospheric Science(35.96) | Atmospheric Physics and Atmospheric Environment(40.58) |
| | Journalism and Communication(33.82) | Fine Arts(35.32) | | Dynamic Meteorology(38.00) | |
| | | Communication and Broadcasting(34.48) | | Meteorology(30.95) | |
| | | History and Theory of Journalism and Media Management(40.68) | | Biochemistry and Molecular Biology(39.39) | |
| | | Journalism and News Practice(28.89) | | Biophysics(60.00) | |
| | | Classical Chinese Literature(44.00) | | Botany(33.13) | |
| Management(45.11) | Language and Literature(44.09) | French Language and Literature(52.00) | | Cell Biology(40.23) | |
| | | Linguistics and Applied Linguistics(48.00) | | Ecology(32.64) | |
| | | Literary History(40.58) | | Genetics(36.41) | |
| | | Literary Theory(43.75) | | Microbiology(35.40) | |
| | | Modern and Contemporary Chinese Literature(42.00) | | Physiology(40.00) | |
| | Musicology(34.74) | Philology and Bibliography(56.00) | | Zoology(26.61) | |
| | | Russian Language and Literature(29.82) | | Chemistry(29.40) | |
| | | Composition(32.00) | | Analytical Chemistry(33.33) | |
| | | Harmony(31.67) | | Electrochemistry(23.87) | |
| | | Instrumentation and Performance(43.08) | | Inorganic Chemistry(30.43) | |
| Medicine(43.41) | Business Administration(41.55) | Music History, Education, and Technology(35.17) | | Organic Chemistry(33.92) | |
| | | Musical Forms and Analysis(38.00) | | Physical Chemistry(27.62) | |
| | | Pitch and Scales(26.79) | | Polymer Chemistry and Physics(32.89) | |
| | | Business and Accounting Management(38.04) | | Radiochemistry(25.00) | |
| | | Tourism Management and Technological Economics Management(48.00) | | Geography(48.87) | Human Geography(68.00) |
| | Library, Information and Archival Management(47.33) | Information Management Science(22.00) | | Physical Geography(37.35) | |
| | | Information Management and Communication(76.00) | | Geology(39.88) | Geochemistry(50.00) |
| | | Library and Archival Science(44.00) | | Mineralogy, Petrology, and Economic Geology(38.84) | |
| | | Management Science and Engineering(36.21) | | Paleontology and Stratigraphy(30.00) | |
| | | Education Economics, Management and Social Security(40.00) | | Principles of Seismic Exploration(42.00) | |
| Pharmacy(40.65) | Public Administration(49.67) | Land Resource Management and Administrative Management(45.10) | | Structural Geology(40.00) | |
| | | Social Medicine and Health Management(64.00) | | Geophysics(49.00) | Solid Earth Geophysics(58.00) |
| | | Forensic Medicine(46.00) | | Mathematics(48.02) | Space physics(40.00) |
| | | Human Anatomy and Histology-Embryology(35.98) | | | Advanced Algebra(56.44) |
| | | Immunology(36.23) | | | Combinatorial Mathematics(36.13) |
| | Clinical Medicine(45.07) | Pathogen Biology(35.11) | | | Computational Mathematics(48.00) |
| | | Pathology and Pathophysiology(34.78) | | | Cryptography(64.00) |
| | | Radiation Medicine(70.00) | | | Discrete Mathematics(39.33) |
| | | Anesthesiology(52.00) | | | Functions of Complex Variables(59.02) |
| | | Clinical Laboratory Diagnostics(48.00) | | | Functions of Real Variables(55.22) |
| Public Health and Preventive Medicine(44.18) | Stomatology(37.88) | Dermatology and Venereology(43.94) | | | Fundamental Mathematics(50.76) |
| | | Emergency Medicine(50.00) | | | Fuzzy Mathematics(60.00) |
| | | Geriatric Medicine(58.00) | | | Geometry and Topology(36.23) |
| | | Imaging and Nuclear Medicine(19.40) | | | Graph Theory(43.14) |
| | | Internal Medicine(48.02) | | | Group Theory(32.00) |
| | Traditional Chinese Medicine(48.88) | Neurology(41.80) | | | Mathematical Analysis(51.74) |
| | | Nursing and Rehabilitation Medicine(48.00) | | | Number Theory(31.82) |
| | | Obstetrics and Gynecology(46.08) | | | Numerical Analysis(49.25) |
| | | Oncology(37.93) | | | Ordinary Differential Equations(53.75) |
| | | Ophthalmology(36.00) | | | Polynomials and Series Expansions(44.69) |
| Military Science(47.32) | Military Science(47.32) | Otorhinolaryngology(36.00) | | | Probability and Statistics(57.59) |
| | | Pediatrics(50.00) | | | Special Number Theory(54.00) |
| | | Psychiatry and Mental Health(66.00) | | | Stochastic Processes(76.00) |
| | Philosophy(43.23) | Surgery(47.06) | | | Hydrogeology(68.00) |
| | | Medicinal Chemistry(32.00) | | | Marine Biology(82.00) |
| | | Microbiology and Biochemical Pharmacy(42.00) | | | Marine Chemistry(62.00) |
| Philosophy(43.23) | Traditional Chinese Medicine(48.88) | Pharmaceutical Analysis(40.00) | | | Underwater Acoustics(38.00) |
| | | Pharmacetics(47.95) | | | Physical Oceanography(42.00) |
| | | Pharmacology(38.18) | | | Acoustics(27.76) |
| | | Epidemiology and Health Statistics(33.73) | | | |
| | | Health Toxicology and Environmental Health(48.75) | | | Atomic and Molecular Physics(30.48) |
| | Sociology(38.46) | Maternal, Child and Adolescent Health(45.57) | | | Electrodynamics(34.13) |
| | | Nutrition and Food Hygiene(52.00) | | | Fluid Physics(37.31) |
| | | Basic Stomatology(41.51) | | | Particle and Nuclear Physics(32.89) |
| | | Clinical Stomatology(35.44) | | | Polymer Physics(34.86) |
| | | Traditional Chinese Health Preservation(55.93) | | | Quantum Mechanics(31.07) |
| Philosophy(43.23) | Military Science(47.32) | Traditional Chinese Medicine Theory(46.67) | | | Relativity(49.37) |
| | | Traditional Chinese Pharmacy(47.06) | | | Semiconductor Physics(18.03) |
| | | Military Command and Information Systems(52.00) | | | Solid State Physics(32.65) |
| | | Military Logistics and Equipment(35.19) | | | Statistical Mechanics(60.00) |
| | | Military Management(70.00) | | | Subatomic and Atomic Physics(41.18) |
| | Philosophy(43.23) | Military Thought and History(33.33) | | | Thermodynamics(29.77) |
| | | Ethics(33.82) | | | Thermodynamics and Statistical Physics(28.68) |
| | | Logic(37.14) | | | Systems Science(46.00) |
| | | Philosophical Aesthetics(38.53) | | | Demography and Anthropology(56.00) |
| | | Philosophy of Science and Technology(66.00) | | | Social and Folklore Studies(29.03) |

Table 35. Continued: Model Scores Across Three Levels of Disciplines: qwen-max-2024-09-19.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|---|---|---|
| Agronomy(41.44) | Animal Husbandry(35.92) | Animal Nutrition and Feed Science(44.23) | Engineering(37.47) | Geological Resources and Geological Engineering(58.00) | Geological Resources and Geological Engineering(58.00) |
| | | Animal Rearing and Breeding(27.45) | | | Hydraulics and Hydrology(30.88) |
| | Aquaculture(39.29) | Aquaculture(39.29) | | Hydraulic Engineering(31.65) | Water conservancy and Hydropower Engineering(32.93) |
| | | Crop Science(39.31) | | | Antenna and Radio Communication(38.60) |
| | Forestry(48.85) | Forest Cultivation and Genetic Breeding(39.51) | | Information and Communication Engineering(42.86) | Communication Principles(42.24) |
| | | Landscape Plants and Ornamental Horticulture(64.00) | | | Communication and Information Systems(43.48) |
| | Veterinary Medicine(42.00) | Veterinary Medicine(42.00) | | Optical Fiber Communication(68.00) | Optical Fiber Communication(68.00) |
| | | Economic Statistics(46.00) | | | Signal and Information Processing(38.06) |
| | Economics(40.78) | Finance(40.91) | | Instrument Science and Technology(42.00) | Instrument Science and Technology(42.00) |
| | | Industrial Economics(33.33) | | | Materials Physics and Chemistry(33.17) |
| | | International Trade(39.13) | | Materials Science and Engineering(33.91) | Materials Processing Engineering(35.56) |
| | | Labor Economics(41.89) | | | Manufacturing Automation(41.27) |
| | | National and Defense Economics(44.00) | | Mechanics(28.41) | Mechatronic Engineering(52.00) |
| | | Public Finance(35.00) | | | Fundamentals of Dynamics and Control(27.95) |
| | | Quantitative Economics(41.00) | | | Rigid Body Mechanics(23.70) |
| | | Theoretical Economics(46.67) | | | Solid Mechanics(30.11) |
| | | Economic History(56.00) | | Metallurgical Engineering(41.18) | Theoretical Fluid Mechanics(36.43) |
| | | Political Economy(36.00) | | | Theoretical Mechanics(26.45) |
| Education(44.21) | Education(44.13) | Western Economics(48.00) | | | Iron and Steel Metallurgy(24.76) |
| | | Educational Technology and Principles(37.50) | | Non-ferrous Metallurgy(34.00) | Non-ferrous Metallurgy(34.00) |
| | Physical Education(48.67) | Preschool Education(54.00) | | | Physical Chemistry of Metallurgical Process(56.00) |
| | | Special Education(52.00) | | Mining Engineering(46.00) | Principles of Metallurgy(68.00) |
| | | Theory of Curriculum and Instruction(39.22) | | | Mineral Processing Engineering(46.00) |
| | Psychology(36.78) | Physical Education and Training(36.00) | | | Mining and Safety Engineering(46.00) |
| | | Sports Humanities and Sociology(52.00) | | Naval Architecture and Ocean Engineering(30.43) | Marine Engineering(26.00) |
| | | Sports Science and Medicine(58.00) | | | Ship Mechanics and Design Principles(32.95) |
| | Engineering(37.47) | Psychology(36.78) | | Nuclear Science and Technology(47.66) | Nuclear Energy and Reactor Technology(40.35) |
| | | Aeronautical and Astronautical Science and Technology(34.45) | | | Radiation Protection and Nuclear Technology Applications(56.00) |
| | | Agricultural Engineering(41.35) | | Optical Engineering(34.57) | Applied Optics(33.87) |
| | | Agricultural Environment and Soil-Water Engineering(29.63) | | | Laser Technology(52.00) |
| | | Agricultural Mechanization Engineering(54.00) | | Petroleum and Natural Gas Engineering(45.54) | Optoelectronic Technology(23.88) |
| | | Architecture(49.38) | | | Theoretical Optics(34.07) |
| | | Architectural Design and Theory(50.00) | | Power Engineering and Engineering Thermophysics(30.85) | Oil and Gas Field Development and Storage & Transportation Engineering(35.48) |
| | | Architectural History(48.39) | | | Poromechanics and Reservoir Physics(58.00) |
| | | Urban Planning and Design(50.00) | | | Engineering Fluid Mechanics(36.90) |
| | | Chemical Engineering and Technology(27.80) | | | Engineering Thermophysics(31.51) |
| Control Science and Engineering(40.00) | Computer Science and Technology(44.30) | Elements of Chemical Reaction Engineering(21.50) | Surveying and Mapping Science and Technology(44.05) | Fluid Machinery and Engineering(21.88) | Fluid Machinery and Engineering(21.88) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(25.23) | | | Heat Transfer(34.88) |
| | | Mass Transport and Separation Process in Chemical Engineering(30.14) | | Internal Combustion Engineering(50.00) | Internal Combustion Engineering(50.00) |
| | | Civil Engineering(29.89) | | | Power Machinery and Engineering(19.23) |
| | | Bridge and Tunnel Engineering(35.29) | | Refrigeration and Cryogenic Engineering(22.00) | Refrigeration and Cryogenic Engineering(22.00) |
| | | Geotechnical Engineering(25.70) | | | Thermal Energy Engineering(26.61) |
| | | Structural Engineering(22.81) | | Cartography and Geographic Information Engineering(50.00) | Cartography and Geographic Information Engineering(50.00) |
| | | Urban Infrastructure Engineering(42.25) | | | Digital Surveying and Remote Sensing Applications(39.71) |
| | | Computer Science and Technology(44.30) | | Geodesy and Surveying Engineering(44.00) | Geodesy and Surveying Engineering(44.00) |
| | | Advanced Programming Languages(64.00) | | | Textile Chemistry and Dyeing Engineering(34.00) |
| Electrical Engineering(31.47) | Computer Architecture(44.00) | Computer Networks(37.29) | | | Textile Materials Science(58.00) |
| | | Computer Software and Theory(39.24) | | Textile Science and Engineering(46.00) | Transportation Engineering(35.46) |
| | | Data Structures(31.31) | | | Road and Railway Engineering(22.00) |
| | | Databases(45.86) | | Weapon Science and Technology(60.00) | Traffic Information Engineering and Control(35.38) |
| | | Formal Languages(40.38) | | | Transportation Planning and Management(40.70) |
| | | Operating Systems(43.53) | | | Vehicle Operation Engineering(40.00) |
| | | Pattern Recognition(78.00) | | Military Chemistry and Pyrotechnics(68.00) | Weapon Science and Technology(68.00) |
| | | Principles of Computer Organization(37.80) | | | Weapon Systems Science and Engineering(52.00) |
| | | Control Theory and Control Engineering(44.94) | | Archaeology and Museology(59.62) | Archaeology and Museology(59.62) |
| | | Guidance, Navigation and Control(29.41) | | | Historical Geography(42.25) |
| Engineering(37.47) | Operations Research and Cybernetics(42.00) | Operations Research and Cybernetics(42.00) | | World History(51.40) | World History(51.40) |
| | | Electrical Engineering(31.47) | History(50.74) | | Civil and Commercial Law(48.31) |
| | | Electrical Theory and New Technologies(31.05) | Law(52.90) | Constitutional and Administrative Law(56.00) | |
| | | High Voltage and Insulation Technology(42.05) | | Contract Law(62.00) | |
| | | Power Electronics and Electrical Drives(31.87) | Law(54.15) | Criminal Law(51.72) | |
| | | Power Systems and Automation(21.88) | | International Law(33.33) | |
| | Electronic Science and Technology(40.24) | Circuits and Systems(45.37) | Law(54.15) | Law and Social Governance(62.00) | |
| | | Electromagnetic Field and Microwave Technology(30.68) | | Legal Theory and Legal History(56.00) | |
| | | Microelectronics and Solid-State Electronics(46.00) | Political Science(41.54) | Military Law(74.00) | |
| | Environmental Science and Engineering(51.85) | Environmental Engineering(37.08) | | Procedural Law(58.00) | |
| | | Environmental Science(68.00) | | Political Science(41.54) | |
| Food Science and Engineering(52.29) | Food Biochemistry(78.00) | Environmental and Resource Protection(62.00) | | - | |
| | | Food Processing and Storage Engineering(30.51) | | - | |
| | Food Science and Engineering(52.29) | Forest Engineering(56.00) | Political Science(41.54) | - | |
| | | Wood Science and Technology(54.00) | | - | |

Table 36. Model Scores Across Three Levels of Disciplines: gpt-4o-2024-05-13.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|-------------------------------------|---|--|-------------------|--|--|
| Literature and Arts(45.11) | Art Studies(49.42) | Broadcasting and Television Art(62.00) | Philosophy(45.24) | Philosophy(45.24) | Religious Studies(62.00) |
| | | Dance Studies(42.00) | | Astronomy(42.72) | Astronomical Observation and Technology(57.00) |
| | | Design Arts(38.71) | | Astrophysics(33.33) | Cosmology(39.74) |
| | | Drama and Opera Studies(46.34) | | Solar System Science(30.68) | Stellar and Interstellar Evolution(50.00) |
| | | Film Studies(51.27) | | Atmospheric Science(42.36) | Atmospheric Physics and Atmospheric Environment(31.88) |
| | Journalism and Communication(45.41) | Fine Arts(51.24) | | Dynamic Meteorology(56.00) | |
| | | Communication and Broadcasting(41.38) | | Biology(40.62) | Meteorology(42.86) |
| | Language and Literature(40.91) | History and Theory of Journalism and Media Management(38.98) | | Biochemistry and Molecular Biology(46.46) | Biophysics(58.00) |
| | | Journalism and News Practice(52.22) | | Botany(36.75) | Cell Biology(43.68) |
| | | Classical Chinese Literature(26.00) | | Ecology(38.19) | Genetics(39.13) |
| | | French Language and Literature(50.00) | | Microbiology(45.34) | Physiology(32.50) |
| | | Linguistics and Applied Linguistics(62.00) | | Zoology(38.53) | Zoology(38.53) |
| Management(41.32) | Musicology(43.19) | Literary History(40.58) | | Analytical Chemistry(30.56) | |
| | | Literary Theory(45.31) | | Electrochemistry(22.52) | |
| | | Modern and Contemporary Chinese Literature(32.00) | | Inorganic Chemistry(34.06) | |
| | | Philology and Bibliography(44.00) | | Organic Chemistry(36.26) | |
| | | Russian Language and Literature(28.07) | | Physical Chemistry(27.20) | |
| | Business Administration(39.44) | Composition(38.00) | | Polymer Chemistry and Physics(28.95) | |
| | | Harmony(36.67) | | Radiochemistry(28.33) | |
| | | Instrumentation and Performance(43.08) | | Geography(47.37) | Human Geography(66.00) |
| | | Music History, Education, and Technology(49.66) | | Physical Geography(36.14) | |
| | | Musical Forms and Analysis(46.00) | | Geology(38.42) | Geochemistry(64.00) |
| Medicine(48.82) | Library, Information and Archival Management(45.33) | Pitch and Scales(35.71) | | Mineralogy, Petrology, and Economic Geology(29.75) | |
| | | Business and Accounting Management(35.87) | | Paleontology and Stratigraphy(34.00) | |
| | | Tourism Management and Technological Economics Management(46.00) | | Principles of Seismic Exploration(36.00) | |
| | | Information Management Science(26.00) | | Structural Geology(40.00) | |
| | | Information Management and Communication(80.00) | | Geophysics(52.00) | Solid Earth Geophysics(56.00) |
| | Public Administration(40.40) | Library and Archival Science(30.00) | | Space physics(48.00) | |
| | | Management Science and Engineering(37.93) | | Advanced Algebra(40.59) | |
| | | Education Economics, Management and Social Security(38.00) | | Combinatorial Mathematics(25.13) | |
| | | Land Resource Management and Administrative Management(33.33) | | Computational Mathematics(42.00) | |
| | | Social Medicine and Health Management(50.00) | | Cryptography(70.00) | |
| Clinical Medicine(50.49) | Basic Medicine(48.32) | Forensic Medicine(38.00) | | Discrete Mathematics(29.21) | |
| | | Human Anatomy and Histology-Embryology(44.44) | | Functions of Complex Variables(40.98) | |
| | | Immunology(44.93) | | Functions of Real Variables(34.33) | |
| | | Pathogen Biology(52.13) | | Fundamental Mathematics(31.47) | |
| | | Pathology and Pathophysiology(39.13) | | Fuzzy Mathematics(46.00) | |
| | Pharmacy(42.81) | Radiation Medicine(72.00) | | Geometry and Topology(27.17) | |
| | | Anesthesiology(56.00) | | Graph Theory(41.18) | |
| | | Clinical Laboratory Diagnostics(54.00) | | Group Theory(28.00) | |
| | | Dermatology and Venereology(56.06) | | Mathematical Analysis(31.94) | |
| | | Emergency Medicine(43.94) | | Number Theory(28.18) | |
| Pharmacy(42.81) | Clinical Medicine(50.49) | Geriatric Medicine(56.00) | | Numerical Analysis(26.87) | |
| | | Imaging and Nuclear Medicine(44.78) | | Ordinary Differential Equations(41.88) | |
| | | Internal Medicine(43.56) | | Polynomials and Series Expansions(27.37) | |
| | | Neurology(57.14) | | Probability and Statistics(39.73) | |
| | | Nursing and Rehabilitation Medicine(46.00) | | Special Number Theory(50.00) | |
| | Public Health and Preventive Medicine(57.19) | Obstetrics and Gynecology(38.24) | | Stochastic Processes(64.00) | |
| | | Oncology(43.10) | | Hydrogeology(62.00) | |
| | | Ophthalmology(58.00) | | Marine Biology(82.00) | |
| | | Otorhinolaryngology(56.00) | | Marine Chemistry(56.00) | |
| | | Pediatrics(66.00) | | Underwater Acoustics(58.00) | |
| Traditional Chinese Medicine(43.28) | Stomatology(40.91) | Psychiatry and Mental Health(72.00) | | Physical Oceanography(50.00) | Physical Oceanography(50.00) |
| | | Surgery(39.71) | | Physics(32.48) | Acoustics(31.84) |
| | | Medicinal Chemistry(46.00) | | Atomic and Molecular Physics(31.43) | |
| | | Microbiology and Biochemical Pharmacy(38.00) | | Electrodynamics(31.22) | |
| | | Pharmaceutical Analysis(38.00) | | Fluid Physics(30.60) | |
| | Military Science(50.73) | Pharmacetics(35.62) | | Particle and Nuclear Physics(40.44) | |
| | | Pharmacology(40.00) | | Polymer Physics(29.36) | |
| | | Epidemiology and Health Statistics(44.58) | | Quantum Mechanics(31.55) | |
| | | Health Toxicology and Environmental Health(58.75) | | Relativity(46.84) | |
| | | Maternal, Child and Adolescent Health(67.09) | | Semiconductor Physics(21.31) | |
| Philosophy(45.24) | Military Science(50.73) | Nutrition and Food Hygiene(60.00) | | Solid State Physics(31.29) | |
| | | Basic Stomatology(39.62) | | Statistical Mechanics(58.00) | |
| | | Clinical Stomatology(41.77) | | Subatomic and Atomic Physics(31.37) | |
| | | Traditional Chinese Medicine(55.93) | | Thermodynamics(32.56) | |
| Philosophy(45.24) | Philosophy(45.24) | Traditional Chinese Medicine Theory(44.44) | | Thermodynamics and Statistical Physics(29.81) | |
| | | Traditional Chinese Pharmacy(36.13) | | Systems Science(48.00) | |
| | | Military Command and Information Systems(48.00) | | Sociology(53.85) | Demography and Anthropology(60.00) |
| | | Military Logistics and Equipment(50.00) | | Sociology(53.85) | Social and Folklore Studies(50.54) |
| Philosophy(45.24) | Philosophy(45.24) | Military Management(54.00) | | | |
| | | Military Thought and History(50.98) | | | |
| | | Ethics(48.53) | | | |
| | | Logic(31.43) | | | |
| Philosophy(45.24) | Philosophy(45.24) | Philosophical Aesthetics(38.53) | | | |
| | | Philosophy of Science and Technology(58.00) | | | |

Table 36. Continued: Model Scores Across Three Levels of Disciplines: gpt-4o-2024-05-13.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|---|---|
| Agronomy(36.49) | Animal Husbandry(39.81) | Animal Nutrition and Feed Science(38.46) | Engineering(38.93) | Geological Resources and Geological Engineering(50.00) | Geological Resources and Geological Engineering(50.00) |
| | | Animal Rearing and Breeding(41.18) | | | Hydraulics and Hydrology(34.56) |
| | | Aquaculture(23.21) | | | Water conservancy and Hydropower Engineering(36.59) |
| | Crop Science(28.28) | Crop Science(28.28) | | Information and Communication Engineering(48.21) | Antenna and Radio Communication(33.33) |
| | | Forestry(44.27) | | | Communication Principles(49.14) |
| | Veterinary Medicine(48.00) | Forest Cultivation and Genetic Breeding(40.74) | | | Communication and Information Systems(47.83) |
| | | Landscape Plants and Ornamental Horticulture(50.00) | | | Optical Fiber Communication(60.00) |
| | | Veterinary Medicine(48.00) | | | Signal and Information Processing(54.84) |
| Economics(43.07) | Applied Economics(43.57) | Economic Statistics(48.00) | | Instrument Science and Technology(38.00) | Instrument Science and Technology(38.00) |
| | | Finance(44.89) | | Materials Science and Engineering(36.33) | Materials Physics and Chemistry(32.16) |
| | | Industrial Economics(47.62) | | Materials Processing Engineering(45.56) | |
| | | International Trade(52.17) | | Mechanical Engineering(40.91) | Manufacturing Automation(40.48) |
| | | Labor Economics(33.78) | | Mechanics(31.83) | Mechatronic Engineering(42.00) |
| | | National and Defense Economics(34.00) | | Fundamentals of Dynamics and Control(29.97) | |
| | | Public Finance(45.83) | | Rigid Body Mechanics(21.97) | |
| | | Quantitative Economics(39.00) | | Solid Mechanics(38.71) | |
| | | Theoretical Economics(40.67) | | Theoretical Fluid Mechanics(47.14) | |
| | | Economic History(44.00) | | Theoretical Mechanics(29.03) | |
| | | Political Economy(36.00) | | Metallurgical Engineering(41.96) | Iron and Steel Metallurgy(31.43) |
| | | Western Economics(42.00) | | Non-ferrous Metallurgy(40.00) | |
| Education(45.45) | Education(46.56) | Educational Technology and Principles(41.67) | | Physical Chemistry of Metallurgical Process(48.00) | |
| | | Preschool Education(50.00) | | Principles of Metallurgy(60.00) | |
| | | Special Education(60.00) | | Mining Engineering(52.00) | Mineral Processing Engineering(52.00) |
| | Physical Education(50.67) | Theory of Curriculum and Instruction(39.22) | | Mining and Safety Engineering(52.00) | |
| | | Physical Education and Training(40.00) | | Naval Architecture and Ocean Engineering(30.43) | Marine Engineering(26.00) |
| | | Sports Humanities and Sociology(52.00) | | Ship Mechanics and Design Principles(32.95) | |
| | | Sports Science and Medicine(60.00) | | Nuclear Science and Technology(43.93) | Nuclear Energy and Reactor Technology(31.58) |
| | Psychology(33.33) | Psychology(33.33) | | Radiation Protection and Nuclear Technology Applications(58.00) | |
| | | Aeronautical and Astronautical Science and Technology(29.41) | | Optical Engineering(34.31) | Applied Optics(30.65) |
| | | Agricultural Engineering(50.96) | | Laser Technology(40.00) | |
| Engineering(38.93) | Aeronautical and Astronautical Science and Technology(29.41) | Aeronautical and Astronautical Science and Technology(29.41) | | Optoelectronic Technology(29.85) | |
| | | Agricultural Environment and Soil-Water Engineering(42.59) | | Theoretical Optics(37.78) | |
| | | Agricultural Mechanization Engineering(60.00) | | Petroleum and Natural Gas Engineering(39.29) | Oil and Gas Field Development and Storage & Transportation Engineering(33.87) |
| | Architecture(43.21) | Architectural Design and Theory(42.00) | | Poromechanics and Reservoir Physics(46.00) | |
| | | Architectural History(41.94) | | Power Engineering and Engineering Thermophysics(37.13) | Engineering Fluid Mechanics(39.29) |
| | | Urban Planning and Design(46.00) | | Engineering Thermophysics(36.30) | |
| | Chemical Engineering and Technology(35.37) | Chemical Transport Engineering(50.00) | | Fluid Machinery and Engineering(18.75) | |
| | | Elements of Chemical Reaction Engineering(33.64) | | Heat Transfer(46.51) | |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(29.91) | | Internal Combustion Engineering(50.00) | |
| | Civil Engineering(36.59) | Mass Transport and Separation Process in Chemical Engineering(35.62) | | Power Machinery and Engineering(26.92) | |
| | | Civil Engineering(36.59) | | Refrigeration and Cryogenic Engineering(30.00) | |
| | | Bridge and Tunnel Engineering(35.29) | | Thermal Energy Engineering(38.53) | |
| Control Science and Engineering(49.47) | Computer Science and Technology(44.04) | Geotechnical Engineering(31.84) | | Surveying and Mapping Science and Technology(47.62) | Cartography and Geographic Information Engineering(52.00) |
| | | Structural Engineering(43.86) | | | Digital Surveying and Remote Sensing Applications(32.35) |
| | | Urban Infrastructure Engineering(43.66) | | | Geodesy and Surveying Engineering(64.00) |
| | Control Science and Engineering(49.47) | Advanced Programming Languages(66.00) | | | Textile Chemistry and Dyeing Engineering(40.00) |
| | | Computer Architecture(40.00) | | | Textile Materials Science(60.00) |
| | | Computer Networks(37.29) | | | Transportation Engineering(39.84) |
| | Control Science and Engineering(49.47) | Computer Software and Theory(30.38) | | | Road and Railway Engineering(24.00) |
| | | Data Structures(36.36) | | | Traffic Information Engineering and Control(41.54) |
| | | Databases(50.32) | | | Transportation Planning and Management(44.19) |
| | Control Science and Engineering(49.47) | Formal Languages(32.69) | | | Vehicle Operation Engineering(46.00) |
| | | Operating Systems(38.82) | | Weapon Science and Technology(47.00) | Military Chemistry and Pyrotechnics(46.00) |
| | | Pattern Recognition(74.00) | | Weapon Systems Science and Engineering(48.00) | |
| Electrical Engineering(29.14) | Control Science and Engineering(49.47) | Principles of Computer Organization(42.68) | | Archaeology and Museology(35.58) | |
| | | Control Theory and Control Engineering(51.69) | | Historical Geography(25.35) | |
| | | Guidance, Navigation and Control(54.90) | | World History(31.31) | |
| | Control Science and Engineering(49.47) | Operations Research and Cybernetics(40.00) | | History(30.71) | History(30.71) |
| | | Electrical Engineering(29.14) | | | History(30.71) |
| | | Electrical Theory and New Technologies(24.21) | | | Archaeology and Museology(35.58) |
| | Control Science and Engineering(49.47) | High Voltage and Insulation Technology(39.77) | | | Historical Geography(25.35) |
| | | Power Electronics and Electrical Drives(29.12) | | | World History(31.31) |
| | | Power Systems and Automation(29.17) | | | Law(41.92) |
| Environmental Science and Engineering(44.44) | Control Science and Engineering(49.47) | Circuits and Systems(32.41) | Law(41.92) | Law(44.16) | Civil and Commercial Law(43.22) |
| | | Electromagnetic Field and Microwave Technology(30.68) | | | Constitutional and Administrative Law(44.00) |
| | | Microelectronics and Solid-State Electronics(42.00) | | | Contract Law(40.00) |
| | Control Science and Engineering(49.47) | Environmental Engineering(34.83) | | | Criminal Law(44.83) |
| | | Environmental Science(58.00) | | | International Law(36.84) |
| | | Environmental and Resource Protection(48.00) | | | Law and Social Governance(48.00) |
| | Control Science and Engineering(49.47) | Food Biochemistry(74.00) | | | Legal Theory and Legal History(44.00) |
| | | Food Processing and Storage Engineering(33.90) | | | Military Law(68.00) |
| | | Forest Engineering(52.00) | | | Procedural Law(30.00) |
| Engineering(38.93) | Food Science and Engineering(52.29) | Wood Science and Technology(28.00) | | Political Science(21.54) | Political Science(21.54) |
| | | - | | | - |

Table 37. Model Scores Across Three Levels of Disciplines: Qwen2.5-32B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|--|--|-------------------|-------------------|--|
| Literature and Arts(32.76) | Art Studies(31.01) | Broadcasting and Television Art(32.00) | Philosophy(39.19) | Philosophy(39.19) | Religious Studies(50.00) |
| | | Dance Studies(26.00) | | | Astronomical Observation and Technology(45.00) |
| | | Design Arts(20.97) | | | Astrophysics(44.93) |
| | | Drama and Opera Studies(37.80) | | | Cosmology(46.15) |
| | | Film Studies(37.97) | | | Solar System Science(35.23) |
| | Journalism and Communication(27.05) | Fine Arts(26.87) | | | Stellar and Interstellar Evolution(37.14) |
| | | Communication and Broadcasting(29.31) | | | Atmospheric Physics and Atmospheric Environment(44.93) |
| | Language and Literature(39.77) | History and Theory of Journalism and Media Management(33.90) | | | Dynamic Meteorology(40.00) |
| | | Journalism and News Practice(21.11) | | | Meteorology(32.14) |
| | | Classical Chinese Literature(46.00) | | | Biochemistry and Molecular Biology(38.38) |
| | | French Language and Literature(52.00) | | | Biophysics(48.00) |
| | | Linguistics and Applied Linguistics(52.00) | | | Botany(27.71) |
| Management(39.52) | Musicology(30.75) | Literary History(39.13) | | | Cell Biology(47.13) |
| | | Literary Theory(37.50) | | | Ecology(33.33) |
| | | Modern and Contemporary Chinese Literature(34.00) | | | Genetics(34.78) |
| | | Philology and Bibliography(46.00) | | | Microbiology(44.10) |
| | | Russian Language and Literature(15.79) | | | Physiology(39.17) |
| | | Composition(32.00) | | | Zoology(24.77) |
| | | Harmony(28.33) | | | Chemistry(28.89) Analytical Chemistry(32.83) |
| | | Instrumentation and Performance(40.00) | | | Electrochemistry(27.93) |
| | | Music History, Education, and Technology(28.28) | | | Inorganic Chemistry(30.43) |
| | | Musical Forms and Analysis(24.00) | | | Organic Chemistry(28.07) |
| | Business Administration(31.69) | Pitch and Scales(33.93) | | | Physical Chemistry(27.05) |
| | | Business and Accounting Management(28.26) | | | Polymer Chemistry and Physics(22.37) |
| | | Tourism Management and Technological Economics Management(38.00) | | | Radiochemistry(35.00) |
| | | Library, Information and Archival Management(42.67) | | | Geography(45.86) Human Geography(60.00) |
| | | Information Management Science(32.00) | | | Physical Geography(37.35) |
| Medicine(42.21) | Clinical Medicine(40.72) | Information Management and Communication(68.00) | | | Geology(39.88) Geochemistry(52.00) |
| | | Library and Archival Science(28.00) | | | Mineralogy, Petrology, and Economic Geology(33.06) |
| | | Management Science and Engineering(37.93) | | | Paleontology and Stratigraphy(32.00) |
| | | Education Economics, Management and Social Security(40.00) | | | Principles of Seismic Exploration(52.00) |
| | | Land Resource Management and Administrative Management(33.33) | | | Structural Geology(40.00) |
| | | Social Medicine and Health Management(60.00) | | | Geophysics(50.00) Solid Earth Geophysics(56.00) |
| | Pharmacy(40.65) | Forensic Medicine(44.00) | | | Space physics(44.00) |
| | | Human Anatomy and Histology-Embryology(35.98) | | | Advanced Algebra(54.46) |
| | | Immunology(37.68) | | | Combinatorial Mathematics(38.74) |
| | | Pathogen Biology(39.36) | | | Computational Mathematics(42.00) |
| | | Pathology and Pathophysiology(45.22) | | | Cryptography(54.00) |
| Military Science(44.88) | Clinical Medicine(40.72) | Radiation Medicine(64.00) | | | Discrete Mathematics(38.20) |
| | | Anesthesiology(44.00) | | | Functions of Complex Variables(55.74) |
| | | Clinical Laboratory Diagnostics(42.00) | | | Functions of Real Variables(55.22) |
| | | Dermatology and Venereology(46.97) | | | Fundamental Mathematics(52.79) |
| | | Emergency Medicine(39.39) | | | Fuzzy Mathematics(48.00) |
| | Pharmacy(40.65) | Geriatric Medicine(56.00) | | | Geometry and Topology(35.09) |
| | | Imaging and Nuclear Medicine(32.84) | | | Graph Theory(43.14) |
| | | Internal Medicine(42.57) | | | Group Theory(34.00) |
| | | Neurology(31.22) | | | Mathematical Analysis(48.96) |
| | | Nursing and Rehabilitation Medicine(44.00) | | | Number Theory(40.00) |
| Philosophy(39.19) | Traditional Chinese Medicine(49.25) | Obstetrics and Gynecology(40.20) | | | Numerical Analysis(35.82) |
| | | Oncology(34.48) | | | Ordinary Differential Equations(39.38) |
| | | Ophthalmology(34.00) | | | Polynomials and Series Expansions(41.34) |
| | | Otorhinolaryngology(40.00) | | | Probability and Statistics(58.04) |
| | | Pediatrics(46.00) | | | Special Number Theory(50.00) |
| | Public Health and Preventive Medicine(48.29) | Psychiatry and Mental Health(68.00) | | | Stochastic Processes(72.00) |
| | | Surgery(35.29) | | | Hydrogeology(68.00) |
| | | Medicinal Chemistry(24.00) | | | Marine Biology(76.00) |
| | | Microbiology and Biochemical Pharmacy(44.00) | | | Marine Chemistry(62.00) |
| | | Pharmaceutical Analysis(50.00) | | | Underwater Acoustics(48.00) |
| Sociology(39.16) | Systems Science(48.00) | Pharmacetics(42.47) | | | Physical Oceanography(46.00) |
| | | Pharmacology(41.82) | | | Acoustics(28.16) |
| | | Epidemiology and Health Statistics(43.37) | | | Atomic and Molecular Physics(31.90) |
| | | Health Toxicology and Environmental Health(47.50) | | | Electrodynamics(35.33) |
| | | Maternal, Child and Adolescent Health(46.84) | | | Fluid Physics(38.06) |
| | Stomatology(33.33) | Nutrition and Food Hygiene(60.00) | | | Particle and Nuclear Physics(35.56) |
| | | Basic Stomatology(32.08) | | | Polymer Physics(34.86) |
| | | Clinical Stomatology(34.18) | | | Quantum Mechanics(31.07) |
| | | Traditional Chinese Medicine(49.15) | | | Relativity(40.51) |
| | | Traditional Chinese Medicine Theory(51.11) | | | Semiconductor Physics(19.67) |
| Military Science(44.88) | Military Science(44.88) | Traditional Chinese Pharmacy(47.90) | | | Solid State Physics(26.53) |
| | | Military Command and Information Systems(52.00) | | | Statistical Mechanics(60.00) |
| | | Military Logistics and Equipment(29.63) | | | Subatomic and Atomic Physics(41.18) |
| | | Military Management(60.00) | | | Thermodynamics(32.56) |
| | | Military Thought and History(39.22) | | | Thermodynamics and Statistical Physics(29.06) |
| | Philosophy(39.19) | Ethics(36.76) | | | Systems Science(48.00) |
| | | Logic(34.29) | | | Sociology(39.16) Sociology(39.16) |
| | | Philosophical Aesthetics(33.94) | | | Demography and Anthropology(46.00) |
| | | Philosophy of Science and Technology(50.00) | | | Social and Folklore Studies(35.48) |

Table 37. Continued: Model Scores Across Three Levels of Disciplines: Qwen2.5-32B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|--|--|--------------------|--|---|
| Agronomy(36.70) | Animal Husbandry(35.92) | Animal Nutrition and Feed Science(38.46) | Engineering(36.44) | Geological Resources and Geological Engineering(50.00) | Geological Resources and Geological Engineering(50.00) |
| | | Animal Rearing and Breeding(33.33) | | | Hydraulics and Hydrology(38.24) |
| | Aquaculture(39.29) | Aquaculture(39.29) | | Hydraulic Engineering(37.16) | Water conservancy and Hydropower Engineering(35.37) |
| | Crop Science(29.66) | Crop Science(29.66) | | Information and Communication Engineering(43.85) | Antenna and Radio Communication(35.09) |
| | Forestry(39.69) | Forest Cultivation and Genetic Breeding(30.86) | | Communication Principles(44.83) | Communication and Information Systems(46.38) |
| | | Landscape Plants and Ornamental Horticulture(54.00) | | Optical Fiber Communication(66.00) | Optical Fiber Communication(66.00) |
| | Veterinary Medicine(48.00) | Veterinary Medicine(48.00) | | Signal and Information Processing(41.29) | Signal and Information Processing(41.29) |
| | Economics(40.55) | Economic Statistics(52.00) | | Instrument Science and Technology(40.00) | Instrument Science and Technology(40.00) |
| | | Finance(39.77) | | Materials Science and Engineering(30.10) | Materials Physics and Chemistry(30.65) |
| | | Industrial Economics(42.86) | | Mechanical Engineering(46.02) | Materials Processing Engineering(28.89) |
| | | International Trade(39.13) | | Mechatronic Engineering(50.00) | Manufacturing Automation(44.44) |
| | | Labor Economics(36.49) | | Mechanics(28.52) | Fundamentals of Dynamics and Control(27.38) |
| | | National and Defense Economics(42.00) | | | Rigid Body Mechanics(24.28) |
| | | Public Finance(34.17) | | | Solid Mechanics(30.11) |
| | | Quantitative Economics(41.00) | | | Theoretical Fluid Mechanics(35.71) |
| | | Theoretical Economics(43.33) | | | Theoretical Mechanics(28.39) |
| | | Economic History(40.00) | | Metallurgical Engineering(40.78) | Iron and Steel Metallurgy(36.19) |
| | | Political Economy(36.00) | | | Non-ferrous Metallurgy(38.00) |
| | | Western Economics(54.00) | | | Physical Chemistry of Metallurgical Process(34.00) |
| Education(40.29) | Education(41.70) | Educational Technology and Principles(39.58) | | | Principles of Metallurgy(60.00) |
| | | Preschool Education(42.00) | | Mining Engineering(47.00) | Mineral Processing Engineering(48.00) |
| | | Special Education(54.00) | | | Mining and Safety Engineering(46.00) |
| | | Theory of Curriculum and Instruction(33.33) | | Naval Architecture and Ocean Engineering(26.81) | Marine Engineering(28.00) |
| | | Physical Education(46.00) | | | Ship Mechanics and Design Principles(26.14) |
| Engineering(36.44) | Psychology(26.44) | Physical Education and Training(40.00) | | | Nuclear Energy and Reactor Technology(29.82) |
| | | Sports Humanities and Sociology(42.00) | | | Radiation Protection and Nuclear Technology Applications(44.00) |
| | | Sports Science and Medicine(56.00) | | Optical Engineering(34.57) | Applied Optics(31.45) |
| | | Psychology(26.44) | | | Laser Technology(30.00) |
| | | Aeronautical and Astronautical Science and Technology(32.77) | | | Optoelectronic Technology(40.30) |
| | Chemical Engineering and Technology(32.93) | Agricultural Environment and Soil-Water Engineering(46.30) | | | Theoretical Optics(36.30) |
| | | Agricultural Mechanization Engineering(50.00) | | Petroleum and Natural Gas Engineering(41.07) | Oil and Gas Field Development and Storage & Transportation Engineering(25.81) |
| | | Architecture(41.98) | | | Poromechanics and Reservoir Physics(60.00) |
| | | Architectural Design and Theory(46.00) | | | Engineering Fluid Mechanics(40.48) |
| | | Architectural History(40.32) | | | Engineering Thermophysics(32.31) |
| Engineering(36.44) | Civil Engineering(28.77) | Urban Planning and Design(40.00) | | | Engineering Thermophysics(30.14) |
| | | Chemical Transport Engineering(42.00) | | | Fluid Machinery and Engineering(25.00) |
| | | Elements of Chemical Reaction Engineering(32.71) | | | Heat Transfer(36.43) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(32.71) | | | Internal Combustion Engineering(40.00) |
| | | Mass Transport and Separation Process in Chemical Engineering(30.14) | | | Power Machinery and Engineering(13.46) |
| | Computer Science and Technology(42.20) | Civil Engineering(21.57) | | | Refrigeration and Cryogenic Engineering(32.00) |
| | | Geotechnical Engineering(27.93) | | | Thermal Energy Engineering(33.94) |
| | | Structural Engineering(33.33) | | | Cartography and Geographic Information Engineering(48.00) |
| | | Urban Infrastructure Engineering(32.39) | | | Digital Surveying and Remote Sensing Applications(41.18) |
| | | Computer Science and Technology(42.20) | | | Geodesy and Surveying Engineering(38.00) |
| Engineering(36.44) | Control Science and Engineering(42.63) | Advanced Programming Languages(58.00) | | | Textile Chemistry and Dyeing Engineering(36.00) |
| | | Computer Architecture(36.00) | | | Textile Materials Science(48.00) |
| | | Computer Networks(32.20) | | | Transportation Engineering(34.26) |
| | | Computer Software and Theory(43.04) | | | Road and Railway Engineering(24.00) |
| | | Data Structures(31.31) | | | Traffic Information Engineering and Control(21.54) |
| | Electrical Engineering(28.42) | Databases(44.59) | | | Transportation Planning and Management(38.37) |
| | | Formal Languages(32.69) | | | Vehicle Operation Engineering(54.00) |
| | | Operating Systems(45.88) | | | Weapon Science and Technology(52.00) |
| | | Pattern Recognition(68.00) | | | Military Chemistry and Pyrotechnics(52.00) |
| | | Principles of Computer Organization(37.80) | | | Weapon Systems Science and Engineering(38.00) |
| Engineering(36.44) | Environmental Science and Engineering(46.56) | Control Theory and Control Engineering(49.44) | | | Archaeology and Museology(42.31) |
| | | Guidance, Navigation and Control(43.14) | | | Historical Geography(40.85) |
| | | Operations Research and Cybernetics(30.00) | | | World History(41.12) |
| | | Electrical Engineering(27.37) | History(41.25) | | Civil and Commercial Law(33.90) |
| | | High Voltage and Insulation Technology(29.55) | | | Constitutional and Administrative Law(40.00) |
| | Electronic Science and Technology(38.21) | Power Electronics and Electrical Drives(29.67) | | | Contract Law(70.00) |
| | | Power Systems and Automation(27.08) | | | Criminal Law(42.24) |
| | | Circuits and Systems(35.19) | | | International Law(28.07) |
| | | Electromagnetic Field and Microwave Technology(39.77) | | | Law and Social Governance(58.00) |
| | | Microelectronics and Solid-State Electronics(42.00) | | | Legal Theory and Legal History(50.00) |
| Engineering(36.44) | Food Science and Engineering(45.87) | Environmental Engineering(32.58) | | | Military Law(72.00) |
| | | Environmental Science(62.00) | | | Procedural Law(42.00) |
| | | Environmental and Resource Protection(56.00) | | | Political Science(33.85) |
| | | Food Biochemistry(70.00) | | | Political Science(33.85) |
| | | Food Processing and Storage Engineering(25.42) | | | |
| | Forestry Engineering(46.00) | Forest Engineering(40.00) | | | |
| | | Wood Science and Technology(52.00) | | | |
| | | - | | | |
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Table 38. Model Scores Across Three Levels of Disciplines: Llama-3.3-70B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|-------------------------------------|--|-------------------|--|--|
| Literature and Arts(38.54) | Art Studies(40.13) | Broadcasting and Television Art(52.00) | Philosophy(42.94) | Philosophy(42.94) | Religious Studies(56.00) |
| | | Dance Studies(30.00) | | Astronomy(39.01) | Astronomical Observation and Technology(46.00) |
| | | Design Arts(30.65) | | Astrophysics(39.13) | Cosmology(41.03) |
| | | Drama and Opera Studies(39.02) | | Solar System Science(35.23) | Stellar and Interstellar Evolution(31.43) |
| | | Film Studies(50.00) | | Atmospheric Science(30.54) | Atmospheric Physics and Atmospheric Environment(36.23) |
| | Journalism and Communication(36.23) | Fine Arts(35.32) | | Dynamic Meteorology(36.00) | |
| | | Communication and Broadcasting(34.48) | | Meteorology(22.62) | |
| | Language and Literature(38.86) | History and Theory of Journalism and Media Management(27.12) | Biology(38.21) | Biochemistry and Molecular Biology(42.42) | |
| | | Journalism and News Practice(43.33) | | Biophysics(56.00) | |
| | | Classical Chinese Literature(24.00) | | Botany(36.75) | |
| | | French Language and Literature(52.00) | | Cell Biology(44.83) | |
| | | Linguistics and Applied Linguistics(54.00) | | Ecology(36.81) | |
| Management(45.51) | Musicology(37.09) | Literary History(33.33) | | Genetics(32.61) | |
| | | Literary Theory(39.06) | | Microbiology(34.78) | |
| | | Modern and Contemporary Chinese Literature(32.00) | | Physiology(37.50) | |
| | | Philology and Bibliography(46.00) | | Zoology(40.37) | |
| | | Russian Language and Literature(33.33) | | Chemistry(27.36) | |
| | | Composition(34.00) | | Analytical Chemistry(30.56) | |
| | | Harmony(30.00) | | Electrochemistry(22.97) | |
| | | Instrumentation and Performance(38.46) | | Inorganic Chemistry(28.26) | |
| | | Music History, Education, and Technology(38.62) | | Organic Chemistry(32.16) | |
| | | Musical Forms and Analysis(44.00) | | Physical Chemistry(25.78) | |
| | Business Administration(38.04) | Pitch and Scales(35.71) | | Polymer Chemistry and Physics(31.58) | |
| | | Business and Accounting Management(38.04) | | Radiochemistry(20.00) | |
| | | Tourism Management and Technological Economics Management(40.00) | | Geography(42.86) | Human Geography(62.00) |
| | | Library, Information and Archival Management(46.67) | | Physical Geography(31.33) | |
| | | Information Management Science(26.00) | | Geology(42.52) | Geochemistry(62.00) |
| Medicine(43.77) | Clinical Medicine(46.31) | Information Management and Communication(74.00) | | Mineralogy, Petrology, and Economic Geology(38.02) | |
| | | Library and Archival Science(40.00) | | Paleontology and Stratigraphy(32.00) | |
| | | Management Science and Engineering(41.38) | | Principles of Seismic Exploration(46.00) | |
| | | Education Economics, Management and Social Security(44.00) | | Structural Geology(41.43) | |
| | | Land Resource Management and Administrative Management(49.02) | | Geophysics(44.00) | Solid Earth Geophysics(58.00) |
| | | Social Medicine and Health Management(64.00) | | Mathematics(38.33) | Space physics(30.00) |
| | Pharmacy(40.29) | Forensic Medicine(54.00) | | Advanced Algebra(46.04) | |
| | | Human Anatomy and Histology-Embryology(39.68) | | Combinatorial Mathematics(29.84) | |
| | | Immunology(50.72) | | Computational Mathematics(42.00) | |
| | | Pathogen Biology(40.43) | | Cryptography(56.00) | |
| | | Pathology and Pathophysiology(33.91) | | Discrete Mathematics(33.71) | |
| Public Health and Preventive Medicine(52.40) | Clinical Medicine(46.31) | Radiation Medicine(60.00) | | Functions of Complex Variables(45.90) | |
| | | Anesthesiology(56.00) | | Functions of Real Variables(46.27) | |
| | | Clinical Laboratory Diagnostics(42.00) | | Fundamental Mathematics(38.58) | |
| | | Dermatology and Venereology(56.06) | | Fuzzy Mathematics(52.00) | |
| | | Emergency Medicine(39.39) | | Geometry and Topology(30.94) | |
| | Pharmacy(40.29) | Geriatric Medicine(52.00) | | Graph Theory(29.41) | |
| | | Imaging and Nuclear Medicine(34.33) | | Group Theory(26.00) | |
| | | Internal Medicine(37.62) | | Mathematical Analysis(33.68) | |
| | | Neurology(55.56) | | Number Theory(28.18) | |
| | | Nursing and Rehabilitation Medicine(40.00) | | Numerical Analysis(41.79) | |
| Military Science(46.34) | Stomatology(34.85) | Obstetrics and Gynecology(30.39) | | Ordinary Differential Equations(43.12) | |
| | | Oncology(53.45) | | Polynomials and Series Expansions(34.64) | |
| | | Ophthalmology(56.60) | | Probability and Statistics(48.66) | |
| | | Otorhinolaryngology(48.00) | | Special Number Theory(46.00) | |
| | | Pediatrics(44.00) | | Stochastic Processes(54.00) | |
| | Traditional Chinese Medicine(32.46) | Psychiatry and Mental Health(70.00) | | Hydrogeology(58.00) | |
| | | Surgery(45.59) | | Marine Biology(82.00) | |
| | | Medicinal Chemistry(36.00) | | Marine Chemistry(62.00) | |
| | | Microbiology and Biochemical Pharmacy(42.00) | | Underwater Acoustics(48.00) | |
| | | Pharmaceutical Analysis(50.00) | | Physical Oceanography(46.00) | |
| Philosophy(42.94) | Military Science(46.34) | Pharmacetics(34.25) | | Acoustics(26.12) | |
| | | Pharmacology(41.82) | | Atomic and Molecular Physics(34.29) | |
| | | Epidemiology and Health Statistics(34.94) | | Electrodynamics(30.02) | |
| | | Health Toxicology and Environmental Health(53.75) | | Fluid Physics(27.61) | |
| | | Maternal, Child and Adolescent Health(65.82) | | Particle and Nuclear Physics(36.44) | |
| | Systems Science(52.00) | Nutrition and Food Hygiene(58.00) | | Polymer Physics(31.19) | |
| | | Basic Stomatology(33.96) | | Quantum Mechanics(31.07) | |
| | | Clinical Stomatology(35.44) | | Relativity(43.04) | |
| | | Traditional Chinese Medicine(42.37) | | Semiconductor Physics(26.23) | |
| | | Traditional Chinese Medicine Theory(30.00) | | Solid State Physics(27.21) | |
| | | Traditional Chinese Pharmacy(29.41) | | Statistical Mechanics(44.00) | |
| | Sociology(42.66) | Military Command and Information Systems(44.00) | | Subatomic and Atomic Physics(39.22) | |
| | | Military Logistics and Equipment(38.89) | | Thermodynamics(28.84) | |
| | | Military Management(60.00) | | Thermodynamics and Statistical Physics(30.19) | |
| | | Military Thought and History(43.14) | | Systems Science(52.00) | |
| | | Ethics(35.29) | | Sociology(42.66) | Demography and Anthropology(46.00) |
| | | Logic(34.29) | | Sociology(42.66) | Social and Folklore Studies(40.86) |

Table 38. Continued: Model Scores Across Three Levels of Disciplines: Llama-3.3-70B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|---|--|---|--|---|
| Agronomy(32.78) | Animal Husbandry(31.07) | Animal Nutrition and Feed Science(30.77) | Engineering(37.27) | Geological Resources and Geological Engineering(50.00) | Geological Resources and Geological Engineering(50.00) |
| | | Animal Rearing and Breeding(31.37) | | | Hydraulics and Hydrology(37.50) |
| | Aquaculture(21.43) Crop Science(33.10) | Aquaculture(21.43) | | Water conservancy and Hydropower Engineering(29.27) | Water conservancy and Hydropower Engineering(29.27) |
| | | Crop Science(33.10) | | | Antenna and Radio Communication(36.84) |
| | Forestry(36.64) | Forest Cultivation and Genetic Breeding(32.10) | | Communication Principle(41.38) | Communication Principle(41.38) |
| | | Landscape Plants and Ornamental Horticulture(44.00) | | | Communication and Information Systems(40.58) |
| | Veterinary Medicine(38.00) | Veterinary Medicine(38.00) | | Optical Fiber Communication(66.00) | Optical Fiber Communication(66.00) |
| | | Economic Statistics(48.00) | | | Signal and Information Processing(52.90) |
| | Economics(40.21) | Finance(42.05) | | Instrument Science and Technology(36.00) | Instrument Science and Technology(36.00) |
| | | Industrial Economics(41.67) | | | Materials Physics and Chemistry(27.64) |
| | | International Trade(39.13) | | Materials Science and Engineering(32.53) | Materials Processing Engineering(43.33) |
| | | Labor Economics(35.14) | | | Manufacturing Automation(34.92) |
| | | National and Defense Economics(46.00) | | Mechanics(32.38) | Mechatronic Engineering(56.00) |
| | | Public Finance(32.50) | | | Fundamentals of Dynamics and Control(29.68) |
| | | Quantitative Economics(40.00) | | | Rigid Body Mechanics(26.01) |
| | | Theoretical Economics(42.00) | | | Solid Mechanics(38.71) |
| | | Economic History(42.00) | | | Theoretical Fluid Mechanics(43.57) |
| | | Political Economy(34.00) | | | Theoretical Mechanics(31.61) |
| | | Western Economics(50.00) | | | Iron and Steel Metallurgy(23.81) |
| Education(39.26) | Education(40.49) | Educational Technology and Principles(37.50) | Metallurgical Engineering(37.25) | Non-ferrous Metallurgy(38.00) | Non-ferrous Metallurgy(38.00) |
| | | Preschool Education(44.00) | | | Physical Chemistry of Metallurgical Process(46.00) |
| | Physical Education(47.33) | Special Education(50.00) | | Principles of Metallurgy(56.00) | Principles of Metallurgy(56.00) |
| | | Theory of Curriculum and Instruction(33.33) | | | Mining Engineering(43.00) |
| | | Physical Education and Training(36.00) | | | Mineral Processing Engineering(38.00) |
| | Psychology(21.84) | Sports Humanities and Sociology(46.00) | | Mining and Safety Engineering(48.00) | Mining and Safety Engineering(48.00) |
| | | Sports Science and Medicine(60.00) | | | Naval Architecture and Ocean Engineering(32.61) |
| Engineering(37.27) | Aeronautical and Astronautical Science and Technology(31.09) Agricultural Engineering(45.19) | Psychology(21.84) | Naval Architecture and Ocean Engineering(32.61) | Marine Engineering(30.00) | Marine Engineering(30.00) |
| | | Aeronautical and Astronautical Science and Technology(31.09) | | | Ship Mechanics and Design Principles(34.09) |
| | | Agricultural Environment and Soil-Water Engineering(37.04) | | Nuclear Energy and Reactor Technology(47.37) | Nuclear Energy and Reactor Technology(47.37) |
| | | Agricultural Mechanization Engineering(54.00) | | | Radiation Protection and Nuclear Technology Applications(40.00) |
| | Architecture(33.33) | Architectural Design and Theory(38.00) | | Optical Engineering(34.84) | Applied Optics(34.68) |
| | | Architectural History(25.81) | | | Laser Technology(42.00) |
| | Chemical Engineering and Technology(34.15) | Urban Planning and Design(38.00) | | | Optoelectronic Technology(35.82) |
| | | Chemical Transport Engineering(50.00) | | | Theoretical Optics(31.85) |
| | Civil Engineering(27.37) | Elements of Chemical Reaction Engineering(34.58) | | Petroleum and Natural Gas Engineering(46.43) | Oil and Gas Field Development and Storage & Transportation Engineering(38.71) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(32.71) | | | Poromechanics and Reservoir Physics(56.00) |
| Engineering(37.27) | Computer Science and Technology(40.50) | Mass Transport and Separation Process in Chemical Engineering(29.45) | | | Engineering Fluid Mechanics(39.29) |
| | | Civil Engineering(19.61) | | | Engineering Thermophysics(36.30) |
| | | Geotechnical Engineering(27.37) | | | Fluid Machinery and Engineering(31.25) |
| | | Structural Engineering(26.32) | | | Heat Transfer(43.41) |
| | Control Science and Engineering(47.89) | Urban Infrastructure Engineering(33.80) | | Power Engineering and Engineering Thermophysics(36.26) | Internal Combustion Engineering(40.00) |
| | | Computer Science and Technology(40.50) | | | Power Machinery and Engineering(32.69) |
| | Electrical Engineering(29.50) | Advanced Programming Languages(58.00) | | | Refrigeration and Cryogenic Engineering(32.00) |
| | | Computer Architecture(42.00) | | | Thermal Energy Engineering(30.28) |
| | Electronic Science and Technology(38.62) | Computer Networks(35.59) | | Surveying and Mapping Science and Technology(35.12) | Cartography and Geographic Information Engineering(38.00) |
| | | Computer Software and Theory(27.85) | | | Digital Surveying and Remote Sensing Applications(25.00) |
| | Environmental Science and Engineering(41.80) | Data Structures(35.35) | | | Geodesy and Surveying Engineering(46.00) |
| | | Databases(47.77) | | | Textile Chemistry and Dyeing Engineering(36.00) |
| | Food Science and Engineering(55.96) | Formal Languages(34.62) | | | Textile Materials Science(58.00) |
| | | Operating Systems(32.94) | | Textile Science and Engineering(47.00) | Transportation Engineering(35.86) |
| | Forestry Engineering(44.00) | Pattern Recognition(70.00) | | | Road and Railway Engineering(32.00) |
| | | Principles of Computer Organization(30.49) | | | Traffic Information Engineering and Control(35.38) |
| | Forestry Engineering(44.00) | Control Theory and Control Engineering(44.94) | | | Transportation Planning and Management(33.72) |
| | | Guidance, Navigation and Control(49.02) | | | Vehicle Operation Engineering(44.00) |
| | Forestry Engineering(44.00) | Operations Research and Cybernetics(52.00) | | Weapon Science and Technology(54.00) | Military Chemistry and Pyrotechnics(50.00) |
| | | Electrical Theory and New Technologies(34.74) | | | Weapon Systems Science and Engineering(58.00) |
| | Forestry Engineering(44.00) | High Voltage and Insulation Technology(25.00) | History(30.27) | Law(41.46) | Archaeology and Museology(33.65) |
| | | Power Electronics and Electrical Drives(28.02) | | | Historical Geography(26.76) |
| | Food Science and Engineering(55.96) | Power Systems and Automation(26.04) | | | World History(30.61) |
| | | Circuits and Systems(32.41) | Law(42.64) | Law(42.64) | Civil and Commercial Law(38.14) |
| | Food Science and Engineering(55.96) | Electromagnetic Field and Microwave Technology(44.32) | | | Constitutional and Administrative Law(42.00) |
| | | Microelectronics and Solid-State Electronics(42.00) | | | Contract Law(50.00) |
| | Food Science and Engineering(55.96) | Environmental Engineering(30.34) | | Political Science(30.77) | Criminal Law(38.79) |
| | | Environmental Science(60.00) | | | International Law(31.58) |
| | Food Science and Engineering(55.96) | Environmental and Resource Protection(44.00) | | | Law and Social Governance(50.00) |
| | | Food Biochemistry(76.00) | | | Legal Theory and Legal History(46.00) |
| | Food Science and Engineering(55.96) | Food Processing and Storage Engineering(38.98) | | | Military Law(70.00) |
| | | Forest Engineering(30.00) | | | Procedural Law(30.00) |
| | Forestry Engineering(44.00) | Wood Science and Technology(38.00) | | | Political Science(30.77) |
| | | - | | | - |

Table 39. Model Scores Across Three Levels of Disciplines: phi-4.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|---------------------|--|--|
| Literature and Arts(31.62) | Art Studies(32.01) | Broadcasting and Television Art(34.00) | Philosophy(40.63) | Philosophy(40.63) | Religious Studies(72.00) |
| | | Dance Studies(30.00) | | Astronomy(36.30) | Astronomical Observation and Technology(41.00) |
| | | Design Arts(17.74) | | Astrophysics(31.88) | Cosmology(39.74) |
| | | Drama and Opera Studies(40.24) | | Solar System Science(35.23) | Stellar and Interstellar Evolution(31.43) |
| | | Film Studies(33.54) | | Atmospheric Science(34.98) | Atmospheric Physics and Atmospheric Environment(37.68) |
| | Journalism and Communication(27.54) | Fine Arts(31.84) | | Dynamic Meteorology(44.00) | |
| | | Communication and Broadcasting(24.14) | | Meteorology(27.38) | |
| | Language and Literature(33.64) | History and Theory of Journalism and Media Management(33.90) | Biology(36.79) | Biochemistry and Molecular Biology(47.47) | |
| | | Journalism and News Practice(25.56) | | Biophysics(58.00) | |
| | | Classical Chinese Literature(30.00) | | Botany(28.92) | |
| | | French Language and Literature(48.00) | | Cell Biology(43.68) | |
| | | Linguistics and Applied Linguistics(44.00) | | Ecology(29.86) | |
| Management(39.12) | Musicology(30.99) | Literary History(26.09) | | Genetics(41.30) | |
| | | Literary Theory(35.94) | | Microbiology(30.43) | |
| | | Modern and Contemporary Chinese Literature(22.00) | | Physiology(40.83) | |
| | | Philology and Bibliography(38.00) | | Zoology(50.28) | |
| | | Russian Language and Literature(28.07) | | Chemistry(31.77) | Analytical Chemistry(33.59) |
| | | Composition(32.00) | | Electrochemistry(33.78) | |
| | | Harmony(30.00) | | Inorganic Chemistry(26.81) | |
| | | Instrumentation and Performance(30.77) | | Organic Chemistry(34.50) | |
| | | Music History, Education, and Technology(29.66) | | Physical Chemistry(30.31) | |
| | | Musical Forms and Analysis(30.00) | | Polymer Chemistry and Physics(28.95) | |
| | Business Administration(35.21) | Pitch and Scales(35.71) | | Radiochemistry(36.67) | |
| | | Business and Accounting Management(30.43) | Geography(45.86) | Human Geography(64.00) | |
| | | Tourism Management and Technological Economics Management(44.00) | | Physical Geography(34.94) | |
| | | Library, Information and Archival Management(42.67) | | Geology(38.71) | Geochemistry(58.00) |
| | | Information Management Science(22.00) | | Mineralogy, Petrology, and Economic Geology(33.88) | |
| Medicine(37.79) | Management Science and Engineering(37.93) | Information Management and Communication(70.00) | | Paleontology and Stratigraphy(24.00) | |
| | | Library and Archival Science(36.00) | | Principles of Seismic Exploration(42.00) | |
| | | Management Science and Engineering(37.93) | | Structural Geology(41.43) | |
| | | Education Economics, Management and Social Security(32.00) | Geophysics(56.00) | Geophysics(56.00) | Solid Earth Geophysics(70.00) |
| | | Land Resource Management and Administrative Management(29.41) | | Mathematics(46.45) | Space physics(42.00) |
| | Public Administration(39.74) | Social Medicine and Health Management(58.00) | | Advanced Algebra(54.46) | Advanced Algebra(54.46) |
| | | Forensic Medicine(48.00) | | Combinatorial Mathematics(33.51) | Combinatorial Mathematics(33.51) |
| | | Human Anatomy and Histology-Embryology(34.39) | | Computational Mathematics(46.00) | Computational Mathematics(46.00) |
| | | Immunology(34.78) | | Cryptography(64.00) | Cryptography(64.00) |
| | | Pathogen Biology(43.62) | | Discrete Mathematics(39.33) | Discrete Mathematics(39.33) |
| Clinical Medicine(38.92) | Basic Medicine(38.10) | Pathology and Pathophysiology(29.57) | | Functions of Complex Variables(59.02) | Functions of Complex Variables(59.02) |
| | | Radiation Medicine(56.00) | | Functions of Real Variables(49.25) | Functions of Real Variables(49.25) |
| | | Anesthesiology(36.00) | | Fundamental Mathematics(54.31) | Fundamental Mathematics(54.31) |
| | | Clinical Laboratory Diagnostics(40.00) | | Fuzzy Mathematics(58.00) | Fuzzy Mathematics(58.00) |
| | | Dermatology and Venereology(46.97) | | Geometry and Topology(33.21) | Geometry and Topology(33.21) |
| | Pharmacy(35.97) | Emergency Medicine(48.48) | | Graph Theory(35.29) | Graph Theory(35.29) |
| | | Geriatric Medicine(54.00) | | Group Theory(28.00) | Group Theory(28.00) |
| | | Imaging and Nuclear Medicine(35.82) | | Mathematical Analysis(48.61) | Mathematical Analysis(48.61) |
| | | Internal Medicine(35.64) | | Number Theory(34.55) | Number Theory(34.55) |
| | | Neurology(34.39) | | Numerical Analysis(46.27) | Numerical Analysis(46.27) |
| Pharmacy(35.97) | Clinical Medicine(38.92) | Nursing and Rehabilitation Medicine(32.00) | Oceanography(63.00) | Ordinary Differential Equations(34.37) | Ordinary Differential Equations(34.37) |
| | | Obstetrics and Gynecology(26.47) | | Polynomials and Series Expansions(46.37) | Polynomials and Series Expansions(46.37) |
| | | Oncology(39.66) | | Probability and Statistics(51.34) | Probability and Statistics(51.34) |
| | | Ophthalmology(32.00) | | Special Number Theory(58.00) | Special Number Theory(58.00) |
| | | Otorhinolaryngology(50.00) | | Stochastic Processes(64.00) | Stochastic Processes(64.00) |
| | Pharmacy(35.97) | Pediatrics(44.00) | | Hydrogeology(66.00) | Hydrogeology(66.00) |
| | | Psychiatry and Mental Health(66.00) | | Marine Biology(76.00) | Marine Biology(76.00) |
| | | Surgery(33.82) | | Marine Chemistry(52.00) | Marine Chemistry(52.00) |
| | | Medicinal Chemistry(36.00) | | Underwater Acoustics(58.00) | Underwater Acoustics(58.00) |
| | | Microbiology and Biochemical Pharmacy(38.00) | | Physical Oceanography(48.00) | Physical Oceanography(48.00) |
| Public Health and Preventive Medicine(50.00) | Stomatology(32.58) | Pharmaceutical Analysis(38.00) | | Acoustics(31.43) | Acoustics(31.43) |
| | | Pharmacetics(30.14) | Physics(34.90) | Atomic and Molecular Physics(34.29) | Atomic and Molecular Physics(34.29) |
| | | Pharmacology(40.00) | | Electrodynamics(35.51) | Electrodynamics(35.51) |
| | | Epidemiology and Health Statistics(34.94) | | Fluid Physics(39.55) | Fluid Physics(39.55) |
| | | Health Toxicology and Environmental Health(55.00) | | Particle and Nuclear Physics(43.11) | Particle and Nuclear Physics(43.11) |
| | Traditional Chinese Medicine(23.13) | Maternal, Child and Adolescent Health(58.23) | | Polymer Physics(25.69) | Polymer Physics(25.69) |
| | | Nutrition and Food Hygiene(54.00) | | Quantum Mechanics(38.35) | Quantum Mechanics(38.35) |
| | | Basic Stomatology(30.19) | | Relativity(44.30) | Relativity(44.30) |
| | | Clinical Stomatology(34.18) | | Semiconductor Physics(18.03) | Semiconductor Physics(18.03) |
| | | Traditional Chinese Medicine(27.12) | Sociology(41.26) | Solid State Physics(29.93) | Solid State Physics(29.93) |
| Military Science(39.02) | Military Science(39.02) | Traditional Chinese Medicine Theory(22.22) | | Statistical Mechanics(52.00) | Statistical Mechanics(52.00) |
| | | Traditional Chinese Pharmacy(21.85) | | Subatomic and Atomic Physics(35.29) | Subatomic and Atomic Physics(35.29) |
| | | Military Command and Information Systems(42.00) | | Thermodynamics(32.56) | Thermodynamics(32.56) |
| | | Military Logistics and Equipment(35.19) | | Thermodynamics and Statistical Physics(33.21) | Thermodynamics and Statistical Physics(33.21) |
| | | Military Management(50.00) | | Systems Science(44.00) | Systems Science(44.00) |
| | Philosophy(40.63) | Military Thought and History(29.41) | | Demography and Anthropology(46.00) | Demography and Anthropology(46.00) |
| | | Ethics(39.71) | | Social and Folklore Studies(38.71) | Social and Folklore Studies(38.71) |
| | | Logic(34.29) | | | |
| | | Philosophical Aesthetics(27.52) | | | |
| | | Philosophy of Science and Technology(48.00) | | | |

Table 39. Continued: Model Scores Across Three Levels of Disciplines: phi-4.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|--|--|----------------------------------|---|---|
| Agronomy(36.08) | Animal Husbandry(34.95) | Animal Nutrition and Feed Science(38.46) | Engineering(35.87) | Geological Resources and Geological Engineering(40.00) | Geological Resources and Geological Engineering(40.00) |
| | | Animal Rearing and Breeding(31.37) | | | Hydraulics and Hydrology(32.35) |
| | Aquaculture(23.21) | Aquaculture(23.21) | | Hydraulic Engineering(29.36) | Water conservancy and Hydropower Engineering(24.39) |
| | Crop Science(31.03) | Crop Science(31.03) | | Information and Communication Engineering(41.67) | Antenna and Radio Communication(27.19) |
| | Forestry(41.98) | Forest Cultivation and Genetic Breeding(39.51) | | Communication Principle(46.55) | Communication Principle(46.55) |
| | | Landscape Plants and Ornamental Horticulture(46.00) | | | Communication and Information Systems(36.23) |
| | Veterinary Medicine(52.00) | Veterinary Medicine(52.00) | | | Optical Fiber Communication(54.00) |
| | Economics(37.69) | Applied Economics(36.79) | | | Signal and Information Processing(47.10) |
| | | Economic Statistics(42.00) | | Instrument Science and Technology(34.00) | Instrument Science and Technology(34.00) |
| | | Finance(37.50) | | Materials Science and Engineering(31.14) | Materials Physics and Chemistry(26.13) |
| Economics(37.69) | | Industrial Economics(35.71) | | Materials Processing Engineering(42.22) | Materials Processing Engineering(42.22) |
| | | International Trade(36.23) | | | Mechanical Engineering(42.05) |
| | | Labor Economics(39.19) | | Manufacturing Automation(38.10) | Manufacturing Automation(38.10) |
| | | National and Defense Economics(38.00) | | | Mechatronic Engineering(52.00) |
| | | Public Finance(30.00) | | Fundamentals of Dynamics and Control(25.36) | Fundamentals of Dynamics and Control(25.36) |
| | | Quantitative Economics(40.00) | | | Rigid Body Mechanics(20.81) |
| | | Theoretical Economics(42.00) | | Solid Mechanics(34.41) | Solid Mechanics(34.41) |
| | | Economic History(40.00) | | | Theoretical Fluid Mechanics(38.57) |
| | | Political Economy(36.00) | | Theoretical Mechanics(25.81) | Theoretical Mechanics(25.81) |
| | | Western Economics(50.00) | | | Metallurgical Engineering(39.61) |
| Education(39.26) | Education(40.49) | Educational Technology and Principles(41.67) | Metallurgical Engineering(39.61) | Iron and Steel Metallurgy(31.43) | Iron and Steel Metallurgy(31.43) |
| | | Preschool Education(44.00) | | | Non-ferrous Metallurgy(28.00) |
| | Physical Education(48.00) | Special Education(44.00) | | Physical Chemistry of Metallurgical Process(48.00) | Physical Chemistry of Metallurgical Process(48.00) |
| | | Theory of Curriculum and Instruction(31.37) | | | Principles of Metallurgy(60.00) |
| | Psychology(20.69) | Physical Education and Training(42.00) | | Mining Engineering(52.00) | Mineral Processing Engineering(54.00) |
| | | Sports Humanities and Sociology(38.00) | | | Mining and Safety Engineering(50.00) |
| | Psychology(20.69) | Sports Science and Medicine(64.00) | | Naval Architecture and Ocean Engineering(30.43) | Marine Engineering(30.00) |
| | | Psychology(20.69) | | | Ship Mechanics and Design Principles(30.68) |
| Engineering(35.87) | Aeronautical and Astronautical Science and Technology(28.57) | Aeronautical and Astronautical Science and Technology(28.57) | | Nuclear Science and Technology(36.45) | Nuclear Energy and Reactor Technology(24.56) |
| | | Agricultural Environment and Soil-Water Engineering(42.59) | | | Radiation Protection and Nuclear Technology Applications(50.00) |
| | Agricultural Engineering(47.12) | Agricultural Mechanization Engineering(52.00) | | Optical Engineering(32.18) | Applied Optics(29.03) |
| | | Architecture(41.36) | | | Laser Technology(40.00) |
| | Chemical Engineering and Technology(34.39) | Architectural Design and Theory(46.00) | | Petroleum and Natural Gas Engineering(43.75) | Optoelectronic Technology(43.28) |
| | | Architectural History(38.71) | | | Theoretical Optics(26.67) |
| | Civil Engineering(33.52) | Urban Planning and Design(40.00) | | Power Engineering and Engineering Thermophysics(32.31) | Oil and Gas Field Development and Storage & Transportation Engineering(41.94) |
| | | Chemical Transport Engineering(54.00) | | | Poromechanics and Reservoir Physics(46.00) |
| Engineering(35.87) | Computer Science and Technology(38.40) | Elements of Chemical Reaction Engineering(34.58) | | Engineering Thermophysics(36.30) | Engineering Fluid Mechanics(33.33) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(28.97) | | | Engineering Thermophysics(36.30) |
| | Control Science and Engineering(45.79) | Mass Transport and Separation Process in Chemical Engineering(31.51) | | Surveying and Mapping Science and Technology(43.45) | Fluid Machinery and Engineering(25.00) |
| | | Civil Engineering(33.52) | | | Heat Transfer(31.78) |
| | Control Science and Engineering(45.79) | Bridge and Tunnel Engineering(31.37) | | Textile Science and Engineering(45.00) | Internal Combustion Engineering(50.00) |
| | | Geotechnical Engineering(29.61) | | | Power Machinery and Engineering(19.23) |
| | Control Science and Engineering(45.79) | Structural Engineering(35.09) | | Transportation Engineering(38.65) | Refrigeration and Cryogenic Engineering(38.00) |
| | | Urban Infrastructure Engineering(43.66) | | | Thermal Energy Engineering(26.61) |
| Engineering(35.87) | Computer Science and Technology(38.40) | Advanced Programming Languages(56.00) | | Cartography and Geographic Information Engineering(56.00) | Cartography and Geographic Information Engineering(56.00) |
| | | Computer Architecture(24.00) | | | Digital Surveying and Remote Sensing Applications(35.29) |
| | Control Science and Engineering(45.79) | Computer Networks(44.07) | | Geodesy and Surveying Engineering(42.00) | Geodesy and Surveying Engineering(42.00) |
| | | Computer Software and Theory(27.85) | | | Textile Chemistry and Dyeing Engineering(40.00) |
| | Control Science and Engineering(45.79) | Data Structures(32.32) | | Textile Materials Science(50.00) | Textile Materials Science(50.00) |
| | | Databases(44.59) | | | Transportation Engineering(38.65) |
| | Control Science and Engineering(45.79) | Formal Languages(36.54) | | Road and Railway Engineering(26.00) | Road and Railway Engineering(26.00) |
| | | Operating Systems(25.88) | | | Traffic Information Engineering and Control(41.54) |
| Engineering(35.87) | Electrical Engineering(30.22) | Pattern Recognition(62.00) | | Transportation Planning and Management(39.53) | Transportation Planning and Management(39.53) |
| | | Principles of Computer Organization(37.80) | | | Vehicle Operation Engineering(46.00) |
| | Electrical Engineering(30.22) | Control Theory and Control Engineering(46.07) | | Weapon Science and Technology(45.00) | Weapon Science and Technology(45.00) |
| | | Guidance, Navigation and Control(50.98) | | | Military Chemistry and Pyrotechnics(44.00) |
| | Electrical Engineering(30.22) | Operations Research and Cybernetics(40.00) | | Weapon Systems Science and Engineering(46.00) | Weapon Systems Science and Engineering(46.00) |
| | | Power Systems and Automation(29.17) | | | Archaeology and Museology(30.77) |
| | Electronic Science and Technology(35.37) | Circuits and Systems(33.33) | | Historical Geography(26.06) | Historical Geography(26.06) |
| | | Electromagnetic Field and Microwave Technology(31.82) | | | World History(25.47) |
| Engineering(35.87) | Environmental Science and Engineering(42.33) | Microelectronics and Solid-State Electronics(46.00) | History(26.41) | Civil and Commercial Law(35.59) | Civil and Commercial Law(35.59) |
| | | Environmental Engineering(29.21) | | | Constitutional and Administrative Law(34.00) |
| | Food Science and Engineering(47.71) | Environmental Science(64.00) | | Contract Law(38.00) | Contract Law(38.00) |
| | | Environmental and Resource Protection(44.00) | | | Criminal Law(43.10) |
| | Food Science and Engineering(47.71) | Food Biochemistry(70.00) | | International Law(29.82) | International Law(29.82) |
| | | Food Processing and Storage Engineering(28.81) | | | Law and Social Governance(46.00) |
| | Forestry Engineering(43.00) | Forest Engineering(46.00) | | | Legal Theory and Legal History(36.00) |
| | | Wood Science and Technology(40.00) | | | Military Law(58.00) |
| Engineering(35.87) | Forestry Engineering(43.00) | - | | Political Science(26.15) | Procedural Law(20.00) |
| | - | - | | | Political Science(26.15) |

Table 40. Model Scores Across Three Levels of Disciplines: Qwen2.5-14B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|--|--|
| Literature and Arts(31.44) | Art Studies(31.51) | Broadcasting and Television Art(34.00) | Philosophy(38.04) | Philosophy(38.04) | Religious Studies(52.00) |
| | | Dance Studies(32.00) | | Astronomy(34.07) | Astronomical Observation and Technology(39.00) |
| | | Design Arts(17.74) | | Astrophysics(36.23) | Cosmology(38.46) |
| | | Drama and Opera Studies(35.37) | | Solar System Science(29.55) | Stellar and Interstellar Evolution(25.71) |
| | | Film Studies(35.44) | | Atmospheric Science(36.45) | Atmospheric Physics and Atmospheric Environment(42.03) |
| | Journalism and Communication(25.12) | Fine Arts(30.35) | | Dynamic Meteorology(40.00) | |
| | | Communication and Broadcasting(20.69) | | Meteorology(29.76) | |
| | Language and Literature(36.36) | History and Theory of Journalism and Media Management(27.12) | Biology(32.23) | Biochemistry and Molecular Biology(40.40) | |
| | | Journalism and News Practice(26.67) | | Biophysics(52.00) | |
| | | Classical Chinese Literature(38.00) | | Botany(28.31) | |
| | | French Language and Literature(48.00) | | Cell Biology(40.23) | |
| | | Linguistics and Applied Linguistics(36.00) | | Ecology(24.31) | |
| Management(41.52) | Musicology(29.34) | Literary History(36.23) | | Genetics(28.26) | |
| | | Literary Theory(37.50) | | Microbiology(35.40) | |
| | | Modern and Contemporary Chinese Literature(32.00) | | Physiology(35.83) | |
| | | Philology and Bibliography(38.00) | | Zoology(23.88) | |
| | | Russian Language and Literature(26.32) | | Chemistry(27.42) | |
| | | Composition(34.00) | | Analytical Chemistry(29.04) | |
| | | Harmony(25.00) | | Electrochemistry(26.13) | |
| | | Instrumentation and Performance(40.00) | | Inorganic Chemistry(34.06) | |
| | | Music History, Education, and Technology(22.76) | | Organic Chemistry(30.41) | |
| | | Musical Forms and Analysis(36.00) | | Physical Chemistry(25.07) | |
| | Business Administration(35.92) | Pitch and Scales(28.57) | | Polymer Chemistry and Physics(21.05) | |
| | | Business and Accounting Management(34.78) | | Radiochemistry(33.33) | |
| | | Tourism Management and Technological Economics Management(38.00) | | Geography(37.59) | Human Geography(58.00) |
| | | Library, Information and Archival Management(41.33) | | Physical Geography(25.30) | |
| | | Information Management Science(22.00) | | Geology(36.07) | Geochemistry(48.00) |
| Medicine(36.91) | Management Science and Engineering(34.48) | Information Management and Communication(68.00) | | Mineralogy, Petrology, and Economic Geology(30.58) | |
| | | Library and Archival Science(34.00) | | Paleontology and Stratigraphy(36.00) | |
| | | Management Science and Engineering(34.48) | | Principles of Seismic Exploration(32.00) | |
| | | Education Economics, Management and Social Security(46.00) | | Structural Geology(40.00) | |
| | | Land Resource Management and Administrative Management(43.14) | | Geophysics(49.00) | Solid Earth Geophysics(58.00) |
| | Public Administration(49.67) | Social Medicine and Health Management(60.00) | | Space physics(40.00) | |
| | | Forensic Medicine(36.00) | | Advanced Algebra(50.50) | |
| | | Human Anatomy and Histology-Embryology(33.33) | | Combinatorial Mathematics(30.37) | |
| | | Immunology(33.33) | | Computational Mathematics(38.00) | |
| | | Pathogen Biology(32.98) | | Cryptography(46.00) | |
| Pharmacy(36.69) | Clinical Medicine(36.21) | Pathology and Pathophysiology(37.39) | | Discrete Mathematics(41.57) | |
| | | Radiation Medicine(56.00) | | Functions of Complex Variables(60.66) | |
| | | Anesthesiology(38.00) | | Functions of Real Variables(43.28) | |
| | | Clinical Laboratory Diagnostics(44.00) | | Fundamental Mathematics(44.67) | |
| | | Dermatology and Venereology(31.82) | | Fuzzy Mathematics(56.00) | |
| | Pharmacy(36.69) | Emergency Medicine(28.79) | | Geometry and Topology(26.42) | |
| | | Geriatric Medicine(54.00) | | Graph Theory(23.53) | |
| | | Imaging and Nuclear Medicine(17.91) | | Group Theory(36.00) | |
| | | Internal Medicine(40.10) | | Mathematical Analysis(44.44) | |
| | | Neurology(32.80) | | Number Theory(31.36) | |
| Public Health and Preventive Medicine(39.73) | Health Toxicology and Environmental Health(40.00) | Nursing and Rehabilitation Medicine(38.00) | | Numerical Analysis(37.31) | |
| | | Obstetrics and Gynecology(34.31) | | Ordinary Differential Equations(48.75) | |
| | | Oncology(29.31) | | Polynomials and Series Expansions(39.66) | |
| | | Ophthalmology(34.00) | | Probability and Statistics(42.41) | |
| | | Otorhinolaryngology(22.00) | | Special Number Theory(40.00) | |
| | Public Health and Preventive Medicine(39.73) | Pediatrics(44.00) | | Stochastic Processes(62.00) | |
| | | Psychiatry and Mental Health(54.00) | | Hydrogeology(62.00) | |
| | | Surgery(44.12) | | Marine Biology(78.00) | |
| | | Medicinal Chemistry(28.00) | | Marine Chemistry(56.00) | |
| | | Microbiology and Biochemical Pharmacy(34.00) | | Underwater Acoustics(46.00) | |
| Military Science(38.05) | Traditional Chinese Medicine(44.03) | Pharmaceutical Analysis(42.00) | | Physical Oceanography(40.00) | Physical Oceanography(40.00) |
| | | Pharmacetics(43.84) | | Physics(29.84) | Acoustics(26.94) |
| | | Pharmacology(32.73) | | | |
| | | Epidemiology and Health Statistics(34.94) | | | |
| | | Health Toxicology and Environmental Health(40.00) | | | |
| | Stomatology(25.76) | Maternal, Child and Adolescent Health(40.51) | | | |
| | | Nutrition and Food Hygiene(46.00) | | | |
| | | Basic Stomatology(30.19) | | | |
| | | Clinical Stomatology(22.78) | | | |
| | | Traditional Chinese Medicine(52.54) | | | |
| Philosophy(38.04) | Military Science(38.05) | Traditional Chinese Medicine Theory(46.67) | | | |
| | | Traditional Chinese Pharmacy(37.82) | | | |
| | | Military Command and Information Systems(50.00) | | | |
| | | Military Logistics and Equipment(25.93) | | | |
| | | Military Management(52.00) | | | |
| | Philosophy(38.04) | Military Thought and History(25.49) | | | |
| | | Ethics(32.35) | | | |
| | | Logic(30.00) | | | |
| | | Philosophical Aesthetics(32.11) | | | |
| | | Philosophy of Science and Technology(56.00) | | | |
| Sociology(36.36) | Systems Science(40.00) | Sociology(36.36) | | | |
| | | Demography and Anthropology(40.00) | | | |
| | | Social and Folklore Studies(34.41) | | | |

Table 40. Continued: Model Scores Across Three Levels of Disciplines: Qwen2.5-14B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|---|--|--|--|
| Agronomy(37.11) | Animal Husbandry(35.92) | Animal Nutrition and Feed Science(30.77) Animal Rearing and Breeding(41.18) | Engineering(33.88) | Geological Resources and Geological Engineering(48.00) Geological Engineering(48.00) | Geological Resources and Geological Engineering(48.00) |
| | Aquaculture(25.00) Crop Science(40.69) | Aquaculture(25.00) Crop Science(40.69) | Hydraulic Engineering(31.65) | Hydraulics and Hydrology(30.15) Water conservancy and Hydropower Engineering(34.15) | |
| | Forestry(37.40) | Forest Cultivation and Genetic Breeding(25.93) Landscape Plants and Ornamental Horticulture(56.00) | Information and Communication Engineering(40.87) | Antenna and Radio Communication(34.21) Communication Principle(43.97) Communication and Information Systems(47.83) | |
| Economics(41.12) | Veterinary Medicine(42.00) | Veterinary Medicine(42.00) | | Optical Fiber Communication(48.00) Signal and Information Processing(38.06) | |
| | Applied Economics(40.25) | Economic Statistics(46.00) Finance(38.64) | Instrument Science and Technology(30.00) | Instrument Science and Technology(30.00) | |
| | | Industrial Economics(46.43) | Materials Science and Engineering(26.30) | Materials Physics and Chemistry(22.61) | |
| | | International Trade(47.83) Labor Economics(39.19) | Mechanical Engineering(40.91) | Materials Processing Engineering(34.44) Manufacturing Automation(36.51) | |
| | | National and Defense Economics(36.00) Public Finance(32.50) | Mechanics(23.02) | Mechatronic Engineering(52.00) Fundamentals of Dynamics and Control(19.88) | |
| | | Quantitative Economics(42.00) | | Rigid Body Mechanics(17.92) Solid Mechanics(29.03) | |
| | Theoretical Economics(45.33) | Economic History(52.00) Political Economy(26.00) | Metallurgical Engineering(38.43) | Theoretical Fluid Mechanics(37.86) Theoretical Mechanics(18.71) | |
| | | Western Economics(58.00) | | Iron and Steel Metallurgy(27.62) Non-ferrous Metallurgy(40.00) | |
| Education(41.94) | Education(41.70) | Educational Technology and Principles(40.62) Preschool Education(48.00) | Mining Engineering(44.00) | Physical Chemistry of Metallurgical Process(42.00) Principles of Metallurgy(56.00) | |
| | Physical Education(43.33) | Special Education(46.00) Theory of Curriculum and Instruction(33.33) Physical Education and Training(28.00) Sports Humanities and Sociology(38.00) | Naval Architecture and Ocean Engineering(35.51) | Mineral Processing Engineering(52.00) Mining and Safety Engineering(36.00) | |
| | Psychology(40.23) | Sports Science and Medicine(64.00) | | Marine Engineering(36.00) | |
| Engineering(33.88) | Aeronautical and Astronautical Science and Technology(28.57) Agricultural Engineering(48.08) | Aeronautical and Astronautical Science and Technology(28.57) Agricultural Environment and Soil-Water Engineering(40.74) Agricultural Mechanization Engineering(56.00) | Nuclear Science and Technology(36.45) | Ship Mechanics and Design Principles(35.23) Nuclear Energy and Reactor Technology(28.07) | |
| | Architecture(30.86) | Architectural Design and Theory(38.00) Architectural History(24.19) | Optical Engineering(25.53) | Radiation Protection and Nuclear Technology Applications(46.00) Applied Optics(26.61) | |
| | Chemical Engineering and Technology(26.59) | Urban Planning and Design(32.00) Chemical Transport Engineering(34.00) | Petroleum and Natural Gas Engineering(44.64) | Laser Technology(34.00) Optoelectronic Technology(26.87) | |
| | | Elements of Chemical Reaction Engineering(26.17) Fluid Flow and Heat Transfer in Chemical Engineering(23.36) | | Theoretical Optics(20.74) | |
| | | Mass Transport and Separation Process in Chemical Engineering(26.71) | Power Engineering and Engineering Thermophysics(31.73) | Polymer Mechanics and Reservoir Physics(56.00) Engineering Fluid Mechanics(29.76) | |
| | Civil Engineering(25.14) | Bridge and Tunnel Engineering(17.65) Geotechnical Engineering(27.93) Structural Engineering(19.30) Urban Infrastructure Engineering(28.17) | | Engineering Thermophysics(32.19) | |
| | Computer Science and Technology(43.12) | Advanced Programming Languages(64.00) Computer Architecture(38.00) | Surveying and Mapping Science and Technology(44.64) | Fluid Machinery and Engineering(23.44) Heat Transfer(34.88) | |
| | | Computer Networks(42.37) | | Internal Combustion Engineering(50.00) Power Machinery and Engineering(19.23) | |
| | | Computer Software and Theory(46.84) Data Structures(24.24) | Textile Science and Engineering(47.00) | Refrigeration and Cryogenic Engineering(26.00) | |
| | | Databases(47.13) | | Thermal Energy Engineering(33.94) Cartography and Geographic Information Engineering(46.00) | |
| | | Formal Languages(36.54) | | Digital Surveying and Remote Sensing Applications(44.12) | |
| | | Operating Systems(41.18) Pattern Recognition(70.00) | Transportation Engineering(38.25) | Geodesy and Surveying Engineering(44.00) Textile Chemistry and Dyeing Engineering(48.00) | |
| | Control Science and Engineering(34.74) | Principles of Computer Organization(35.37) Control Theory and Control Engineering(42.70) | | Textile Materials Science(46.00) | |
| | | Guidance, Navigation and Control(29.41) | | Road and Railway Engineering(32.00) Traffic Information Engineering and Control(16.92) | |
| | | Operations Research and Cybernetics(26.00) | | Transportation Planning and Management(51.16) Vehicle Operation Engineering(50.00) | |
| Electrical Engineering(24.46) | Electrical Theory and New Technologies(24.21) | History(33.09) | Weapon Science and Technology(47.00) | Military Chemistry and Pyrotechnics(54.00) | |
| | High Voltage and Insulation Technology(32.95) | History(33.09) | | Weapon Systems Science and Engineering(40.00) | |
| | Power Electronics and Electrical Drives(22.53) | | | Archaeology and Museology(38.46) | |
| | Power Systems and Automation(20.83) | Law(45.88) | | Historical Geography(24.65) | |
| Electronic Science and Technology(34.55) | Circuits and Systems(30.56) | Law(47.38) | | World History(34.58) | |
| | Electromagnetic Field and Microwave Technology(35.23) | | | Civil and Commercial Law(44.92) | |
| | Microelectronics and Solid-State Electronics(42.00) | | | Constitutional and Administrative Law(34.00) | |
| Environmental Science and Engineering(44.97) | Environmental Engineering(29.21) | | | Contract Law(60.00) | |
| | Environmental Science(60.00) | | | Criminal Law(41.38) | |
| Food Science and Engineering(56.88) | Environmental and Resource Protection(58.00) | | | International Law(58.60) | |
| | Food Biochemistry(82.00) | | | Law and Social Governance(58.00) | |
| Forestry Engineering(49.00) | Food Processing and Storage Engineering(35.59) | | | Legal Theory and Legal History(52.00) | |
| Engineering(33.88) | Forest Engineering(44.00) | | | Military Law(70.00) | |
| | Wood Science and Technology(54.00) | | Political Science(32.31) | Procedural Law(40.00) | |
| | | | | Political Science(32.31) | |

Table 41. Model Scores Across Three Levels of Disciplines: Llama-3.1-70B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|-------------------|--|--|
| Literature and Arts(35.08) | Art Studies(34.83) | Broadcasting and Television Art(44.00) | Philosophy(42.94) | Philosophy(42.94) | Religious Studies(52.00) |
| | | Dance Studies(24.00) | | Astronomy(37.04) | Astronomical Observation and Technology(48.00) |
| | | Design Arts(30.65) | | Astrophysics(37.68) | Cosmology(29.49) |
| | | Drama and Opera Studies(35.37) | | Solar System Science(35.23) | Stellar and Interstellar Evolution(31.43) |
| | | Film Studies(38.61) | | Atmospheric Science(39.41) | Atmospheric Physics and Atmospheric Environment(39.13) |
| | Journalism and Communication(36.71) | Fine Arts(33.33) | | Dynamic Meteorology(48.00) | |
| | | Communication and Broadcasting(37.93) | | Meteorology(34.52) | |
| | Language and Literature(35.91) | History and Theory of Journalism and Media Management(28.81) | Biology(35.54) | Biochemistry and Molecular Biology(32.32) | |
| | | Journalism and News Practice(41.11) | | Biophysics(54.00) | |
| | | Classical Chinese Literature(32.00) | | Botany(36.75) | |
| | | French Language and Literature(54.00) | | Cell Biology(42.53) | |
| | | Linguistics and Applied Linguistics(46.00) | | Ecology(34.72) | |
| Management(46.11) | Business Administration(41.55) | Literary History(23.19) | | Genetics(29.89) | |
| | | Literary Theory(43.75) | | Microbiology(37.27) | |
| | | Modern and Contemporary Chinese Literature(22.00) | | Physiology(33.33) | |
| | | Philology and Bibliography(42.00) | | Zoology(53.03) | |
| | | Russian Language and Literature(28.07) | | Chemistry(23.46) | |
| | Musicology(33.80) | Composition(36.00) | | Analytical Chemistry(26.52) | |
| | | Harmony(25.00) | | Electrochemistry(20.72) | |
| | | Instrumentation and Performance(40.00) | | Inorganic Chemistry(21.74) | |
| | | Music History, Education, and Technology(31.72) | | Organic Chemistry(28.65) | |
| | | Musical Forms and Analysis(46.00) | | Physical Chemistry(21.39) | |
| | Library, Information and Archival Management(48.00) | Pitch and Scales(28.57) | | Polymer Chemistry and Physics(27.63) | |
| | | Business and Accounting Management(43.48) | | Radiochemistry(21.67) | |
| | | Tourism Management and Technological Economics Management(38.00) | | Geography(47.37) | Human Geography(54.00) |
| | | Information Management Science(30.00) | | Physical Geography(43.37) | |
| | | Information Management and Communication(68.00) | | Geology(38.71) | Geochemistry(54.00) |
| Medicine(44.21) | Management Science and Engineering(43.10) | Library and Archival Science(46.00) | | Mineralogy, Petrology, and Economic Geology(35.54) | |
| | | Management Science and Engineering(43.10) | | Paleontology and Stratigraphy(32.00) | |
| | | Education Economics, Management and Social Security(44.00) | | Principles of Seismic Exploration(42.00) | |
| | | Land Resource Management and Administrative Management(41.18) | | Structural Geology(35.71) | |
| | | Social Medicine and Health Management(64.00) | | Geophysics(42.00) | Solid Earth Geophysics(54.00) |
| | Clinical Medicine(46.22) | Forensic Medicine(56.00) | | Space physics(30.00) | |
| | | Human Anatomy and Histology-Embryology(37.04) | | Advanced Algebra(36.14) | |
| | | Immunology(44.93) | | Combinatorial Mathematics(23.04) | |
| | | Pathogen Biology(39.36) | | Computational Mathematics(42.00) | |
| | | Pathology and Pathophysiology(40.00) | | Cryptography(60.00) | |
| Pharmacy(44.96) | Public Health and Preventive Medicine(53.08) | Radiation Medicine(64.00) | | Discrete Mathematics(25.84) | |
| | | Anesthesiology(44.00) | | Functions of Complex Variables(36.89) | |
| | | Clinical Laboratory Diagnostics(50.00) | | Functions of Real Variables(47.76) | |
| | | Dermatology and Venereology(50.00) | | Fundamental Mathematics(29.44) | |
| | | Emergency Medicine(42.42) | | Fuzzy Mathematics(40.00) | |
| | Stomatology(33.33) | Geriatric Medicine(52.00) | | Geometry and Topology(19.62) | |
| | | Imaging and Nuclear Medicine(37.31) | | Graph Theory(33.33) | |
| | | Internal Medicine(40.10) | | Group Theory(14.00) | |
| | | Neurology(54.50) | | Mathematical Analysis(25.35) | |
| | | Nursing and Rehabilitation Medicine(48.00) | | Number Theory(18.18) | |
| Military Science(47.80) | Traditional Chinese Medicine(32.46) | Obstetrics and Gynecology(33.33) | | Numerical Analysis(38.81) | |
| | | Oncology(53.45) | | Ordinary Differential Equations(38.75) | |
| | | Ophthalmology(42.00) | | Polynomials and Series Expansions(22.35) | |
| | | Otorhinolaryngology(58.00) | | Probability and Statistics(41.07) | |
| | | Pediatrics(48.00) | | Special Number Theory(36.00) | |
| | Philosophy(42.94) | Psychiatry and Mental Health(68.00) | | Stochastic Processes(58.00) | |
| | | Surgery(33.82) | | Hydrogeology(62.00) | |
| | | Medicinal Chemistry(40.00) | | Marine Biology(86.00) | |
| | | Microbiology and Biochemical Pharmacy(48.00) | | Marine Chemistry(70.00) | |
| | | Pharmaceutical Analysis(48.00) | | Underwater Acoustics(44.00) | |
| Sociology(48.25) | Systems Science(46.00) | Pharmacetics(41.10) | | Physical Oceanography(50.00) | |
| | | Pharmacology(49.09) | | Acoustics(24.08) | |
| | | Epidemiology and Health Statistics(40.96) | | Atomic and Molecular Physics(24.29) | |
| | | Health Toxicology and Environmental Health(55.00) | | Electrodynamics(22.30) | |
| | | Maternal, Child and Adolescent Health(64.56) | | Fluid Physics(20.15) | |
| | Sociology(48.25) | Nutrition and Food Hygiene(52.00) | | Particle and Nuclear Physics(26.22) | |
| | | Basic Stomatology(43.40) | | Polymer Physics(30.28) | |
| | | Clinical Stomatology(26.58) | | Quantum Mechanics(25.73) | |
| | | Traditional Chinese Medicine(40.68) | | Relativity(31.65) | |
| | | Traditional Chinese Medicine Theory(26.67) | | Semiconductor Physics(9.84) | |
| Philosophy(42.94) | Military Science(47.80) | Traditional Chinese Pharmacy(32.77) | | Solid State Physics(27.21) | |
| | | Military Command and Information Systems(52.00) | | Statistical Mechanics(40.00) | |
| | | Military Logistics and Equipment(44.44) | | Subatomic and Atomic Physics(35.29) | |
| | | Military Management(56.00) | | Thermodynamics(23.72) | |
| | | Military Thought and History(39.22) | | Thermodynamics and Statistical Physics(23.02) | |
| | Sociology(48.25) | Ethics(41.18) | | Systems Science(46.00) | |
| | | Logic(25.71) | | Sociology(48.25) | Demography and Anthropology(52.00) |
| | | Philosophical Aesthetics(42.20) | | Sociology(48.25) | Social and Folklore Studies(46.24) |
| | | Philosophy of Science and Technology(62.00) | | | |

Table 41. Continued: Model Scores Across Three Levels of Disciplines: Llama-3.1-70B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|--|--|----------------------------------|--|---|
| Agronomy(36.29) | Animal Husbandry(45.63) | Animal Nutrition and Feed Science(48.08) | Engineering(33.39) | Geological Resources and Geological Engineering(60.00) | Geological Resources and Geological Engineering(60.00) |
| | | Animal Rearing and Breeding(43.14) | | | Hydraulics and Hydrology(29.41) |
| | Aquaculture(17.86) | Aquaculture(17.86) | | Water conservancy and Hydropower Engineering(31.71) | Water conservancy and Hydropower Engineering(31.71) |
| | | Crop Science(31.72) | | | Antenna and Radio Communication(28.95) |
| | Forestry(38.17) | Forest Cultivation and Genetic Breeding(35.80) | | Communication Principles(39.66) | Communication Principles(39.66) |
| | | Landscape Plants and Ornamental Horticulture(42.00) | | | Communication and Information Systems(42.03) |
| | Veterinary Medicine(46.00) | Veterinary Medicine(46.00) | | Optical Fiber Communication(42.00) | Optical Fiber Communication(42.00) |
| | | Economic Statistics(46.00) | | | Signal and Information Processing(38.71) |
| | Economics(44.33) | Finance(46.02) | | Instrument Science and Technology(44.00) | Instrument Science and Technology(44.00) |
| | | Industrial Economics(42.86) | | | Materials Physics and Chemistry(24.62) |
| | | International Trade(49.28) | | Materials Science and Engineering(30.10) | Materials Processing Engineering(42.22) |
| | | Labor Economics(43.24) | | | Mechanical Engineering(39.20) |
| | | National and Defense Economics(34.00) | | Manufacturing Automation(38.89) | Manufacturing Automation(38.89) |
| | | Public Finance(47.50) | | | Mechatronic Engineering(40.00) |
| | | Quantitative Economics(34.00) | | Fundamentals of Dynamics and Control(19.60) | Fundamentals of Dynamics and Control(19.60) |
| | | Theoretical Economics(48.67) | | | Rigid Body Mechanics(17.92) |
| | | Economic History(54.00) | | Solid Mechanics(30.11) | Solid Mechanics(30.11) |
| | | Political Economy(44.00) | | | Theoretical Fluid Mechanics(35.00) |
| | | Western Economics(48.00) | | | Theoretical Mechanics(20.00) |
| Education(45.25) | Education(50.20) | Educational Technology and Principles(44.79) | Metallurgical Engineering(37.25) | Iron and Steel Metallurgy(30.48) | Iron and Steel Metallurgy(30.48) |
| | | Preschool Education(50.00) | | | Non-ferrous Metallurgy(28.00) |
| | Physical Education(45.33) | Special Education(62.00) | | Physical Chemistry of Metallurgical Process(42.00) | Physical Chemistry of Metallurgical Process(42.00) |
| | | Theory of Curriculum and Instruction(49.02) | | | Principles of Metallurgy(56.00) |
| | Psychology(31.03) | Physical Education and Training(28.00) | | Mineral Processing Engineering(54.00) | Mineral Processing Engineering(54.00) |
| | | Sports Humanities and Sociology(46.00) | | | Mining and Safety Engineering(52.00) |
| | | Sports Science and Medicine(62.00) | | Naval Architecture and Ocean Engineering(35.51) | Naval Architecture and Ocean Engineering(35.51) |
| | Psychology(31.03) | Psychology(31.03) | | | Marine Engineering(22.00) |
| | | Aeronautical and Astronautical Science and Technology(24.37) | | | Ship Mechanics and Design Principles(43.18) |
| Engineering(33.39) | Agricultural Engineering(44.23) | Agricultural Environment and Soil-Water Engineering(37.04) | | Nuclear Energy and Reactor Technology(26.32) | Nuclear Energy and Reactor Technology(26.32) |
| | | Agricultural Mechanization Engineering(52.00) | | | Radiation Protection and Nuclear Technology Applications(54.00) |
| | Architecture(43.21) | Architectural Design and Theory(36.00) | | Optical Engineering(26.06) | Applied Optics(25.00) |
| | | Architectural History(50.00) | | | Laser Technology(30.00) |
| | Chemical Engineering and Technology(23.17) | Urban Planning and Design(42.00) | | | Optoelectronic Technology(28.36) |
| | | Chemical Transport Engineering(18.00) | | | Theoretical Optics(24.44) |
| | | Elements of Chemical Reaction Engineering(25.23) | | Petroleum and Natural Gas Engineering(33.93) | Petroleum and Natural Gas Engineering(33.93) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(20.56) | | | Oil and Gas Field Development and Storage & Transportation Engineering(29.03) |
| | | Mass Transport and Separation Process in Chemical Engineering(25.34) | | | Poromechanics and Reservoir Physics(40.00) |
| | | Civil Engineering(30.17) | | | Engineering Fluid Mechanics(30.95) |
| Engineering(33.39) | Computer Science and Technology(43.64) | Bridge and Tunnel Engineering(23.53) | | | Engineering Thermophysics(22.60) |
| | | Geotechnical Engineering(26.82) | | Surveying and Mapping Science and Technology(49.40) | Fluid Machinery and Engineering(20.31) |
| | Control Science and Engineering(35.26) | Structural Engineering(31.58) | | | Heat Transfer(33.33) |
| | | Urban Infrastructure Engineering(42.25) | | | Internal Combustion Engineering(48.00) |
| | Electrical Engineering(21.94) | Advanced Programming Languages(62.00) | | | Power Machinery and Engineering(17.31) |
| | | Computer Architecture(38.00) | | | Refrigeration and Cryogenic Engineering(26.00) |
| | | Computer Networks(40.68) | | Textile Science and Engineering(47.00) | Thermal Energy Engineering(26.61) |
| | | Computer Software and Theory(51.90) | | | Cartography and Geographic Information Engineering(58.00) |
| | | Data Structures(23.23) | | | Digital Surveying and Remote Sensing Applications(45.59) |
| | | Databases(53.50) | | | Geodesy and Surveying Engineering(46.00) |
| Engineering(33.39) | Environmental Science and Engineering(40.74) | Formal Languages(28.85) | | | Textile Chemistry and Dyeing Engineering(34.00) |
| | | Operating Systems(31.76) | | | Textile Materials Science(60.00) |
| | Food Science and Engineering(53.21) | Pattern Recognition(78.00) | | Transportation Engineering(38.25) | Road and Railway Engineering(26.00) |
| | | Principles of Computer Organization(36.59) | | | Traffic Information Engineering and Control(29.23) |
| | Forestry Engineering(41.00) | Control Theory and Control Engineering(40.45) | | | Transportation Planning and Management(51.16) |
| | | Guidance, Navigation and Control(25.49) | | | Vehicle Operation Engineering(40.00) |
| | | Operations Research and Cybernetics(36.00) | | Weapon Science and Technology(44.00) | Weapon Science and Technology(44.00) |
| | Electronic Science and Technology(34.15) | Electrical Theory and New Technologies(18.42) | | | Military Chemistry and Pyrotechnics(52.00) |
| | | High Voltage and Insulation Technology(22.73) | | | Weapon Systems Science and Engineering(36.00) |
| Engineering(33.39) | Environmental Science and Engineering(40.74) | Power Electronics and Electrical Drives(25.27) | | History(31.31) | Archaeology and Museology(39.42) |
| | | Power Systems and Automation(21.88) | | | Historical Geography(26.76) |
| | Food Science and Engineering(53.21) | Circuits and Systems(43.52) | | | World History(30.84) |
| | | Electromagnetic Field and Microwave Technology(19.32) | | Law(44.21) | Civil and Commercial Law(40.68) |
| | | Microelectronics and Solid-State Electronics(40.00) | | | Constitutional and Administrative Law(58.00) |
| | Forestry Engineering(41.00) | Environmental Engineering(23.60) | | | Contract Law(48.00) |
| | | Environmental Science(62.00) | | | Criminal Law(45.69) |
| | | Environmental and Resource Protection(50.00) | | Law(45.85) | International Law(31.58) |
| | | Food Biochemistry(76.00) | | | Law and Social Governance(46.00) |
| | | Food Processing and Storage Engineering(33.90) | | | Legal Theory and Legal History(54.00) |
| | | Forest Engineering(34.00) | | | Military Law(68.00) |
| | | Wood Science and Technology(48.00) | | Political Science(29.23) | Procedural Law(30.00) |
| | | - | | | Political Science(29.23) |

Table 42. Model Scores Across Three Levels of Disciplines: Qwen2.5-72B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield | |
|----------------------------|---|--|------------------------|-------------------|--|--|
| Literature and Arts(35.50) | Art Studies(36.32) | Broadcasting and Television Art(38.00) | Philosophy(42.94) | Philosophy(42.94) | Religious Studies(56.00) | |
| | | Dance Studies(28.00) | | | Astronomical Observation and Technology(40.00) | |
| | | Design Arts(24.19) | | | Astrophysics(21.74) | |
| | | Drama and Opera Studies(41.46) | | | Cosmology(26.92) | |
| | | Film Studies(39.24) | | | Solar System Science(29.55) | |
| | Journalism and Communication(28.50) | Fine Arts(37.31) | | | Stellar and Interstellar Evolution(21.43) | |
| | | Communication and Broadcasting(31.03) | | | Atmospheric Physics and Atmospheric Environment(43.48) | |
| | | History and Theory of Journalism and Media Management(32.20) | | | Dynamic Meteorology(40.00) | |
| | | Journalism and News Practice(24.44) | | | Meteorology(32.14) | |
| | | Classical Chinese Literature(38.00) | | | Biochemistry and Molecular Biology(41.41) | |
| Management(43.51) | Language and Literature(41.14) | French Language and Literature(48.00) | | | Biophysics(48.00) | |
| | | Linguistics and Applied Linguistics(48.00) | | | Botany(26.51) | |
| | | Literary History(47.83) | | | Cell Biology(41.38) | |
| | | Literary Theory(40.62) | | | Ecology(29.17) | |
| | | Modern and Contemporary Chinese Literature(32.00) | | | Genetics(31.52) | |
| | Musicology(31.92) | Philology and Bibliography(42.00) | | | Microbiology(35.40) | |
| | | Russian Language and Literature(31.58) | | | Physiology(36.67) | |
| | | Composition(32.00) | | | Zoology(35.78) | |
| | | Harmony(23.33) | | | Chemistry(23.91) Analytical Chemistry(25.25) | |
| | | Instrumentation and Performance(36.92) | | | Electrochemistry(23.87) | |
| Medicine(43.12) | Business Administration(33.80) | Music History, Education, and Technology(31.03) | | | Inorganic Chemistry(25.36) | |
| | | Musical Forms and Analysis(46.00) | | | Organic Chemistry(25.73) | |
| | | Pitch and Scales(25.00) | | | Physical Chemistry(22.66) | |
| | | Business and Accounting Management(29.35) | | | Polymer Chemistry and Physics(22.37) | |
| | | Tourism Management and Technological Economics Management(42.00) | | | Radiochemistry(23.33) | |
| | Library, Information and Archival Management(45.33) | Information Management Science(28.00) | | | Geography(43.61) Human Geography(60.00) | |
| | | Information Management and Communication(72.00) | | | Physical Geography(33.73) | |
| | | Library and Archival Science(36.00) | | | Geology(36.36) Geochemistry(44.00) | |
| | | Management Science and Engineering(53.45) | | | Mineralogy, Petrology, and Economic Geology(41.32) | |
| | | Education Economics, Management and Social Security(40.00) | | | Paleontology and Stratigraphy(30.00) | |
| Medicine(43.12) | Public Administration(47.02) | Land Resource Management and Administrative Management(43.14) | | | Principles of Seismic Exploration(36.00) | |
| | | Social Medicine and Health Management(58.00) | | | Structural Geology(27.14) | |
| | | Forensic Medicine(42.00) | | | Geophysics(44.00) Solid Earth Geophysics(60.00) | |
| | | Human Anatomy and Histology-Embryology(40.21) | | | Space physics(28.00) | |
| | | Immunology(34.78) | | | Advanced Algebra(42.08) | |
| | Clinical Medicine(41.05) | Pathogen Biology(40.43) | | | Combinatorial Mathematics(20.94) | |
| | | Pathology and Pathophysiology(44.35) | | | Computational Mathematics(36.00) | |
| | | Radiation Medicine(64.00) | | | Cryptography(68.00) | |
| | | Anesthesiology(42.00) | | | Discrete Mathematics(17.98) | |
| | | Clinical Laboratory Diagnostics(38.00) | | | Functions of Complex Variables(36.07) | |
| Medicine(43.12) | Pharmacy(44.96) | Dermatology and Venereology(42.42) | | | Functions of Real Variables(29.85) | |
| | | Emergency Medicine(36.36) | | | Fundamental Mathematics(30.46) | |
| | | Geriatric Medicine(60.00) | | | Fuzzy Mathematics(36.00) | |
| | | Imaging and Nuclear Medicine(25.37) | | | Geometry and Topology(18.87) | |
| | | Internal Medicine(43.07) | | | Graph Theory(19.61) | |
| | Public Health and Preventive Medicine(43.84) | Neurology(35.98) | | | Group Theory(32.00) | |
| | | Nursing and Rehabilitation Medicine(44.00) | | | Mathematical Analysis(30.90) | |
| | | Obstetrics and Gynecology(41.18) | | | Number Theory(19.55) | |
| | | Oncology(41.38) | | | Numerical Analysis(25.37) | |
| | | Ophthalmology(34.00) | | | Ordinary Differential Equations(33.12) | |
| Medicine(43.12) | Pharmacy(44.96) | Otorhinolaryngology(38.00) | | | Polynomials and Series Expansions(28.49) | |
| | | Pediatrics(52.00) | | | Probability and Statistics(42.86) | |
| | | Psychiatry and Mental Health(56.00) | | | Special Number Theory(36.00) | |
| | | Surgery(41.18) | | | Stochastic Processes(58.00) | |
| | | Medicinal Chemistry(40.00) | | | Hydrogeology(66.00) | |
| | Public Health and Preventive Medicine(43.84) | Microbiology and Biochemical Pharmacy(42.00) | | | Marine Biology(80.00) | |
| | | Pharmaceutical Analysis(42.00) | | | Marine Chemistry(58.00) | |
| | | Pharmacetics(53.42) | | | Underwater Acoustics(36.00) | |
| | | Pharmacology(43.64) | | | Physical Oceanography(38.00) | |
| | | Epidemiology and Health Statistics(34.94) | | | Acoustics(20.00) | |
| Medicine(43.12) | Stomatology(37.88) | Health Toxicology and Environmental Health(41.25) | | | Atomic and Molecular Physics(23.33) | |
| | | Maternal, Child and Adolescent Health(43.04) | | | Electrodynamics(25.21) | |
| | | Nutrition and Food Hygiene(64.00) | | | Fluid Physics(31.34) | |
| | | Basic Stomatology(33.96) | | | Particle and Nuclear Physics(29.78) | |
| | | Clinical Stomatology(40.51) | | | Polymer Physics(23.85) | |
| | Traditional Chinese Medicine(53.36) | Traditional Chinese Health Preservation(57.63) | | | Quantum Mechanics(22.82) | |
| | | Traditional Chinese Medicine Theory(50.00) | | | Relativity(30.38) | |
| | | Traditional Chinese Pharmacy(53.78) | | | Semiconductor Physics(13.11) | |
| | | Military Science(46.34) | | | Solid State Physics(25.17) | |
| | | Military Command and Information Systems(46.00) | | | Statistical Mechanics(42.00) | |
| Military Science(46.34) | Philosophy(42.94) | Military Logistics and Equipment(38.89) | Systems Science(40.00) | Sociology(38.46) | Subatomic and Atomic Physics(29.41) | |
| | | Military Management(58.00) | | | Thermodynamics(25.58) | |
| | | Military Thought and History(43.14) | | | Thermodynamics and Statistical Physics(20.57) | |
| | | Ethics(41.18) | | | Systems Science(40.00) | |
| Philosophy(42.94) | | Logic(31.43) | | | Demography and Anthropology(54.00) | |
| | | Philosophical Aesthetics(36.70) | | | Social and Folklore Studies(30.11) | |
| | | Philosophy of Science and Technology(62.00) | | | | |

Table 42. Continued: Model Scores Across Three Levels of Disciplines: Qwen2.5-72B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|---------------------------------------|---|---|
| Agronomy(33.81) | Animal Husbandry(37.86) | Animal Nutrition and Feed Science(36.54) | Engineering(32.53) | Geological Resources and Geological Engineering(50.00) | Geological Resources and Geological Engineering(50.00) |
| | | Animal Rearing and Breeding(39.22) | | | Hydraulics and Hydrology(33.82) |
| | Aquaculture(26.79) | Aquaculture(26.79) | | Water conservancy and Hydropower Engineering(26.83) | Water conservancy and Hydropower Engineering(26.83) |
| | | Crop Science(26.21) | | | Antenna and Radio Communication(28.95) |
| | Forestry(38.93) | Forest Cultivation and Genetic Breeding(30.86) | | Communication Principles(30.17) | Communication Principles(30.17) |
| | | Landscape Plants and Ornamental Horticulture(52.00) | | | Communication and Information Systems(34.78) |
| | Veterinary Medicine(42.00) | Veterinary Medicine(42.00) | | Optical Fiber Communication(54.00) | Optical Fiber Communication(54.00) |
| | | Economic Statistics(50.00) | | | Signal and Information Processing(38.71) |
| | Economics(39.18) | Finance(30.11) | | Instrument Science and Technology(30.00) | Instrument Science and Technology(30.00) |
| | | Industrial Economics(47.62) | | | Materials Physics and Chemistry(28.14) |
| | | International Trade(43.48) | | Materials Processing Engineering(32.22) | Materials Processing Engineering(32.22) |
| | | Labor Economics(35.14) | | | Mechatronic Engineering(42.00) |
| | | National and Defense Economics(50.00) | | Manufacturing Automation(38.89) | Fundamentals of Dynamics and Control(24.78) |
| | | Public Finance(42.50) | | | Rigid Body Mechanics(19.08) |
| | | Quantitative Economics(37.00) | | Solid Mechanics(30.11) | Solid Mechanics(30.11) |
| | | Theoretical Economics(36.67) | | | Theoretical Fluid Mechanics(37.86) |
| | | Economic History(36.00) | | Theoretical Mechanics(20.00) | Theoretical Mechanics(20.00) |
| | | Political Economy(26.00) | | | Iron and Steel Metallurgy(15.24) |
| | | Western Economics(48.00) | | Non-ferrous Metallurgy(38.00) | Non-ferrous Metallurgy(38.00) |
| | Education(35.95) | Psychology(26.44) | | | Physical Chemistry of Metallurgical Process(42.00) |
| | | Educational Technology and Principles(34.38) | | Principles of Metallurgy(58.00) | Principles of Metallurgy(58.00) |
| | | Preschool Education(42.00) | | | Mining Engineering(38.00) |
| | | Special Education(40.00) | | Mineral Processing Engineering(36.00) | Mineral Processing Engineering(36.00) |
| | | Theory of Curriculum and Instruction(29.41) | | | Mining and Safety Engineering(40.00) |
| | | Physical Education and Training(34.00) | | Naval Architecture and Ocean Engineering(30.43) | Naval Architecture and Ocean Engineering(32.00) |
| | | Sports Humanities and Sociology(40.00) | | | Marine Engineering(32.00) |
| | | Sports Science and Medicine(50.00) | | Ship Mechanics and Design Principles(29.55) | Ship Mechanics and Design Principles(29.55) |
| | | Psychology(26.44) | | | Nuclear Energy and Reactor Technology(19.30) |
| Engineering(32.53) | Aeronautical and Astronautical Science and Technology(35.29) | Aeronautical and Astronautical Science and Technology(35.29) | Nuclear Science and Technology(31.78) | Radiation Protection and Nuclear Technology Applications(46.00) | Radiation Protection and Nuclear Technology Applications(46.00) |
| | | Agricultural Engineering(48.08) | | | Applied Optics(30.65) |
| | | Agricultural Environment and Soil-Water Engineering(42.59) | | Optical Engineering(26.86) | Laser Technology(36.00) |
| | | Agricultural Mechanization Engineering(54.00) | | | Optoelectronic Technology(26.87) |
| | Architecture(39.51) | Architectural Design and Theory(44.00) | | Theoretical Optics(20.00) | Theoretical Optics(20.00) |
| | | Architectural History(35.48) | | | Petroleum and Natural Gas Engineering(36.61) |
| | Chemical Engineering and Technology(24.88) | Urban Planning and Design(40.00) | | Oil and Gas Field Development and Storage & Transportation Engineering(25.81) | Oil and Gas Field Development and Storage & Transportation Engineering(25.81) |
| | | Chemical Transport Engineering(38.00) | | | Poromechanics and Reservoir Physics(50.00) |
| | | Elements of Chemical Reaction Engineering(27.10) | | Power Engineering and Engineering Thermophysics(29.97) | Engineering Fluid Mechanics(32.14) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(19.63) | | | Engineering Thermophysics(27.40) |
| | | Mass Transport and Separation Process in Chemical Engineering(22.60) | | Fluid Machinery and Engineering(23.44) | Fluid Machinery and Engineering(23.44) |
| | | Civil Engineering(27.93) | | | Heat Transfer(34.11) |
| | Computer Science and Technology(35.52) | Bridge and Tunnel Engineering(33.33) | | | Internal Combustion Engineering(46.00) |
| | | Geotechnical Engineering(25.14) | | Internal Combustion Engineering(46.00) | Power Machinery and Engineering(19.23) |
| | | Structural Engineering(26.32) | | | Refrigeration and Cryogenic Engineering(28.00) |
| | | Urban Infrastructure Engineering(32.39) | | Refrigeration and Cryogenic Engineering(28.00) | Thermal Energy Engineering(29.36) |
| | | Computer Science and Technology(35.52) | | | Cartography and Geographic Information Engineering(46.00) |
| | | Advanced Programming Languages(62.00) | | Digital Surveying and Remote Sensing Applications(30.88) | Digital Surveying and Remote Sensing Applications(30.88) |
| | | Computer Architecture(34.00) | | | Geodesy and Surveying Engineering(56.00) |
| | | Computer Networks(37.29) | | Textile Science and Engineering(50.00) | Textile Chemistry and Dyeing Engineering(46.00) |
| | | Computer Software and Theory(41.77) | | | Textile Materials Science(54.00) |
| | | Data Structures(27.27) | | Transportation Engineering(33.86) | Road and Railway Engineering(32.00) |
| | | Databases(33.12) | | | Traffic Information Engineering and Control(33.85) |
| | Control Science and Engineering(35.79) | Formal Languages(23.08) | | | Transportation Planning and Management(26.74) |
| | | Operating Systems(27.06) | | Vehicle Operation Engineering(48.00) | Vehicle Operation Engineering(48.00) |
| | | Pattern Recognition(68.00) | | | Weapon Science and Technology(45.00) |
| | | Principles of Computer Organization(24.39) | | Military Chemistry and Pyrotechnics(44.00) | Military Chemistry and Pyrotechnics(44.00) |
| | | Control Theory and Control Engineering(30.34) | | | Weapon Systems Science and Engineering(46.00) |
| | | Guidance, Navigation and Control(45.10) | | Archaeology and Museology(40.38) | Archaeology and Museology(40.38) |
| | | Operations Research and Cybernetics(36.00) | | | Historical Geography(36.62) |
| Electrical Engineering(25.18) | Electrical Engineering(25.18) | Electrical Theory and New Technologies(21.58) | History(36.05) | World History(34.81) | World History(34.81) |
| | | High Voltage and Insulation Technology(30.68) | | | Civil and Commercial Law(24.58) |
| | | Power Electronics and Electrical Drives(26.37) | | | Constitutional and Administrative Law(36.00) |
| | Electronic Science and Technology(34.55) | Power Systems and Automation(25.00) | | Contract Law(46.00) | Contract Law(46.00) |
| | | Circuits and Systems(29.63) | | | Criminal Law(34.48) |
| Environmental Science and Engineering(39.68) | Environmental Science and Engineering(39.68) | Electromagnetic Field and Microwave Technology(31.82) | | International Law(28.07) | International Law(28.07) |
| | | Microelectronics and Solid-State Electronics(50.00) | | | Law and Social Governance(40.00) |
| | | Environmental Engineering(23.60) | | Legal Theory and Legal History(56.00) | Legal Theory and Legal History(56.00) |
| | Food Science and Engineering(50.46) | Environmental Science(64.00) | | | Military Law(64.00) |
| | | Environmental and Resource Protection(44.00) | | Procedural Law(30.00) | Procedural Law(30.00) |
| Engineering(32.53) | Forestry Engineering(44.00) | Food Biochemistry(80.00) | | | Political Science(35.38) |
| | | Food Processing and Storage Engineering(25.42) | | Political Science(35.38) | Political Science(35.38) |
| | | Forest Engineering(44.00) | | | - |
| | | Wood Science and Technology(44.00) | | | - |

Table 43. Model Scores Across Three Levels of Disciplines: Yi-Lighting.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|--|--|------------------------|--|--|
| Literature and Arts(36.34) | Art Studies(35.66) | Broadcasting and Television Art(44.00) | Philosophy(37.75) | Philosophy(37.75) | Religious Studies(42.00) |
| | | Dance Studies(28.00) | | Astronomy(34.81) | Astronomical Observation and Technology(37.00) |
| | | Design Arts(37.10) | | Astrophysics(28.99) | Cosmology(38.46) |
| | | Drama and Opera Studies(29.27) | | Solar System Science(43.18) | Stellar and Interstellar Evolution(22.86) |
| | | Film Studies(39.24) | | Atmospheric Science(34.48) | Atmospheric Physics and Atmospheric Environment(34.78) |
| | Journalism and Communication(36.71) | Fine Arts(34.83) | | Dynamic Meteorology(36.00) | |
| | | Communication and Broadcasting(27.59) | | Biology(31.79) | Meteorology(33.33) |
| | Language and Literature(37.73) | History and Theory of Journalism and Media Management(38.98) | | Biochemistry and Molecular Biology(35.35) | BioPhysics(48.00) |
| | | Journalism and News Practice(41.11) | | Botany(30.72) | Cell Biology(33.33) |
| | | Classical Chinese Literature(32.00) | | Ecology(28.47) | Genetics(33.15) |
| | | French Language and Literature(54.00) | | Microbiology(29.81) | Microbiology(29.81) |
| | | Linguistics and Applied Linguistics(50.00) | | Physiology(30.00) | Physiology(30.00) |
| Management(38.12) | Business Administration(33.10) | Literary History(30.43) | | Zoology(28.44) | Zoology(28.44) |
| | | Literary Theory(32.81) | | Chemistry(27.13) | Analytical Chemistry(29.55) |
| | | Modern and Contemporary Chinese Literature(38.00) | | Electrochemistry(26.58) | Inorganic Chemistry(29.71) |
| | | Philology and Bibliography(40.00) | | Organic Chemistry(31.58) | Organic Chemistry(31.58) |
| | | Russian Language and Literature(29.82) | | Physical Chemistry(25.21) | Physical Chemistry(25.21) |
| | Musicology(35.68) | Composition(36.00) | | Polymer Chemistry and Physics(22.37) | Polymer Chemistry and Physics(22.37) |
| | | Harmony(33.33) | | Radiochemistry(23.33) | |
| | | Instrumentation and Performance(30.77) | | Geography(40.60) | Human Geography(58.00) |
| | | Music History, Education, and Technology(36.55) | | Geology(37.24) | Physical Geography(30.12) |
| | | Musical Forms and Analysis(42.00) | | Geology(37.24) | Geochemistry(44.00) |
| Medicine(36.95) | Clinical Medicine(38.18) | Pitch and Scales(35.71) | | Mineralogy, Petrology, and Economic Geology(33.06) | |
| | | Business and Accounting Management(31.52) | | Paleontology and Stratigraphy(24.00) | |
| | | Tourism Management and Technological Economics Management(36.00) | | Principles of Seismic Exploration(54.00) | |
| | | Information Management Science(22.00) | | Structural Geology(37.14) | |
| | | Information Management and Communication(64.00) | | Geophysics(41.00) | Solid Earth Geophysics(50.00) |
| | Public Administration(39.07) | Library and Archival Science(38.00) | | Mathematics(32.04) | Space physics(32.00) |
| | | Management Science and Engineering(39.66) | | | Advanced Algebra(35.64) |
| | | Education Economics, Management and Social Security(38.00) | | | Combinatorial Mathematics(29.84) |
| | | Land Resource Management and Administrative Management(37.25) | | | Computational Mathematics(34.00) |
| | | Social Medicine and Health Management(42.00) | | | Cryptography(60.00) |
| Pharmacy(35.25) | Clinical Medicine(38.18) | Forensic Medicine(38.00) | | | Discrete Mathematics(31.46) |
| | | Human Anatomy and Histology-Embryology(33.86) | | | Functions of Complex Variables(37.70) |
| | | Immunology(28.99) | | | Functions of Real Variables(32.84) |
| | | Pathogen Biology(31.91) | | | Fundamental Mathematics(36.55) |
| | | Pathology and Pathophysiology(33.04) | | | Fuzzy Mathematics(40.00) |
| | Public Health and Preventive Medicine(44.86) | Radiation Medicine(66.00) | | | Geometry and Topology(23.77) |
| | | Anesthesiology(56.00) | | | Graph Theory(25.49) |
| | | Clinical Laboratory Diagnostics(42.00) | | | Group Theory(24.00) |
| | | Dermatology and Venereology(39.39) | | | Mathematical Analysis(35.42) |
| | | Emergency Medicine(45.45) | | | Number Theory(22.73) |
| Military Science(42.44) | Pharmacy(35.25) | Geriatric Medicine(54.00) | | | Numerical Analysis(29.85) |
| | | Imaging and Nuclear Medicine(29.85) | | | Ordinary Differential Equations(29.38) |
| | | Internal Medicine(33.17) | | | Polynomials and Series Expansions(26.26) |
| | | Neurology(31.75) | | | Probability and Statistics(34.82) |
| | | Nursing and Rehabilitation Medicine(30.00) | | | Special Number Theory(36.00) |
| | Traditional Chinese Medicine(24.63) | Obstetrics and Gynecology(39.22) | | | Stochastic Processes(52.00) |
| | | Oncology(36.21) | | | Hydrogeology(66.00) |
| | | Ophthalmology(38.00) | | | Marine Biology(88.00) |
| | | Otorhinolaryngology(40.00) | | | Marine Chemistry(52.00) |
| | | Pediatrics(44.00) | | | Underwater Acoustics(46.00) |
| Philosophy(37.75) | Traditional Chinese Medicine(24.63) | Psychiatry and Mental Health(62.00) | | | Physical Oceanography(38.00) |
| | | Surgery(26.47) | | | Physics(26.75) |
| | | Medicinal Chemistry(44.00) | | | Atomic and Molecular Physics(28.10) |
| | | Microbiology and Biochemical Pharmacy(38.00) | | | Electrodynamics(25.73) |
| | | Pharmaceutical Analysis(42.00) | | | Fluid Physics(27.61) |
| | Military Science(42.44) | Pharmacuetics(30.14) | | | Particle and Nuclear Physics(28.44) |
| | | Pharmacology(25.45) | | | Polymer Physics(28.44) |
| | | Epidemiology and Health Statistics(42.17) | | | Quantum Mechanics(24.76) |
| | | Health Toxicology and Environmental Health(50.00) | | | Relativity(31.65) |
| | | Maternal, Child and Adolescent Health(37.97) | | | Semiconductor Physics(22.95) |
| Sociology(42.66) | Stomatology(33.33) | Nutrition and Food Hygiene(52.00) | | | Solid State Physics(28.57) |
| | | Basic Stomatology(32.08) | | | Statistical Mechanics(38.00) |
| | | Clinical Stomatology(34.18) | | | Subatomic and Atomic Physics(27.45) |
| | | Traditional Chinese Medicine(28.81) | | | Thermodynamics(28.84) |
| | | Traditional Chinese Medicine Theory(23.33) | | | Thermodynamics and Statistical Physics(24.72) |
| | Philosophy(37.75) | Traditional Chinese Pharmacy(23.53) | | | Systems Science(40.00) |
| | | Military Command and Information Systems(40.00) | | | Social and Folklore Studies(44.09) |
| | | Military Logistics and Equipment(33.33) | | | |
| | | Military Management(56.00) | | | |
| | | Military Thought and History(41.18) | | | |
| Philosophy(37.75) | Philosophy(37.75) | Ethics(29.41) | Systems Science(40.00) | | |
| | | Logic(30.00) | | | |
| | | Philosophical Aesthetics(37.61) | | | |
| | | Philosophy of Science and Technology(56.00) | | | |
| | | Sociology(42.66) | | | |

Table 43. Continued: Model Scores Across Three Levels of Disciplines: Yi-Lighting.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|--|---|
| Agronomy(38.76) | Animal Husbandry(34.95) | Animal Nutrition and Feed Science(36.54) | Engineering(32.70) | Geological Resources and Geological Engineering(62.00) | Geological Resources and Geological Engineering(62.00) |
| | | Animal Rearing and Breeding(33.33) | | | Hydraulics and Hydrology(25.00) |
| | Aquaculture(30.36) | Aquaculture(30.36) | | Hydraulic Engineering(26.15) | Water conservancy and Hydropower Engineering(28.05) |
| | | Crop Science(34.48) | | | Antenna and Radio Communication(23.68) |
| | Forestry(45.04) | Forest Cultivation and Genetic Breeding(39.51) | | Information and Communication Engineering(35.52) | Communication Principle(41.38) |
| | | Landscape Plants and Ornamental Horticulture(54.00) | | | Communication and Information Systems(42.03) |
| | Veterinary Medicine(52.00) | Veterinary Medicine(52.00) | | Optical Fiber Communication(40.00) | Optical Fiber Communication(40.00) |
| | | Economic Statistics(40.00) | | | Signal and Information Processing(35.48) |
| | Economics(40.89) | Finance(44.89) | | Instrument Science and Technology(30.00) | Instrument Science and Technology(30.00) |
| | | Industrial Economics(48.81) | | | Materials Physics and Chemistry(23.12) |
| | | International Trade(49.28) | | Mechanical Engineering(40.34) | Materials Processing Engineering(33.33) |
| | | Labor Economics(28.38) | | | Manufacturing Automation(39.68) |
| | | National and Defense Economics(38.00) | | Mechanics(23.90) | Mechatronic Engineering(42.00) |
| | | Public Finance(37.50) | | | Fundamentals of Dynamics and Control(22.77) |
| | | Quantitative Economics(35.00) | | | Rigid Body Mechanics(17.34) |
| | | Theoretical Economics(42.00) | | | Solid Mechanics(31.18) |
| | | Economic History(38.00) | | Metallurgical Engineering(38.04) | Theoretical Fluid Mechanics(39.29) |
| | | Political Economy(36.00) | | | Theoretical Mechanics(15.48) |
| Education(45.87) | Education(44.94) | Western Economics(52.00) | | | Iron and Steel Metallurgy(26.67) |
| | | Educational Technology and Principles(42.71) | | Mining Engineering(50.00) | Non-ferrous Metallurgy(40.00) |
| | Physical Education(49.33) | Preschool Education(52.00) | | | Physical Chemistry of Metallurgical Process(46.00) |
| | | Special Education(50.00) | | | Principles of Metallurgy(52.00) |
| | Psychology(42.53) | Theory of Curriculum and Instruction(37.25) | | Naval Architecture and Ocean Engineering(29.71) | Marine Engineering(18.00) |
| | | Physical Education and Training(36.00) | | | Ship Mechanics and Design Principles(36.36) |
| | | Sports Humanities and Sociology(48.00) | | Nuclear Science and Technology(40.19) | Nuclear Energy and Reactor Technology(24.56) |
| | | Sports Science and Medicine(64.00) | | | Radiation Protection and Nuclear Technology Applications(58.00) |
| | Engineering(32.70) | Psychology(42.53) | | Optical Engineering(25.27) | Applied Optics(23.39) |
| | | Aeronautical and Astronautical Science and Technology(25.21) | | | Laser Technology(24.00) |
| | | Agricultural Engineering(40.38) | | Petroleum and Natural Gas Engineering(38.39) | Optoelectronic Technology(23.88) |
| | | Agricultural Environment and Soil-Water Engineering(37.04) | | | Theoretical Optics(28.15) |
| | | Agricultural Mechanization Engineering(44.00) | | Power Engineering and Engineering Thermophysics(26.61) | Oil and Gas Field Development and Storage & Transportation Engineering(30.65) |
| | | Architecture(38.89) | | | Poromechanics and Reservoir Physics(48.00) |
| | | Architectural Design and Theory(30.00) | | | Engineering Fluid Mechanics(36.90) |
| | | Architectural History(45.16) | | | Engineering Thermophysics(22.60) |
| | | Urban Planning and Design(40.00) | | Surveying and Mapping Science and Technology(50.00) | Fluid Machinery and Engineering(14.06) |
| | | Chemical Transport Engineering(32.00) | | | Heat Transfer(31.01) |
| Control Science and Engineering(35.26) | Chemical Engineering and Technology(26.59) | Elements of Chemical Reaction Engineering(18.69) | | | Internal Combustion Engineering(38.00) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(28.97) | | | Power Machinery and Engineering(13.46) |
| | | Mass Transport and Separation Process in Chemical Engineering(28.77) | | Textile Science and Engineering(47.00) | Refrigeration and Cryogenic Engineering(28.00) |
| | | Civil Engineering(26.82) | | | Thermal Energy Engineering(26.61) |
| | | Bridge and Tunnel Engineering(19.61) | | Transportation Engineering(39.44) | Cartography and Geographic Information Engineering(62.00) |
| | | Geotechnical Engineering(24.02) | | | Digital Surveying and Remote Sensing Applications(42.65) |
| | | Structural Engineering(33.33) | | | Geodesy and Surveying Engineering(48.00) |
| | | Urban Infrastructure Engineering(33.80) | | | Textile Chemistry and Dyeing Engineering(34.00) |
| | Computer Science and Technology(41.28) | Computer Science and Technology(41.28) | | | Textile Materials Science(60.00) |
| | | Advanced Programming Languages(62.00) | | | Road and Railway Engineering(24.00) |
| | | Computer Architecture(36.00) | | | Traffic Information Engineering and Control(24.62) |
| | | Computer Networks(45.76) | | | Transportation Planning and Management(56.98) |
| | | Computer Software and Theory(40.51) | | Weapon Science and Technology(42.00) | Vehicle Operation Engineering(44.00) |
| | | Data Structures(23.23) | | | Military Chemistry and Pyrotechnics(50.00) |
| | | Databases(46.50) | | | Weapon Systems Science and Engineering(34.00) |
| | | Formal Languages(25.00) | | History(28.49) | Archaeology and Museology(39.42) |
| | | Operating Systems(37.65) | | | Historical Geography(20.42) |
| Engineering(32.70) | Electrical Engineering(25.18) | Pattern Recognition(74.00) | | | World History(28.50) |
| | | Principles of Computer Organization(35.37) | | Law(39.94) | Civil and Commercial Law(37.29) |
| | | Control Theory and Control Engineering(40.45) | | | Constitutional and Administrative Law(34.00) |
| | | Guidance, Navigation and Control(33.33) | | Law(41.12) | Contract Law(44.00) |
| | | Operations Research and Cybernetics(28.00) | | | Criminal Law(39.66) |
| | | Electrical Engineering(25.18) | | Political Science(29.23) | International Law(35.09) |
| | | Electrical Theory and New Technologies(25.26) | | | Law and Social Governance(44.00) |
| | | High Voltage and Insulation Technology(27.27) | | | Legal Theory and Legal History(54.00) |
| | | Power Electronics and Electrical Drives(23.63) | | | Military Law(62.00) |
| | | Power Systems and Automation(26.04) | | | Procedural Law(28.00) |
| Electronic Science and Technology(30.08) | Electronic Science and Technology(30.08) | Circuits and Systems(32.41) | | | Political Science(29.23) |
| | | Electromagnetic Field and Microwave Technology(20.45) | | | - |
| | | Microelectronics and Solid-State Electronics(42.00) | | - | - |
| | Environmental Science and Engineering(40.74) | Environmental Engineering(26.97) | | | - |
| | | Environmental Science(58.00) | | | - |
| | Food Science and Engineering(54.13) | Environmental and Resource Protection(48.00) | | - | - |
| | | Food Biochemistry(82.00) | | | - |
| | Forestry Engineering(40.00) | Food Processing and Storage Engineering(30.51) | | - | - |
| | | Forest Engineering(42.00) | | | - |
| | | Wood Science and Technology(38.00) | | | - |

Table 44. Model Scores Across Three Levels of Disciplines: Qwen2.5-32B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|--|--|-------------------|--|--|
| Literature and Arts(30.91) | Art Studies(29.02) | Broadcasting and Television Art(34.00) | Philosophy(43.52) | Philosophy(43.52) | Religious Studies(50.00) |
| | | Dance Studies(18.00) | | Astronomy(30.12) | Astronomical Observation and Technology(38.00) |
| | | Design Arts(19.35) | | Astrophysics(24.64) | Cosmology(35.90) |
| | | Drama and Opera Studies(34.15) | | Solar System Science(29.55) | Stellar and Interstellar Evolution(18.57) |
| | | Film Studies(35.44) | | Atmospheric Science(37.93) | Atmospheric Physics and Atmospheric Environment(43.48) |
| | Journalism and Communication(24.15) | Fine Arts(26.37) | | Dynamic Meteorology(36.00) | |
| | | Communication and Broadcasting(18.97) | | Meteorology(34.52) | |
| | Language and Literature(38.18) | History and Theory of Journalism and Media Management(35.59) | Biology(32.50) | Biochemistry and Molecular Biology(34.34) | |
| | | Journalism and News Practice(20.00) | | Biophysics(46.00) | |
| | | Classical Chinese Literature(48.00) | | Botany(27.71) | |
| | | French Language and Literature(52.00) | | Cell Biology(40.23) | |
| | | Linguistics and Applied Linguistics(44.00) | | Ecology(31.94) | |
| Management(40.72) | Musicology(29.34) | Literary History(26.09) | | Genetics(36.41) | |
| | | Literary Theory(40.62) | | Microbiology(29.19) | |
| | | Modern and Contemporary Chinese Literature(32.00) | | Physiology(30.83) | |
| | | Philology and Bibliography(36.00) | | Zoology(26.61) | |
| | | Russian Language and Literature(31.58) | | Chemistry(22.72) | |
| | | Composition(28.00) | | Analytical Chemistry(23.99) | |
| | | Harmony(25.00) | | Electrochemistry(18.02) | |
| | | Instrumentation and Performance(35.38) | | Inorganic Chemistry(26.81) | |
| | | Music History, Education, and Technology(28.97) | | Organic Chemistry(29.24) | |
| | | Musical Forms and Analysis(32.00) | | Physical Chemistry(22.10) | |
| | Business Administration(35.92) | Pitch and Scales(26.79) | | Polymer Chemistry and Physics(15.79) | |
| | | Business and Accounting Management(34.78) | | Radiochemistry(20.00) | |
| | | Tourism Management and Technological Economics Management(38.00) | | Geography(36.84) | Human Geography(56.00) |
| | | Library, Information and Archival Management(40.67) | | Physical Geography(25.30) | |
| | | Information Management Science(22.00) | | Geology(35.78) | Geochemistry(46.00) |
| Medicine(38.84) | Management Science and Engineering(39.66) | Information Management and Communication(58.00) | | Mineralogy, Petrology, and Economic Geology(33.88) | |
| | | Library and Archival Science(42.00) | | Paleontology and Stratigraphy(24.00) | |
| | | Management Science and Engineering(39.66) | | Principles of Seismic Exploration(32.00) | |
| | | Education Economics, Management and Social Security(36.00) | | Structural Geology(42.86) | |
| | | Land Resource Management and Administrative Management(39.22) | | Geophysics(44.00) | Solid Earth Geophysics(62.00) |
| | Public Administration(45.70) | Social Medicine and Health Management(62.00) | | Space physics(26.00) | |
| | | Forensic Medicine(34.00) | | Advanced Algebra(45.54) | |
| | | Human Anatomy and Histology-Embryology(36.51) | | Combinatorial Mathematics(16.75) | |
| | | Immunology(40.58) | | Computational Mathematics(42.00) | |
| | | Pathogen Biology(37.23) | | Cryptography(60.00) | |
| Clinical Medicine(39.41) | Clinical Medicine(39.41) | Pathology and Pathophysiology(41.74) | | Discrete Mathematics(22.47) | |
| | | Radiation Medicine(62.00) | | Functions of Complex Variables(45.90) | |
| | | Anesthesiology(46.00) | | Functions of Real Variables(38.81) | |
| | | Clinical Laboratory Diagnostics(32.00) | | Fundamental Mathematics(31.98) | |
| | | Dermatology and Venereology(37.88) | | Fuzzy Mathematics(38.00) | |
| | Pharmacy(34.89) | Emergency Medicine(40.91) | | Geometry and Topology(18.49) | |
| | | Geriatric Medicine(58.00) | | Graph Theory(21.57) | |
| | | Imaging and Nuclear Medicine(31.34) | | Group Theory(28.00) | |
| | | Internal Medicine(42.57) | | Mathematical Analysis(32.64) | |
| | | Neurology(32.28) | | Number Theory(18.64) | |
| Pharmacy(34.89) | Pharmacy(34.89) | Nursing and Rehabilitation Medicine(46.00) | | Numerical Analysis(26.87) | |
| | | Obstetrics and Gynecology(38.24) | | Ordinary Differential Equations(37.50) | |
| | | Oncology(36.21) | | Polynomials and Series Expansions(27.37) | |
| | | Ophthalmology(28.00) | | Probability and Statistics(47.77) | |
| | | Otorhinolaryngology(30.00) | | Special Number Theory(22.00) | |
| | Public Health and Preventive Medicine(38.36) | Pediatrics(50.00) | | Stochastic Processes(58.00) | |
| | | Psychiatry and Mental Health(56.00) | | Hydrogeology(70.00) | |
| | | Surgery(39.71) | | Marine Biology(74.00) | |
| | | Medicinal Chemistry(24.00) | | Marine Chemistry(54.00) | |
| | | Microbiology and Biochemical Pharmacy(36.00) | | Underwater Acoustics(42.00) | |
| Stomatology(32.58) | Traditional Chinese Medicine(41.04) | Pharmaceutical Analysis(40.00) | | Physical Oceanography(44.00) | Physical Oceanography(44.00) |
| | | Pharmacuetics(39.73) | | Physics(25.13) | Acoustics(24.90) |
| | | Pharmacology(32.73) | | | |
| | | Epidemiology and Health Statistics(32.53) | | | |
| | | Health Toxicology and Environmental Health(37.50) | | | |
| | Stomatology(32.58) | Maternal, Child and Adolescent Health(31.65) | | | |
| | | Nutrition and Food Hygiene(60.00) | | | |
| | | Basic Stomatology(28.30) | | | |
| | | Clinical Stomatology(35.44) | | | |
| | | Traditional Chinese Medicine(52.54) | | | |
| Military Science(47.80) | Military Science(47.80) | Traditional Chinese Medicine Theory(37.78) | | | |
| | | Traditional Chinese Pharmacy(37.82) | | | |
| | | Military Command and Information Systems(52.00) | | | |
| | | Military Logistics and Equipment(33.33) | | | |
| | | Military Management(64.00) | | | |
| | Philosophy(43.52) | Military Thought and History(43.14) | | | |
| | | Ethics(41.18) | | | |
| | | Logic(37.14) | | | |
| | | Philosophical Aesthetics(41.28) | | | |
| | | Philosophy of Science and Technology(54.00) | | | |
| Philosophy(43.52) | Philosophy(43.52) | Systems Science(36.00) | Sociology(39.86) | Demography and Anthropology(50.00) | |
| | | | | Social and Folklore Studies(34.41) | |
| | | | | | |

Table 44. Continued: Model Scores Across Three Levels of Disciplines: Qwen2.5-32B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--|--|--|
| Agronomy(28.66) | Animal Husbandry(26.21) | Animal Nutrition and Feed Science(21.15) Animal Rearing and Breeding(31.37) | Engineering(31.87) | Geological Resources and Geological Engineering(50.00) Geological Engineering(50.00) | Geological Resources and Geological Engineering(50.00) |
| | Aquaculture(26.79) Crop Science(29.66) | Aquaculture(26.79) Crop Science(29.66) | | Hydraulic Engineering(35.78) | Hydraulics and Hydrology(36.03) Water conservancy and Hydropower Engineering(35.37) |
| | Forestry(30.53) | Forest Cultivation and Genetic Breeding(22.22) Landscape Plants and Ornamental Horticulture(44.00) | Information and Communication Engineering(37.30) | Antenna and Radio Communication(25.44) Communication Principles(34.48) Communication and Information Systems(40.58) | Antenna and Radio Communication(25.44) |
| Economics(35.17) | Veterinary Medicine(28.00) | Veterinary Medicine(28.00) | | Optical Fiber Communication(52.00) Signal and Information Processing(41.94) | Optical Fiber Communication(52.00) |
| | Applied Economics(33.20) | Economic Statistics(36.00) Finance(34.09) Industrial Economics(38.10) International Trade(39.13) Labor Economics(29.73) National and Defense Economics(38.00) Public Finance(25.83) Quantitative Economics(31.00) | Instrument Science and Technology(18.00) Materials Science and Engineering(26.64) | Instrument Science and Technology(18.00) Materials Physics and Chemistry(25.13) | Instrument Science and Technology(18.00) |
| | Theoretical Economics(44.67) | Economic History(52.00) Political Economy(36.00) Western Economics(46.00) | Mechanics(27.09) | Rigid Body Mechanics(22.54) Solid Mechanics(24.73) Theoretical Fluid Mechanics(38.57) Theoretical Mechanics(27.10) | Mechanics(27.09) |
| Education(39.05) | Education(40.08) | Educational Technology and Principles(39.58) Preschool Education(38.00) Special Education(44.00) Theory of Curriculum and Instruction(39.22) | Metallurgical Engineering(31.37) | Iron and Steel Metallurgy(22.86) Non-ferrous Metallurgy(32.00) Physical Chemistry of Metallurgical Process(36.00) Principles of Metallurgy(44.00) | Metallurgical Engineering(31.37) |
| | Physical Education(38.67) | Physical Education and Training(28.00) Sports Humanities and Sociology(42.00) Sports Science and Medicine(46.00) | Mining Engineering(40.00) | Mineral Processing Engineering(36.00) Mining and Safety Engineering(44.00) | Mining Engineering(40.00) |
| | Psychology(36.78) | Psychology(36.78) | Naval Architecture and Ocean Engineering(27.54) | Marine Engineering(28.00) | Naval Architecture and Ocean Engineering(27.54) |
| Engineering(31.87) | Aeronautical and Astronautical Science and Technology(24.37) Agricultural Engineering(34.62) | Aeronautical and Astronautical Science and Technology(24.37) Agricultural Environment and Soil-Water Engineering(38.89) Agricultural Mechanization Engineering(30.00) | Nuclear Science and Technology(31.78) | Ship Mechanics and Design Principles(27.27) Nuclear Energy and Reactor Technology(17.54) | Nuclear Science and Technology(31.78) |
| | Architecture(37.04) | Architectural Design and Theory(40.00) Architectural History(41.94) Urban Planning and Design(28.00) | Optical Engineering(28.72) | Radiation Protection and Nuclear Technology Applications(48.00) Applied Optics(31.45) | Optical Engineering(28.72) |
| | Chemical Engineering and Technology(26.10) | Chemical Transport Engineering(30.00) Elements of Chemical Reaction Engineering(26.17) Fluid Flow and Heat Transfer in Chemical Engineering(24.30) Mass Transport and Separation Process in Chemical Engineering(26.03) | Petroleum and Natural Gas Engineering(31.25) | Laser Technology(28.00) Optoelectronic Technology(31.34) Theoretical Optics(25.19) | Petroleum and Natural Gas Engineering(31.25) |
| | Civil Engineering(25.70) | Bridge and Tunnel Engineering(25.49) Geotechnical Engineering(21.23) Structural Engineering(26.32) Urban Infrastructure Engineering(36.62) | Power Engineering and Engineering Thermodynamics(25.15) | Oil and Gas Field Development and Storage & Transportation Engineering(25.81) Poromechanics and Reservoir Physics(38.00) Engineering Fluid Mechanics(23.81) | Power Engineering and Engineering Thermodynamics(25.15) |
| | Computer Science and Technology(38.93) | Advanced Programming Languages(52.00) Computer Architecture(52.00) Computer Networks(30.51) | | Engineering Thermophysics(21.23) | |
| | | Computer Software and Theory(40.51) Data Structures(32.32) Databases(45.86) | | Fluid Machinery and Engineering(25.00) Heat Transfer(35.66) Internal Combustion Engineering(36.00) Power Machinery and Engineering(15.38) | |
| | | Formal Languages(26.92) Operating Systems(29.41) Pattern Recognition(54.00) | | Refrigeration and Cryogenic Engineering(24.00) | |
| | Control Science and Engineering(36.32) | Principles of Computer Organization(30.49) Control Theory and Control Engineering(44.94) | | Thermal Energy Engineering(19.27) Cartography and Geographic Information Engineering(34.00) | |
| | | Guidance, Navigation and Control(35.29) | | Digital Surveying and Remote Sensing Applications(32.35) Geodesy and Surveying Engineering(46.00) | |
| | | Operations Research and Cybernetics(22.00) | | Textile Chemistry and Dyeing Engineering(34.00) | |
| Electrical Engineering(24.82) | Electrical Theory and New Technologies(26.84) High Voltage and Insulation Technology(23.86) Power Electronics and Electrical Drives(23.08) | History(30.12) | | Textile Materials Science(56.00) | |
| | | Power Systems and Automation(25.00) | Law(37.20) | Transportation Engineering(36.25) | |
| Electronic Science and Technology(36.59) | Circuits and Systems(38.89) | | | Road and Railway Engineering(28.00) Traffic Information Engineering and Control(35.38) Transportation Planning and Management(39.53) Vehicle Operation Engineering(40.00) | |
| | | Electromagnetic Field and Microwave Technology(25.00) Microelectronics and Solid-State Electronics(52.00) | | Weapon Science and Technology(38.00) | |
| Environmental Science and Engineering(38.62) | Environmental Engineering(28.09) | | | Military Chemistry and Pyrotechnics(38.00) | |
| Food Science and Engineering(46.79) | Environmental Science(50.00) Environmental and Resource Protection(46.00) Food Biochemistry(70.00) | | | Weapon Systems Science and Engineering(38.00) | |
| Forestry Engineering(41.00) | Food Processing and Storage Engineering(27.12) Forest Engineering(42.00) | | History(30.12) | Archaeology and Museology(47.12) Historical Geography(25.35) World History(27.57) | |
| Engineering(31.87) | Forestry Engineering(41.00) | Wood Science and Technology(40.00) | Law(37.20) | Law(37.39) | Civil and Commercial Law(32.20) Constitutional and Administrative Law(40.00) |
| | | | | | Contract Law(44.00) Criminal Law(29.31) |
| | | | | | International Law(22.81) |
| | | | | | Law and Social Governance(44.00) Legal Theory and Legal History(52.00) |
| | | | | | Military Law(66.00) |
| | | | | | Procedural Law(26.00) |
| | | | | | Political Science(35.38) |

Table 45. Model Scores Across Three Levels of Disciplines: DeepSeek-V3-Base.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|----------------------------|--|
| Literature and Arts(33.65) | Art Studies(33.33) | Broadcasting and Television Art(38.00) | Philosophy(38.62) | Philosophy(38.62) | Religious Studies(50.00) |
| | | Dance Studies(32.00) | Science(30.08) | Astronomy(33.33) | Astronomical Observation and Technology(37.00) |
| | | Design Arts(19.35) | | | Astrophysics(33.33) |
| | | Drama and Opera Studies(28.05) | | | Cosmology(30.77) |
| | | Film Studies(40.51) | | | Solar System Science(34.09) |
| | | Fine Arts(33.33) | | | Stellar and Interstellar Evolution(30.00) |
| | Journalism and Communication(29.47) | Communication and Broadcasting(34.48) | | Atmospheric Science(34.98) | Atmospheric Physics and Atmospheric Environment(31.88) |
| | | History and Theory of Journalism and Media Management(28.81) | | | Dynamic Meteorology(60.00) |
| | Language and Literature(41.14) | Journalism and News Practice(26.67) | Biology(33.84) | | Meteorology(22.62) |
| | | Classical Chinese Literature(30.00) | | | Biochemistry and Molecular Biology(37.37) |
| Management(37.33) | | French Language and Literature(50.00) | | | Biophysics(50.00) |
| | | Linguistics and Applied Linguistics(50.00) | | | Botany(30.72) |
| | | Literary History(26.09) | | | Cell Biology(39.08) |
| | | Literary Theory(46.88) | | | Ecology(40.28) |
| | | Modern and Contemporary Chinese Literature(48.00) | | | Genetics(32.07) |
| | | Philology and Bibliography(36.00) | | | Microbiology(30.43) |
| | | Russian Language and Literature(45.61) | | | Physiology(33.33) |
| | Musicology(28.40) | Composition(28.00) | Chemistry(23.40) | | Zoology(23.85) |
| | | Harmony(20.00) | | | Analytical Chemistry(27.53) |
| | | Instrumentation and Performance(36.92) | | | Electrochemistry(19.37) |
| Business Administration(35.92) | | Music History, Education, and Technology(25.52) | | | Inorganic Chemistry(23.19) |
| | | Musical Forms and Analysis(36.00) | | | Organic Chemistry(25.15) |
| | | Pitch and Scales(28.57) | | | Physical Chemistry(21.81) |
| | | Business and Accounting Management(36.96) | | | Polymer Chemistry and Physics(25.00) |
| | | Tourism Management and Technological Economics Management(34.00) | | | Radiochemistry(23.33) |
| | Library, Information and Archival Management(41.33) | Information Management Science(20.00) | Geography(42.86) | | Human Geography(54.00) |
| | | Information Management and Communication(64.00) | | | Physical Geography(36.14) |
| | | Library and Archival Science(40.00) | Geology(32.26) | | Geochemistry(40.00) |
| | Management Science and Engineering(41.38) | Management Science and Engineering(41.38) | | | Mineralogy, Petrology, and Economic Geology(32.23) |
| | Public Administration(33.11) | Education Economics, Management and Social Security(26.00) | | | Paleontology and Stratigraphy(30.00) |
| Medicine(34.70) | | Land Resource Management and Administrative Management(37.25) | | | Principles of Seismic Exploration(26.00) |
| | | Social Medicine and Health Management(36.00) | | | Structural Geology(32.86) |
| | Basic Medicine(37.92) | Forensic Medicine(46.00) | Geophysics(42.00) | | Solid Earth Geophysics(48.00) |
| | | Human Anatomy and Histology-Embryology(38.62) | | | Space physics(36.00) |
| | | Immunology(33.33) | | | Advanced Algebra(39.11) |
| | | Pathogen Biology(35.11) | | | Combinatorial Mathematics(21.99) |
| | | Pathology and Pathophysiology(29.57) | | | Computational Mathematics(44.00) |
| | | Radiation Medicine(58.00) | | | Cryptography(46.00) |
| | Clinical Medicine(33.00) | Anesthesiology(34.00) | | | Discrete Mathematics(20.22) |
| | | Clinical Laboratory Diagnostics(40.00) | | | Functions of Complex Variables(40.98) |
| Pharmacy(34.53) | | Dermatology and Venereology(30.30) | | | Functions of Real Variables(43.28) |
| | | Emergency Medicine(27.27) | | | Fundamental Mathematics(35.53) |
| | | Geriatric Medicine(52.00) | | | Fuzzy Mathematics(54.00) |
| | | Imaging and Nuclear Medicine(28.36) | | | Geometry and Topology(24.15) |
| | | Internal Medicine(35.64) | | | Graph Theory(35.29) |
| | | Neurology(32.28) | | | Group Theory(30.00) |
| | | Nursing and Rehabilitation Medicine(38.00) | | | Mathematical Analysis(31.94) |
| | | Obstetrics and Gynecology(29.41) | | | Number Theory(19.09) |
| | | Oncology(31.03) | | | Numerical Analysis(32.84) |
| | | Ophthalmology(22.00) | | | Ordinary Differential Equations(41.25) |
| Public Health and Preventive Medicine(41.10) | | Otorhinolaryngology(34.00) | | | Polynomials and Series Expansions(29.61) |
| | | Pediatrics(30.00) | | | Probability and Statistics(41.52) |
| | | Psychiatry and Mental Health(44.00) | | | Special Number Theory(32.00) |
| | | Surgery(25.00) | | | Stochastic Processes(50.00) |
| | | Medicinal Chemistry(38.00) | | | Hydrogeology(60.00) |
| | | Microbiology and Biochemical Pharmacy(30.00) | | | Marine Biology(70.00) |
| | | Pharmaceutical Analysis(30.00) | | | Marine Chemistry(64.00) |
| | | Pharmacetics(32.88) | | | Underwater Acoustics(32.00) |
| | | Pharmacology(41.82) | | | Physical Oceanography(40.00) |
| | | Epidemiology and Health Statistics(36.14) | | | Acoustics(26.12) |
| Stomatology(33.33) | | Health Toxicology and Environmental Health(36.25) | | | |
| | | Maternal, Child and Adolescent Health(39.24) | | | |
| | | Nutrition and Food Hygiene(60.60) | | | |
| | | Basic Stomatology(37.74) | | | |
| | | Clinical Stomatology(30.38) | | | |
| | Traditional Chinese Medicine(29.48) | Traditional Chinese Health Preservation(49.15) | | | |
| | | Traditional Chinese Medicine Theory(22.22) | | | |
| | | Traditional Chinese Pharmacy(25.21) | | | |
| | Military Science(37.07) | Military Command and Information Systems(42.00) | | | |
| | | Military Logistics and Equipment(25.93) | | | |
| Philosophy(38.62) | | Military Management(38.00) | | | |
| | | Military Thought and History(43.14) | | | |
| | Philosophy(38.62) | Ethics(41.18) | Sociology(37.76) | Sociology(37.76) | Demography and Anthropology(46.00) |
| | | Logic(27.14) | | | Social and Folklore Studies(33.33) |
| | | Philosophical Aesthetics(32.11) | | | |
| | | Philosophy of Science and Technology(54.00) | | | |

Table 45. Continued: Model Scores Across Three Levels of Disciplines: DeepSeek-V3-Base.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|---|---|--|--|--|
| Agronomy(34.02) | Animal Husbandry(35.92) | Animal Nutrition and Feed Science(38.46) Animal Rearing and Breeding(33.33) | Engineering(30.26) | Geological Resources and Geological Engineering(44.00) Hydraulic Engineering(29.36) | Geological Resources and Geological Engineering(44.00) Hydraulics and Hydrology(27.21) Water conservancy and Hydropower Engineering(32.93) Antenna and Radio Communication(26.32) |
| | Aquaculture(19.64) Crop Science(32.41) | Aquaculture(19.64) Crop Science(32.41) | Information and Communication Engineering(34.33) | | Communication Principles(40.52) Communication and Information Systems(33.33) Optical Fiber Communication(34.00) Signal and Information Processing(36.13) |
| | Forestry(36.64) | Forest Cultivation and Genetic Breeding(39.51) Landscape Plants and Ornamental Horticulture(32.00) | | | Instrument Science and Technology(38.00) |
| Economics(34.82) | Veterinary Medicine(44.00) | Veterinary Medicine(44.00) | | Materials Science and Engineering(24.57) | Materials Physics and Chemistry(25.63) Materials Processing Engineering(22.22) |
| | Applied Economics(34.16) | Economic Statistics(36.00) Finance(33.52) | | Mechanical Engineering(39.20) | Manufacturing Automation(35.71) Mechatronic Engineering(48.00) Fundamentals of Dynamics and Control(19.60) Rigid Body Mechanics(21.97) Solid Mechanics(26.88) |
| | | Industrial Economics(39.29) | | Mechanics(23.13) | Theoretical Fluid Mechanics(32.14) Theoretical Mechanics(21.94) |
| | | International Trade(50.72) Labor Economics(29.73) | | Metallurgical Engineering(29.80) | Iron and Steel Metallurgy(16.19) Non-ferrous Metallurgy(28.00) Physical Chemistry of Metallurgical Process(42.00) Principles of Metallurgy(48.00) |
| | | National and Defense Economics(32.00) Public Finance(31.67) | | Mining Engineering(45.00) | Mineral Processing Engineering(44.00) Mining and Safety Engineering(46.00) |
| | | Quantitative Economics(26.00) | | Naval Architecture and Ocean Engineering(27.54) | Marine Engineering(16.00) |
| | | Theoretical Economics(38.00) Economic History(38.00) | | | Ship Mechanics and Design Principles(34.09) |
| | | Political Economy(26.00) | | | Nuclear Energy and Reactor Technology(22.81) |
| | | Western Economics(50.00) | | | Radiation Protection and Nuclear Technology Applications(56.00) |
| Education(40.08) | Education(41.30) | Educational Technology and Principles(38.54) Preschool Education(46.00) Special Education(50.00) | | | Optical Engineering(24.47) |
| | Physical Education(46.67) | Theory of Curriculum and Instruction(33.33) Physical Education and Training(38.00) Sports Humanities and Sociology(46.00) | | | Applied Optics(24.19) |
| | | Sports Science and Medicine(56.00) | | | Laser Technology(30.00) Optoelectronic Technology(29.85) Theoretical Optics(20.00) |
| | Psychology(25.29) | Psychology(25.29) | | | Petroleum and Natural Gas Engineering(36.61) |
| Engineering(30.26) | Aeronautical and Astronautical Science and Technology(24.37) Agricultural Engineering(37.50) | Aeronautical and Astronautical Science and Technology(24.37) Agricultural Environment and Soil-Water Engineering(33.33) Agricultural Mechanization Engineering(42.00) | | | Oil and Gas Field Development and Storage & Transportation Engineering(35.48) Poromechanics and Reservoir Physics(38.00) Engineering Fluid Mechanics(26.19) |
| | Architecture(37.65) | Architectural Design and Theory(32.00) Architectural History(37.10) | | | Power Engineering and Engineering Thermodynamics(25.73) |
| | Chemical Engineering and Technology(22.20) | Urban Planning and Design(44.00) Chemical Transport Engineering(20.00) | | | Engineering Thermophysics(22.60) |
| | | Elements of Chemical Reaction Engineering(16.82) Fluid Flow and Heat Transfer in Chemical Engineering(20.56) | | | Fluid Machinery and Engineering(20.31) Heat Transfer(31.78) Internal Combustion Engineering(34.00) Power Machinery and Engineering(21.15) |
| | | Mass Transport and Separation Process in Chemical Engineering(28.08) | | | Refrigeration and Cryogenic Engineering(18.00) |
| | Civil Engineering(27.37) | Bridge and Tunnel Engineering(31.37) Geotechnical Engineering(24.02) Structural Engineering(28.07) | | | Surveying and Mapping Science and Technology(42.86) |
| | | Urban Infrastructure Engineering(32.39) | | | Thermal Energy Engineering(27.52) Cartography and Geographic Information Engineering(50.00) |
| | Computer Science and Technology(35.91) | Advanced Programming Languages(52.00) Computer Architecture(38.00) Computer Networks(27.12) | | | Digital Surveying and Remote Sensing Applications(32.35) Geodesy and Surveying Engineering(50.00) |
| | | Computer Software and Theory(32.91) Data Structures(22.22) | | | Textile Science and Engineering(41.00) |
| | | Databases(42.68) | | | Textile Chemistry and Dyeing Engineering(32.00) |
| | | Formal Languages(28.85) | | | Textile Materials Science(50.00) |
| | | Operating Systems(30.59) Pattern Recognition(72.00) | | | Transportation Engineering(33.47) |
| | | Principles of Computer Organization(25.61) Control Theory and Control Engineering(33.71) | | | Road and Railway Engineering(22.00) Traffic Information Engineering and Control(27.69) Transportation Planning and Management(41.86) Vehicle Operation Engineering(38.00) |
| | Control Science and Engineering(32.11) | Guidance, Navigation and Control(31.37) | | | |
| | | Operations Research and Cybernetics(30.00) | | | Weapon Science and Technology(48.00) |
| | Electrical Engineering(21.58) | Electrical Theory and New Technologies(24.74) High Voltage and Insulation Technology(21.59) | History(28.49) | History(28.49) | Military Chemistry and Pyrotechnics(50.00) |
| | | Power Electronics and Electrical Drives(19.23) | | | Weapon Systems Science and Engineering(46.00) |
| | | Power Systems and Automation(19.79) | | | Archaeology and Museology(35.58) Historical Geography(21.83) World History(28.97) |
| | Electronic Science and Technology(28.46) | Circuits and Systems(28.70) | Law(36.89) | Law(37.39) | Civil and Commercial Law(34.75) Constitutional and Administrative Law(22.00) |
| | | Electromagnetic Field and Microwave Technology(26.14) | | | Contract Law(42.00) Criminal Law(39.66) |
| | | Microelectronics and Solid-State Electronics(52.00) | | | International Law(58.60) |
| | Environmental Science and Engineering(40.74) | Environmental Engineering(30.34) Environmental Science(54.00) | | | Law and Social Governance(36.00) Legal Theory and Legal History(42.00) |
| | Food Science and Engineering(44.04) | Environmental and Resource Protection(46.00) Food Biochemistry(76.00) | | | Military Law(60.00) |
| | Forestry Engineering(38.00) | Food Processing and Storage Engineering(16.95) | | | Procedural Law(22.00) |
| Engineering(30.26) | Forestry Engineering(38.00) | Forest Engineering(44.00) | | | Political Science(32.31) |
| | | Wood Science and Technology(32.00) | | | - |

Table 46. Model Scores Across Three Levels of Disciplines: Qwen2.5-14B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|------------------------|-------------------|--|
| Literature and Arts(28.94) | Art Studies(28.19) | Broadcasting and Television Art(30.00) | Philosophy(37.75) | Philosophy(37.75) | Religious Studies(58.00) |
| | | Dance Studies(30.00) | | | Astronomical Observation and Technology(31.00) |
| | | Design Arts(20.97) | | | Astrophysics(23.19) |
| | | Drama and Opera Studies(25.61) | | | Cosmology(37.18) |
| | | Film Studies(36.08) | | | Solar System Science(22.73) |
| | Journalism and Communication(23.19) | Fine Arts(24.38) | | | Stellar and Interstellar Evolution(22.86) |
| | | Communication and Broadcasting(20.69) | | | Atmospheric Physics and Atmospheric Environment(42.03) |
| | | History and Theory of Journalism and Media Management(23.73) | | | Dynamic Meteorology(36.00) |
| | | Journalism and News Practice(24.44) | | | Meteorology(26.19) |
| | | Classical Chinese Literature(30.00) | | | Biochemistry and Molecular Biology(37.37) |
| Management(40.32) | Language and Literature(34.32) | French Language and Literature(38.00) | | | Biophysics(36.00) |
| | | Linguistics and Applied Linguistics(26.00) | | | Botany(28.31) |
| | | Literary History(30.43) | | | Cell Biology(44.83) |
| | | Literary Theory(37.50) | | | Ecology(30.56) |
| | | Modern and Contemporary Chinese Literature(34.00) | | | Genetics(25.54) |
| | Musicology(27.23) | Philology and Bibliography(38.00) | | | Microbiology(34.16) |
| | | Russian Language and Literature(40.35) | | | Physiology(28.33) |
| | | Composition(26.00) | | | Zoology(25.69) |
| | | Harmony(25.00) | | | Chemistry(19.39) Analytical Chemistry(22.98) |
| | | Instrumentation and Performance(36.92) | | | Electrochemistry(14.41) |
| Medicine(34.37) | Business Administration(35.92) | Music History, Education, and Technology(18.62) | | | Inorganic Chemistry(23.91) |
| | | Musical Forms and Analysis(34.00) | | | Organic Chemistry(24.56) |
| | | Pitch and Scales(26.79) | | | Physical Chemistry(17.56) |
| | | Business and Accounting Management(35.87) | | | Polymer Chemistry and Physics(13.16) |
| | | Tourism Management and Technological Economics Management(36.00) | | | Radiochemistry(18.33) |
| | Library, Information and Archival Management(38.67) | Information Management Science(22.00) | | | Geography(36.09) Human Geography(52.00) |
| | | Information Management and Communication(64.00) | | | Physical Geography(26.51) |
| | | Library and Archival Science(30.00) | | | Geology(32.26) Geochemistry(44.00) |
| | | Management Science and Engineering(37.93) | | | Mineralogy, Petrology, and Economic Geology(28.10) |
| | | Education Economics, Management and Social Security(34.00) | | | Paleontology and Stratigraphy(30.00) |
| Medicine(34.37) | Public Administration(47.02) | Land Resource Management and Administrative Management(50.98) | | | Principles of Seismic Exploration(20.00) |
| | | Social Medicine and Health Management(56.00) | | | Structural Geology(41.43) |
| | | Forensic Medicine(38.00) | | | Geophysics(39.00) Solid Earth Geophysics(48.00) |
| | | Human Anatomy and Histology-Embryology(33.86) | | | Space physics(30.00) |
| | | Immunology(27.54) | | | Advanced Algebra(34.65) |
| | Clinical Medicine(33.83) | Pathogen Biology(27.66) | | | Combinatorial Mathematics(20.42) |
| | | Pathology and Pathophysiology(34.78) | | | Computational Mathematics(38.00) |
| | | Radiation Medicine(60.00) | | | Cryptography(48.00) |
| | | Anesthesiology(36.00) | | | Discrete Mathematics(17.98) |
| | | Clinical Laboratory Diagnostics(34.00) | | | Functions of Complex Variables(36.89) |
| Medicine(34.37) | Pharmacy(35.61) | Dermatology and Venereology(31.82) | | | Functions of Real Variables(34.33) |
| | | Emergency Medicine(40.91) | | | Fundamental Mathematics(30.96) |
| | | Geriatric Medicine(40.00) | | | Fuzzy Mathematics(34.00) |
| | | Imaging and Nuclear Medicine(14.93) | | | Geometry and Topology(22.64) |
| | | Internal Medicine(34.16) | | | Graph Theory(21.57) |
| | Public Health and Preventive Medicine(36.30) | Neurology(33.86) | | | Group Theory(22.00) |
| | | Nursing and Rehabilitation Medicine(36.00) | | | Mathematical Analysis(28.12) |
| | | Obstetrics and Gynecology(39.22) | | | Number Theory(18.64) |
| | | Oncology(24.14) | | | Numerical Analysis(29.85) |
| | | Ophthalmology(30.00) | | | Ordinary Differential Equations(36.25) |
| Medicine(34.37) | Stomatology(27.27) | Otorhinolaryngology(22.00) | | | Polynomials and Series Expansions(22.91) |
| | | Pediatrics(40.00) | | | Probability and Statistics(41.96) |
| | | Psychiatry and Mental Health(50.00) | | | Special Number Theory(38.00) |
| | | Surgery(33.82) | | | Stochastic Processes(60.00) |
| | | Medicinal Chemistry(26.00) | | | Hydrogeology(54.00) |
| | Traditional Chinese Medicine(35.82) | Microbiology and Biochemical Pharmacy(36.00) | | | Marine Biology(64.00) |
| | | Pharmaceutical Analysis(42.00) | | | Marine Chemistry(50.00) |
| | | Pharmacetics(36.99) | | | Underwater Acoustics(30.00) |
| | | Pharmacology(36.36) | | | Physical Oceanography(34.00) |
| | | Epidemiology and Health Statistics(24.10) | | | Acoustics(21.22) |
| Military Science(40.00) | Military Science(40.00) | Health Toxicology and Environmental Health(40.00) | | | Atomic and Molecular Physics(22.38) |
| | | Maternal, Child and Adolescent Health(32.91) | | | Electrodynamics(21.78) |
| | | Nutrition and Food Hygiene(56.00) | | | Fluid Physics(26.12) |
| | | Basic Stomatology(24.53) | | | Particle and Nuclear Physics(22.22) |
| | | Clinical Stomatology(29.11) | | | Polymer Physics(15.60) |
| | Philosophy(37.75) | Traditional Chinese Medicine(42.37) | | | Quantum Mechanics(21.84) |
| | | Traditional Chinese Medicine Theory(40.00) | | | Relativity(27.85) |
| | | Traditional Chinese Pharmacy(29.41) | | | Semiconductor Physics(8.20) |
| | | Military Command and Information Systems(48.00) | | | Solid State Physics(26.53) |
| | | Military Logistics and Equipment(35.19) | | | Statistical Mechanics(34.00) |
| Philosophy(37.75) | Philosophy(37.75) | Military Management(46.00) | Systems Science(40.00) | Sociology(36.36) | Subatomic and Atomic Physics(29.41) |
| | | Military Thought and History(31.37) | | | Thermodynamics(22.79) |
| | | Ethics(39.71) | | | Thermodynamics and Statistical Physics(20.57) |
| | | Logic(25.71) | | | Systems Science(40.00) |
| Philosophy(37.75) | Philosophy(37.75) | Philosophical Aesthetics(31.19) | | | Demography and Anthropology(46.00) |
| | | Philosophy of Science and Technology(46.00) | | | Social and Folklore Studies(31.18) |

Table 46. Continued: Model Scores Across Three Levels of Disciplines: Qwen2.5-14B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|--------------------------------------|--|---|
| Agronomy(28.25) | Animal Husbandry(29.13) | Animal Nutrition and Feed Science(34.62) | Engineering(29.02) | Geological Resources and Geological Engineering(32.00) | Geological Resources and Geological Engineering(32.00) |
| | | Animal Rearing and Breeding(23.53) | | | Hydraulics and Hydrology(27.21) |
| | Aquaculture(21.43) Crop Science(29.66) | Aquaculture(21.43) | | Hydraulic Engineering(26.61) | Water conservancy and Hydropower Engineering(25.61) |
| | | Crop Science(29.66) | | | Antenna and Radio Communication(26.32) |
| | Forestry(26.72) | Forest Cultivation and Genetic Breeding(24.69) | | Information and Communication Engineering(32.54) | Communication Principles(31.90) |
| | | Landscape Plants and Ornamental Horticulture(30.00) | | | Communication and Information Systems(31.88) |
| | Veterinary Medicine(34.00) | Veterinary Medicine(34.00) | | Optical Fiber Communication(40.00) | Optical Fiber Communication(40.00) |
| | | Economic Statistics(44.00) | | | Signal and Information Processing(35.48) |
| | Economics(33.45) | Finance(30.68) | | Instrument Science and Technology(30.00) | Instrument Science and Technology(30.00) |
| | | Industrial Economics(25.00) | | | Materials Physics and Chemistry(19.60) |
| | | International Trade(27.54) | | Materials Science and Engineering(22.15) | Materials Processing Engineering(27.78) |
| | | Labor Economics(31.08) | | | Manufacturing Automation(19.84) |
| | | National and Defense Economics(38.00) | | Mechanics(22.47) | Mechatronic Engineering(44.00) |
| | | Public Finance(35.00) | | | Fundamentals of Dynamics and Control(20.17) |
| | | Quantitative Economics(32.00) | | | Rigid Body Mechanics(16.18) |
| | | Theoretical Economics(40.00) | | | Solid Mechanics(26.88) |
| | | Economic History(38.00) | | | Theoretical Fluid Mechanics(34.29) |
| | | Political Economy(32.00) | | | Theoretical Mechanics(21.29) |
| | | Western Economics(50.00) | | | Iron and Steel Metallurgy(22.86) |
| Education(33.68) | Education(34.41) | Educational Technology and Principles(33.33) | Metallurgical Engineering(34.51) | Non-ferrous Metallurgy(36.00) | Non-ferrous Metallurgy(36.00) |
| | | Preschool Education(36.00) | | | Physical Chemistry of Metallurgical Process(40.00) |
| | Physical Education(36.00) | Special Education(46.00) | | Principles of Metallurgy(52.00) | Principles of Metallurgy(52.00) |
| | | Theory of Curriculum and Instruction(23.53) | | | Mining Engineering(41.00) |
| | Psychology(27.59) | Physical Education and Training(38.00) | | Mineral Processing Engineering(40.00) | Mineral Processing Engineering(40.00) |
| | | Sports Humanities and Sociology(24.00) | | | Mining and Safety Engineering(42.00) |
| | | Sports Science and Medicine(46.00) | | | Naval Architecture and Ocean Engineering(26.09) |
| | Psychology(27.59) | Psychology(27.59) | | Marine Engineering(20.00) | Marine Engineering(20.00) |
| | | Aeronautical and Astronautical Science and Technology(30.25) | | | Ship Mechanics and Design Principles(29.55) |
| Engineering(29.02) | Agricultural and Environmental Engineering(43.27) | Agricultural Environment and Soil-Water Engineering(38.89) | | Nuclear Energy and Reactor Technology(26.32) | Nuclear Energy and Reactor Technology(26.32) |
| | | Agricultural Mechanization Engineering(48.00) | | | Radiation Protection and Nuclear Technology Applications(36.00) |
| | Architecture(37.65) | Architectural Design and Theory(46.00) | | Optical Engineering(29.52) | Applied Optics(26.61) |
| | | Architectural History(27.42) | | | Laser Technology(34.00) |
| | Chemical Engineering and Technology(25.85) | Urban Planning and Design(42.00) | | | Optoelectronic Technology(31.34) |
| | | Chemical Transport Engineering(38.00) | | | Theoretical Optics(29.63) |
| | Civil Engineering(24.86) | Elements of Chemical Reaction Engineering(23.36) | | Petroleum and Natural Gas Engineering(33.04) | Polymer and Natural Gas Engineering(33.04) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(20.56) | | | Oil and Gas Field Development and Storage & Transportation Engineering(19.35) |
| | Computer Science and Technology(33.16) | Mass Transport and Separation Process in Chemical Engineering(27.40) | | Power Engineering and Engineering Thermophysics(23.83) | Poromechanics and Reservoir Physics(50.00) |
| | | Bridge and Tunnel Engineering(31.37) | | | Engineering Fluid Mechanics(28.57) |
| Control Science and Engineering(28.42) | Geotechnical Engineering(22.91) | Geotechnical Engineering(22.91) | | | Engineering Thermophysics(22.60) |
| | | Structural Engineering(21.05) | | | Fluid Machinery and Engineering(20.31) |
| | Computer Science and Technology(33.16) | Urban Infrastructure Engineering(28.17) | | | Heat Transfer(21.71) |
| | | Advanced Programming Languages(48.00) | | | Internal Combustion Engineering(42.00) |
| | Control Science and Engineering(28.42) | Computer Architecture(38.00) | | | Power Machinery and Engineering(11.54) |
| | | Computer Networks(25.42) | | | Refrigeration and Cryogenic Engineering(22.00) |
| | Control Science and Engineering(28.42) | Computer Software and Theory(32.91) | | Surveying and Mapping Science and Technology(30.95) | Thermal Energy Engineering(24.77) |
| | | Data Structures(21.21) | | | Cartography and Geographic Information Engineering(46.00) |
| Electrical Engineering(21.22) | Databases(37.58) | Databases(37.58) | | | Digital Surveying and Remote Sensing Applications(17.65) |
| | | Formal Languages(26.92) | | | Geodesy and Surveying Engineering(34.00) |
| | Electrical Engineering(21.22) | Operating Systems(24.71) | | | Textile Chemistry and Dyeing Engineering(30.00) |
| | | Pattern Recognition(62.00) | | | Textile Materials Science(50.00) |
| | Electronics and Electrical Engineering(30.89) | Principles of Computer Organization(28.05) | | Textile Science and Engineering(40.00) | Transportation Engineering(33.07) |
| | | Control Theory and Control Engineering(28.09) | | | Road and Railway Engineering(16.00) |
| | Environmental Science and Engineering(37.04) | Guidance, Navigation and Control(31.37) | | | Traffic Information Engineering and Control(26.15) |
| | | Operations Research and Cybernetics(26.00) | | | Transportation Planning and Management(38.37) |
| Engineering(29.02) | Food Science and Technology(46.79) | Electrical Theory and New Technologies(23.16) | Weapon Science and Technology(39.00) | Vehicle Operation Engineering(50.00) | Vehicle Operation Engineering(50.00) |
| | | High Voltage and Insulation Technology(23.86) | | | Weapon Systems Science and Engineering(26.00) |
| | Food Science and Technology(46.79) | Power Electronics and Electrical Drives(17.58) | | | Military Chemistry and Pyrotechnics(52.00) |
| | | Power Systems and Automation(21.88) | | | Weapon Systems Science and Engineering(26.00) |
| | Food Science and Technology(46.79) | Circuits and Systems(25.00) | History(30.86) | Archaeology and Museology(33.65) | Archaeology and Museology(33.65) |
| | | Electromagnetic Field and Microwave Technology(32.95) | | | Historical Geography(25.35) |
| | Food Science and Technology(46.79) | Microelectronics and Solid-State Electronics(40.00) | | | World History(32.01) |
| | Forestry Engineering(40.00) | Environmental Engineering(15.73) | Law(34.60) | Civil and Commercial Law(28.81) | Civil and Commercial Law(28.81) |
| | | Environmental Science(62.00) | | | Constitutional and Administrative Law(36.00) |
| Engineering(29.02) | Food Science and Technology(46.79) | Environmental and Resource Protection(50.00) | | Contract Law(34.00) | Contract Law(34.00) |
| | | Food Biochemistry(66.00) | | | Criminal Law(31.03) |
| | Forestry Engineering(40.00) | Food Processing and Storage Engineering(30.51) | | International Law(33.33) | International Law(33.33) |
| | | Forest Engineering(42.00) | | | Law and Social Governance(42.00) |
| | Forestry Engineering(40.00) | Wood Science and Technology(38.00) | | Legal Theory and Legal History(36.00) | Legal Theory and Legal History(36.00) |
| | | - | | | Military Law(58.00) |
| | Forestry Engineering(40.00) | - | | Procedural Law(24.00) | Procedural Law(24.00) |
| | | - | | | Political Science(33.85) |
| | Forestry Engineering(40.00) | - | | | Political Science(33.85) |

Table 47. Model Scores Across Three Levels of Disciplines: Mixtral-8x22B-Instruct-v0.1.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|-------------------|---|--|
| Literature and Arts(30.55) | Art Studies(30.68) | Broadcasting and Television Art(34.00) | Philosophy(32.85) | Philosophy(32.85) | Religious Studies(44.00) |
| | | Dance Studies(38.00) | | Astronomy(32.35) | Astronomical Observation and Technology(43.00) |
| | | Design Arts(20.97) | | Astrophysics(20.29) | Cosmology(34.62) |
| | | Drama and Opera Studies(20.73) | | Solar System Science(31.82) | Stellar and Interstellar Evolution(27.14) |
| | | Film Studies(31.65) | | Atmospheric Science(26.11) | Atmospheric Physics and Atmospheric Environment(26.09) |
| | Journalism and Communication(28.99) | Fine Arts(34.33) | | | Dynamic Meteorology(20.00) |
| | | Communication and Broadcasting(29.31) | | | Meteorology(29.76) |
| | Language and Literature(32.27) | History and Theory of Journalism and Media Management(25.42) | Biology(26.88) | Biochemistry and Molecular Biology(28.28) | Biophysics(56.00) |
| | | Journalism and News Practice(31.11) | | Botany(25.30) | Cell Biology(33.33) |
| | | Classical Chinese Literature(30.00) | | Ecology(22.22) | Genetics(23.37) |
| | | French Language and Literature(30.00) | | Microbiology(29.19) | Microbiology(29.19) |
| | | Linguistics and Applied Linguistics(48.00) | | Physiology(21.67) | Physiology(21.67) |
| Management(35.13) | Musicology(29.34) | Literary History(27.54) | | Zoology(23.85) | Zoology(23.85) |
| | | Literary Theory(26.56) | | Chemistry(19.45) | Analytical Chemistry(22.47) |
| | | Modern and Contemporary Chinese Literature(36.00) | | Electrochemistry(18.02) | Inorganic Chemistry(21.74) |
| | | Philology and Bibliography(36.00) | | Organic Chemistry(19.30) | Organic Chemistry(19.30) |
| | | Russian Language and Literature(28.07) | | Physical Chemistry(18.13) | Physical Chemistry and Physics(15.79) |
| | Business Administration(29.58) | Composition(28.00) | | Radiochemistry(20.00) | Radiochemistry(20.00) |
| | | Harmony(23.33) | | Geography(50.38) | Human Geography(64.00) |
| | | Instrumentation and Performance(32.31) | | Geology(34.31) | Physical Geography(42.17) |
| | | Music History, Education, and Technology(30.34) | | | Geochemistry(50.00) |
| | | Musical Forms and Analysis(34.00) | | | Mineralogy, Petrology, and Economic Geology(32.23) |
| Medicine(30.53) | Basic Medicine(29.98) | Pitch and Scales(26.79) | | | Paleontology and Stratigraphy(28.00) |
| | | Business and Accounting Management(21.74) | | | Principles of Seismic Exploration(34.00) |
| | | Tourism Management and Technological Economics Management(44.00) | | | Structural Geology(31.43) |
| | | Library, Information and Archival Management(38.67) | | | Solid Earth Geophysics(38.00) |
| | | Information Management Science(28.00) | | | Space physics(22.00) |
| | Clinical Medicine(32.51) | Information Management and Communication(64.00) | | | Mathematics(29.25) |
| | | Library and Archival Science(24.00) | | | Advanced Algebra(39.60) |
| | | Management Science and Engineering(36.21) | | | Combinatorial Mathematics(15.18) |
| | | Public Administration(36.42) | | | Computational Mathematics(38.00) |
| | | Education Economics, Management and Social Security(28.00) | | | Cryptography(50.00) |
| Pharmacy(29.50) | Management Science and Engineering(36.21) | Land Resource Management and Administrative Management(29.41) | | | Discrete Mathematics(29.21) |
| | | Social Medicine and Health Management(52.00) | | | Functions of Complex Variables(37.70) |
| | | Forensic Medicine(34.00) | | | Functions of Real Variables(37.31) |
| | | Human Anatomy and Histology-Embryology(30.16) | | | Fundamental Mathematics(22.34) |
| | | Immunology(26.09) | | | Fuzzy Mathematics(44.00) |
| | Clinical Medicine(32.51) | Pathogen Biology(32.98) | | | Geometry and Topology(21.51) |
| | | Pathology and Pathophysiology(20.87) | | | Graph Theory(25.49) |
| | | Radiation Medicine(46.00) | | | Group Theory(30.00) |
| | | Anesthesiology(38.00) | | | Mathematical Analysis(27.78) |
| | | Clinical Laboratory Diagnostics(40.00) | | | Number Theory(17.27) |
| Public Health and Preventive Medicine(36.30) | Pharmacy(29.50) | Dermatology and Venereology(33.33) | | | Numerical Analysis(31.34) |
| | | Emergency Medicine(24.24) | | | Ordinary Differential Equations(36.88) |
| | | Geriatric Medicine(40.00) | | | Polynomials and Series Expansions(24.02) |
| | | Imaging and Nuclear Medicine(29.85) | | | Probability and Statistics(37.05) |
| | | Internal Medicine(32.67) | | | Special Number Theory(32.00) |
| | Public Health and Preventive Medicine(36.30) | Neurology(39.68) | | | Stochastic Processes(52.00) |
| | | Nursing and Rehabilitation Medicine(32.00) | | | Oceanography(63.00) |
| | | Obstetrics and Gynecology(23.53) | | | Hydrogeology(56.00) |
| | | Oncology(27.59) | | | Marine Biology(82.00) |
| | | Ophthalmology(34.00) | | | Marine Chemistry(66.00) |
| Military Science(44.39) | Stomatology(27.27) | Otorhinolaryngology(34.00) | | | Underwater Acoustics(48.00) |
| | | Pediatrics(26.00) | | | Physical Oceanography(40.00) |
| | | Psychiatry and Mental Health(54.00) | | | Physics(23.83) |
| | | Surgery(11.76) | | | Acoustics(22.04) |
| | | Medicinal Chemistry(26.00) | | | |
| | Traditional Chinese Medicine(19.03) | Microbiology and Biochemical Pharmacy(42.00) | | | Atomic and Molecular Physics(22.86) |
| | | Pharmaceutical Analysis(28.00) | | | Electrodynamics(27.10) |
| | | Pharmacetics(26.03) | | | Fluid Physics(22.39) |
| | | Pharmacology(27.27) | | | Particle and Nuclear Physics(26.22) |
| | | Epidemiology and Health Statistics(30.12) | | | Polymer Physics(25.69) |
| Philosophy(32.85) | Military Science(44.39) | Health Toxicology and Environmental Health(38.75) | | | Quantum Mechanics(20.39) |
| | | Maternal, Child and Adolescent Health(35.44) | | | Relativity(31.65) |
| | | Nutrition and Food Hygiene(44.00) | | | Semiconductor Physics(13.11) |
| | | Basic Stomatology(32.08) | | | Solid State Physics(28.57) |
| | | Clinical Stomatology(24.05) | | | |
| | Philosophy(32.85) | Traditional Chinese Health Preservation(15.25) | | | Statistical Mechanics(42.00) |
| | | Traditional Chinese Medicine Theory(20.00) | | | Subatomic and Atomic Physics(25.49) |
| | | Traditional Chinese Pharmacy(20.17) | | | Thermodynamics(24.19) |
| | | Military Command and Information Systems(42.00) | | | Thermodynamics and Statistical Physics(18.49) |
| | | Military Logistics and Equipment(48.15) | | | Systems Science(34.00) |
| | | Military Management(54.00) | | | Sociology(36.36) |
| | | Military Thought and History(33.33) | | | Sociology(36.36) |
| | | Ethics(26.47) | | | Demography and Anthropology(30.00) |
| | | Logic(22.86) | | | Social and Folklore Studies(39.78) |
| | | Philosophical Aesthetics(33.03) | | | |
| | | Philosophy of Science and Technology(44.00) | | | |

Table 47. Continued: Model Scores Across Three Levels of Disciplines:

Mixtral-8x22B-Instruct-v0.1.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|-------------------------------|--|--|--------------------|--|---|
| Agronomy(29.28) | Animal Husbandry(33.98) | Animal Nutrition and Feed Science(30.77) | Engineering(28.38) | Geological Resources and Geological Engineering(38.00) | Geological Resources and Geological Engineering(38.00) |
| | | Animal Rearing and Breeding(37.25) | | | Hydraulics and Hydrology(27.94) |
| | Aquaculture(19.64) | Aquaculture(19.64) | | Hydraulic Engineering(27.52) | Water conservancy and Hydropower Engineering(26.83) |
| | | Crop Science(27.59) | | | Antenna and Radio Communication(24.56) |
| | Forestry(30.53) | Forest Cultivation and Genetic Breeding(30.86) | | Information and Communication Engineering(32.34) | Communication Principles(34.48) |
| | | Landscape Plants and Ornamental Horticulture(30.00) | | | Communication and Information Systems(26.09) |
| | Veterinary Medicine(32.00) | Veterinary Medicine(32.00) | | Optical Fiber Communication(36.00) | Optical Fiber Communication(36.00) |
| | | Economic Statistics(42.00) | | | Signal and Information Processing(38.06) |
| | Economics(34.59) | Finance(35.23) | | Instrument Science and Technology(36.00) | Instrument Science and Technology(36.00) |
| | | Industrial Economics(40.48) | | | Materials Physics and Chemistry(21.61) |
| | | International Trade(31.88) | | Materials Science and Engineering(24.49) | Materials Processing Engineering(24.44) |
| | | Labor Economics(33.78) | | | Manufacturing Automation(29.37) |
| | | National and Defense Economics(38.00) | | Mechanics(23.90) | Mechatronic Engineering(34.00) |
| | | Public Finance(30.00) | | | Fundamentals of Dynamics and Control(23.05) |
| | | Quantitative Economics(32.00) | | | Rigid Body Mechanics(17.92) |
| | | Theoretical Economics(34.00) | | | Solid Mechanics(22.58) |
| | | Economic History(30.00) | | | Theoretical Fluid Mechanics(35.00) |
| | | Political Economy(32.00) | | | Theoretical Mechanics(23.23) |
| | | Western Economics(40.00) | | | Iron and Steel Metallurgy(24.76) |
| Education(35.33) | Education(37.25) | Educational Technology and Principles(30.21) | | Non-ferrous Metallurgy(28.00) | Non-ferrous Metallurgy(28.00) |
| | | Preschool Education(52.00) | | | Physical Chemistry of Metallurgical Process(36.00) |
| | Physical Education(40.00) | Special Education(42.00) | | Principles of Metallurgy(50.00) | Principles of Metallurgy(50.00) |
| | | Theory of Curriculum and Instruction(31.37) | | | Mining Engineering(41.00) |
| | Psychology(21.84) | Physical Education and Training(16.00) | | Mineral Processing Engineering(44.00) | Mineral Processing Engineering(44.00) |
| | | Sports Humanities and Sociology(40.00) | | | Mining and Safety Engineering(38.00) |
| | | Sports Science and Medicine(64.00) | | Naval Architecture and Ocean Engineering(23.19) | Naval Architecture and Ocean Engineering(24.00) |
| | | Psychology(21.84) | | | Marine Engineering(24.00) |
| | Engineering(28.38) | Aeronautical and Astronautical Science and Technology(23.53) | | Ship Mechanics and Design Principles(22.73) | Ship Mechanics and Design Principles(22.73) |
| | | Agricultural Engineering(37.50) | | | Nuclear Energy and Reactor Technology(24.56) |
| | | Aeronautical and Astronautical Science and Technology(23.53) | | Nuclear Science and Technology(28.04) | Radiation Protection and Nuclear Technology Applications(32.00) |
| | | Agricultural Environment and Soil-Water Engineering(35.19) | | | Optical Engineering(21.54) |
| | | Agricultural Mechanization Engineering(40.00) | | Applied Optics(20.97) | Laser Technology(16.00) |
| | | Architecture(31.48) | | | Optoelectronic Technology(25.37) |
| | | Architectural Design and Theory(38.00) | | | Theoretical Optics(22.22) |
| | | Architectural History(22.58) | | Petroleum and Natural Gas Engineering(27.68) | Petroleum and Natural Gas Engineering(27.68) |
| | | Urban Planning and Design(36.00) | | | Oil and Gas Field Development and Storage & Transportation Engineering(20.97) |
| | Control Science and Engineering(28.95) | Chemical Engineering and Technology(24.88) | | | Poromechanics and Reservoir Physics(36.00) |
| | | Elements of Chemical Reaction Engineering(18.69) | | Power Engineering and Engineering Thermophysics(25.88) | Engineering Fluid Mechanics(30.95) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(27.10) | | | Engineering Thermophysics(28.08) |
| | | Mass Transport and Separation Process in Chemical Engineering(28.77) | | | Fluid Machinery and Engineering(12.50) |
| | | Civil Engineering(23.18) | | | Heat Transfer(29.46) |
| | | Bridge and Tunnel Engineering(19.61) | | | Internal Combustion Engineering(30.00) |
| | | Geotechnical Engineering(20.67) | | | Power Machinery and Engineering(25.00) |
| | | Structural Engineering(29.82) | | | Refrigeration and Cryogenic Engineering(20.00) |
| | | Urban Infrastructure Engineering(26.76) | | Surveying and Mapping Science and Technology(37.50) | Thermal Energy Engineering(23.85) |
| | | Computer Science and Technology(32.50) | | | Cartography and Geographic Information Engineering(42.00) |
| Electrical Engineering(23.92) | Computer Science and Technology(32.50) | Advanced Programming Languages(50.00) | | Digital Surveying and Remote Sensing Applications(36.76) | Digital Surveying and Remote Sensing Applications(36.76) |
| | | Computer Architecture(26.00) | | | Geodesy and Surveying Engineering(34.00) |
| | Control Science and Engineering(28.95) | Computer Networks(25.42) | | | Textile Chemistry and Dyeing Engineering(24.00) |
| | | Computer Software and Theory(27.85) | | | Textile Materials Science(44.00) |
| | Environmental Science and Engineering(32.28) | Data Structures(24.24) | | Transportation Engineering(34.26) | Road and Railway Engineering(18.00) |
| | | Databases(40.76) | | | Traffic Information Engineering and Control(29.23) |
| | Food Science and Engineering(40.37) | Formal Languages(25.00) | | | Transportation Planning and Management(43.02) |
| | | Operating Systems(20.00) | | | Vehicle Operation Engineering(42.00) |
| | Food Science and Engineering(40.37) | Pattern Recognition(56.00) | | Weapon Science and Technology(39.00) | Weapon Science and Technology(39.00) |
| | | Principles of Computer Organization(32.93) | | | Military Chemistry and Pyrotechnics(36.00) |
| Engineering(28.38) | Control Science and Engineering(28.95) | Control Theory and Control Engineering(32.58) | | | Weapon Systems Science and Engineering(42.00) |
| | | Guidance, Navigation and Control(21.57) | | | Archaeology and Museology(30.77) |
| | Environmental Science and Engineering(32.28) | Operations Research and Cybernetics(30.00) | | History(22.85) | Historical Geography(19.72) |
| | | Circuits and Systems(32.41) | | | World History(21.96) |
| | Food Science and Engineering(40.37) | Electromagnetic Field and Microwave Technology(27.27) | | Law(32.62) | Civil and Commercial Law(31.36) |
| | | Microelectronics and Solid-State Electronics(24.00) | | | Constitutional and Administrative Law(28.00) |
| | Forestry Engineering(32.00) | Environmental Engineering(24.72) | | Law(34.18) | Contract Law(36.00) |
| | | Environmental Science(42.00) | | | Criminal Law(40.52) |
| | Forestry Engineering(32.00) | Environmental and Resource Protection(36.00) | | Political Science(18.46) | International Law(22.81) |
| | | Food Biochemistry(66.00) | | | Law and Social Governance(32.00) |
| | | Food Processing and Storage Engineering(18.64) | | | Legal Theory and Legal History(38.00) |
| | | Forest Engineering(38.00) | | | Military Law(60.00) |
| | | Wood Science and Technology(26.00) | | | Procedural Law(16.00) |
| | | - | | | Political Science(18.46) |

Table 48. Model Scores Across Three Levels of Disciplines: Qwen2.5-7B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|-------------------|-------------------|--|
| Literature and Arts(24.28) | Art Studies(23.71) | Broadcasting and Television Art(32.00) | Philosophy(34.58) | Philosophy(34.58) | Religious Studies(44.00) |
| | | Dance Studies(24.00) | | | Astronomical Observation and Technology(26.00) |
| | | Design Arts(22.58) | | | Astrophysics(24.64) |
| | | Drama and Opera Studies(23.17) | | | Cosmology(23.08) |
| | | Film Studies(27.85) | | | Solar System Science(20.45) |
| | Journalism and Communication(22.71) | Fine Arts(18.91) | | | Stellar and Interstellar Evolution(20.00) |
| | | Communication and Broadcasting(12.07) | | | Atmospheric Physics and Atmospheric Environment(31.88) |
| | | History and Theory of Journalism and Media Management(37.29) | | | Dynamic Meteorology(24.00) |
| | | Journalism and News Practice(20.00) | | | Meteorology(25.00) |
| | | Classical Chinese Literature(34.00) | | | Biochemistry and Molecular Biology(27.27) |
| Management(33.33) | Language and Literature(26.14) | French Language and Literature(32.00) | | | Biophysics(40.00) |
| | | Linguistics and Applied Linguistics(24.00) | | | Botany(23.49) |
| | | Literary History(21.74) | | | Cell Biology(27.59) |
| | | Literary Theory(23.44) | | | Ecology(22.92) |
| | | Modern and Contemporary Chinese Literature(30.00) | | | Genetics(25.54) |
| | Musicology(23.94) | Philology and Bibliography(20.00) | | | Microbiology(31.06) |
| | | Russian Language and Literature(26.32) | | | Physiology(25.83) |
| | | Composition(24.00) | | | Zoology(17.43) |
| | | Harmony(28.33) | | | Chemistry(21.82) |
| | | Instrumentation and Performance(27.69) | | | Analytical Chemistry(21.46) |
| Medicine(32.60) | Business Administration(23.94) | Music History, Education, and Technology(19.31) | | | Electrochemistry(18.47) |
| | | Musical Forms and Analysis(24.00) | | | Inorganic Chemistry(22.46) |
| | | Pitch and Scales(26.79) | | | Organic Chemistry(22.22) |
| | | Business and Accounting Management(21.74) | | | Physical Chemistry(23.51) |
| | | Tourism Management and Technological Economics Management(28.00) | | | Polymer Chemistry and Physics(13.16) |
| | Library, Information and Archival Management(40.00) | Information Management Science(24.00) | | | Radiochemistry(25.00) |
| | | Information Management and Communication(66.00) | | | Geography(39.85) |
| | | Library and Archival Science(30.00) | | | Human Geography(56.00) |
| | | Management Science and Engineering(31.03) | | | Physical Geography(30.12) |
| | | Education Economics, Management and Social Security(22.00) | | | Geology(27.57) |
| Pharmacy(34.17) | Public Administration(36.42) | Land Resource Management and Administrative Management(39.22) | | | Geochemistry(48.00) |
| | | Social Medicine and Health Management(48.00) | | | Mineralogy, Petrology, and Economic Geology(26.45) |
| | | Forensic Medicine(36.00) | | | Paleontology and Stratigraphy(18.00) |
| | | Human Anatomy and Histology-Embryology(30.16) | | | Principles of Seismic Exploration(26.00) |
| | | Immunology(33.33) | | | Structural Geology(22.86) |
| | Clinical Medicine(32.35) | Pathogen Biology(22.34) | | | Geophysics(36.00) |
| | | Pathology and Pathophysiology(34.78) | | | Solid Earth Geophysics(42.00) |
| | | Radiation Medicine(56.00) | | | Space physics(30.00) |
| | | Anesthesiology(34.00) | | | Advanced Algebra(43.56) |
| | | Clinical Laboratory Diagnostics(30.00) | | | Combinatorial Mathematics(26.70) |
| Military Science(32.68) | Pharmacology(34.17) | Dermatology and Venereology(27.27) | | | Computational Mathematics(28.00) |
| | | Emergency Medicine(31.82) | | | Cryptography(44.00) |
| | | Geriatric Medicine(50.00) | | | Discrete Mathematics(15.73) |
| | | Imaging and Nuclear Medicine(16.42) | | | Functions of Complex Variables(45.90) |
| | | Internal Medicine(37.13) | | | Functions of Real Variables(46.27) |
| | Public Health and Preventive Medicine(31.85) | Neurology(26.98) | | | Fundamental Mathematics(37.56) |
| | | Nursing and Rehabilitation Medicine(38.00) | | | Fuzzy Mathematics(40.00) |
| | | Obstetrics and Gynecology(38.24) | | | Geometry and Topology(24.15) |
| | | Oncology(34.48) | | | Graph Theory(27.45) |
| | | Ophthalmology(28.00) | | | Group Theory(26.00) |
| Philosophy(34.58) | Stomatology(18.94) | Otorhinolaryngology(20.00) | | | Mathematical Analysis(30.90) |
| | | Pediatrics(28.00) | | | Number Theory(26.36) |
| | | Psychiatry and Mental Health(46.00) | | | Numerical Analysis(35.82) |
| | | Surgery(32.35) | | | Ordinary Differential Equations(43.75) |
| | | Medicinal Chemistry(18.00) | | | Polynomials and Series Expansions(31.28) |
| | Traditional Chinese Medicine(38.81) | Microbiology and Biochemical Pharmacy(26.00) | | | Probability and Statistics(42.41) |
| | | Pharmaceutical Analysis(46.00) | | | Special Number Theory(38.00) |
| | | Pharmacetics(42.47) | | | Stochastic Processes(60.00) |
| | | Pharmacology(34.55) | | | Hydrogeology(64.00) |
| | | Epidemiology and Health Statistics(30.12) | | | Marine Biology(66.00) |
| Sociology(30.07) | Systems Science(32.00) | Health Toxicology and Environmental Health(26.25) | | | Marine Chemistry(52.00) |
| | | Maternal, Child and Adolescent Health(24.05) | | | Underwater Acoustics(30.00) |
| | | Nutrition and Food Hygiene(56.00) | | | Physical Oceanography(26.00) |
| | | Basic Stomatology(20.75) | | | Acoustics(24.08) |
| | | Clinical Stomatology(17.72) | | | Atomic and Molecular Physics(20.48) |
| | Traditional Chinese Medicine(38.81) | Traditional Chinese Health Preservation(47.46) | | | Electrodynamics(24.19) |
| | | Traditional Chinese Medicine Theory(38.89) | | | Fluid Physics(26.12) |
| | | Traditional Chinese Pharmacy(34.45) | | | Particle and Nuclear Physics(25.33) |
| | | Military Command and Information Systems(40.00) | | | Polymer Physics(22.94) |
| | | Military Logistics and Equipment(20.37) | | | Quantum Mechanics(19.42) |
| Military Science(32.68) | Philosophy(34.58) | Military Management(48.00) | | | Relativity(35.44) |
| | | Military Thought and History(23.53) | | | Semiconductor Physics(24.59) |
| | | Ethics(30.88) | | | Solid State Physics(16.33) |
| | | Logic(24.29) | | | Statistical Mechanics(40.00) |
| Philosophy(34.58) | Philosophy(34.58) | Philosophical Aesthetics(28.44) | | | Subatomic and Atomic Physics(21.57) |
| | | Philosophy of Science and Technology(58.00) | | | Thermodynamics(22.33) |
| | | Sociology(30.07) | | | Thermodynamics and Statistical Physics(22.45) |
| Sociology(30.07) | Sociology(30.07) | Sociology(30.07) | | | Systems Science(32.00) |
| | | Sociology(30.07) | | | Demography and Anthropology(40.00) |
| | | Sociology(30.07) | | | Social and Folklore Studies(24.73) |

Table 48. Continued: Model Scores Across Three Levels of Disciplines: Qwen2.5-7B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|--|--|---|--|---|
| Agronomy(28.25) | Animal Husbandry(29.13) | Animal Nutrition and Feed Science(30.77) | Engineering(27.32) | Geological Resources and Geological Engineering(32.00) | Geological Resources and Geological Engineering(32.00) |
| | | Animal Rearing and Breeding(27.45) | | | Hydraulics and Hydrology(19.85) |
| | Aquaculture(17.86) | Aquaculture(17.86) | | Hydraulic Engineering(21.10) | Water conservancy and Hydropower Engineering(23.17) |
| | | Crop Science(28.97) | | | Antenna and Radio Communication(18.42) |
| | Forestry(29.77) | Forest Cultivation and Genetic Breeding(24.69) | | Information and Communication Engineering(27.98) | Communication Principles(37.07) |
| | | Landscape Plants and Ornamental Horticulture(38.00) | | | Communication and Information Systems(21.74) |
| | Veterinary Medicine(32.00) | Veterinary Medicine(32.00) | | Optical Fiber Communication(34.00) | Optical Fiber Communication(34.00) |
| | | Economic Statistics(42.00) | | | Signal and Information Processing(29.03) |
| | Economics(35.85) | Finance(34.66) | | Instrument Science and Technology(30.00) | Instrument Science and Technology(30.00) |
| | | Industrial Economics(35.71) | | | Materials Physics and Chemistry(24.12) |
| | | International Trade(33.33) | | Materials Science and Engineering(24.91) | Materials Processing Engineering(26.67) |
| | | Labor Economics(35.14) | | | Manufacturing Automation(28.57) |
| | | National and Defense Economics(36.00) | | Mechanics(18.17) | Mechatronic Engineering(44.00) |
| | | Public Finance(38.33) | | | Fundamentals of Dynamics and Control(17.00) |
| | | Quantitative Economics(31.00) | | | Rigid Body Mechanics(11.56) |
| | | Theoretical Economics(38.00) | | | Solid Mechanics(19.35) |
| | | Economic History(38.00) | | | Theoretical Fluid Mechanics(30.71) |
| | | Political Economy(38.00) | | | Theoretical Mechanics(16.13) |
| | | Western Economics(38.00) | | | Iron and Steel Metallurgy(21.90) |
| Education(37.60) | Education(40.49) | Educational Technology and Principles(35.42) | Metallurgical Engineering(31.37) | Non-ferrous Metallurgy(28.00) | Non-ferrous Metallurgy(28.00) |
| | | Preschool Education(46.00) | | | Physical Chemistry of Metallurgical Process(30.00) |
| | Physical Education(39.33) | Special Education(50.00) | | Principles of Metallurgy(56.00) | Principles of Metallurgy(56.00) |
| | | Theory of Curriculum and Instruction(35.29) | | | Mining Engineering(43.00) |
| | Psychology(26.44) | Physical Education and Training(36.00) | | Mineral Processing Engineering(42.00) | Mineral Processing Engineering(42.00) |
| | | Sports Humanities and Sociology(34.00) | | | Mining and Safety Engineering(44.00) |
| | | Sports Science and Medicine(48.00) | | Naval Architecture and Ocean Engineering(23.91) | Naval Architecture and Ocean Engineering(24.00) |
| | Engineering(27.32) | Psychology(26.44) | | | Marine Engineering(24.00) |
| | | Psychology(26.44) | | | Ship Mechanics and Design Principles(23.86) |
| Engineering(27.32) | Aeronautical and Astronautical Science and Technology(20.17) | Aeronautical and Astronautical Science and Technology(20.17) | Nuclear Science and Technology(32.71) | Nuclear Energy and Reactor Technology(24.56) | Nuclear Energy and Reactor Technology(24.56) |
| | | Agricultural Environment and Soil-Water Engineering(31.48) | | | Radiation Protection and Nuclear Technology Applications(42.00) |
| | | Agricultural Mechanization Engineering(30.00) | | Optical Engineering(24.47) | Applied Optics(22.58) |
| | | Architecture(40.74) | | | Laser Technology(26.00) |
| | Chemical Engineering and Technology(21.95) | Architectural Design and Theory(34.00) | | | Optoelectronic Technology(28.36) |
| | | Architectural History(40.32) | | | Theoretical Optics(23.70) |
| | | Urban Planning and Design(48.00) | | Petroleum and Natural Gas Engineering(31.25) | Petroleum and Natural Gas Engineering(31.25) |
| | | Chemical Transport Engineering(18.00) | | | Oil and Gas Field Development and Storage & Transportation Engineering(35.48) |
| Engineering(27.32) | Civil Engineering(22.91) | Elements of Chemical Reaction Engineering(20.56) | | Poromechanics and Reservoir Physics(26.00) | Poromechanics and Reservoir Physics(26.00) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(23.36) | | | Engineering Fluid Mechanics(26.19) |
| | | Mass Transport and Separation Process in Chemical Engineering(23.29) | | Power Engineering and Engineering Thermophysics(23.98) | Engineering Thermophysics(19.86) |
| | | Civil Engineering(22.91) | | | Fluid Machinery and Engineering(18.75) |
| | Computer Science and Technology(33.03) | Bridge and Tunnel Engineering(27.45) | | | Heat Transfer(22.48) |
| | | Geotechnical Engineering(18.44) | | | Internal Combustion Engineering(38.00) |
| | | Structural Engineering(26.32) | | | Power Machinery and Engineering(28.85) |
| | | Urban Infrastructure Engineering(28.17) | | | Refrigeration and Cryogenic Engineering(34.00) |
| Engineering(27.32) | Control Science and Engineering(27.89) | Advanced Programming Languages(40.00) | Surveying and Mapping Science and Technology(34.52) | Thermal Energy Engineering(19.27) | Thermal Energy Engineering(19.27) |
| | | Computer Architecture(40.00) | | | Cartography and Geographic Information Engineering(44.00) |
| | | Computer Networks(27.12) | | Digital Surveying and Remote Sensing Applications(29.41) | Digital Surveying and Remote Sensing Applications(29.41) |
| | | Computer Software and Theory(39.24) | | | Geodesy and Surveying Engineering(32.00) |
| | Electrical Engineering(22.30) | Data Structures(20.20) | | | Textile Chemistry and Dyeing Engineering(28.00) |
| | | Databases(40.13) | | | Textile Materials Science(44.00) |
| | | Formal Languages(30.77) | | Transportation Engineering(36.25) | Road and Railway Engineering(14.00) |
| | | Operating Systems(25.88) | | | Traffic Information Engineering and Control(27.69) |
| Engineering(27.32) | Electronic Science and Technology(25.20) | Pattern Recognition(54.00) | | | Transportation Planning and Management(46.51) |
| | | Principles of Computer Organization(20.73) | | | Vehicle Operation Engineering(52.00) |
| | | Control Theory and Control Engineering(28.09) | | Weapon Science and Technology(39.00) | Weapon Science and Technology(39.00) |
| | | Guidance, Navigation and Control(27.45) | | | Military Chemistry and Pyrotechnics(46.00) |
| | Environmental Science and Engineering(32.80) | Operations Research and Cybernetics(28.00) | | Weapon Systems Science and Engineering(32.00) | Weapon Systems Science and Engineering(32.00) |
| | | Electrical Theory and New Technologies(23.68) | | | Archaeology and Museology(27.88) |
| | | High Voltage and Insulation Technology(19.32) | | | Historical Geography(19.72) |
| | | Power Electronics and Electrical Drives(21.43) | | | World History(25.47) |
| Engineering(27.32) | Food Science and Engineering(51.38) | Power Systems and Automation(23.96) | History(24.63) | Civil and Commercial Law(34.75) | Civil and Commercial Law(34.75) |
| | | Circuits and Systems(24.07) | | | Constitutional and Administrative Law(24.00) |
| | | Electromagnetic Field and Microwave Technology(20.45) | | Contract Law(36.00) | Contract Law(36.00) |
| | | Microelectronics and Solid-State Electronics(36.00) | | | Criminal Law(29.31) |
| | Forestry Engineering(34.00) | Environmental Engineering(19.10) | | International Law(28.07) | International Law(28.07) |
| | | Environmental Science(52.00) | | | Law and Social Governance(40.00) |
| | | Environmental and Resource Protection(38.00) | | | Legal Theory and Legal History(44.00) |
| | | Food Biochemistry(68.00) | | | Military Law(62.00) |
| Engineering(27.32) | Food Science and Engineering(51.38) | Food Processing and Storage Engineering(37.29) | | Procedural Law(18.00) | Procedural Law(18.00) |
| | | Forest Engineering(38.00) | | | Political Science(35.38) |
| | | Wood Science and Technology(30.00) | | | Political Science(35.38) |
| | | - | | | - |

Table 49. Model Scores Across Three Levels of Disciplines: Yi-1.5-34B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|-------------------|---|--|
| Literature and Arts(30.25) | Art Studies(31.01) | Broadcasting and Television Art(38.00) | Philosophy(35.45) | Philosophy(35.45) | Religious Studies(42.00) |
| | | Dance Studies(18.00) | | Astronomy(23.46) | Astronomical Observation and Technology(23.00) |
| | | Design Arts(29.03) | | Astrophysics(23.19) | Cosmology(26.92) |
| | | Drama and Opera Studies(30.49) | | Solar System Science(21.59) | Stellar and Interstellar Evolution(22.86) |
| | | Film Studies(37.97) | | Atmospheric Science(31.03) | Atmospheric Physics and Atmospheric Environment(36.23) |
| | Journalism and Communication(25.12) | Fine Arts(27.86) | | Dynamic Meteorology(32.00) | |
| | | Communication and Broadcasting(24.14) | | Biology(26.70) | Meteorology(26.19) |
| | Language and Literature(36.59) | History and Theory of Journalism and Media Management(25.42) | | Biochemistry and Molecular Biology(27.27) | Biophysics(46.00) |
| | | Journalism and News Practice(25.56) | | Botany(21.08) | Botany(21.08) |
| | | Classical Chinese Literature(38.00) | | Cell Biology(31.03) | Cell Biology(31.03) |
| | | French Language and Literature(46.00) | | Ecology(27.08) | Ecology(27.08) |
| | | Linguistics and Applied Linguistics(36.00) | | Genetics(22.83) | Genetics(22.83) |
| Management(36.13) | Musicology(25.12) | Literary History(28.99) | | Microbiology(33.54) | Microbiology(33.54) |
| | | Literary Theory(45.31) | | Physiology(24.17) | Physiology(24.17) |
| | | Modern and Contemporary Chinese Literature(32.00) | | Zoology(21.10) | Zoology(21.10) |
| | | Philology and Bibliography(36.00) | | Chemistry(20.52) | Analytical Chemistry(24.75) |
| | | Russian Language and Literature(31.58) | | Electrochemistry(21.17) | Inorganic Chemistry(21.74) |
| | Business Administration(30.28) | Composition(28.00) | | Organic Chemistry(17.54) | Organic Chemistry(17.54) |
| | | Harmony(23.33) | | Physical Chemistry(18.98) | Physical Chemistry(18.98) |
| | | Instrumentation and Performance(36.92) | | Polymer Chemistry and Physics(19.74) | Polymer Chemistry and Physics(19.74) |
| | | Music History, Education, and Technology(21.38) | | Radiochemistry(15.00) | Radiochemistry(15.00) |
| | | Musical Forms and Analysis(26.00) | | Geography(40.60) | Human Geography(60.00) |
| Medicine(31.18) | Business Administration(30.28) | Pitch and Scales(19.64) | | Physical Geography(28.92) | |
| | | Business and Accounting Management(28.26) | | Geology(32.55) | Geochemistry(44.00) |
| | | Tourism Management and Technological Economics Management(34.00) | | | Mineralogy, Petrology, and Economic Geology(38.84) |
| | | Information Management Science(28.00) | | | Paleontology and Stratigraphy(28.00) |
| | | Information Management and Communication(60.00) | | | Principles of Seismic Exploration(16.00) |
| | Library, Information and Archival Management(43.33) | Library and Archival Science(42.00) | | | Structural Geology(28.57) |
| | | Management Science and Engineering(36.21) | | Geophysics(28.00) | Solid Earth Geophysics(36.00) |
| | | Education Economics, Management and Social Security(28.00) | | Mathematics(22.92) | Space physics(20.00) |
| | | Land Resource Management and Administrative Management(33.33) | | | Advanced Algebra(25.74) |
| | | Social Medicine and Health Management(42.00) | | | Combinatorial Mathematics(14.66) |
| Medicine(31.18) | Clinical Medicine(31.36) | Forensic Medicine(44.00) | | | Computational Mathematics(30.00) |
| | | Human Anatomy and Histology-Embryology(30.69) | | | Cryptography(42.00) |
| | | Immunology(27.54) | | | Discrete Mathematics(23.60) |
| | | Pathogen Biology(28.72) | | | Functions of Complex Variables(32.79) |
| | | Pathology and Pathophysiology(27.83) | | | Functions of Real Variables(28.36) |
| | Pharmacy(30.94) | Radiation Medicine(48.00) | | | Fundamental Mathematics(24.37) |
| | | Anesthesiology(44.00) | | | Fuzzy Mathematics(30.00) |
| | | Clinical Laboratory Diagnostics(34.00) | | | Geometry and Topology(20.38) |
| | | Dermatology and Venereology(30.30) | | | Graph Theory(21.57) |
| | | Emergency Medicine(28.79) | | | Group Theory(16.00) |
| Medicine(31.18) | Public Administration(34.44) | Geriatric Medicine(38.00) | | | Mathematical Analysis(20.83) |
| | | Imaging and Nuclear Medicine(20.90) | | | Number Theory(9.09) |
| | | Internal Medicine(34.16) | | | Numerical Analysis(19.40) |
| | | Neurology(28.57) | | | Ordinary Differential Equations(28.12) |
| | | Nursing and Rehabilitation Medicine(34.00) | | | Polynomials and Series Expansions(22.91) |
| | Pharmacy(30.94) | Obstetrics and Gynecology(30.39) | | | Probability and Statistics(24.55) |
| | | Oncology(25.86) | | | Special Number Theory(34.00) |
| | | Ophthalmology(32.00) | | | Stochastic Processes(36.00) |
| | | Otorhinolaryngology(30.00) | | | Hydrogeology(54.00) |
| | | Pediatrics(30.00) | | | Marine Biology(80.00) |
| Medicine(31.18) | Public Health and Preventive Medicine(32.53) | Psychiatry and Mental Health(46.00) | | | Marine Chemistry(54.00) |
| | | Surgery(23.53) | | | Underwater Acoustics(26.00) |
| | | Medicinal Chemistry(26.00) | | | Physical Oceanography(32.00) |
| | | Microbiology and Biochemical Pharmacy(28.00) | | | Acoustics(19.59) |
| | | Pharmaceutical Analysis(46.00) | | | |
| | Stomatology(20.45) | Pharmacetics(28.77) | | | Atomic and Molecular Physics(24.29) |
| | | Pharmacology(27.27) | | | Electrodynamics(19.04) |
| | | Epidemiology and Health Statistics(30.12) | | | Fluid Physics(14.93) |
| | | Health Toxicology and Environmental Health(31.25) | | | Particle and Nuclear Physics(22.67) |
| | | Maternal, Child and Adolescent Health(24.05) | | | Polymer Physics(25.69) |
| Medicine(31.18) | Traditional Chinese Medicine(32.46) | Nutrition and Food Hygiene(52.00) | | | Quantum Mechanics(20.39) |
| | | Basic Stomatology(26.42) | | | Relativity(21.52) |
| | | Clinical Stomatology(16.46) | | | Semiconductor Physics(13.11) |
| | | Traditional Chinese Medicine(32.46) | | | Solid State Physics(22.45) |
| | | Traditional Chinese Health Preservation(40.68) | | | |
| | Military Science(40.49) | Traditional Chinese Medicine Theory(32.22) | | | Statistical Mechanics(38.00) |
| | | Traditional Chinese Pharmacy(28.57) | | | Subatomic and Atomic Physics(25.49) |
| | | Military Command and Information Systems(44.00) | | | Thermodynamics(23.26) |
| | | Military Logistics and Equipment(35.19) | | | Thermodynamics and Statistical Physics(18.68) |
| | | Military Management(48.00) | | | Systems Science(28.00) |
| Philosophy(35.45) | Philosophy(35.45) | Military Thought and History(35.29) | Sociology(37.76) | Sociology(37.76) | Demography and Anthropology(34.00) |
| | | Ethics(32.35) | | | Social and Folklore Studies(39.78) |
| | | Logic(25.71) | | | |
| | | Philosophical Aesthetics(30.28) | | | |
| | | Philosophy of Science and Technology(58.00) | | | |

Table 49. Continued: Model Scores Across Three Levels of Disciplines: Yi-1.5-34B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|---|--|---|--|
| Agronomy(31.13) | Animal Husbandry(27.18) | Animal Nutrition and Feed Science(28.85) Animal Rearing and Breeding(25.49) | Engineering(26.72) | Geological Resources and Geological Engineering(48.00) Geological Engineering(48.00) | Geological Resources and Geological Engineering(48.00) |
| | Aquaculture(25.00) Crop Science(29.66) | Aquaculture(25.00) Crop Science(29.66) | | Hydraulic Engineering(21.56) | Hydraulics and Hydrology(21.32) Water conservancy and Hydropower Engineering(21.95) |
| | Forestry(36.64) | Forest Cultivation and Genetic Breeding(28.40) Landscape Plants and Ornamental Horticulture(50.00) | Information and Communication Engineering(30.56) | Antenna and Radio Communication(28.07) | Antenna and Radio Communication(28.07) |
| Economics(29.32) | Veterinary Medicine(36.00) | Veterinary Medicine(36.00) | | Communication Principles(30.17) Communication and Information Systems(28.99) | Communication Principles(30.17) |
| | Applied Economics(28.77) | Economic Statistics(36.00) Finance(22.73) | | Optical Fiber Communication(34.00) Signal and Information Processing(32.26) | Optical Fiber Communication(34.00) |
| | | Industrial Economics(28.57) | Instrument Science and Technology(26.00) | Instrument Science and Technology(26.00) | Instrument Science and Technology(26.00) |
| | | International Trade(30.43) Labor Economics(31.08) | Materials Science and Engineering(17.99) | Materials Physics and Chemistry(18.09) | Materials Physics and Chemistry(18.09) |
| | | National and Defense Economics(34.00) Public Finance(27.50) | Mechanical Engineering(29.55) | Materials Processing Engineering(17.78) | Materials Processing Engineering(17.78) |
| | | Quantitative Economics(32.00) | Mechanics(19.16) | Manufacturing Automation(26.98) Mechatronic Engineering(36.00) | Manufacturing Automation(26.98) |
| | Theoretical Economics(32.00) | Economic History(32.00) | | Fundamentals of Dynamics and Control(19.02) Rigid Body Mechanics(13.87) | Fundamentals of Dynamics and Control(19.02) |
| | | Political Economy(28.00) | | Solid Mechanics(19.35) | Rigid Body Mechanics(13.87) |
| | | Western Economics(36.00) | | Theoretical Fluid Mechanics(28.57) Theoretical Mechanics(16.77) | Solid Mechanics(19.35) |
| Education(30.99) | Education(29.96) | Educational Technology and Principles(31.25) Preschool Education(24.00) | Metallurgical Engineering(30.59) | Iron and Steel Metallurgy(16.19) Non-ferrous Metallurgy(32.00) | Iron and Steel Metallurgy(16.19) |
| | Physical Education(36.67) | Special Education(40.00) Theory of Curriculum and Instruction(23.53) Physical Education and Training(24.00) | | Physical Chemistry of Metallurgical Process(36.00) Principles of Metallurgy(54.00) | Non-ferrous Metallurgy(32.00) |
| | | Sports Humanities and Sociology(34.00) | Mining Engineering(39.00) | Mineral Processing Engineering(46.00) Mining and Safety Engineering(32.00) | Physical Chemistry of Metallurgical Process(36.00) |
| | | Sports Science and Medicine(52.00) | Naval Architecture and Ocean Engineering(23.91) | Marine Engineering(26.00) | Principles of Metallurgy(54.00) |
| | Psychology(24.14) | Psychology(24.14) | | | Ship Mechanics and Design Principles(22.73) |
| Engineering(26.72) | Aeronautical and Astronautical Science and Technology(18.49) Agricultural Engineering(41.35) | Aeronautical and Astronautical Science and Technology(18.49) Agricultural Environment and Soil-Water Engineering(38.89) Agricultural Mechanization Engineering(44.00) | Nuclear Science and Technology(29.91) | Nuclear Energy and Reactor Technology(22.81) | Nuclear Energy and Reactor Technology(22.81) |
| | Architecture(33.95) | Architectural Design and Theory(36.00) Architectural History(24.19) | | | Radiation Protection and Nuclear Technology Applications(38.00) |
| | Chemical Engineering and Technology(20.00) | Urban Planning and Design(44.00) Chemical Transport Engineering(32.00) | Optical Engineering(24.20) | Applied Optics(20.97) | Applied Optics(20.97) |
| | | Elements of Chemical Reaction Engineering(14.02) Fluid Flow and Heat Transfer in Chemical Engineering(15.89) | | Laser Technology(30.00) Optoelectronic Technology(31.34) | Laser Technology(30.00) |
| | | Mass Transport and Separation Process in Chemical Engineering(23.29) | Petroleum and Natural Gas Engineering(32.14) | Theoretical Optics(21.48) | Optoelectronic Technology(31.34) |
| | Civil Engineering(21.51) | Bridge and Tunnel Engineering(25.49) Geotechnical Engineering(17.88) Structural Engineering(21.05) Urban Infrastructure Engineering(28.17) | | Oil and Gas Field Development and Storage & Transportation Engineering(24.19) | Theoretical Optics(21.48) |
| | Computer Science and Technology(30.80) | Advanced Programming Languages(56.00) Computer Architecture(32.00) | Power Engineering and Engineering Thermophysics(23.10) | Poromechanics and Reservoir Physics(42.00) Engineering Fluid Mechanics(23.81) | Oil and Gas Field Development and Storage & Transportation Engineering(24.19) |
| | | Computer Networks(20.34) | | Engineering Thermophysics(21.92) | Poromechanics and Reservoir Physics(42.00) |
| | | Computer Software and Theory(18.99) Data Structures(21.21) | | | Engineering Fluid Mechanics(23.81) |
| | | Databases(31.21) | | | |
| | | Formal Languages(23.08) | | | |
| | | Operating Systems(27.06) Pattern Recognition(72.00) | | | |
| | Control Science and Engineering(24.74) | Principles of Computer Organization(28.05) Control Theory and Control Engineering(23.60) | | | |
| | | Guidance, Navigation and Control(19.61) | | | |
| | | Operations Research and Cybernetics(32.00) | | | |
| Electrical Engineering(21.94) | Electrical Theory and New Technologies(20.53) High Voltage and Insulation Technology(27.27) | History(24.78) | History(24.78) | Military Chemistry and Pyrotechnics(48.00) | Military Chemistry and Pyrotechnics(48.00) |
| | Power Electronics and Electrical Drives(22.53) | | | Weapon Science and Technology(43.00) | Weapon Systems Science and Engineering(38.00) |
| | | Power Systems and Automation(18.75) | | | Archaeology and Museology(27.88) |
| Electronic Science and Technology(27.24) | Circuits and Systems(24.07) | | | | Historical Geography(21.13) |
| | Electromagnetic Field and Microwave Technology(28.41) | | | | World History(25.23) |
| | Microelectronics and Solid-State Electronics(52.00) | | | | |
| Environmental Science and Engineering(34.92) | Environmental Engineering(19.10) | | | | |
| | Environmental Science(52.00) | | | | |
| | Environmental and Resource Protection(46.00) | | | | |
| Food Science and Engineering(50.46) | Food Biochemistry(74.00) | | | | |
| | Food Processing and Storage Engineering(30.51) | | | | |
| Forestry Engineering(43.00) | Forest Engineering(48.00) | | | | |
| Engineering(26.72) | Wood Science and Technology(38.00) | | | | |
| | | | Law(35.06) | Law(36.38) | Civil and Commercial Law(25.42) |
| | | | | | Constitutional and Administrative Law(36.00) |
| | | | | | Contract Law(42.00) |
| | | | | | Criminal Law(32.76) |
| | | | | | International Law(26.32) |
| | | | | | Law and Social Governance(48.00) |
| | | | | | Legal Theory and Legal History(40.00) |
| | | | | | Military Law(70.00) |
| | | | | | Procedural Law(28.00) |
| | | | | | Political Science(23.08) |
| | | | | | |

Table 50. Model Scores Across Three Levels of Disciplines: gemma-2-27b-it.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|-------------------|-------------------|--|
| Literature and Arts(29.42) | Art Studies(29.52) | Broadcasting and Television Art(36.00) | Philosophy(35.45) | Philosophy(35.45) | Religious Studies(44.00) |
| | | Dance Studies(24.00) | | | Astronomical Observation and Technology(26.00) |
| | | Design Arts(20.97) | | | Astrophysics(26.09) |
| | | Drama and Opera Studies(37.80) | | | Cosmology(23.08) |
| | | Film Studies(27.85) | | | Solar System Science(22.73) |
| | Journalism and Communication(30.43) | Fine Arts(29.85) | | | Stellar and Interstellar Evolution(22.86) |
| | | Communication and Broadcasting(32.76) | | | Atmospheric Physics and Atmospheric Environment(30.43) |
| | | History and Theory of Journalism and Media Management(33.90) | | | Dynamic Meteorology(26.00) |
| | | Journalism and News Practice(26.67) | | | Meteorology(29.76) |
| | | Classical Chinese Literature(22.00) | | | Biochemistry and Molecular Biology(38.38) |
| Management(34.93) | Language and Literature(29.32) | French Language and Literature(40.00) | | | Biophysics(48.00) |
| | | Linguistics and Applied Linguistics(40.00) | | | Botany(19.28) |
| | | Literary History(20.29) | | | Cell Biology(41.38) |
| | | Literary Theory(23.44) | | | Ecology(26.39) |
| | | Modern and Contemporary Chinese Literature(32.00) | | | Genetics(29.89) |
| | Musicology(28.87) | Phonology and Bibliography(34.00) | | | Microbiology(29.81) |
| | | Russian Language and Literature(28.07) | | | Physiology(27.30) |
| | | Composition(32.00) | | | Zoology(22.02) |
| | | Harmony(25.00) | | | Chemistry(20.18) |
| | | Instrumentation and Performance(33.85) | | | Analytical Chemistry(21.46) |
| Medicine(31.00) | Business Administration(31.69) | Music History, Education, and Technology(24.14) | | | Electrochemistry(22.07) |
| | | Musical Forms and Analysis(44.00) | | | Inorganic Chemistry(25.36) |
| | | Pitch and Scales(23.21) | | | Organic Chemistry(19.30) |
| | | Business and Accounting Management(29.35) | | | Physical Chemistry(18.27) |
| | | Tourism Management and Technological Economics Management(36.00) | | | Polymer Chemistry and Physics(21.05) |
| | Library, Information and Archival Management(38.67) | Information Management Science(28.00) | | | Radiochemistry(16.67) |
| | | Information Management and Communication(64.00) | | | Geography(40.60) |
| | | Library and Archival Science(24.00) | | | Human Geography(54.00) |
| | | Management Science and Engineering(29.31) | | | Physical Geography(32.53) |
| | | Education Economics, Management and Social Security(34.00) | | | Geology(29.33) |
| Pharmacy(25.54) | Public Administration(36.42) | Land Resource Management and Administrative Management(29.41) | | | Geochemistry(48.00) |
| | | Social Medicine and Health Management(46.00) | | | Mineralogy, Petrology, and Economic Geology(28.10) |
| | | Forensic Medicine(38.00) | | | Paleontology and Stratigraphy(16.00) |
| | | Human Anatomy and Histology-Embryology(28.04) | | | Principles of Seismic Exploration(18.00) |
| | | Immunology(36.23) | | | Structural Geology(35.71) |
| | Clinical Medicine(34.24) | Pathogen Biology(31.91) | | | Geophysics(28.00) |
| | | Pathology and Pathophysiology(27.83) | | | Solid Earth Geophysics(32.00) |
| | | Radiation Medicine(44.00) | | | Space physics(24.00) |
| | | Anesthesiology(38.00) | | | Advanced Algebra(28.71) |
| | | Clinical Laboratory Diagnostics(34.00) | | | Combinatorial Mathematics(18.32) |
| Stomatology(19.70) | Pharmacy(25.54) | Dermatology and Venereology(39.39) | | | Computational Mathematics(28.00) |
| | | Emergency Medicine(27.27) | | | Cryptography(58.00) |
| | | Geriatric Medicine(44.00) | | | Discrete Mathematics(15.73) |
| | | Imaging and Nuclear Medicine(31.34) | | | Functions of Complex Variables(31.97) |
| | | Internal Medicine(35.15) | | | Functions of Real Variables(32.84) |
| | Public Health and Preventive Medicine(35.27) | Neurology(36.51) | | | Fundamental Mathematics(23.35) |
| | | Nursing and Rehabilitation Medicine(42.00) | | | Fuzzy Mathematics(32.00) |
| | | Obstetrics and Gynecology(30.39) | | | Geometry and Topology(20.75) |
| | | Oncology(22.41) | | | Graph Theory(21.57) |
| | | Ophthalmology(30.00) | | | Group Theory(16.00) |
| Military Science(39.02) | Traditional Chinese Medicine(20.90) | Otorhinolaryngology(36.00) | | | Mathematical Analysis(25.69) |
| | | Pediatrics(34.00) | | | Number Theory(15.00) |
| | | Psychiatry and Mental Health(50.00) | | | Numerical Analysis(20.90) |
| | | Surgery(20.59) | | | Ordinary Differential Equations(25.00) |
| | | Medicinal Chemistry(14.00) | | | Polynomials and Series Expansions(20.11) |
| | Philosophy(35.45) | Microbiology and Biochemical Pharmacy(36.00) | | | Probability and Statistics(30.36) |
| | | Pharmaceutical Analysis(26.00) | | | Special Number Theory(26.00) |
| | | Pharmacetics(23.29) | | | Stochastic Processes(48.00) |
| | | Pharmacology(29.09) | | | Hydrogeology(58.00) |
| | | Epidemiology and Health Statistics(24.10) | | | Marine Biology(82.00) |
| Philosophy(35.45) | Military Science(39.02) | Health Toxicology and Environmental Health(32.50) | | | Marine Chemistry(56.00) |
| | | Maternal, Child and Adolescent Health(40.51) | | | Underwater Acoustics(42.00) |
| | | Nutrition and Food Hygiene(50.00) | | | Physical Oceanography(26.00) |
| | | Basic Stomatology(20.75) | | | Acoustics(22.04) |
| | | Clinical Stomatology(18.99) | | | Atomic and Molecular Physics(21.90) |
| | Systems Science(28.00) | Traditional Chinese Health Preservation(16.95) | | | Electrodynamics(20.75) |
| | | Traditional Chinese Medicine Theory(22.22) | | | Fluid Physics(22.39) |
| | | Traditional Chinese Pharmacy(21.85) | | | Particle and Nuclear Physics(22.22) |
| | | Military Command and Information Systems(44.00) | | | Polymer Physics(26.61) |
| | | Military Logistics and Equipment(33.33) | | | Quantum Mechanics(21.36) |
| Sociology(34.27) | Philosophy(35.45) | Military Management(52.00) | | | Relativity(18.99) |
| | | Military Thought and History(27.45) | | | Semiconductor Physics(16.39) |
| | | Ethics(36.76) | | | Solid State Physics(24.49) |
| | | Logic(18.57) | | | Statistical Mechanics(58.00) |
| Sociology(34.27) | Philosophy(35.45) | Philosophical Aesthetics(33.94) | | | Subatomic and Atomic Physics(19.61) |
| | | Philosophy of Science and Technology(52.00) | | | Thermodynamics(22.79) |
| | | Sociology(34.27) | | | Thermodynamics and Statistical Physics(20.57) |
| | | Sociology(34.27) | | | Systems Science(28.00) |
| | | Sociology(34.27) | | | Demography and Anthropology(42.00) |
| | | Sociology(34.27) | | | Social and Folklore Studies(30.11) |

Table 50. Continued: Model Scores Across Three Levels of Disciplines: gemma-2-27b-it.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|--------------------|--|---|
| Agronomy(28.87) | Animal Husbandry(28.16) | Animal Nutrition and Feed Science(23.08) | Engineering(26.19) | Geological Resources and Geological Engineering(50.00) | Geological Resources and Geological Engineering(50.00) |
| | | Animal Rearing and Breeding(33.33) | | | Hydraulics and Hydrology(19.12) |
| | Aquaculture(35.71) Crop Science(25.52) | Aquaculture(35.71) | | Hydraulic Engineering(23.39) | Water conservancy and Hydropower Engineering(30.49) |
| | | Crop Science(25.52) | | | Antenna and Radio Communication(18.42) |
| | Forestry(27.48) | Forest Cultivation and Genetic Breeding(25.93) | | Information and Communication Engineering(26.79) | Communication Principles(31.03) |
| | | Landscape Plants and Ornamental Horticulture(30.00) | | | Communication and Information Systems(31.88) |
| | Veterinary Medicine(36.00) | Veterinary Medicine(36.00) | | Optical Fiber Communication(30.00) | Optical Fiber Communication(30.00) |
| | | Economic Statistics(28.00) | | | Signal and Information Processing(26.45) |
| | Economics(29.67) | Finance(27.84) | | Instrument Science and Technology(34.00) | Instrument Science and Technology(34.00) |
| | | Industrial Economics(33.33) | | | Materials Physics and Chemistry(18.09) |
| | | International Trade(31.88) | | Materials Science and Engineering(20.76) | Materials Processing Engineering(26.67) |
| | | Labor Economics(28.38) | | | Manufacturing Automation(30.16) |
| | | National and Defense Economics(32.00) | | Mechanics(20.93) | Mechatronic Engineering(36.00) |
| | | Public Finance(29.17) | | | Fundamentals of Dynamics and Control(19.60) |
| | | Quantitative Economics(23.00) | | | Rigid Body Mechanics(20.81) |
| | | Theoretical Economics(34.00) | | | Solid Mechanics(26.88) |
| | | Economic History(28.00) | | Metallurgical Engineering(27.45) | Theoretical Fluid Mechanics(21.43) |
| | | Political Economy(32.00) | | | Theoretical Mechanics(20.00) |
| | | Western Economics(42.00) | | | Iron and Steel Metallurgy(15.24) |
| Education(36.36) | Education(38.06) | Educational Technology and Principles(35.42) | | Non-ferrous Metallurgy(24.00) | Non-ferrous Metallurgy(24.00) |
| | | Preschool Education(38.00) | | | Physical Chemistry of Metallurgical Process(36.00) |
| | Physical Education(38.00) | Special Education(54.00) | | Principles of Metallurgy(48.00) | Principles of Metallurgy(48.00) |
| | | Theory of Curriculum and Instruction(27.45) | | | Mining Engineering(34.00) |
| | Psychology(28.74) | Physical Education and Training(24.00) | | Mineral Processing Engineering(36.00) | Mineral Processing Engineering(36.00) |
| | | Sports Humanities and Sociology(44.00) | | | Mining and Safety Engineering(32.00) |
| | | Sports Science and Medicine(46.00) | | Naval Architecture and Ocean Engineering(21.01) | Naval Architecture and Ocean Engineering(18.00) |
| | | Psychology(28.74) | | | Marine Engineering(18.00) |
| | Engineering(26.19) | Aeronautical and Astronautical Science and Technology(21.01) | | Ship Mechanics and Design Principles(22.73) | Ship Mechanics and Design Principles(22.73) |
| | | Agricultural Engineering(39.42) | | | Nuclear Energy and Reactor Technology(19.30) |
| | | Agricultural Environment and Soil-Water Engineering(33.33) | | Nuclear Science and Technology(27.10) | Radiation Protection and Nuclear Technology Applications(36.00) |
| | | Agricultural Mechanization Engineering(46.00) | | | Applied Optics(20.97) |
| | | Architecture(32.10) | | Optical Engineering(21.28) | Laser Technology(20.00) |
| | | Architectural Design and Theory(32.00) | | | Optoelectronic Technology(22.39) |
| | | Architectural History(30.65) | | | Theoretical Optics(21.48) |
| | | Urban Planning and Design(34.00) | | Petroleum and Natural Gas Engineering(32.14) | Petroleum and Natural Gas Engineering(32.14) |
| | | Chemical Transport Engineering(28.00) | | | Oil and Gas Field Development and Storage & Transportation Engineering(25.81) |
| | Control Science and Engineering(20.53) | Elements of Chemical Reaction Engineering(14.02) | | | Poromechanics and Reservoir Physics(40.00) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(14.95) | | | Engineering Fluid Mechanics(23.81) |
| | | Mass Transport and Separation Process in Chemical Engineering(21.23) | | Power Engineering and Engineering Thermophysics(21.93) | Engineering Thermophysics(22.60) |
| | | Civil Engineering(20.11) | | | Fluid Machinery and Engineering(18.75) |
| | | Bridge and Tunnel Engineering(11.76) | | | Heat Transfer(22.48) |
| | | Geotechnical Engineering(18.44) | | | Internal Combustion Engineering(36.00) |
| | | Structural Engineering(26.32) | | | Power Machinery and Engineering(11.54) |
| | | Urban Infrastructure Engineering(25.35) | | Refrigeration and Cryogenic Engineering(18.00) | Refrigeration and Cryogenic Engineering(18.00) |
| | | Computer Science and Technology(32.37) | | | Thermal Energy Engineering(21.10) |
| | | Advanced Programming Languages(54.00) | | | Cartography and Geographic Information Engineering(40.00) |
| Electrical Engineering(22.84) | Computer Architecture(32.00) | Computer Architecture(32.00) | | Digital Surveying and Remote Sensing Applications(26.47) | Digital Surveying and Remote Sensing Applications(26.47) |
| | | Computer Networks(33.90) | | | Geodesy and Surveying Engineering(32.00) |
| | Computer Software and Theory(26.58) | Computer Software and Theory(26.58) | | | Textile Chemistry and Dyeing Engineering(30.00) |
| | | Data Structures(15.15) | | | Textile Materials Science(54.00) |
| | Control Theory and Control Engineering(31.46) | Databases(38.22) | | Transportation Engineering(28.69) | Transportation Engineering(28.69) |
| | | Formal Languages(25.00) | | | Road and Railway Engineering(18.00) |
| | Principles of Computer Organization(28.05) | Operating Systems(24.71) | | | Traffic Information Engineering and Control(20.00) |
| | | Pattern Recognition(62.00) | | | Transportation Planning and Management(39.53) |
| | Operations Research and Cybernetics(10.00) | Principles of Computer Organization(28.05) | | | Vehicle Operation Engineering(32.00) |
| | | Control Theory and Control Engineering(31.46) | | Weapon Science and Technology(39.00) | Weapon Science and Technology(39.00) |
| Environmental Science and Engineering(33.33) | Guidance, Navigation and Control(11.76) | Guidance, Navigation and Control(11.76) | | | Military Chemistry and Pyrotechnics(52.00) |
| | | Operations Research and Cybernetics(10.00) | | | Weapon Systems Science and Engineering(26.00) |
| | Electrical Theory and New Technologies(18.42) | Electrical Theory and New Technologies(18.42) | History(32.94) | History(32.94) | Archaeology and Museology(35.58) |
| | | High Voltage and Insulation Technology(22.73) | | | Historical Geography(33.10) |
| | Power Electronics and Electrical Drives(25.82) | Power Electronics and Electrical Drives(25.82) | | | World History(32.24) |
| | | Power Systems and Automation(26.04) | | Law(33.38) | Civil and Commercial Law(30.51) |
| | Food Science and Technology(26.02) | Circuits and Systems(31.48) | | | Constitutional and Administrative Law(24.00) |
| | | Electromagnetic Field and Microwave Technology(14.77) | | | Contract Law(34.00) |
| | Microelectronics and Solid-State Electronics(54.00) | Microelectronics and Solid-State Electronics(54.00) | | | Criminal Law(33.62) |
| | | Environmental Engineering(12.36) | | | International Law(29.82) |
| Food Science and Engineering(47.71) | Environmental Science(56.00) | Environmental Science(56.00) | | | Law and Social Governance(40.00) |
| | | Environmental and Resource Protection(48.00) | | | Legal Theory and Legal History(36.00) |
| | Food Biochemistry(70.00) | Food Biochemistry(70.00) | | | Military Law(66.00) |
| | | Food Processing and Storage Engineering(28.81) | | Political Science(24.62) | Procedural Law(22.00) |
| | Forest Engineering(54.00) | Forest Engineering(54.00) | | | Political Science(24.62) |
| Engineering(26.19) | Forestry Engineering(40.00) | Wood Science and Technology(26.00) | | | - |

Table 51. Model Scores Across Three Levels of Disciplines: Llama-3.1-70B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|-------------------|-------------------|--|
| Literature and Arts(32.64) | Art Studies(33.33) | Broadcasting and Television Art(38.00) | Philosophy(36.89) | Philosophy(36.89) | Religious Studies(48.00) |
| | | Dance Studies(34.00) | | | Astronomical Observation and Technology(31.00) |
| | | Design Arts(29.03) | | | Astrophysics(24.64) |
| | | Drama and Opera Studies(30.49) | | | Cosmology(25.64) |
| | | Film Studies(44.94) | | | Solar System Science(23.86) |
| | Journalism and Communication(28.02) | Fine Arts(25.37) | | | Stellar and Interstellar Evolution(28.57) |
| | | Communication and Broadcasting(36.21) | | | Atmospheric Physics and Atmospheric Environment(34.78) |
| | | History and Theory of Journalism and Media Management(20.34) | | | Dynamic Meteorology(34.00) |
| | | Journalism and News Practice(27.78) | | | Meteorology(33.33) |
| | | Classical Chinese Literature(24.00) | | | Biochemistry and Molecular Biology(31.31) |
| Management(36.73) | Language and Literature(34.09) | French Language and Literature(42.00) | | | Biophysics(36.00) |
| | | Linguistics and Applied Linguistics(48.00) | | | Botany(31.93) |
| | | Literary History(28.99) | | | Cell Biology(42.53) |
| | | Literary Theory(39.06) | | | Ecology(30.56) |
| | | Modern and Contemporary Chinese Literature(24.00) | | | Genetics(21.74) |
| | Musicology(32.39) | Phylogeny and Bibliography(30.00) | | | Microbiology(24.84) |
| | | Russian Language and Literature(36.84) | | | Physiology(24.17) |
| | | Composition(40.00) | | | Zoology(25.69) |
| | | Harmony(30.00) | | | Chemistry(18.54) |
| | | Instrumentation and Performance(33.85) | | | Analytical Chemistry(19.19) |
| Medicine(30.96) | Business Administration(30.99) | Music History, Education, and Technology(27.59) | | | Electrochemistry(17.57) |
| | | Musical Forms and Analysis(50.00) | | | Inorganic Chemistry(21.01) |
| | | Pitch and Scales(23.21) | | | Organic Chemistry(22.22) |
| | | Business and Accounting Management(25.00) | | | Physical Chemistry(17.42) |
| | | Tourism Management and Technological Economics Management(42.00) | | | Polymer Chemistry and Physics(15.79) |
| | Library, Information and Archival Management(40.67) | Information Management Science(28.00) | | | Radiochemistry(18.33) |
| | | Information Management and Communication(56.00) | | | Geography(39.85) |
| | | Library and Archival Science(38.00) | | | Human Geography(54.00) |
| | | Management Science and Engineering(27.59) | | | Physical Geography(31.33) |
| | | Education Economics, Management and Social Security(36.00) | | | Geology(30.79) |
| Medicine(30.96) | Public Administration(41.72) | Land Resource Management and Administrative Management(41.18) | | | Geochemistry(46.00) |
| | | Social Medicine and Health Management(48.00) | | | Mineralogy, Petrology, and Economic Geology(29.75) |
| | | Forensic Medicine(38.00) | | | Paleontology and Stratigraphy(28.00) |
| | | Human Anatomy and Histology-Embryology(25.40) | | | Principles of Seismic Exploration(24.00) |
| | | Immunology(28.99) | | | Structural Geology(28.57) |
| | Clinical Medicine(32.51) | Pathogen Biology(35.11) | | | Geophysics(30.00) |
| | | Pathology and Pathophysiology(27.83) | | | Solid Earth Geophysics(38.00) |
| | | Radiation Medicine(46.00) | | | Space physics(22.00) |
| | | Anesthesiology(34.00) | | | Advanced Algebra(25.74) |
| | | Clinical Laboratory Diagnostics(30.00) | | | Combinatorial Mathematics(11.52) |
| Medicine(30.96) | Pharmacy(24.82) | Dermatology and Venereology(39.39) | | | Computational Mathematics(34.00) |
| | | Emergency Medicine(40.91) | | | Cryptography(54.00) |
| | | Geriatric Medicine(34.00) | | | Discrete Mathematics(13.48) |
| | | Imaging and Nuclear Medicine(20.90) | | | Functions of Complex Variables(21.31) |
| | | Internal Medicine(28.71) | | | Functions of Real Variables(25.37) |
| | Public Health and Preventive Medicine(40.75) | Neurology(35.98) | | | Fundamental Mathematics(16.75) |
| | | Nursing and Rehabilitation Medicine(24.00) | | | Fuzzy Mathematics(40.00) |
| | | Obstetrics and Gynecology(30.39) | | | Geometry and Topology(16.23) |
| | | Oncology(25.86) | | | Graph Theory(21.57) |
| | | Ophthalmology(34.00) | | | Group Theory(20.00) |
| Medicine(30.96) | Pharmacy(24.82) | Otorhinolaryngology(36.00) | | | Mathematical Analysis(12.50) |
| | | Pediatrics(30.00) | | | Number Theory(8.64) |
| | | Psychiatry and Mental Health(52.00) | | | Numerical Analysis(17.91) |
| | | Surgery(29.41) | | | Ordinary Differential Equations(25.62) |
| | | Medicinal Chemistry(16.00) | | | Polynomials and Series Expansions(18.44) |
| | Public Health and Preventive Medicine(40.75) | Microbiology and Biochemical Pharmacy(36.00) | | | Probability and Statistics(25.45) |
| | | Pharmaceutical Analysis(32.00) | | | Special Number Theory(34.00) |
| | | Pharmacetics(21.92) | | | Stochastic Processes(40.00) |
| | | Pharmacology(20.00) | | | Hydrogeology(56.00) |
| | | Epidemiology and Health Statistics(30.12) | | | Marine Biology(78.00) |
| Medicine(30.96) | Stomatology(25.00) | Health Toxicology and Environmental Health(47.50) | | | Marine Chemistry(54.00) |
| | | Maternal, Child and Adolescent Health(35.44) | | | Underwater Acoustics(36.00) |
| | | Nutrition and Food Hygiene(56.00) | | | Physical Oceanography(48.00) |
| | | Basic Stomatology(20.75) | | | Acoustics(19.18) |
| | | Clinical Stomatology(27.85) | | | Atomic and Molecular Physics(25.71) |
| | Traditional Chinese Medicine(22.76) | Traditional Chinese Health Preservation(27.12) | | | Electrodynamics(21.27) |
| | | Traditional Chinese Medicine Theory(22.22) | | | Fluid Physics(18.66) |
| | | Traditional Chinese Pharmacy(21.01) | | | Particle and Nuclear Physics(20.00) |
| | | Military Science(40.98) | | | Polymer Physics(13.76) |
| | | Military Command and Information Systems(44.00) | | | Quantum Mechanics(23.30) |
| Military Science(40.98) | Philosophy(36.89) | Military Logistics and Equipment(27.78) | | | Relativity(25.32) |
| | | Military Management(48.00) | | | Semiconductor Physics(18.03) |
| | | Military Thought and History(45.10) | | | Solid State Physics(21.09) |
| | | Ethics(44.12) | | | Statistical Mechanics(30.00) |
| | | Logic(17.14) | | | Subatomic and Atomic Physics(29.41) |
| | Philosophy(36.89) | Philosophical Aesthetics(33.03) | | | Thermodynamics(26.98) |
| | | Philosophy of Science and Technology(52.00) | | | Thermodynamics and Statistical Physics(16.79) |
| | | Sociology(34.27) | | | Systems Science(40.00) |
| | | Sociology(34.27) | | | Demography and Anthropology(48.00) |
| | | Sociology(34.27) | | | Social and Folklore Studies(26.88) |

Table 51. Continued: Model Scores Across Three Levels of Disciplines: Llama-3.1-70B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|--|---|
| Agronomy(28.87) | Animal Husbandry(29.13) | Animal Nutrition and Feed Science(38.46) | Engineering(25.67) | Geological Resources and Geological Engineering(40.00) | Geological Resources and Geological Engineering(40.00) |
| | | Animal Rearing and Breeding(19.61) | | | Hydraulics and Hydrology(20.59) |
| | Aquaculture(17.86) | Aquaculture(17.86) | | Water conservancy and Hydropower Engineering(25.61) | Water conservancy and Hydropower Engineering(25.61) |
| | | Crop Science(29.66) | | | Antenna and Radio Communication(19.30) |
| | Forestry(30.53) | Forest Cultivation and Genetic Breeding(32.10) | | Communication Principles(27.59) | Communication Principles(27.59) |
| | | Landscape Plants and Ornamental Horticulture(28.00) | | | Communication and Information Systems(21.74) |
| | Veterinary Medicine(34.00) | Veterinary Medicine(34.00) | | Optical Fiber Communication(36.00) | Optical Fiber Communication(36.00) |
| | | Economic Statistics(36.00) | | | Signal and Information Processing(28.39) |
| | Economics(31.27) | Finance(30.68) | | Instrument Science and Technology(30.00) | Instrument Science and Technology(30.00) |
| | | Industrial Economics(29.76) | | | Materials Physics and Chemistry(17.59) |
| | | International Trade(42.03) | | Materials Science and Engineering(17.30) | Materials Processing Engineering(16.67) |
| | | Labor Economics(25.68) | | | Manufacturing Automation(27.78) |
| | | National and Defense Economics(28.00) | | Mechatronic Engineering(34.00) | Mechatronic Engineering(34.00) |
| | | Public Finance(23.33) | | | Fundamentals of Dynamics and Control(20.46) |
| | | Quantitative Economics(30.00) | | Rigid Body Mechanics(18.50) | Rigid Body Mechanics(18.50) |
| | | Theoretical Economics(37.33) | | | Solid Mechanics(16.13) |
| | | Economic History(40.00) | | Theoretical Fluid Mechanics(25.71) | Theoretical Fluid Mechanics(25.71) |
| | | Political Economy(34.00) | | | Theoretical Mechanics(18.71) |
| | | Western Economics(38.00) | | Metallurgical Engineering(26.67) | Iron and Steel Metallurgy(16.19) |
| Education(30.99) | Education(29.55) | Educational Technology and Principles(29.17) | | | Non-ferrous Metallurgy(28.00) |
| | | Preschool Education(22.00) | | | Physical Chemistry of Metallurgical Process(28.00) |
| | | Special Education(40.00) | | | Principles of Metallurgy(46.00) |
| | | Theory of Curriculum and Instruction(27.45) | | Mining Engineering(35.00) | Mineral Processing Engineering(30.00) |
| | Physical Education(38.00) | Physical Education and Training(30.00) | | | Mining and Safety Engineering(40.00) |
| | | Sports Humanities and Sociology(32.00) | | | Naval Architecture and Ocean Engineering(28.99) |
| | | Sports Science and Medicine(52.00) | | | Marine Engineering(28.00) |
| | | Psychology(22.99) | | | Ship Mechanics and Design Principles(29.55) |
| | Engineering(25.67) | Aeronautical and Astronautical Science and Technology(25.21) | | Nuclear Science and Technology(21.50) | Nuclear Energy and Reactor Technology(15.79) |
| | | Agricultural Engineering(40.38) | | | Radiation Protection and Nuclear Technology Applications(28.00) |
| | | Aerospace Engineering(33.33) | | Optical Engineering(23.94) | Applied Optics(19.35) |
| | | Agricultural Mechanization Engineering(48.00) | | | Laser Technology(24.00) |
| | | Architecture(36.42) | | | Optoelectronic Technology(26.87) |
| | | Architectural Design and Theory(42.00) | | | Theoretical Optics(26.67) |
| | | Architectural History(32.26) | | Petroleum and Natural Gas Engineering(29.46) | Petroleum and Natural Gas Engineering(29.46) |
| | | Urban Planning and Design(36.00) | | | Oil and Gas Field Development and Storage & Transportation Engineering(27.42) |
| | Chemical Engineering and Technology(22.93) | Chemical Transport Engineering(24.00) | | | Poromechanics and Reservoir Physics(32.00) |
| | | Elements of Chemical Reaction Engineering(17.76) | | | Engineering Fluid Mechanics(22.62) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(28.04) | | | Engineering Thermodynamics(23.97) |
| | | Mass Transport and Separation Process in Chemical Engineering(22.60) | | | Fluid Machinery and Engineering(12.50) |
| | | Civil Engineering(23.74) | | | Heat Transfer(27.91) |
| | | Bridge and Tunnel Engineering(27.45) | | | Internal Combustion Engineering(34.00) |
| | | Geotechnical Engineering(17.88) | | | Power Machinery and Engineering(30.77) |
| | | Structural Engineering(28.07) | | | Refrigeration and Cryogenic Engineering(22.00) |
| | | Urban Infrastructure Engineering(32.39) | | | Thermal Energy Engineering(16.51) |
| | | Computer Science and Technology(29.23) | | Surveying and Mapping Science and Technology(32.74) | Cartography and Geographic Information Engineering(36.00) |
| | | Advanced Programming Languages(50.00) | | | Digital Surveying and Remote Sensing Applications(29.41) |
| | | Computer Architecture(28.00) | | | Geodesy and Surveying Engineering(34.00) |
| | | Computer Networks(27.12) | | | Textile Chemistry and Dyeing Engineering(18.00) |
| | | Computer Software and Theory(22.78) | | | Textile Materials Science(46.00) |
| | | Data Structures(19.19) | | | Transportation Engineering(32.27) |
| | | Databases(36.94) | | | Road and Railway Engineering(20.00) |
| | | Formal Languages(28.85) | | | Traffic Information Engineering and Control(23.08) |
| | | Operating Systems(28.24) | | | Transportation Planning and Management(43.02) |
| | | Pattern Recognition(44.00) | | | Vehicle Operation Engineering(38.00) |
| Control Science and Engineering(26.84) | Principles of Computer Organization(14.63) | Principles of Computer Organization(14.63) | History(23.00) | Weapon Science and Technology(31.00) | Military Chemistry and Pyrotechnics(32.00) |
| | | Control Theory and Control Engineering(32.58) | | | Weapon Systems Science and Engineering(30.00) |
| | | Guidance, Navigation and Control(21.57) | | | Archaeology and Museology(22.12) |
| | | Operations Research and Cybernetics(22.00) | | | Historical Geography(18.31) |
| | Electrical Engineering(17.09) | Electrical Theory and New Technologies(14.74) | | | World History(24.77) |
| | | High Voltage and Insulation Technology(15.91) | | Law(34.45) | Civil and Commercial Law(27.12) |
| | | Power Electronics and Electrical Drives(19.23) | | | Constitutional and Administrative Law(30.00) |
| | | Power Systems and Automation(18.75) | | | Contract Law(48.00) |
| Electronic Science and Technology(22.36) | Circuits and Systems(25.00) | Circuits and Systems(25.00) | | Law(35.03) | Criminal Law(37.93) |
| | | Electromagnetic Field and Microwave Technology(11.36) | | | International Law(26.32) |
| | | Microelectronics and Solid-State Electronics(36.00) | | | Law and Social Governance(40.00) |
| | | Environmental Science and Engineering(16.85) | | | Legal Theory and Legal History(32.00) |
| | Food Science and Engineering(42.20) | Environmental Science(58.00) | | | Military Law(56.00) |
| | | Environmental and Resource Protection(34.00) | | Political Science(29.23) | Procedural Law(26.00) |
| | | Food Biochemistry(64.00) | | | Political Science(29.23) |
| | | Food Processing and Storage Engineering(23.73) | | | - |
| Engineering(25.67) | Forestry Engineering(37.00) | Forest Engineering(42.00) | | | - |
| | | Wood Science and Technology(32.00) | | | - |

Table 52. Model Scores Across Three Levels of Disciplines: Yi-1.5-34B-Chat.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|-------------------|--|
| Literature and Arts(27.15) | Art Studies(27.69) | Broadcasting and Television Art(32.00) | Philosophy(30.26) | Philosophy(30.26) | Religious Studies(38.00) |
| | | Dance Studies(26.00) | | | Astronomical Observation and Technology(17.00) |
| | | Design Arts(24.19) | | | Astrophysics(24.64) |
| | | Drama and Opera Studies(39.02) | | | Cosmology(21.79) |
| | | Film Studies(31.65) | | | Solar System Science(19.32) |
| | Journalism and Communication(24.64) | Fine Arts(20.40) | | | Stellar and Interstellar Evolution(21.43) |
| | | Communication and Broadcasting(29.31) | | | Atmospheric Physics and Atmospheric Environment(34.78) |
| | | History and Theory of Journalism and Media Management(20.34) | | | Dynamic Meteorology(26.00) |
| | | Journalism and News Practice(24.44) | | | Meteorology(33.33) |
| | | Classical Chinese Literature(32.00) | | | Biochemistry and Molecular Biology(23.23) |
| Management(31.54) | Language and Literature(31.14) | French Language and Literature(46.00) | | | Biophysics(38.00) |
| | | Linguistics and Applied Linguistics(28.00) | | | Botany(19.88) |
| | | Literary History(21.74) | | | Cell Biology(28.74) |
| | | Literary Theory(29.69) | | | Ecology(20.14) |
| | | Modern and Contemporary Chinese Literature(36.00) | | | Genetics(23.91) |
| | Musicology(23.47) | Philology and Bibliography(22.00) | | | Microbiology(27.95) |
| | | Russian Language and Literature(36.84) | | | Physiology(30.00) |
| | | Composition(36.00) | | | Zoology(19.27) |
| | | Harmony(26.67) | | | Analytical Chemistry(16.92) |
| | | Instrumentation and Performance(29.23) | | | Electrochemistry(17.57) |
| Medicine(29.73) | Business Administration(28.17) | Music History, Education, and Technology(17.93) | | | Inorganic Chemistry(18.12) |
| | | Musical Forms and Analysis(24.00) | | | Organic Chemistry(21.05) |
| | | Pitch and Scales(16.07) | | | Physical Chemistry(18.84) |
| | | Business and Accounting Management(26.09) | | | Polymer Chemistry and Physics(21.05) |
| | | Tourism Management and Technological Economics Management(32.00) | | | Radiochemistry(26.67) |
| | Library, Information and Archival Management(36.00) | Information Management Science(24.00) | | | Geography(36.84) |
| | | Information Management and Communication(64.00) | | | Human Geography(46.00) |
| | | Library and Archival Science(20.00) | | | Physical Geography(31.33) |
| | | Management Science and Engineering(25.86) | | | Geology(28.45) |
| | | Education Economics, Management and Social Security(26.00) | | | Geochemistry(38.00) |
| Pharmacy(31.29) | Public Administration(32.45) | Land Resource Management and Administrative Management(25.49) | | | Mineralogy, Petrology, and Economic Geology(32.23) |
| | | Social Medicine and Health Management(46.00) | | | Paleontology and Stratigraphy(18.00) |
| | | Forensic Medicine(42.00) | | | Principles of Seismic Exploration(22.00) |
| | | Human Anatomy and Histology-Embryology(29.63) | | | Structural Geology(27.14) |
| | | Immunology(21.74) | | | Geophysics(34.00) |
| | Clinical Medicine(30.38) | Pathogen Biology(28.72) | | | Solid Earth Geophysics(38.00) |
| | | Pathology and Pathophysiology(23.48) | | | Space physics(30.00) |
| | | Radiation Medicine(50.00) | | | Advanced Algebra(30.69) |
| | | Anesthesiology(26.00) | | | Combinatorial Mathematics(17.28) |
| | | Clinical Laboratory Diagnostics(42.00) | | | Computational Mathematics(32.00) |
| Public Health and Preventive Medicine(32.19) | Pharmacy(31.29) | Dermatology and Venereology(33.33) | | | Cryptography(50.00) |
| | | Emergency Medicine(24.24) | | | Discrete Mathematics(17.98) |
| | | Geriatric Medicine(36.00) | | | Functions of Complex Variables(30.33) |
| | | Imaging and Nuclear Medicine(20.90) | | | Functions of Real Variables(34.33) |
| | | Internal Medicine(35.64) | | | Fundamental Mathematics(17.26) |
| | Stomatology(22.73) | Neurology(24.34) | | | Fuzzy Mathematics(30.00) |
| | | Nursing and Rehabilitation Medicine(32.00) | | | Geometry and Topology(18.87) |
| | | Obstetrics and Gynecology(31.37) | | | Graph Theory(27.45) |
| | | Oncology(25.86) | | | Group Theory(14.00) |
| | | Ophthalmology(34.00) | | | Mathematical Analysis(22.57) |
| Military Science(33.17) | Traditional Chinese Medicine(25.00) | Otorhinolaryngology(22.00) | | | Number Theory(15.45) |
| | | Pediatrics(28.00) | | | Numerical Analysis(26.87) |
| | | Psychiatry and Mental Health(42.00) | | | Ordinary Differential Equations(27.50) |
| | | Surgery(32.35) | | | Polynomials and Series Expansions(15.64) |
| | | Medicinal Chemistry(30.00) | | | Probability and Statistics(29.91) |
| | Philosophy(30.26) | Microbiology and Biochemical Pharmacy(38.00) | | | Special Number Theory(32.00) |
| | | Pharmaceutical Analysis(26.00) | | | Stochastic Processes(52.00) |
| | | Pharmacetics(32.88) | | | Hydrogeology(40.00) |
| | | Pharmacology(29.09) | | | Marine Biology(70.00) |
| | | Epidemiology and Health Statistics(36.14) | | | Marine Chemistry(50.00) |
| Philosophy(30.26) | Military Science(33.17) | Health Toxicology and Environmental Health(27.50) | | | Underwater Acoustics(34.00) |
| | | Maternal, Child and Adolescent Health(18.99) | | | Physical Oceanography(12.00) |
| | | Nutrition and Food Hygiene(54.00) | | | Acoustics(18.37) |
| | | Basic Stomatology(30.19) | | | Atomic and Molecular Physics(20.00) |
| | | Clinical Stomatology(17.72) | | | Electrodynamics(21.96) |
| | Systems Science(38.00) | Traditional Chinese Health Preservation(35.59) | | | Fluid Physics(22.39) |
| | | Traditional Chinese Medicine Theory(20.00) | | | Particle and Nuclear Physics(24.89) |
| | | Traditional Chinese Pharmacy(23.53) | | | Polymer Physics(20.18) |
| | | Military Command and Information Systems(40.00) | | | Quantum Mechanics(21.84) |
| | | Military Logistics and Equipment(20.37) | | | Relativity(21.52) |
| Philosophy(30.26) | Sociology(28.67) | Military Management(48.00) | | | Semiconductor Physics(14.75) |
| | | Military Thought and History(25.49) | | | Solid State Physics(14.29) |
| | | Ethics(22.06) | | | Statistical Mechanics(38.00) |
| | | Logic(27.14) | | | Subatomic and Atomic Physics(29.41) |
| Philosophy(30.26) | Sociology(28.67) | Philosophical Aesthetics(22.94) | | | Thermodynamics(22.33) |
| | | Philosophy of Science and Technology(54.00) | | | Thermodynamics and Statistical Physics(19.81) |
| | | Sociology(28.67) | | | Systems Science(38.00) |
| | | Sociology(28.67) | | | Demography and Anthropology(30.00) |
| | | Sociology(28.67) | | | Social and Folklore Studies(27.96) |

Table 52. Continued: Model Scores Across Three Levels of Disciplines: Yi-1.5-34B-Chat.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|-------------------------------|--|--|--------------------|--|---|
| Agronomy(28.87) | Animal Husbandry(24.27) | Animal Nutrition and Feed Science(26.92) | Engineering(25.25) | Geological Resources and Geological Engineering(42.00) | Geological Resources and Geological Engineering(42.00) |
| | | Animal Rearing and Breeding(21.57) | | | Hydraulics and Hydrology(26.47) |
| | Aquaculture(28.57) | Aquaculture(28.57) | | Hydraulic Engineering(26.15) | Water conservancy and Hydropower Engineering(25.61) |
| | | Crop Science(25.52) | | | Antenna and Radio Communication(23.68) |
| | Forestry(29.01) | Forest Cultivation and Genetic Breeding(24.69) | | Information and Communication Engineering(28.97) | Communication Principles(30.17) |
| | | Landscape Plants and Ornamental Horticulture(36.00) | | | Communication and Information Systems(24.64) |
| | Veterinary Medicine(48.00) | Veterinary Medicine(48.00) | | Optical Fiber Communication(34.00) | Optical Fiber Communication(34.00) |
| | | Economic Statistics(24.00) | | | Signal and Information Processing(32.26) |
| | Economics(26.23) | Finance(19.89) | | Instrument Science and Technology(30.00) | Instrument Science and Technology(30.00) |
| | | Industrial Economics(28.57) | | | Materials Physics and Chemistry(21.61) |
| | | International Trade(26.09) | | Materials Science and Engineering(22.49) | Materials Processing Engineering(24.44) |
| | | Labor Economics(29.73) | | | Manufacturing Automation(21.43) |
| | | National and Defense Economics(26.00) | | Mechanics(20.15) | Mechatronic Engineering(36.00) |
| | | Public Finance(21.67) | | | Fundamentals of Dynamics and Control(18.73) |
| | | Quantitative Economics(28.00) | | | Rigid Body Mechanics(15.61) |
| | | Theoretical Economics(34.00) | | | Solid Mechanics(26.88) |
| | | Economic History(30.00) | | Metallurgical Engineering(25.88) | Theoretical Fluid Mechanics(29.29) |
| | | Political Economy(32.00) | | | Theoretical Mechanics(16.13) |
| Education(26.86) | Education(28.34) | Western Economics(40.00) | | | Iron and Steel Metallurgy(14.29) |
| | | Educational Technology and Principles(25.00) | | Non-ferrous Metallurgy(22.00) | Non-ferrous Metallurgy(22.00) |
| | Physical Education(30.67) | Preschool Education(30.00) | | | Physical Chemistry of Metallurgical Process(36.00) |
| | | Special Education(50.00) | | Mining Engineering(32.00) | Principles of Metallurgy(44.00) |
| | | Theory of Curriculum and Instruction(11.76) | | | Mineral Processing Engineering(32.00) |
| | | Physical Education and Training(18.00) | | Naval Architecture and Ocean Engineering(24.64) | Mining and Safety Engineering(32.00) |
| | | Sports Humanities and Sociology(32.00) | | | Marine Engineering(20.00) |
| | | Sports Science and Medicine(42.00) | | Metallurgical Engineering(25.88) | Ship Mechanics and Design Principles(27.27) |
| | Psychology(16.09) | Psychology(16.09) | | | Nuclear Energy and Reactor Technology(12.28) |
| | | Aeronautical and Astronautical Science and Technology(19.33) | | Nuclear Science and Technology(23.36) | Radiation Protection and Nuclear Technology Applications(36.00) |
| Engineering(25.25) | Agricultural Engineering(42.31) | Agricultural Environment and Soil-Water Engineering(46.30) | | | Applied Optics(16.94) |
| | | Agricultural Mechanization Engineering(38.00) | | Optical Engineering(21.54) | Laser Technology(26.00) |
| | Architecture(32.10) | Architectural Design and Theory(36.00) | | | Optoelectronic Technology(17.91) |
| | | Architectural History(24.19) | | Petroleum and Natural Gas Engineering(24.11) | Theoretical Optics(25.93) |
| | Chemical Engineering and Technology(21.22) | Urban Planning and Design(38.00) | | | Oil and Gas Field Development and Storage & Transportation Engineering(11.29) |
| | | Chemical Transport Engineering(26.00) | | Power Engineering and Engineering Thermophysics(21.78) | Poromechanics and Reservoir Physics(40.00) |
| | | Elements of Chemical Reaction Engineering(19.63) | | | Engineering Fluid Mechanics(17.86) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(24.30) | | Surveying and Mapping Science and Technology(28.57) | Engineering Thermophysics(21.23) |
| | | Mass Transport and Separation Process in Chemical Engineering(18.49) | | | Fluid Machinery and Engineering(17.19) |
| | Civil Engineering(18.44) | Civil Engineering(18.44) | | | Heat Transfer(22.48) |
| | | Bridge and Tunnel Engineering(17.65) | | Textile Science and Engineering(37.00) | Internal Combustion Engineering(30.00) |
| Engineering(25.25) | Computer Science and Technology(29.10) | Geotechnical Engineering(16.76) | | | Power Machinery and Engineering(23.08) |
| | | Structural Engineering(24.56) | | Transportation Engineering(29.08) | Refrigeration and Cryogenic Engineering(22.00) |
| | | Urban Infrastructure Engineering(18.31) | | | Thermal Energy Engineering(22.94) |
| | Control Science and Engineering(28.95) | Advanced Programming Languages(48.00) | | Surveying and Mapping Science and Technology(28.57) | Cartography and Geographic Information Engineering(32.00) |
| | | Computer Architecture(38.00) | | | Digital Surveying and Remote Sensing Applications(23.53) |
| | | Computer Networks(22.03) | | Textile Science and Engineering(37.00) | Geodesy and Surveying Engineering(32.00) |
| | | Computer Software and Theory(25.32) | | | Textile Chemistry and Dyeing Engineering(30.00) |
| | | Data Structures(21.21) | | Textile Materials Science(44.00) | Textile Materials Science(44.00) |
| | | Databases(29.94) | | | Road and Railway Engineering(26.00) |
| | | Formal Languages(19.23) | | | Traffic Information Engineering and Control(21.54) |
| Electrical Engineering(19.06) | Electrical Engineering(19.06) | Operating Systems(20.00) | | | Transportation Planning and Management(34.88) |
| | | Pattern Recognition(66.00) | | Weapon Science and Technology(33.00) | Vehicle Operation Engineering(32.00) |
| | | Principles of Computer Organization(21.95) | | | Military Chemistry and Pyrotechnics(34.00) |
| | | Control Theory and Control Engineering(29.21) | | History(25.96) | Weapon Systems Science and Engineering(32.00) |
| | Control Science and Engineering(28.95) | Guidance, Navigation and Control(29.41) | | | Archaeology and Museology(21.15) |
| | | Operations Research and Cybernetics(28.00) | | Law(30.95) | Historical Geography(23.24) |
| | Electrical Engineering(19.06) | Circuit Theory and Network Analysis(22.11) | | | World History(28.04) |
| | | High Voltage and Insulation Technology(15.91) | | Law(31.64) | Civil and Commercial Law(24.58) |
| | | Power Electronics and Electrical Drives(17.58) | | | Constitutional and Administrative Law(30.00) |
| Engineering(25.25) | Electronic Science and Technology(23.98) | Power Systems and Automation(18.75) | | Law(31.64) | Contract Law(36.00) |
| | | Circuits and Systems(23.15) | | | Criminal Law(31.90) |
| | Environmental Science and Engineering(30.16) | Electromagnetic Field and Microwave Technology(22.73) | | Political Science(24.62) | International Law(26.32) |
| | | Microelectronics and Solid-State Electronics(28.00) | | | Law and Social Governance(34.00) |
| | Food Science and Engineering(42.20) | Environmental Engineering(15.73) | | Political Science(24.62) | Legal Theory and Legal History(34.00) |
| | | Environmental Science(46.00) | | | Military Law(60.00) |
| | Food Science and Engineering(42.20) | Environmental and Resource Protection(40.00) | | Political Science(24.62) | Procedural Law(18.00) |
| | | Food Biochemistry(60.00) | | | Political Science(24.62) |
| | Forestry Engineering(39.00) | Food Processing and Storage Engineering(27.12) | | | - |
| | | Forest Engineering(34.00) | | | - |
| | Forestry Engineering(39.00) | Wood Science and Technology(44.00) | | | - |

Table 53. Model Scores Across Three Levels of Disciplines: Mistral-Small-Instruct-2409.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|------------------------|--|--|
| Literature and Arts(27.57) | Art Studies(27.53) | Broadcasting and Television Art(36.00) | Philosophy(29.68) | Philosophy(29.68) | Religious Studies(34.00) |
| | | Dance Studies(30.00) | | Astronomy(20.99) | Astronomical Observation and Technology(18.00) |
| | | Design Arts(19.35) | | Astrophysics(21.74) | Cosmology(21.79) |
| | | Drama and Opera Studies(23.17) | | Solar System Science(23.86) | Stellar and Interstellar Evolution(20.00) |
| | | Film Studies(33.54) | | Atmospheric Science(24.14) | Atmospheric Physics and Atmospheric Environment(27.54) |
| | Journalism and Communication(26.57) | Fine Arts(24.38) | | | Dynamic Meteorology(22.00) |
| | | Communication and Broadcasting(34.48) | | | Meteorology(22.62) |
| | | History and Theory of Journalism and Media Management(18.64) | | | Biochemistry and Molecular Biology(30.30) |
| | | Journalism and News Practice(32.67) | | | Biophysics(64.00) |
| | | Classical Chinese Literature(32.00) | | | Botany(28.92) |
| Language and Literature(30.23) | French Language and Literature(38.00) | French Language and Literature(38.00) | Biology(26.96) | Cell Biology(32.18) | Cell Biology(32.18) |
| | | Linguistics and Applied Linguistics(36.00) | | Ecology(21.53) | Ecology(21.53) |
| | | Literary History(17.39) | | Genetics(19.02) | Genetics(19.02) |
| | | Literary Theory(28.12) | | Microbiology(26.09) | Microbiology(26.09) |
| | | Modern and Contemporary Chinese Literature(32.00) | | Physiology(21.67) | Physiology(21.67) |
| | Musicology(25.35) | Philology and Bibliography(34.00) | | Zoology(27.32) | Zoology(27.32) |
| | | Russian Language and Literature(29.82) | | Chemistry(18.82) | Analytical Chemistry(17.42) |
| | | Composition(20.00) | | Electrochemistry(19.82) | Electrochemistry(19.82) |
| | | Harmony(26.67) | | Inorganic Chemistry(20.29) | Inorganic Chemistry(20.29) |
| | | Instrumentation and Performance(36.92) | | Organic Chemistry(18.13) | Organic Chemistry(18.13) |
| Management(30.54) | Business Administration(23.94) | Music History, Education, and Technology(24.14) | | Physical Chemistry(18.98) | Physical Chemistry(18.98) |
| | | Musical Forms and Analysis(20.00) | | Polymer Chemistry and Physics(23.68) | Polymer Chemistry and Physics(23.68) |
| | | Pitch and Scales(23.21) | | Radiochemistry(15.00) | Radiochemistry(15.00) |
| | | Business and Accounting Management(17.39) | Geography(36.84) | Human Geography(46.00) | Human Geography(46.00) |
| | | Tourism Management and Technological Economics Management(36.00) | | Physical Geography(31.33) | Physical Geography(31.33) |
| | Library, Information and Archival Management(32.67) | Information Management Science(14.00) | | Geochemistry(50.00) | Geochemistry(50.00) |
| | | Information Management and Communication(58.00) | | Mineralogy, Petrology, and Economic Geology(28.10) | Mineralogy, Petrology, and Economic Geology(28.10) |
| | | Library and Archival Science(26.00) | | Paleontology and Stratigraphy(36.00) | Paleontology and Stratigraphy(36.00) |
| | | Management Science and Engineering(27.59) | | Principles of Seismic Exploration(16.00) | Principles of Seismic Exploration(16.00) |
| | | Public Administration(35.76) | | Structural Geology(20.00) | Structural Geology(20.00) |
| Medicine(28.53) | Basic Medicine(31.92) | Education Economics, Management and Social Security(38.00) | | Solid Earth Geophysics(26.00) | Solid Earth Geophysics(26.00) |
| | | Land Resource Management and Administrative Management(23.53) | | Space physics(24.00) | Space physics(24.00) |
| | | Social Medicine and Health Management(46.00) | | Mathematics(25.32) | Advanced Algebra(30.69) |
| | | Forensic Medicine(32.00) | | Combinatorial Mathematics(15.18) | Combinatorial Mathematics(15.18) |
| | | Human Anatomy and Histology-Embryology(30.69) | | Computational Mathematics(28.00) | Computational Mathematics(28.00) |
| | Clinical Medicine(28.49) | Immunology(33.33) | | Cryptography(38.00) | Cryptography(38.00) |
| | | Pathogen Biology(26.60) | | Discrete Mathematics(21.35) | Discrete Mathematics(21.35) |
| | | Pathology and Pathophysiology(30.43) | | Functions of Complex Variables(34.43) | Functions of Complex Variables(34.43) |
| | | Radiation Medicine(48.00) | | Functions of Real Variables(40.30) | Functions of Real Variables(40.30) |
| | | Anesthesiology(40.00) | | Fundamental Mathematics(23.35) | Fundamental Mathematics(23.35) |
| Pharmacy(26.62) | Clinical Laboratory Diagnostics(38.00) | Clinical Laboratory Diagnostics(38.00) | Geophysics(25.00) | Fuzzy Mathematics(28.00) | Fuzzy Mathematics(28.00) |
| | | Dermatology and Venereology(30.30) | | Geometry and Topology(20.38) | Geometry and Topology(20.38) |
| | | Emergency Medicine(19.70) | | Graph Theory(21.57) | Graph Theory(21.57) |
| | | Geriatric Medicine(46.00) | | Group Theory(16.00) | Group Theory(16.00) |
| | | Imaging and Nuclear Medicine(26.87) | | Mathematical Analysis(25.00) | Mathematical Analysis(25.00) |
| | Pharmacology(40.00) | Internal Medicine(25.74) | | Number Theory(14.09) | Number Theory(14.09) |
| | | Neurology(26.98) | | Numerical Analysis(34.33) | Numerical Analysis(34.33) |
| | | Nursing and Rehabilitation Medicine(24.00) | | Ordinary Differential Equations(31.87) | Ordinary Differential Equations(31.87) |
| | | Obstetrics and Gynecology(26.47) | | Polynomials and Series Expansions(17.32) | Polynomials and Series Expansions(17.32) |
| | | Oncology(27.59) | | Probability and Statistics(30.80) | Probability and Statistics(30.80) |
| Public Health and Preventive Medicine(33.56) | Ophthalmology(30.00) | Ophthalmology(30.00) | Mathematics(25.32) | Special Number Theory(36.00) | Special Number Theory(36.00) |
| | | Otorhinolaryngology(20.00) | | Stochastic Processes(48.00) | Stochastic Processes(48.00) |
| | | Pediatrics(28.00) | | Oceanography(55.00) | Hydrogeology(52.00) |
| | | Psychiatry and Mental Health(48.00) | | Marine Biology(74.00) | Marine Biology(74.00) |
| | | Surgery(19.12) | | Marine Chemistry(54.00) | Marine Chemistry(54.00) |
| | Health Toxicology and Environmental Health(35.00) | Medicinal Chemistry(14.00) | | Underwater Acoustics(40.00) | Underwater Acoustics(40.00) |
| | | Microbiology and Biochemical Pharmacy(30.00) | | Physical Oceanography(40.00) | Physical Oceanography(40.00) |
| | | Pharmaceutical Analysis(30.00) | | Physics(21.90) | Acoustics(20.00) |
| | | Pharmacaceutics(20.55) | | | |
| | | Pharmacology(40.00) | | | |
| Stomatology(22.73) | Health Toxicology and Environmental Health(35.00) | Epidemiology and Health Statistics(31.33) | Geophysics(25.00) | Atomic and Molecular Physics(21.90) | Atomic and Molecular Physics(21.90) |
| | | Maternal, Child and Adolescent Health(29.11) | | Electrodynamics(22.64) | Electrodynamics(22.64) |
| | | Nutrition and Food Hygiene(42.00) | | Fluid Physics(20.15) | Fluid Physics(20.15) |
| | | Basic Stomatology(28.30) | | Particle and Nuclear Physics(23.56) | Particle and Nuclear Physics(23.56) |
| | | Clinical Stomatology(18.99) | | Polymer Physics(25.69) | Polymer Physics(25.69) |
| | Traditional Chinese Medicine(20.90) | Traditional Chinese Health Preservation(11.86) | | Quantum Mechanics(22.82) | Quantum Mechanics(22.82) |
| | | Traditional Chinese Medicine Theory(22.22) | | Relativity(30.38) | Relativity(30.38) |
| | | Traditional Chinese Pharmacy(24.37) | | Semiconductor Physics(16.39) | Semiconductor Physics(16.39) |
| | | Military Command and Information Systems(44.00) | | Solid State Physics(24.49) | Solid State Physics(24.49) |
| | | Military Logistics and Equipment(29.63) | | Statistical Mechanics(30.00) | Statistical Mechanics(30.00) |
| Military Science(34.15) | Military Science(34.15) | Military Management(42.00) | | Subatomic and Atomic Physics(29.41) | Subatomic and Atomic Physics(29.41) |
| | | Military Thought and History(21.57) | | Thermodynamics(22.33) | Thermodynamics(22.33) |
| | | Ethics(35.29) | Systems Science(38.00) | Thermodynamics and Statistical Physics(17.55) | Thermodynamics and Statistical Physics(17.55) |
| | | Logic(21.43) | | Systems Science(38.00) | Systems Science(38.00) |
| Philosophy(29.68) | Philosophy(29.68) | Philosophical Aesthetics(23.85) | | Demography and Anthropology(34.00) | Demography and Anthropology(34.00) |
| | | Philosophy of Science and Technology(42.00) | | Social and Folklore Studies(32.26) | Social and Folklore Studies(32.26) |
| | | | | | |
| Sociology(32.87) | Sociology(32.87) | | | | |
| | | | | | |

Table 53. Continued: Model Scores Across Three Levels of Disciplines:

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|----------------------------------|--|---|
| Agronomy(28.25) | Animal Husbandry(25.24) | Animal Nutrition and Feed Science(23.08) | Engineering(24.89) | Geological Resources and Geological Engineering(34.00) | Geological Resources and Geological Engineering(34.00) |
| | | Animal Rearing and Breeding(27.45) | | | Hydraulics and Hydrology(20.59) |
| | Aquaculture(26.79) | Aquaculture(26.79) | | Hydraulic Engineering(22.48) | Water conservancy and Hydropower Engineering(25.61) |
| | | Crop Science(26.21) | | | Antenna and Radio Communication(16.67) |
| | Forestry(32.06) | Forest Cultivation and Genetic Breeding(27.16) | | Information and Communication Engineering(25.79) | Communication Principles(30.17) |
| | | Landscape Plants and Ornamental Horticulture(40.00) | | | Communication and Information Systems(23.19) |
| | Veterinary Medicine(32.00) | Veterinary Medicine(32.00) | | Optical Fiber Communication(24.00) | Optical Fiber Communication(24.00) |
| | | Economic Statistics(40.00) | | | Signal and Information Processing(30.97) |
| | Economics(31.96) | Finance(30.11) | | Instrument Science and Technology(32.00) | Instrument Science and Technology(32.00) |
| | | Industrial Economics(30.95) | | | Materials Physics and Chemistry(15.08) |
| | | International Trade(33.33) | | Materials Science and Engineering(19.03) | Materials Processing Engineering(27.78) |
| | | Labor Economics(41.89) | | | Manufacturing Automation(25.40) |
| | | National and Defense Economics(36.00) | | Mechanics(18.94) | Mechatronic Engineering(28.00) |
| | | Public Finance(26.67) | | | Fundamentals of Dynamics and Control(21.04) |
| | | Quantitative Economics(29.00) | | | Rigid Body Mechanics(15.61) |
| | | Theoretical Economics(31.33) | | | Solid Mechanics(13.98) |
| | | Economic History(26.00) | | | Theoretical Fluid Mechanics(25.00) |
| | | Political Economy(16.00) | | | Theoretical Mechanics(15.48) |
| | | Western Economics(52.00) | | | Iron and Steel Metallurgy(20.95) |
| Education(38.02) | Education(38.06) | Educational Technology and Principles(37.50) | Metallurgical Engineering(28.24) | Non-ferrous Metallurgy(24.00) | Non-ferrous Metallurgy(24.00) |
| | | Preschool Education(46.00) | | | Physical Chemistry of Metallurgical Process(32.00) |
| | Physical Education(44.00) | Special Education(38.00) | | Principles of Metallurgy(44.00) | Principles of Metallurgy(44.00) |
| | | Theory of Curriculum and Instruction(31.37) | | | Mineral Processing Engineering(44.00) |
| | Psychology(27.59) | Physical Education and Training(32.00) | | Mining Engineering(43.00) | Mining and Safety Engineering(42.00) |
| | | Sports Humanities and Sociology(44.00) | | | Marine Engineering(20.00) |
| | | Sports Science and Medicine(56.00) | | | Ship Mechanics and Design Principles(28.41) |
| | Psychology(27.59) | Psychology(27.59) | | | Nuclear Energy and Reactor Technology(31.58) |
| | | Aeronautical and Astronautical Science and Technology(17.65) | | | Radiation Protection and Nuclear Technology Applications(36.00) |
| Engineering(24.89) | Agricultural Engineering(30.77) | Agricultural Environment and Soil-Water Engineering(29.63) | | Optical Engineering(18.09) | Applied Optics(18.55) |
| | | Agricultural Mechanization Engineering(32.00) | | | Laser Technology(18.00) |
| | Architecture(35.80) | Architectural Design and Theory(42.00) | | Petroleum and Natural Gas Engineering(26.79) | Optoelectronic Technology(20.90) |
| | | Architectural History(29.03) | | | Theoretical Optics(16.30) |
| | Chemical Engineering and Technology(20.98) | Urban Planning and Design(38.00) | | Power Engineering and Engineering Thermophysics(20.03) | Oil and Gas Field Development and Storage & Transportation Engineering(27.42) |
| | | Chemical Transport Engineering(18.00) | | | Poromechanics and Reservoir Physics(26.00) |
| | Civil Engineering(21.23) | Elements of Chemical Reaction Engineering(18.69) | | | Engineering Fluid Mechanics(26.19) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(18.69) | | | Engineering Thermophysics(15.07) |
| | Computer Science and Technology(29.75) | Mass Transport and Separation Process in Chemical Engineering(25.34) | | | Fluid Machinery and Engineering(12.50) |
| | | Civil Engineering(23.53) | | | Heat Transfer(20.16) |
| Control Science and Engineering(24.74) | Computer Science and Technology(29.75) | Geotechnical Engineering(15.08) | | | Internal Combustion Engineering(32.00) |
| | | Structural Engineering(26.32) | | | Power Machinery and Engineering(23.08) |
| | Control Science and Engineering(24.74) | Urban Infrastructure Engineering(30.99) | | | Refrigeration and Cryogenic Engineering(24.00) |
| | | Computer Architecture(32.00) | | | Thermal Energy Engineering(17.43) |
| | Control Science and Engineering(24.74) | Computer Networks(16.95) | | Surveying and Mapping Science and Technology(35.12) | Cartography and Geographic Information Engineering(48.00) |
| | | Computer Software and Theory(27.85) | | | Digital Surveying and Remote Sensing Applications(27.94) |
| | Control Science and Engineering(24.74) | Data Structures(21.21) | | | Geodesy and Surveying Engineering(32.00) |
| | | Databases(38.22) | | | Textile Chemistry and Dyeing Engineering(18.00) |
| | Control Science and Engineering(24.74) | Formal Languages(23.08) | | | Textile Materials Science(44.00) |
| | | Operating Systems(25.88) | | | Transportation Engineering(30.28) |
| Electrical Engineering(19.60) | Control Science and Engineering(24.74) | Pattern Recognition(60.00) | | | Road and Railway Engineering(20.00) |
| | | Principles of Computer Organization(14.63) | | | Traffic Information Engineering and Control(24.62) |
| | Control Science and Engineering(24.74) | Control Theory and Control Engineering(28.09) | | | Transportation Planning and Management(37.21) |
| | | Guidance, Navigation and Control(19.61) | | | Vehicle Operation Engineering(36.00) |
| | Control Science and Engineering(24.74) | Operations Research and Cybernetics(24.00) | | Weapon Science and Technology(37.00) | Military Chemistry and Pyrotechnics(40.00) |
| | | Electrical Engineering(19.60) | | | Weapon Systems Science and Engineering(34.00) |
| | Control Science and Engineering(24.74) | Electrical Theory and New Technologies(22.11) | | | Archaeology and Museology(25.96) |
| | | High Voltage and Insulation Technology(14.77) | | | Historical Geography(18.31) |
| Electronic Science and Technology(25.20) | Control Science and Engineering(24.74) | Power Electronics and Electrical Drives(17.58) | | | World History(23.13) |
| | | Power Systems and Automation(22.92) | | History(22.55) | Civil and Commercial Law(29.66) |
| | Control Science and Engineering(24.74) | Circuits and Systems(32.41) | | | Constitutional and Administrative Law(30.00) |
| | | Electromagnetic Field and Microwave Technology(19.32) | | Law(30.34) | Contract Law(40.00) |
| | Control Science and Engineering(24.74) | Microelectronics and Solid-State Electronics(20.00) | | | Criminal Law(26.72) |
| | | Environmental Science and Engineering(35.98) | | | International Law(21.05) |
| | Control Science and Engineering(24.74) | Environmental Engineering(20.22) | | | Law and Social Governance(32.00) |
| | | Environmental Science(54.00) | | | Legal Theory and Legal History(36.00) |
| Environmental Science and Engineering(35.98) | Control Science and Engineering(24.74) | Environmental and Resource Protection(46.00) | | | Military Law(54.00) |
| | | Food Biochemistry(70.00) | | Political Science(23.08) | Procedural Law(20.00) |
| | Control Science and Engineering(24.74) | Food Processing and Storage Engineering(11.86) | | | Political Science(23.08) |
| | | Forest Engineering(32.00) | | | - |
| | Control Science and Engineering(24.74) | Wood Science and Technology(22.00) | | | - |
| | | - | | | - |

Table 54. Model Scores Across Three Levels of Disciplines: Qwen2.5-7B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|-------------------|--|
| Literature and Arts(25.06) | Art Studies(25.21) | Broadcasting and Television Art(32.00) | Philosophy(36.60) | Philosophy(36.60) | Religious Studies(38.00) |
| | | Dance Studies(24.00) | | | Astronomical Observation and Technology(22.00) |
| | | Design Arts(19.35) | | | Astrophysics(24.64) |
| | | Drama and Opera Studies(23.17) | | | Cosmology(24.36) |
| | | Film Studies(31.01) | | | Solar System Science(26.14) |
| | Journalism and Communication(19.81) | Fine Arts(21.89) | | | Stellar and Interstellar Evolution(20.00) |
| | | Communication and Broadcasting(13.79) | | | Atmospheric Physics and Atmospheric Environment(36.23) |
| | | History and Theory of Journalism and Media Management(30.51) | | | Dynamic Meteorology(32.00) |
| | | Journalism and News Practice(16.67) | | | Meteorology(22.62) |
| | | Classical Chinese Literature(32.00) | | | Biochemistry and Molecular Biology(24.24) |
| Management(28.54) | Language and Literature(27.50) | French Language and Literature(38.00) | | | Biophysics(32.00) |
| | | Linguistics and Applied Linguistics(22.00) | | | Botany(25.90) |
| | | Literary History(15.94) | | | Cell Biology(33.33) |
| | | Literary Theory(23.44) | | | Ecology(25.00) |
| | | Modern and Contemporary Chinese Literature(32.00) | | | Genetics(21.74) |
| | Musicology(24.88) | Philology and Bibliography(28.00) | | | Microbiology(32.30) |
| | | Russian Language and Literature(33.33) | | | Physiology(27.50) |
| | | Composition(26.00) | | | Zoology(16.51) |
| | | Harmony(20.00) | | | Analytical Chemistry(19.44) |
| | | Instrumentation and Performance(32.31) | | | Electrochemistry(12.61) |
| Medicine(30.56) | Business Administration(19.01) | Music History, Education, and Technology(20.69) | | | Inorganic Chemistry(18.84) |
| | | Musical Forms and Analysis(30.00) | | | Organic Chemistry(18.13) |
| | | Pitch and Scales(26.79) | | | Physical Chemistry(16.43) |
| | | Business and Accounting Management(16.30) | | | Polymer Chemistry and Physics(22.37) |
| | | Tourism Management and Technological Economics Management(24.00) | | | Radiochemistry(18.33) |
| | Library, Information and Archival Management(36.67) | Information Management Science(22.00) | | | Geography(39.10) Human Geography(58.00) |
| | | Information Management and Communication(58.00) | | | Physical Geography(27.71) |
| | | Library and Archival Science(30.00) | | | Geology(30.79) Geochemistry(40.00) |
| | | Management Science and Engineering(25.86) | | | Mineralogy, Petrology, and Economic Geology(33.88) |
| | | Education Economics, Management and Social Security(18.00) | | | Paleontology and Stratigraphy(26.00) |
| Pharmacy(30.22) | Management Science and Engineering(25.86) | Land Resource Management and Administrative Management(23.53) | | | Principles of Seismic Exploration(22.00) |
| | | Social Medicine and Health Management(50.00) | | | Structural Geology(28.57) |
| | | Forensic Medicine(32.00) | | | Geophysics(33.00) Solid Earth Geophysics(38.00) |
| | | Human Anatomy and Histology-Embryology(34.39) | | | Space physics(28.00) |
| | | Immunology(21.74) | | | Advanced Algebra(22.77) |
| | Clinical Medicine(29.97) | Pathogen Biology(27.66) | | | Combinatorial Mathematics(10.99) |
| | | Pathology and Pathophysiology(25.22) | | | Computational Mathematics(30.00) |
| | | Radiation Medicine(56.00) | | | Cryptography(42.00) |
| | | Anesthesiology(34.00) | | | Discrete Mathematics(16.85) |
| | | Clinical Laboratory Diagnostics(24.00) | | | Functions of Complex Variables(27.05) |
| Public Health and Preventive Medicine(31.85) | Public Administration(30.46) | Dermatology and Venereology(22.73) | | | Functions of Real Variables(26.87) |
| | | Emergency Medicine(27.27) | | | Fundamental Mathematics(26.40) |
| | | Geriatric Medicine(38.00) | | | Fuzzy Mathematics(22.00) |
| | | Imaging and Nuclear Medicine(22.39) | | | Geometry and Topology(13.58) |
| | | Internal Medicine(29.70) | | | Graph Theory(21.57) |
| | Pharmacy(30.22) | Neurology(29.63) | | | Group Theory(10.00) |
| | | Nursing and Rehabilitation Medicine(24.00) | | | Mathematical Analysis(20.83) |
| | | Obstetrics and Gynecology(41.18) | | | Number Theory(9.09) |
| | | Oncology(22.41) | | | Numerical Analysis(23.88) |
| | | Ophthalmology(34.00) | | | Ordinary Differential Equations(26.25) |
| Military Science(31.71) | Stomatology(25.76) | Otorhinolaryngology(26.00) | | | Polynomials and Series Expansions(17.88) |
| | | Pediatrics(22.00) | | | Probability and Statistics(30.36) |
| | | Psychiatry and Mental Health(46.00) | | | Special Number Theory(32.00) |
| | | Surgery(32.35) | | | Stochastic Processes(38.00) |
| | | Medicinal Chemistry(14.00) | | | Hydrogeology(52.00) |
| | Traditional Chinese Medicine(32.46) | Microbiology and Biochemical Pharmacy(24.00) | | | Marine Biology(72.00) |
| | | Pharmaceutical Analysis(32.00) | | | Marine Chemistry(44.00) |
| | | Pharmacetics(45.21) | | | Underwater Acoustics(36.00) |
| | | Pharmacology(29.09) | | | Physical Oceanography(34.00) |
| | | Epidemiology and Health Statistics(26.51) | | | Acoustics(18.78) |
| Philosophy(36.60) | Military Science(31.71) | Health Toxicology and Environmental Health(35.00) | | | Atomic and Molecular Physics(17.62) |
| | | Maternal, Child and Adolescent Health(25.32) | | | Electrodynamics(19.90) |
| | | Nutrition and Food Hygiene(46.00) | | | Fluid Physics(20.15) |
| | | Basic Stomatology(26.42) | | | Particle and Nuclear Physics(17.78) |
| | | Clinical Stomatology(25.32) | | | Polymer Physics(22.02) |
| | Philosophy(36.60) | Traditional Chinese Health Preservation(33.90) | | | Quantum Mechanics(22.33) |
| | | Traditional Chinese Medicine Theory(40.00) | | | Relativity(16.46) |
| | | Traditional Chinese Pharmacy(26.05) | | | Semiconductor Physics(14.75) |
| | | Military Command and Information Systems(30.00) | | | Solid State Physics(21.09) |
| | | Military Logistics and Equipment(18.52) | | | Statistical Mechanics(32.00) |
| Sociology(34.27) | Philosophy(36.60) | Military Management(48.00) | | | Subatomic and Atomic Physics(15.69) |
| | | Military Thought and History(31.37) | | | Thermodynamics(14.88) |
| | | Ethics(35.29) | | | Thermodynamics and Statistical Physics(17.55) |
| | | Logic(24.29) | | | Systems Science(24.00) |
| Philosophy(36.60) | Philosophy(36.60) | Philosophical Aesthetics(33.94) | | | Demography and Anthropology(30.00) |
| | | Philosophy of Science and Technology(60.00) | | | Social and Folklore Studies(36.56) |

Table 54. Continued: Model Scores Across Three Levels of Disciplines: Qwen2.5-7B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|--|--|--------------------|--|---|
| Agronomy(29.28) | Animal Husbandry(31.07) | Animal Nutrition and Feed Science(40.38) | Engineering(23.61) | Geological Resources and Geological Engineering(34.00) | Geological Resources and Geological Engineering(34.00) |
| | | Animal Rearing and Breeding(21.57) | | | Hydraulics and Hydrology(24.26) |
| | Aquaculture(26.79) Crop Science(26.21) | Aquaculture(26.79) | | Hydraulic Engineering(23.85) | Water conservancy and Hydropower Engineering(23.17) |
| | | Crop Science(26.21) | | | Antenna and Radio Communication(21.05) |
| | Forestry(31.30) | Forest Cultivation and Genetic Breeding(34.57) | | Information and Communication Engineering(22.42) | Communication Principles(17.24) |
| | | Landscape Plants and Ornamental Horticulture(26.00) | | | Communication and Information Systems(23.19) |
| | Veterinary Medicine(32.00) | Veterinary Medicine(32.00) | | Optical Fiber Communication(26.00) | Optical Fiber Communication(26.00) |
| | | Economic Statistics(28.00) | | | Signal and Information Processing(25.81) |
| | Economics(27.95) | Finance(21.59) | | Instrument Science and Technology(20.00) | Instrument Science and Technology(20.00) |
| | | Industrial Economics(27.38) | | | Materials Physics and Chemistry(13.57) |
| | | International Trade(24.64) | | Materials Science and Engineering(16.61) | Materials Processing Engineering(23.33) |
| | | Labor Economics(36.49) | | | Manufacturing Automation(26.98) |
| | | National and Defense Economics(22.00) | | Mechanics(16.74) | Mechatronic Engineering(26.00) |
| | | Public Finance(29.17) | | | Fundamentals of Dynamics and Control(16.71) |
| | | Quantitative Economics(27.00) | | | Rigid Body Mechanics(8.67) |
| | | Theoretical Economics(34.67) | | | Solid Mechanics(24.73) |
| | | Economic History(40.00) | | | Theoretical Fluid Mechanics(23.57) |
| Education(31.20) | Education(33.20) | Political Economy(26.00) | | | Theoretical Mechanics(14.84) |
| | | Western Economics(38.00) | | Metallurgical Engineering(23.92) | Iron and Steel Metallurgy(13.33) |
| | Physical Education(32.67) | Educational Technology and Principles(36.46) | | | Non-ferrous Metallurgy(28.00) |
| | | Preschool Education(28.00) | | Mining Engineering(33.00) | Physical Chemistry of Metallurgical Process(26.00) |
| | | Special Education(32.00) | | | Principles of Metallurgy(40.00) |
| | | Theory of Curriculum and Instruction(33.33) | | Naval Architecture and Ocean Engineering(21.74) | Mineral Processing Engineering(25.80) |
| | | Physical Education and Training(26.00) | | | Mining and Safety Engineering(38.00) |
| | | Sports Humanities and Sociology(44.00) | | | Marine Engineering(18.00) |
| | | Sports Science and Medicine(28.00) | | | Ship Mechanics and Design Principles(23.86) |
| Engineering(23.61) | Psychology(22.99) | Psychology(22.99) | | Nuclear Science and Technology(28.04) | Nuclear Energy and Reactor Technology(14.04) |
| | | Aeronautical and Astronautical Science and Technology(25.21) | | | Radiation Protection and Nuclear Technology Applications(44.00) |
| | Agricultural Engineering(29.81) | Agricultural Environment and Soil-Water Engineering(25.93) | | Optical Engineering(19.41) | Applied Optics(16.13) |
| | | Agricultural Mechanization Engineering(34.00) | | | Laser Technology(24.00) |
| | Architecture(33.33) | Architectural Design and Theory(34.00) | | | Optoelectronic Technology(19.40) |
| | | Architectural History(33.87) | | | Theoretical Optics(20.74) |
| | Chemical Engineering and Technology(19.51) | Urban Planning and Design(32.00) | | Petroleum and Natural Gas Engineering(27.68) | Oil and Gas Field Development and Storage & Transportation Engineering(29.03) |
| | | Chemical Transport Engineering(22.00) | | | Poromechanics and Reservoir Physics(26.00) |
| Engineering(23.61) | Elements of Chemical Reaction Engineering(19.63) | Elements of Chemical Reaction Engineering(19.63) | | | Engineering Fluid Mechanics(17.86) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(19.63) | | | Engineering Thermophysics(10.96) |
| | Mass Transport and Separation Process in Chemical Engineering(18.49) | Mass Transport and Separation Process in Chemical Engineering(18.49) | | Power Engineering and Engineering Thermophysics(16.08) | Fluid Machinery and Engineering(7.81) |
| | | Civil Engineering(21.51) | | | Heat Transfer(19.38) |
| | Bridge and Tunnel Engineering(23.53) | Bridge and Tunnel Engineering(23.53) | | | Internal Combustion Engineering(30.00) |
| | | Geotechnical Engineering(16.76) | | | Power Machinery and Engineering(13.46) |
| | Structural Engineering(35.09) | Structural Engineering(35.09) | | | Refrigeration and Cryogenic Engineering(16.00) |
| | | Urban Infrastructure Engineering(21.13) | | | Thermal Energy Engineering(17.43) |
| Engineering(23.61) | Computer Science and Technology(30.67) | Advanced Programming Languages(60.00) | | Surveying and Mapping Science and Technology(35.71) | Cartography and Geographic Information Engineering(42.00) |
| | | Computer Architecture(26.00) | | | Digital Surveying and Remote Sensing Applications(35.29) |
| | Computer Networks(28.81) | Computer Networks(28.81) | | | Geodesy and Surveying Engineering(30.00) |
| | | Computer Software and Theory(31.65) | | | Textile Chemistry and Dyeing Engineering(26.00) |
| | Data Structures(16.16) | Data Structures(16.16) | | Textile Science and Engineering(34.00) | Textile Materials Science(42.00) |
| | | Databases(36.31) | | | Road and Railway Engineering(24.00) |
| | Formal Languages(19.23) | Formal Languages(19.23) | | | Traffic Information Engineering and Control(20.00) |
| | | Operating Systems(20.00) | | | Transportation Planning and Management(40.70) |
| Engineering(23.61) | Pattern Recognition(64.00) | Pattern Recognition(64.00) | | | Vehicle Operation Engineering(20.00) |
| | | Principles of Computer Organization(20.73) | | Weapon Science and Technology(34.00) | Weapon Science and Technology(34.00) |
| | Control Theory and Control Engineering(23.60) | Control Theory and Control Engineering(23.60) | | | Military Chemistry and Pyrotechnics(38.00) |
| | | Guidance, Navigation and Control(25.49) | | | Weapon Systems Science and Engineering(30.00) |
| | Operations Research and Cybernetics(16.00) | Operations Research and Cybernetics(16.00) | | History(34.12) | Archaeology and Museology(36.54) |
| | | Civil Engineering(21.51) | | | Historical Geography(38.03) |
| Engineering(23.61) | Electrical Theory and New Technologies(22.63) | Electrical Theory and New Technologies(22.63) | | | World History(32.24) |
| | | High Voltage and Insulation Technology(22.73) | | Law(34.30) | Civil and Commercial Law(27.97) |
| | Power Electronics and Electrical Drives(16.48) | Power Electronics and Electrical Drives(16.48) | | | Constitutional and Administrative Law(34.00) |
| | | Power Systems and Automation(20.83) | | | Contract Law(24.00) |
| Engineering(23.61) | Circuits and Systems(25.00) | Circuits and Systems(25.00) | | Law(34.52) | Criminal Law(31.03) |
| | | Electronic Science and Technology(23.98) | | | International Law(35.09) |
| | Electromagnetic Field and Microwave Technology(20.45) | Electromagnetic Field and Microwave Technology(20.45) | | Political Science(32.31) | Law and Social Governance(34.00) |
| | | Microelectronics and Solid-State Electronics(28.00) | | | Legal Theory and Legal History(50.00) |
| Engineering(23.61) | Environmental Science and Engineering(31.22) | Environmental Engineering(14.61) | | | Military Law(62.00) |
| | | Environmental Science(56.00) | | | Procedural Law(26.00) |
| | Food Science and Engineering(44.04) | Environmental and Resource Protection(36.00) | | | Political Science(32.31) |
| | | Food Biochemistry(66.00) | | | - |
| Engineering(23.61) | Food Processing and Storage Engineering(25.42) | Food Processing and Storage Engineering(25.42) | | | - |
| | | Forest Engineering(32.00) | | | - |
| | Forestry Engineering(31.00) | Wood Science and Technology(30.00) | | | - |
| | | Forestry Engineering(31.00) | | | - |

Table 55. Model Scores Across Three Levels of Disciplines: Llama-3.1-405B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield | |
|--|---|--|-------------------|-------------------|--|--|
| Literature and Arts(30.79) | Art Studies(32.50) | Broadcasting and Television Art(34.00) | Philosophy(31.70) | Philosophy(31.70) | Religious Studies(48.00) | |
| | | Dance Studies(38.00) | | | Astronomical Observation and Technology(30.00) | |
| | | Design Arts(32.26) | | | Astrophysics(23.19) | |
| | | Drama and Opera Studies(28.05) | | | Cosmology(19.23) | |
| | | Film Studies(34.18) | | | Solar System Science(27.27) | |
| | Journalism and Communication(26.57) | Fine Arts(31.34) | | | Stellar and Interstellar Evolution(11.43) | |
| | | Communication and Broadcasting(29.31) | | | Atmospheric Physics and Atmospheric Environment(31.88) | |
| | Language and Literature(29.77) | History and Theory of Journalism and Media Management(22.03) | | | Dynamic Meteorology(32.00) | |
| | | Journalism and News Practice(27.78) | | | Meteorology(26.19) | |
| | | Classical Chinese Literature(14.00) | | | Biochemistry and Molecular Biology(30.30) | |
| | | French Language and Literature(42.00) | | | Biophysics(50.00) | |
| | | Linguistics and Applied Linguistics(36.00) | | | Botany(28.31) | |
| Management(34.13) | Musicology(31.46) | Literary History(21.74) | | | Cell Biology(26.44) | |
| | | Literary Theory(39.06) | | | Ecology(22.22) | |
| | | Modern and Contemporary Chinese Literature(24.00) | | | Genetics(25.54) | |
| | | Philology and Bibliography(32.00) | | | Microbiology(24.84) | |
| | | Russian Language and Literature(29.82) | | | Physiology(27.50) | |
| | | Composition(32.00) | | | Zoology(22.02) | |
| | | Harmony(25.00) | | | Analytical Chemistry(18.18) | |
| | | Instrumentation and Performance(23.08) | | | Electrochemistry(12.61) | |
| | | Music History, Education, and Technology(35.17) | | | Inorganic Chemistry(21.74) | |
| | | Musical Forms and Analysis(38.00) | | | Organic Chemistry(19.30) | |
| | Business Administration(29.58) | Pitch and Scales(32.14) | | | Physical Chemistry(13.46) | |
| | | Business and Accounting Management(28.26) | | | Polymer Chemistry and Physics(17.11) | |
| | | Tourism Management and Technological Economics Management(32.00) | | | Radiochemistry(23.33) | |
| | | Library, Information and Archival Management(36.67) | | | Geography(35.34) | |
| | | Information Management Science(24.00) | | | Human Geography(58.00) | |
| Medicine(29.47) | Management Science and Engineering(37.93) | Information Management and Communication(62.00) | | | Physical Geography(21.69) | |
| | | Library and Archival Science(24.00) | | | Geochemistry(32.00) | |
| | | Management Science and Engineering(37.93) | | | Mineralogy, Petrology, and Economic Geology(27.27) | |
| | | Public Administration(34.44) | | | Paleontology and Stratigraphy(24.00) | |
| | | Education Economics, Management and Social Security(28.00) | | | Principles of Seismic Exploration(12.00) | |
| | | Land Resource Management and Administrative Management(25.49) | | | Structural Geology(30.00) | |
| | | Social Medicine and Health Management(50.00) | | | Geophysics(23.00) | |
| | | Forensic Medicine(32.00) | | | Solid Earth Geophysics(24.00) | |
| | | Human Anatomy and Histology-Embryology(31.75) | | | Space physics(22.00) | |
| | | Immunology(28.99) | | | Advanced Algebra(23.76) | |
| Clinical Medicine(30.30) | Basic Medicine(30.86) | Pathogen Biology(28.72) | | | Combinatorial Mathematics(14.14) | |
| | | Pathology and Pathophysiology(22.61) | | | Computational Mathematics(42.00) | |
| | | Radiation Medicine(52.00) | | | Cryptography(50.00) | |
| | | Anesthesiology(16.00) | | | Discrete Mathematics(12.36) | |
| | | Clinical Laboratory Diagnostics(34.00) | | | Functions of Complex Variables(26.23) | |
| | | Dermatology and Venereology(24.24) | | | Functions of Real Variables(35.82) | |
| | | Emergency Medicine(34.85) | | | Fundamental Mathematics(20.81) | |
| | | Geriatric Medicine(50.00) | | | Fuzzy Mathematics(30.00) | |
| | | Imaging and Nuclear Medicine(31.34) | | | Geometry and Topology(18.87) | |
| | | Internal Medicine(33.17) | | | Graph Theory(29.41) | |
| Pharmacy(24.46) | Clinical Medicine(30.30) | Neurology(30.16) | | | Group Theory(18.00) | |
| | | Nursing and Rehabilitation Medicine(20.00) | | | Mathematical Analysis(20.83) | |
| | | Obstetrics and Gynecology(26.47) | | | Number Theory(11.36) | |
| | | Oncology(31.03) | | | Numerical Analysis(25.37) | |
| | | Ophthalmology(26.00) | | | Ordinary Differential Equations(22.50) | |
| | | Otorhinolaryngology(22.00) | | | Polynomials and Series Expansions(18.99) | |
| | | Pediatrics(30.00) | | | Probability and Statistics(28.57) | |
| | | Psychiatry and Mental Health(38.00) | | | Special Number Theory(24.00) | |
| | | Surgery(32.35) | | | Stochastic Processes(46.00) | |
| | | Medicinal Chemistry(22.00) | | | Hydrogeology(50.00) | |
| Public Health and Preventive Medicine(38.36) | Pharmacy(24.46) | Microbiology and Biochemical Pharmacy(18.00) | | | Marine Biology(66.00) | |
| | | Pharmaceutical Analysis(28.00) | | | Marine Chemistry(48.00) | |
| | | Pharmacetics(28.77) | | | Underwater Acoustics(30.00) | |
| | | Pharmacology(23.64) | | | Physical Oceanography(32.00) | |
| | | Epidemiology and Health Statistics(37.35) | | | Acoustics(16.73) | |
| | | Health Toxicology and Environmental Health(36.25) | | | Atomic and Molecular Physics(20.95) | |
| | | Maternal, Child and Adolescent Health(37.97) | | | Electrodynamics(17.67) | |
| | | Nutrition and Food Hygiene(44.00) | | | Fluid Physics(14.93) | |
| | | Basic Stomatology(18.87) | | | Particle and Nuclear Physics(16.44) | |
| | | Clinical Stomatology(30.38) | | | Polymer Physics(19.27) | |
| Traditional Chinese Medicine(20.15) | Stomatology(25.76) | Traditional Chinese Medicine Preservation(23.73) | | | Quantum Mechanics(19.90) | |
| | | Traditional Chinese Medicine Theory(16.67) | | | Relativity(24.05) | |
| | | Traditional Chinese Pharmacy(21.01) | | | Semiconductor Physics(4.92) | |
| | | Military Command and Information Systems(42.00) | | | Solid State Physics(20.41) | |
| | | Military Logistics and Equipment(38.89) | | | Statistical Mechanics(36.00) | |
| Military Science(39.51) | Philosophy(31.70) | Military Management(48.00) | | | Subatomic and Atomic Physics(11.76) | |
| | | Military Thought and History(29.41) | | | Thermodynamics(17.21) | |
| | | Ethics(30.88) | | | Thermodynamics and Statistical Physics(15.47) | |
| | | Logic(24.29) | | | Systems Science(22.00) | |
| Philosophy(31.70) | | Philosophical Aesthetics(22.02) | Sociology(24.48) | Sociology(24.48) | Demography and Anthropology(30.00) | |
| | | Philosophy of Science and Technology(48.00) | | | Social and Folklore Studies(21.51) | |

Table 55. Continued: Model Scores Across Three Levels of Disciplines: Llama-3.1-405B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|--|--|----------------------------------|---|---|
| Agronomy(28.87) | Animal Husbandry(26.21) | Animal Nutrition and Feed Science(25.00) | Engineering(24.09) | Geological Resources and Geological Engineering(38.00) | Geological Resources and Geological Engineering(38.00) |
| | | Animal Rearing and Breeding(27.45) | | | Hydraulics and Hydrology(24.26) |
| | Aquaculture(19.64) Crop Science(31.72) | Aquaculture(19.64) | | Hydraulic Engineering(22.94) | Water conservancy and Hydropower Engineering(20.73) |
| | | Crop Science(31.72) | | | Antenna and Radio Communication(20.18) |
| | Forestry(29.77) | Forest Cultivation and Genetic Breeding(22.22) | | Information and Communication Engineering(26.19) | Communication Principles(24.14) |
| | | Landscape Plants and Ornamental Horticulture(42.00) | | | Communication and Information Systems(28.99) |
| | Veterinary Medicine(34.00) | Veterinary Medicine(34.00) | | Optical Fiber Communication(28.00) | Optical Fiber Communication(28.00) |
| | | Economic Statistics(18.00) | | | Signal and Information Processing(30.32) |
| | Economics(27.26) | Finance(25.57) | | Instrument Science and Technology(26.00) | Instrument Science and Technology(26.00) |
| | | Industrial Economics(21.43) | | | Materials Physics and Chemistry(20.10) |
| | | International Trade(33.33) | | Materials Science and Engineering(20.76) | Materials Processing Engineering(22.22) |
| | | Labor Economics(33.78) | | | Manufacturing Automation(19.84) |
| | | National and Defense Economics(30.00) | | Mechanics(17.62) | Mechatronic Engineering(22.00) |
| | | Public Finance(24.17) | | | Fundamentals of Dynamics and Control(14.12) |
| | | Quantitative Economics(26.00) | | | Rigid Body Mechanics(17.34) |
| | | Theoretical Economics(32.00) | | | Solid Mechanics(21.51) |
| | | Economic History(32.00) | | | Theoretical Fluid Mechanics(26.43) |
| | | Political Economy(28.00) | | | Theoretical Mechanics(15.48) |
| | | Western Economics(36.00) | | | Iron and Steel Metallurgy(16.19) |
| Education(30.79) | Education(31.17) | Educational Technology and Principles(28.12) | Metallurgical Engineering(28.24) | Non-ferrous Metallurgy(20.00) | Non-ferrous Metallurgy(20.00) |
| | | Preschool Education(30.00) | | | Physical Chemistry of Metallurgical Process(38.00) |
| | Physical Education(32.67) | Special Education(46.00) | | Principles of Metallurgy(52.00) | Principles of Metallurgy(52.00) |
| | | Theory of Curriculum and Instruction(23.53) | | | Mineral Processing Engineering(30.00) |
| | Psychology(26.44) | Physical Education and Training(26.00) | | Mining Engineering(31.00) | Mining and Safety Engineering(32.00) |
| | | Sports Humanities and Sociology(30.00) | | | Naval Architecture and Ocean Engineering(26.09) |
| | | Sports Science and Medicine(42.00) | | | Marine Engineering(16.00) |
| | Engineering(24.09) | Psychology(26.44) | | | Ship Mechanics and Design Principles(31.82) |
| | | Aeronautical and Astronautical Science and Technology(17.65) | | | Nuclear Energy and Reactor Technology(15.79) |
| Engineering(24.09) | Agricultural Engineering(32.69) | Agricultural Environment and Soil-Water Engineering(25.93) | | Radiation Protection and Nuclear Technology Applications(32.00) | Radiation Protection and Nuclear Technology Applications(32.00) |
| | | Agricultural Mechanization Engineering(40.00) | | | Applied Optics(22.58) |
| | Architecture(29.63) | Architectural Design and Theory(28.00) | | Optical Engineering(25.00) | Laser Technology(26.00) |
| | | Architectural History(27.42) | | | Optoelectronic Technology(35.82) |
| | Chemical Engineering and Technology(19.27) | Urban Planning and Design(34.00) | | | Theoretical Optics(21.48) |
| | | Chemical Transport Engineering(24.00) | | | Petroleum and Natural Gas Engineering(16.96) |
| | Civil Engineering(17.32) | Elements of Chemical Reaction Engineering(15.89) | | | Oil and Gas Field Development and Storage & Transportation Engineering(14.52) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(18.69) | | | Poromechanics and Reservoir Physics(20.00) |
| | Computer Science and Technology(26.61) | Mass Transport and Separation Process in Chemical Engineering(20.55) | | | Engineering Fluid Mechanics(25.00) |
| | | Civil Engineering(17.32) | | | Engineering Thermophysics(23.97) |
| Engineering(24.09) | Computer Science and Technology(26.61) | Bridge and Tunnel Engineering(17.65) | | | Fluid Machinery and Engineering(14.06) |
| | | Geotechnical Engineering(12.85) | | | Heat Transfer(19.38) |
| | Control Science and Engineering(20.53) | Structural Engineering(15.79) | | | Internal Combustion Engineering(28.00) |
| | | Urban Infrastructure Engineering(29.58) | | | Power Machinery and Engineering(19.23) |
| | Electrical Engineering(19.78) | Advanced Programming Languages(34.00) | | | Refrigeration and Cryogenic Engineering(28.00) |
| | | Computer Architecture(32.00) | | | Thermal Energy Engineering(20.18) |
| | Electronic Science and Technology(23.58) | Computer Networks(25.42) | | | Cartography and Geographic Information Engineering(42.00) |
| | | Computer Software and Theory(26.58) | | | Digital Surveying and Remote Sensing Applications(20.59) |
| | Environmental Science and Engineering(31.75) | Data Structures(17.17) | | | Geodesy and Surveying Engineering(32.00) |
| | | Databases(30.57) | | | Textile Chemistry and Dyeing Engineering(26.00) |
| Engineering(24.09) | Food Science and Engineering(50.46) | Formal Languages(21.15) | | | Textile Materials Science(44.00) |
| | | Operating Systems(20.00) | | | Transportation Engineering(29.88) |
| | Forestry Engineering(38.00) | Pattern Recognition(60.00) | | | Road and Railway Engineering(20.00) |
| | | Principles of Computer Organization(13.41) | | | Traffic Information Engineering and Control(29.23) |
| | Food Science and Engineering(50.46) | Control Theory and Control Engineering(20.22) | | | Transportation Planning and Management(34.88) |
| | | Guidance, Navigation and Control(19.61) | | | Vehicle Operation Engineering(32.00) |
| | Forestry Engineering(38.00) | Operations Research and Cybernetics(22.00) | | | Weapon Science and Technology(36.00) |
| | | Electrical Theory and New Technologies(17.89) | History(22.85) | Military Chemistry and Pyrotechnics(40.00) | Military Chemistry and Pyrotechnics(40.00) |
| Engineering(24.09) | Food Science and Engineering(50.46) | High Voltage and Insulation Technology(19.32) | | | Weapon Systems Science and Engineering(32.00) |
| | | Power Electronics and Electrical Drives(21.98) | | | Archaeology and Museology(30.77) |
| | Forestry Engineering(38.00) | Power Systems and Automation(19.79) | | | Historical Geography(21.13) |
| | | Circuits and Systems(24.07) | Law(28.96) | Road and Railway Engineering(20.00) | World History(21.50) |
| | Forestry Engineering(38.00) | Electromagnetic Field and Microwave Technology(18.18) | | | Contract Law(32.00) |
| | | Microelectronics and Solid-State Electronics(52.00) | | | Criminal Law(28.45) |
| | Forestry Engineering(38.00) | Environmental Engineering(13.48) | | | International Law(24.56) |
| | | Environmental Science(58.00) | | | Law and Social Governance(26.00) |
| | Forestry Engineering(38.00) | Environmental and Resource Protection(38.00) | | | Legal Theory and Legal History(36.00) |
| | | Food Biochemistry(70.00) | | | Military Law(62.00) |
| | Forestry Engineering(38.00) | Food Processing and Storage Engineering(33.90) | Political Science(27.69) | Procedural Law(20.00) | Procedural Law(20.00) |
| | | Forest Engineering(46.00) | | | Political Science(27.69) |
| | | Wood Science and Technology(30.00) | | | - |

Table 56. Model Scores Across Three Levels of Disciplines: gemma-2-27b.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|-------------------|--|
| Literature and Arts(27.51) | Art Studies(28.86) | Broadcasting and Television Art(36.00) | Philosophy(31.70) | Philosophy(31.70) | Religious Studies(38.00) |
| | | Dance Studies(32.00) | | | Astronomical Observation and Technology(20.00) |
| | | Design Arts(25.81) | | | Astrophysics(23.19) |
| | | Drama and Opera Studies(25.61) | | | Cosmology(25.64) |
| | | Film Studies(33.54) | | | Solar System Science(22.73) |
| | Journalism and Communication(26.09) | Fine Arts(24.88) | | | Stellar and Interstellar Evolution(25.71) |
| | | Communication and Broadcasting(27.59) | | | Atmospheric Physics and Atmospheric Environment(33.33) |
| | | History and Theory of Journalism and Media Management(27.12) | | | Dynamic Meteorology(26.00) |
| | | Journalism and News Practice(24.44) | | | Meteorology(25.00) |
| | | Classical Chinese Literature(16.00) | | | Biochemistry and Molecular Biology(32.32) |
| Management(32.73) | Language and Literature(25.91) | French Language and Literature(32.00) | | | Biophysics(38.00) |
| | | Linguistics and Applied Linguistics(26.00) | | | Botany(24.10) |
| | | Literary History(20.29) | | | Cell Biology(37.93) |
| | | Literary Theory(37.50) | | | Ecology(23.61) |
| | | Modern and Contemporary Chinese Literature(22.00) | | | Genetics(26.09) |
| | Musicology(27.93) | Philology and Bibliography(22.00) | | | Microbiology(22.36) |
| | | Russian Language and Literature(29.82) | | | Physiology(20.83) |
| | | Composition(32.00) | | | Zoology(15.40) |
| | | Harmony(30.00) | | | Analytical Chemistry(18.94) |
| | | Instrumentation and Performance(32.31) | | | Electrochemistry(16.22) |
| Medicine(27.80) | Business Administration(23.94) | Music History, Education, and Technology(18.62) | | | Inorganic Chemistry(15.22) |
| | | Musical Forms and Analysis(36.00) | | | Organic Chemistry(20.47) |
| | | Pitch and Scales(33.93) | | | Physical Chemistry(15.44) |
| | | Business and Accounting Management(20.65) | | | Polymer Chemistry and Physics(21.05) |
| | | Tourism Management and Technological Economics Management(30.00) | | | Radiochemistry(21.67) |
| | Library, Information and Archival Management(40.00) | Information Management Science(24.00) | | | Geography(40.60) Human Geography(58.00) |
| | | Information Management and Communication(58.00) | | | Physical Geography(30.12) |
| | | Library and Archival Science(38.00) | | | Geochemistry(40.00) |
| | | Management Science and Engineering(32.76) | | | Mineralogy, Petrology, and Economic Geology(31.40) |
| | | Education Economics, Management and Social Security(26.00) | | | Paleontology and Stratigraphy(20.00) |
| Pharmacy(25.54) | Public Administration(33.77) | Land Resource Management and Administrative Management(29.41) | | | Principles of Seismic Exploration(22.00) |
| | | Social Medicine and Health Management(46.00) | | | Structural Geology(30.00) |
| | | Forensic Medicine(22.00) | | | Geophysics(30.00) Solid Earth Geophysics(38.00) |
| | | Human Anatomy and Histology-Embryology(24.87) | | | Space physics(22.00) |
| | | Immunology(42.03) | | | Advanced Algebra(19.80) |
| | Clinical Medicine(27.01) | Pathogen Biology(35.11) | | | Combinatorial Mathematics(15.18) |
| | | Pathology and Pathophysiology(26.96) | | | Computational Mathematics(22.00) |
| | | Radiation Medicine(44.00) | | | Cryptography(42.00) |
| | | Anesthesiology(22.00) | | | Discrete Mathematics(12.36) |
| | | Clinical Laboratory Diagnostics(30.00) | | | Functions of Complex Variables(20.49) |
| Public Health and Preventive Medicine(34.25) | Stomatology(26.52) | Dermatology and Venereology(27.27) | | | Functions of Real Variables(16.42) |
| | | Emergency Medicine(30.30) | | | Fundamental Mathematics(22.34) |
| | | Geriatric Medicine(44.00) | | | Fuzzy Mathematics(24.00) |
| | | Imaging and Nuclear Medicine(7.46) | | | Geometry and Topology(18.87) |
| | | Internal Medicine(25.74) | | | Graph Theory(27.45) |
| | Traditional Chinese Medicine(21.64) | Neurology(27.51) | | | Group Theory(12.00) |
| | | Nursing and Rehabilitation Medicine(30.00) | | | Mathematical Analysis(15.62) |
| | | Obstetrics and Gynecology(29.41) | | | Number Theory(9.09) |
| | | Oncology(22.41) | | | Numerical Analysis(9.40) |
| | | Ophthalmology(26.00) | | | Ordinary Differential Equations(20.62) |
| Military Science(37.56) | Pharmacy(25.54) | Otorhinolaryngology(20.00) | | | Polynomials and Series Expansions(14.53) |
| | | Pediatrics(24.00) | | | Probability and Statistics(20.98) |
| | | Psychiatry and Mental Health(50.00) | | | Special Number Theory(34.00) |
| | | Surgery(23.53) | | | Stochastic Processes(36.00) |
| | | Medicinal Chemistry(24.00) | | | Hydrogeology(54.00) |
| | Philosophy(31.70) | Microbiology and Biochemical Pharmacy(26.00) | | | Marine Biology(74.00) |
| | | Pharmaceutical Analysis(26.00) | | | Marine Chemistry(50.00) |
| | | Pharmacetics(26.03) | | | Underwater Acoustics(40.00) |
| | | Pharmacology(25.45) | | | Physical Oceanography(28.00) |
| | | Epidemiology and Health Statistics(34.94) | | | Acoustics(18.78) |
| Philosophy(31.70) | Military Science(37.56) | Health Toxicology and Environmental Health(35.00) | | | Atomic and Molecular Physics(22.86) |
| | | Maternal, Child and Adolescent Health(26.58) | | | Electrodynamics(19.38) |
| | | Nutrition and Food Hygiene(44.00) | | | Fluid Physics(23.88) |
| | | Basic Stomatology(28.30) | | | Particle and Nuclear Physics(18.67) |
| | | Clinical Stomatology(25.32) | | | Polymer Physics(19.27) |
| | Systems Science(22.00) | Traditional Chinese Health Preservation(23.73) | | | Quantum Mechanics(18.93) |
| | | Traditional Chinese Medicine Theory(17.78) | | | Relativity(20.25) |
| | | Traditional Chinese Pharmacy(23.53) | | | Semiconductor Physics(13.11) |
| | | Military Command and Information Systems(52.00) | | | Solid State Physics(19.73) |
| | | Military Logistics and Equipment(35.19) | | | Statistical Mechanics(16.00) |
| Sociology(30.07) | Philosophy(31.70) | Military Management(38.00) | | | Subatomic and Atomic Physics(15.69) |
| | | Military Thought and History(25.49) | | | Thermodynamics(23.26) |
| | | Ethics(29.41) | | | Thermodynamics and Statistical Physics(17.36) |
| | | Logic(24.29) | | | Systems Science(22.00) |
| Sociology(30.07) | Philosophy(31.70) | Philosophical Aesthetics(30.28) | | | Demography and Anthropology(34.00) |
| | | Philosophy of Science and Technology(42.00) | | | Social and Folklore Studies(27.96) |

Table 56. Continued: Model Scores Across Three Levels of Disciplines: gemma-2-27b.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|--------------------|--|---|
| Agronomy(27.01) | Animal Husbandry(26.21) | Animal Nutrition and Feed Science(30.77) | Engineering(23.24) | Geological Resources and Geological Engineering(34.00) | Geological Resources and Geological Engineering(34.00) |
| | | Animal Rearing and Breeding(21.57) | | | Hydraulics and Hydrology(22.79) |
| | Aquaculture(14.29) Crop Science(28.28) | Aquaculture(14.29) | | Hydraulic Engineering(24.77) | Water conservancy and Hydropower Engineering(28.05) |
| | | Crop Science(28.28) | | | Antenna and Radio Communication(20.18) |
| | Forestry(29.77) | Forest Cultivation and Genetic Breeding(29.63) | | Information and Communication Engineering(24.40) | Communication Principles(22.41) |
| | | Landscape Plants and Ornamental Horticulture(30.00) | | | Communication and Information Systems(26.09) |
| | Veterinary Medicine(32.00) | Veterinary Medicine(32.00) | | Optical Fiber Communication(32.00) | Optical Fiber Communication(32.00) |
| | | Economic Statistics(22.00) | | | Signal and Information Processing(25.81) |
| | Economics(27.15) | Finance(21.02) | | Instrument Science and Technology(34.00) | Instrument Science and Technology(34.00) |
| | | Industrial Economics(25.00) | | | Materials Physics and Chemistry(19.60) |
| | | International Trade(23.19) | | Materials Science and Engineering(20.42) | Materials Processing Engineering(22.22) |
| | | Labor Economics(32.43) | | | Manufacturing Automation(17.46) |
| | | National and Defense Economics(34.00) | | Mechanics(17.84) | Mechatronic Engineering(24.00) |
| | | Public Finance(25.00) | | | Fundamentals of Dynamics and Control(17.29) |
| | | Quantitative Economics(33.00) | | | Rigid Body Mechanics(15.61) |
| | | Theoretical Economics(32.00) | | | Solid Mechanics(20.43) |
| | | Economic History(26.00) | | Metallurgical Engineering(30.20) | Theoretical Fluid Mechanics(26.43) |
| | | Political Economy(36.00) | | | Theoretical Mechanics(12.26) |
| | | Western Economics(34.00) | | | Iron and Steel Metallurgy(16.19) |
| Education(32.64) | Education(31.98) | Educational Technology and Principles(27.08) | | Non-ferrous Metallurgy(32.00) | Non-ferrous Metallurgy(32.00) |
| | | Preschool Education(34.00) | | | Physical Chemistry of Metallurgical Process(32.00) |
| | Physical Education(38.67) | Special Education(42.00) | | Principles of Metallurgy(56.00) | Principles of Metallurgy(56.00) |
| | | Theory of Curriculum and Instruction(29.41) | | | Mining Engineering(33.00) |
| | Psychology(24.14) | Physical Education and Training(26.00) | | Mineral Processing Engineering(30.00) | Mineral Processing Engineering(30.00) |
| | | Sports Humanities and Sociology(42.00) | | | Mining and Safety Engineering(36.00) |
| | | Sports Science and Medicine(48.00) | | Naval Architecture and Ocean Engineering(18.12) | Naval Architecture and Ocean Engineering(18.12) |
| | | Psychology(24.14) | | | Marine Engineering(24.00) |
| | Engineering(23.24) | Aeronautical and Astronautical Science and Technology(16.81) | | Ship Mechanics and Design Principles(14.77) | Ship Mechanics and Design Principles(14.77) |
| | | Agricultural Engineering(35.58) | | | Nuclear Energy and Reactor Technology(21.05) |
| | | Agricultural Environment and Soil-Water Engineering(35.19) | | Nuclear Science and Technology(30.84) | Radiation Protection and Nuclear Technology Applications(42.00) |
| | | Agricultural Mechanization Engineering(36.00) | | | Applied Optics(19.35) |
| | | Architecture(34.57) | | Optical Engineering(21.01) | Laser Technology(24.00) |
| | | Architectural Design and Theory(40.00) | | | Optoelectronic Technology(20.90) |
| | | Architectural History(29.03) | | | Theoretical Optics(21.48) |
| | | Urban Planning and Design(36.00) | | Petroleum and Natural Gas Engineering(30.36) | Polymer Development and Storage & Transportation Engineering(22.58) |
| | | Chemical Transport Engineering(20.00) | | | Poromechanics and Reservoir Physics(40.00) |
| | Control Science and Engineering(18.95) | Elements of Chemical Reaction Engineering(15.89) | | | Engineering Fluid Mechanics(22.62) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(14.95) | | Power Engineering and Engineering Thermophysics(17.98) | Engineering Thermophysics(15.75) |
| | | Mass Transport and Separation Process in Chemical Engineering(21.92) | | | Fluid Machinery and Engineering(12.50) |
| | | Civil Engineering(16.20) | | | Heat Transfer(17.83) |
| | | Bridge and Tunnel Engineering(19.61) | | Refrigeration and Cryogenic Engineering(22.00) | Internal Combustion Engineering(38.00) |
| | | Geotechnical Engineering(13.41) | | | Power Machinery and Engineering(5.77) |
| | | Structural Engineering(14.04) | | Surveying and Mapping Science and Technology(23.81) | Refrigeration and Cryogenic Engineering(22.00) |
| | | Urban Infrastructure Engineering(22.54) | | | Thermal Energy Engineering(15.60) |
| | | Computer Science and Technology(27.39) | | | Cartography and Geographic Information Engineering(36.00) |
| | | Advanced Programming Languages(42.00) | | | Digital Surveying and Remote Sensing Applications(13.24) |
| Electrical Engineering(18.35) | Computer Architecture(28.00) | Computer Networks(16.95) | | Textile Science and Engineering(31.00) | Geodesy and Surveying Engineering(26.00) |
| | | Computer Software and Theory(13.92) | | | Textile Chemistry and Dyeing Engineering(22.00) |
| | Data Structures(21.21) | Databases(36.94) | | | Textile Materials Science(40.00) |
| | | Formal Languages(30.77) | | Transportation Engineering(25.90) | Transportation Engineering(25.90) |
| | Control Theory and Control Engineering(17.98) | Operating Systems(18.82) | | | Road and Railway Engineering(18.00) |
| | | Pattern Recognition(56.00) | | | Traffic Information Engineering and Control(15.38) |
| | Principles of Computer Organization(17.07) | Principles of Computer Organization(17.07) | | | Transportation Planning and Management(34.88) |
| | | Control Theory and Control Engineering(17.98) | | | Vehicle Operation Engineering(32.00) |
| | Guidance, Navigation and Control(19.61) | Guidance, Navigation and Control(19.61) | | Weapon Science and Technology(33.00) | Military Chemistry and Pyrotechnics(38.00) |
| | | Operations Research and Cybernetics(20.00) | | | Weapon Systems Science and Engineering(28.00) |
| Environmental Science and Engineering(34.39) | Electrical Theory and New Technologies(17.89) | Electrical Theory and New Technologies(17.89) | History(22.26) | History(22.26) | Archaeology and Museology(24.04) |
| | | High Voltage and Insulation Technology(15.91) | | | Historical Geography(16.90) |
| | Power Electronics and Electrical Drives(19.23) | Power Electronics and Electrical Drives(19.23) | | | World History(23.60) |
| | | Power Systems and Automation(19.79) | | Law(28.51) | Civil and Commercial Law(18.64) |
| | Electronic Science and Technology(23.58) | Circuits and Systems(22.22) | | | Constitutional and Administrative Law(24.00) |
| | | Electromagnetic Field and Microwave Technology(17.05) | | | Contract Law(38.00) |
| | Microelectronics and Solid-State Electronics(58.00) | Microelectronics and Solid-State Electronics(58.00) | | | Criminal Law(29.31) |
| | | Environmental Engineering(17.98) | | | International Law(22.81) |
| | Environmental Science(56.00) | Environmental Science(56.00) | | | Law and Social Governance(26.00) |
| | | Environmental and Resource Protection(42.00) | | | Legal Theory and Legal History(38.00) |
| Food Science and Engineering(42.20) | Food Biochemistry(72.00) | Food Biochemistry(72.00) | | | Military Law(56.00) |
| | | Food Processing and Storage Engineering(16.95) | | Political Science(20.00) | Procedural Law(28.00) |
| | Forest Engineering(42.00) | Forest Engineering(42.00) | | | Political Science(20.00) |
| | | Wood Science and Technology(24.00) | | | - |
| | Forestry Engineering(33.00) | Wood Science and Technology(24.00) | | | - |
| | | Forestry Engineering(33.00) | | | - |

Table 57. Model Scores Across Three Levels of Disciplines: gemma-2-9b-it.

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| Discipline | Field | Subfield | Discipline | Field | Subfield | |
|----------------------------|---|--|------------------------|------------------------|--|--|
| Literature and Arts(27.45) | Art Studies(25.37) | Broadcasting and Television Art(34.00) | Philosophy(29.39) | Philosophy(29.39) | Religious Studies(32.00) | |
| | | Dance Studies(28.00) | | | Astronomical Observation and Technology(15.00) | |
| | | Design Arts(22.58) | | | Astrophysics(20.29) | |
| | | Drama and Opera Studies(29.27) | | | Cosmology(23.08) | |
| | | Film Studies(31.01) | | | Solar System Science(13.64) | |
| | Journalism and Communication(27.05) | Fine Arts(17.41) | | | Stellar and Interstellar Evolution(22.86) | |
| | | Communication and Broadcasting(29.31) | | | Atmospheric Physics and Atmospheric Environment(23.19) | |
| | Language and Literature(30.45) | History and Theory of Journalism and Media Management(28.81) | | | Dynamic Meteorology(36.00) | |
| | | Journalism and News Practice(24.44) | | | Meteorology(19.05) | |
| | | Classical Chinese Literature(22.00) | | | Biochemistry and Molecular Biology(29.29) | |
| | | French Language and Literature(46.00) | | | Biophysics(50.00) | |
| | | Linguistics and Applied Linguistics(32.00) | | | Botany(26.51) | |
| Management(32.14) | Business Administration(27.46) | Literary History(26.09) | | | Cell Biology(42.53) | |
| | | Literary Theory(31.25) | | | Ecology(22.92) | |
| | | Modern and Contemporary Chinese Literature(30.00) | | | Genetics(26.09) | |
| | | Philology and Bibliography(32.00) | | | Microbiology(34.16) | |
| | | Russian Language and Literature(26.32) | | | Physiology(22.50) | |
| | Library, Information and Archival Management(36.67) | Composition(34.00) | | | Zoology(22.94) | |
| | | Harmony(20.00) | | | Chemistry(16.39) | |
| | | Instrumentation and Performance(32.31) | | | Analytical Chemistry(17.68) | |
| | | Music History, Education, and Technology(23.45) | | | Electrochemistry(14.41) | |
| | | Musical Forms and Analysis(34.00) | | | Inorganic Chemistry(18.84) | |
| Medicine(27.44) | Clinical Medicine(28.65) | Pitch and Scales(28.57) | | | Organic Chemistry(21.64) | |
| | | Business and Accounting Management(23.91) | | | Physical Chemistry(15.86) | |
| | | Tourism Management and Technological Economics Management(34.00) | | | Polymer Chemistry and Physics(6.58) | |
| | | Information Management Science(26.00) | | | Radiochemistry(13.33) | |
| | | Information Management and Communication(60.00) | | | Geography(34.59) | |
| | Public Administration(31.79) | Library and Archival Science(24.00) | | | Human Geography(58.00) | |
| | | Management Science and Engineering(32.76) | | | Physical Geography(20.48) | |
| | | Education Economics, Management and Social Security(26.00) | | | Geology(27.27) | |
| | | Land Resource Management and Administrative Management(27.45) | | | Geochemistry(40.00) | |
| | | Social Medicine and Health Management(42.00) | | | Mineralogy, Petrology, and Economic Geology(25.62) | |
| Medicine(27.44) | Pharmacy(26.62) | Forensic Medicine(32.00) | | | Paleontology and Stratigraphy(32.00) | |
| | | Human Anatomy and Histology-Embryology(30.16) | | | Principles of Seismic Exploration(24.00) | |
| | | Immunology(36.23) | | | Structural Geology(20.00) | |
| | | Pathogen Biology(34.04) | | | Geophysics(31.00) | |
| | | Pathology and Pathophysiology(21.74) | | | Solid Earth Geophysics(36.00) | |
| | Public Health and Preventive Medicine(28.42) | Radiation Medicine(42.00) | | | Space physics(26.00) | |
| | | Anesthesiology(32.00) | | | Advanced Algebra(21.29) | |
| | | Clinical Laboratory Diagnostics(24.00) | | | Combinatorial Mathematics(18.32) | |
| | | Dermatology and Venereology(33.33) | | | Computational Mathematics(18.00) | |
| | | Emergency Medicine(30.30) | | | Cryptography(34.00) | |
| Medicine(27.44) | Pharmacy(26.62) | Geriatric Medicine(40.00) | | | Discrete Mathematics(22.47) | |
| | | Imaging and Nuclear Medicine(25.37) | | | Functions of Complex Variables(23.77) | |
| | | Internal Medicine(27.23) | | | Functions of Real Variables(32.84) | |
| | | Neurology(31.22) | | | Fundamental Mathematics(14.72) | |
| | | Nursing and Rehabilitation Medicine(30.00) | | | Fuzzy Mathematics(32.00) | |
| | Public Health and Preventive Medicine(28.42) | Obstetrics and Gynecology(17.65) | | | Geometry and Topology(16.98) | |
| | | Oncology(24.14) | | | Graph Theory(15.69) | |
| | | Ophthalmology(42.00) | | | Group Theory(18.00) | |
| | | Otorhinolaryngology(24.00) | | | Mathematical Analysis(19.44) | |
| | | Pediatrics(26.00) | | | Number Theory(10.91) | |
| Medicine(27.44) | Stomatology(18.94) | Psychiatry and Mental Health(40.00) | | | Numerical Analysis(17.91) | |
| | | Surgery(22.06) | | | Ordinary Differential Equations(17.50) | |
| | | Medicinal Chemistry(20.00) | | | Polynomials and Series Expansions(15.64) | |
| | | Microbiology and Biochemical Pharmacy(36.00) | | | Probability and Statistics(26.79) | |
| | | Pharmaceutical Analysis(22.00) | | | Special Number Theory(20.00) | |
| | Traditional Chinese Medicine(18.28) | Pharmacetics(24.66) | | | Stochastic Processes(34.00) | |
| | | Pharmacology(30.91) | | | Hydrogeology(54.00) | |
| | | Epidemiology and Health Statistics(21.69) | | | Marine Biology(70.00) | |
| | | Health Toxicology and Environmental Health(30.00) | | | Marine Chemistry(46.00) | |
| | | Maternal, Child and Adolescent Health(26.58) | | | Underwater Acoustics(28.00) | |
| Military Science(34.15) | Military Science(34.15) | Nutrition and Food Hygiene(40.00) | | | Physical Oceanography(32.00) | |
| | | Basic Stomatology(20.75) | | | Physics(19.05) | |
| | | Clinical Stomatology(17.72) | | | Oceanography(49.50) | |
| | | Traditional Chinese Medicine(11.86) | | | Physical Oceanography(32.00) | |
| | | Traditional Chinese Medicine Theory(20.00) | | | Physics(17.55) | |
| | Philosophy(29.39) | Traditional Chinese Pharmacy(20.17) | | | Atomic and Molecular Physics(18.10) | |
| | | Military Command and Information Systems(36.00) | | | Electrodynamics(22.30) | |
| | | Military Logistics and Equipment(37.04) | | | Fluid Physics(24.63) | |
| | | Military Management(46.00) | | | Particle and Nuclear Physics(18.22) | |
| | | Military Thought and History(17.65) | | | Polymer Physics(14.68) | |
| Philosophy(29.39) | Philosophy(29.39) | Ethics(35.29) | Systems Science(20.00) | Systems Science(20.00) | Quantum Mechanics(16.50) | |
| | | Logic(18.57) | | | Relativity(24.05) | |
| | | Philosophical Aesthetics(26.61) | | | Semiconductor Physics(11.48) | |
| | | Philosophy of Science and Technology(40.00) | | | Solid State Physics(17.69) | |
| Philosophy(29.39) | | | | Sociology(27.97) | Statistical Mechanics(32.00) | |
| | | | | | Subatomic and Atomic Physics(17.65) | |
| | | | | | Thermodynamics(21.40) | |
| | | | | | Thermodynamics and Statistical Physics(15.85) | |
| | | | | | Systems Science(20.00) | |
| | | | | | Demography and Anthropology(28.00) | |
| | | | | | Social and Folklore Studies(27.96) | |

Table 57. Continued: Model Scores Across Three Levels of Disciplines: gemma-2-9b-it.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|--|--|--------------------|--|---|
| Agronomy(25.36) | Animal Husbandry(25.24) | Animal Nutrition and Feed Science(26.92) | Engineering(22.83) | Geological Resources and Geological Engineering(32.00) | Geological Resources and Geological Engineering(32.00) |
| | | Animal Rearing and Breeding(23.53) | | Hydraulic Engineering(27.06) | Hydraulics and Hydrology(29.41) |
| | Aquaculture(23.21) | Aquaculture(23.21) | | | Water conservancy and Hydropower Engineering(23.17) |
| | Crop Science(24.83) | Crop Science(24.83) | | Information and Communication Engineering(23.81) | Antenna and Radio Communication(15.79) |
| | Forestry(26.72) | Forest Cultivation and Genetic Breeding(27.16) | | | Communication Principles(28.45) |
| | | Landscape Plants and Ornamental Horticulture(26.00) | | | Communication and Information Systems(23.19) |
| | Veterinary Medicine(26.00) | Veterinary Medicine(26.00) | | | Optical Fiber Communication(26.00) |
| | Economics(26.35) | Economic Statistics(34.00) | | | Signal and Information Processing(25.81) |
| | Applied Economics(26.14) | Finance(21.02) | | Instrument Science and Technology(26.00) | Instrument Science and Technology(26.00) |
| Economics(26.35) | | Industrial Economics(25.00) | | Materials Science and Engineering(16.96) | Materials Physics and Chemistry(18.09) |
| | | International Trade(18.84) | | | Materials Processing Engineering(14.44) |
| | | Labor Economics(37.84) | | Mechanical Engineering(23.30) | Manufacturing Automation(24.60) |
| | | National and Defense Economics(28.00) | | Mechanics(16.30) | Mechatronic Engineering(20.00) |
| | | Public Finance(28.33) | | | Fundamentals of Dynamics and Control(16.43) |
| | | Quantitative Economics(25.00) | | | Rigid Body Mechanics(15.03) |
| | Theoretical Economics(27.33) | Economic History(22.00) | | | Solid Mechanics(16.13) |
| | | Political Economy(30.00) | | | Theoretical Fluid Mechanics(18.57) |
| | | Western Economics(30.00) | | | Theoretical Mechanics(15.48) |
| | Education(30.99) | Educational Technology and Principles(33.33) | | Metallurgical Engineering(29.80) | Iron and Steel Metallurgy(20.95) |
| Education(30.99) | Education(31.17) | Preschool Education(30.00) | | | Non-ferrous Metallurgy(32.00) |
| | | Special Education(42.00) | | | Physical Chemistry of Metallurgical Process(30.00) |
| | Physical Education(36.00) | Theory of Curriculum and Instruction(17.65) | | | Principles of Metallurgy(46.00) |
| | | Physical Education and Training(26.00) | | Mining Engineering(40.00) | Mineral Processing Engineering(36.00) |
| | | Sports Humanities and Sociology(24.00) | | | Mining and Safety Engineering(44.00) |
| | | Sports Science and Medicine(58.00) | | Naval Architecture and Ocean Engineering(20.29) | Marine Engineering(16.00) |
| | Psychology(21.84) | Psychology(21.84) | | | Ship Mechanics and Design Principles(22.73) |
| | Aeronautical and Astronautical Science and Technology(18.49) | Aeronautical and Astronautical Science and Technology(18.49) | | | Nuclear Energy and Reactor Technology(24.56) |
| | Agricultural Engineering(28.85) | Agricultural Environment and Soil-Water Engineering(27.78) | | | Radiation Protection and Nuclear Technology Applications(32.00) |
| | Architecture(24.69) | Agricultural Mechanization Engineering(30.00) | | Optical Engineering(19.15) | Applied Optics(16.94) |
| Engineering(22.83) | Chemical Engineering and Technology(19.02) | Architectural Design and Theory(26.00) | | | Laser Technology(18.00) |
| | | Architectural History(14.52) | | | Optoelectronic Technology(19.40) |
| | | Urban Planning and Design(36.00) | | | Theoretical Optics(21.48) |
| | | Chemical Transport Engineering(28.00) | | Petroleum and Natural Gas Engineering(25.89) | Oil and Gas Field Development and Storage & Transportation Engineering(30.65) |
| | | Elements of Chemical Reaction Engineering(17.76) | | | Poromechanics and Reservoir Physics(20.00) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(16.82) | | Power Engineering and Engineering Thermophysics(20.03) | Engineering Fluid Mechanics(23.81) |
| | | Mass Transport and Separation Process in Chemical Engineering(18.49) | | | Engineering Thermophysics(21.23) |
| | Civil Engineering(18.99) | Bridge and Tunnel Engineering(13.73) | | | Fluid Machinery and Engineering(15.62) |
| | | Geotechnical Engineering(15.08) | | | Heat Transfer(20.93) |
| | | Structural Engineering(29.82) | | | Internal Combustion Engineering(34.00) |
| Engineering(22.83) | | Urban Infrastructure Engineering(23.94) | | | Power Machinery and Engineering(7.69) |
| | Computer Science and Technology(25.56) | Advanced Programming Languages(34.00) | | | Refrigeration and Cryogenic Engineering(16.00) |
| | | Computer Architecture(34.00) | | | Thermal Energy Engineering(18.35) |
| | | Computer Networks(16.95) | | | Cartography and Geographic Information Engineering(34.00) |
| | | Computer Software and Theory(15.19) | | | Digital Surveying and Remote Sensing Applications(26.47) |
| | | Data Structures(21.21) | | | Geodesy and Surveying Engineering(22.00) |
| | | Databases(33.76) | | | Textile Chemistry and Dyeing Engineering(20.00) |
| | | Formal Languages(23.08) | | | Textile Materials Science(50.00) |
| | | Operating Systems(21.18) | | | Transportation Engineering(28.69) |
| | | Pattern Recognition(48.00) | | | Road and Railway Engineering(18.00) |
| Engineering(22.83) | Control Science and Engineering(24.21) | Principles of Computer Organization(13.41) | | | Traffic Information Engineering and Control(23.08) |
| | | Control Theory and Control Engineering(23.60) | | | Transportation Planning and Management(38.37) |
| | | Guidance, Navigation and Control(21.57) | | | Vehicle Operation Engineering(30.00) |
| | | Operations Research and Cybernetics(28.00) | | Weapon Science and Technology(31.00) | Military Chemistry and Pyrotechnics(26.00) |
| | Electrical Engineering(18.35) | Electrical Theory and New Technologies(21.05) | History(18.55) | History(18.55) | Weapon Systems Science and Engineering(36.00) |
| | | High Voltage and Insulation Technology(22.73) | | | Archaeology and Museology(17.31) |
| | | Power Electronics and Electrical Drives(15.93) | | | Historical Geography(19.01) |
| | | Power Systems and Automation(13.54) | | | World History(18.69) |
| | Electronic Science and Technology(19.51) | Circuits and Systems(19.44) | Law(25.61) | Law(26.40) | Civil and Commercial Law(19.49) |
| | | Electromagnetic Field and Microwave Technology(19.32) | | | Constitutional and Administrative Law(24.00) |
| Engineering(22.83) | | Microelectronics and Solid-State Electronics(20.00) | | | Contract Law(22.00) |
| | Environmental Science and Engineering(30.69) | Environmental Engineering(19.10) | | | Criminal Law(33.62) |
| | | Environmental Science(42.00) | | | International Law(24.56) |
| | Food Science and Engineering(42.20) | Environmental and Resource Protection(40.00) | | | Law and Social Governance(20.00) |
| | | Food Biochemistry(62.00) | | | Legal Theory and Legal History(28.00) |
| | Forestry Engineering(27.00) | Food Processing and Storage Engineering(25.42) | | | Military Law(52.00) |
| | | Forest Engineering(22.00) | | Political Science(18.46) | Procedural Law(14.00) |
| | Forestry Engineering(27.00) | Wood Science and Technology(32.00) | | | Political Science(18.46) |

Table 58. Model Scores Across Three Levels of Disciplines: Qwen2.5-3B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|--|--|-------------------|-------------------|--|
| Literature and Arts(22.32) | Art Studies(19.73) | Broadcasting and Television Art(18.00) | Philosophy(27.09) | Philosophy(27.09) | Religious Studies(34.00) |
| | | Dance Studies(26.00) | | | Astronomical Observation and Technology(18.00) |
| | | Design Arts(14.52) | | | Astrophysics(24.64) |
| | | Drama and Opera Studies(17.07) | | | Cosmology(23.08) |
| | | Film Studies(22.78) | | | Solar System Science(26.14) |
| | Journalism and Communication(17.87) | Fine Arts(18.91) | | | Stellar and Interstellar Evolution(8.57) |
| | | Communication and Broadcasting(10.34) | | | Atmospheric Physics and Atmospheric Environment(28.99) |
| | Language and Literature(26.59) | History and Theory of Journalism and Media Management(28.81) | | | Dynamic Meteorology(24.00) |
| | | Journalism and News Practice(15.56) | | | Meteorology(25.00) |
| | | Classical Chinese Literature(30.00) | | | Biochemistry and Molecular Biology(28.28) |
| | | French Language and Literature(34.00) | | | Biophysics(38.00) |
| | | Linguistics and Applied Linguistics(24.00) | | | Botany(21.69) |
| Management(30.94) | Musicology(23.71) | Literary History(17.39) | | | Cell Biology(29.89) |
| | | Literary Theory(28.12) | | | Ecology(21.53) |
| | | Modern and Contemporary Chinese Literature(32.00) | | | Genetics(19.57) |
| | | Philology and Bibliography(30.00) | | | Microbiology(26.09) |
| | | Russian Language and Literature(21.05) | | | Physiology(24.17) |
| | | Composition(38.00) | | | Zoology(11.93) |
| | | Harmony(21.67) | | | Analytical Chemistry(19.95) |
| | | Instrumentation and Performance(27.69) | | | Electrochemistry(15.32) |
| | | Music History, Education, and Technology(19.31) | | | Inorganic Chemistry(19.57) |
| | | Musical Forms and Analysis(20.00) | | | Organic Chemistry(18.71) |
| Medicine(26.82) | Business Administration(25.09) | Pitch and Scales(23.21) | | | Physical Chemistry(18.41) |
| | | Business and Accounting Management(26.09) | | | Polymer Chemistry and Physics(17.11) |
| | | Tourism Management and Technological Economics Management(24.00) | | | Radiochemistry(18.33) |
| | | Library, Information and Archival Management(34.67) | | | Geography(34.59) Human Geography(56.00) |
| | | Information Management Science(20.00) | | | Physical Geography(21.69) |
| | Public Administration(33.11) | Information Management and Communication(52.00) | | | Geology(27.86) Geochemistry(30.00) |
| | | Library and Archival Science(32.00) | | | Mineralogy, Petrology, and Economic Geology(31.40) |
| | | Management Science and Engineering(29.31) | | | Paleontology and Stratigraphy(22.00) |
| | | Education Economics, Management and Social Security(16.00) | | | Principles of Seismic Exploration(20.00) |
| | | Land Resource Management and Administrative Management(33.33) | | | Structural Geology(30.00) |
| Medicine(26.82) | Clinical Medicine(26.11) | Social Medicine and Health Management(50.00) | | | Geophysics(25.00) Solid Earth Geophysics(18.00) |
| | | Forensic Medicine(18.00) | | | Space physics(32.00) |
| | | Human Anatomy and Histology-Embryology(32.80) | | | Advanced Algebra(27.72) |
| | | Immunology(30.43) | | | Combinatorial Mathematics(15.71) |
| | | Pathogen Biology(29.79) | | | Computational Mathematics(24.00) |
| | Pharmacy(28.42) | Pathology and Pathophysiology(19.13) | | | Cryptography(38.00) |
| | | Radiation Medicine(46.00) | | | Discrete Mathematics(8.99) |
| | | Anesthesiology(28.00) | | | Functions of Complex Variables(29.51) |
| | | Clinical Laboratory Diagnostics(8.00) | | | Functions of Real Variables(26.87) |
| | | Dermatology and Venereology(24.24) | | | Fundamental Mathematics(21.32) |
| Medicine(26.82) | Stomatology(15.91) | Emergency Medicine(25.76) | | | Fuzzy Mathematics(24.00) |
| | | Geriatric Medicine(38.00) | | | Geometry and Topology(20.00) |
| | | Imaging and Nuclear Medicine(16.42) | | | Graph Theory(13.73) |
| | | Internal Medicine(32.18) | | | Group Theory(20.00) |
| | | Neurology(19.58) | | | Mathematical Analysis(25.00) |
| | Public Health and Preventive Medicine(27.74) | Nursing and Rehabilitation Medicine(26.00) | | | Number Theory(15.00) |
| | | Obstetrics and Gynecology(25.49) | | | Numerical Analysis(28.36) |
| | | Oncology(27.59) | | | Ordinary Differential Equations(25.62) |
| | | Ophthalmology(34.00) | | | Polynomials and Series Expansions(18.44) |
| | | Otorhinolaryngology(18.00) | | | Probability and Statistics(33.04) |
| Medicine(26.82) | Traditional Chinese Medicine(27.99) | Pediatrics(26.00) | | | Special Number Theory(22.00) |
| | | Psychiatry and Mental Health(42.00) | | | Stochastic Processes(42.00) |
| | | Surgery(29.41) | | | Hydrogeology(56.00) |
| | | Medicinal Chemistry(18.00) | | | Marine Biology(64.00) |
| | | Microbiology and Biochemical Pharmacy(36.00) | | | Marine Chemistry(50.00) |
| | Military Science(27.32) | Pharmaceutical Analysis(36.00) | | | Underwater Acoustics(24.00) |
| | | Pharmacetics(23.29) | | | Physical Oceanography(28.00) |
| | | Pharmacology(30.91) | | | Acoustics(14.69) |
| | | Epidemiology and Health Statistics(22.89) | | | Atomic and Molecular Physics(17.62) |
| | | Health Toxicology and Environmental Health(25.00) | | | Electrodynamics(16.81) |
| Military Science(27.32) | Systems Science(22.00) | Maternal, Child and Adolescent Health(26.58) | | | Fluid Physics(23.13) |
| | | Nutrition and Food Hygiene(42.00) | | | Particle and Nuclear Physics(22.22) |
| | | Basic Stomatology(24.53) | | | Polymer Physics(19.27) |
| | | Clinical Stomatology(10.13) | | | Quantum Mechanics(18.45) |
| | | Traditional Chinese Health Preservation(35.59) | | | Relativity(21.52) |
| | Philosophy(27.09) | Traditional Chinese Medicine Theory(27.78) | | | Semiconductor Physics(13.11) |
| | | Traditional Chinese Pharmacy(24.37) | | | Solid State Physics(16.33) |
| | | Military Command and Information Systems(30.00) | | | Statistical Mechanics(18.00) |
| | | Military Logistics and Equipment(16.67) | | | Subatomic and Atomic Physics(29.41) |
| | | Military Management(36.00) | | | Thermodynamics(17.21) |
| Philosophy(27.09) | Sociology(26.57) | Military Thought and History(27.45) | | | Thermodynamics and Statistical Physics(17.36) |
| | | Ethics(22.06) | | | Systems Science(22.00) |
| | | Logic(18.57) | | | Demography and Anthropology(28.00) |
| | | Philosophical Aesthetics(22.94) | | | Social and Folklore Studies(25.81) |
| | | Philosophy of Science and Technology(48.00) | | | |

Table 58. Continued: Model Scores Across Three Levels of Disciplines: Qwen2.5-3B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield | |
|--------------------|---|--|--|--|--|--|
| Agronomy(24.12) | Animal Husbandry(24.27) | Animal Nutrition and Feed Science(26.92) Animal Rearing and Breeding(21.57) | Engineering(23.04) | Geological Resources and Geological Engineering(34.00) Hydraulic Engineering(27.52) | Geological Resources and Geological Engineering(34.00) Hydraulics and Hydrology(23.53) Water conservancy and Hydropower Engineering(34.15) Antenna and Radio Communication(17.54) | |
| | Aquaculture(17.86) Crop Science(20.69) | Aquaculture(17.86) Crop Science(20.69) | Information and Communication Engineering(21.63) | | Communication Principles(27.59) Communication and Information Systems(13.04) Optical Fiber Communication(18.00) Signal and Information Processing(25.16) | |
| | Forestry(28.24) | Forest Cultivation and Genetic Breeding(25.93) Landscape Plants and Ornamental Horticulture(32.00) | | | Instrument Science and Technology(22.00) | |
| | Veterinary Medicine(30.00) | Veterinary Medicine(30.00) | Economics(29.90) | Economic Statistics(32.00) Finance(27.27) Industrial Economics(29.76) International Trade(34.78) Labor Economics(31.08) National and Defense Economics(26.00) Public Finance(34.17) Quantitative Economics(26.00) | Materials Physics and Chemistry(17.09) Mechanical Engineering(19.89) Materials Science and Engineering(18.61) | Materials Processing Engineering(23.33) Manufacturing Automation(17.46) Mechatronic Engineering(26.00) Fundamentals of Dynamics and Control(18.73) Rigid Body Mechanics(12.72) Solid Mechanics(22.58) Theoretical Fluid Mechanics(26.43) Theoretical Mechanics(15.48) |
| | Theoretical Economics(30.00) | Economic History(34.00) Political Economy(28.00) Western Economics(28.00) | | Metallurgical Engineering(25.10) | Iron and Steel Metallurgy(15.24) Non-ferrous Metallurgy(26.00) Physical Chemistry of Metallurgical Process(26.00) Principles of Metallurgy(44.00) | |
| Education(30.99) | Education(31.17) | Educational Technology and Principles(28.12) Preschool Education(30.00) Special Education(42.00) Theory of Curriculum and Instruction(27.45) | | Mining Engineering(31.00) | Mineral Processing Engineering(36.00) Mining and Safety Engineering(26.00) | |
| | Physical Education(32.00) | Physical Education and Training(18.00) Sports Humanities and Sociology(30.00) Sports Science and Medicine(48.00) | | Naval Architecture and Ocean Engineering(26.09) | Marine Engineering(22.00) Ship Mechanics and Design Principles(28.41) | |
| | Psychology(28.74) | Psychology(28.74) | | Nuclear Science and Technology(18.69) | Nuclear Energy and Reactor Technology(8.77) Radiation Protection and Nuclear Technology Applications(30.00) | |
| Engineering(23.04) | Aeronautical and Astronautical Science and Technology(21.85) Agricultural Engineering(31.73) | Aeronautical and Astronautical Science and Technology(21.85) Agricultural Environment and Soil-Water Engineering(24.07) Agricultural Mechanization Engineering(40.00) | | Optical Engineering(21.54) | Applied Optics(16.13) Laser Technology(20.00) Optoelectronic Technology(28.36) Theoretical Optics(23.70) | |
| | Architecture(25.93) | Architectural Design and Theory(28.00) Architectural History(16.13) Urban Planning and Design(36.00) | | Petroleum and Natural Gas Engineering(28.57) | Oil and Gas Field Development and Storage & Transportation Engineering(27.42) Poromechanics and Reservoir Physics(30.00) Engineering Fluid Mechanics(22.62) | |
| | Chemical Engineering and Technology(16.10) | Chemical Transport Engineering(20.00) Elements of Chemical Reaction Engineering(14.95) Fluid Flow and Heat Transfer in Chemical Engineering(16.82) Mass Transport and Separation Process in Chemical Engineering(15.07) | | Power Engineering and Engineering Thermophysics(21.05) | Engineering Thermophysics(22.60) Fluid Machinery and Engineering(15.62) Heat Transfer(20.16) Internal Combustion Engineering(30.00) Power Machinery and Engineering(19.23) | |
| | Civil Engineering(15.36) | Bridge and Tunnel Engineering(15.69) Geotechnical Engineering(13.41) Structural Engineering(15.79) Urban Infrastructure Engineering(19.72) | | | Refrigeration and Cryogenic Engineering(22.00) Thermal Energy Engineering(18.35) Cartography and Geographic Information Engineering(34.00) | |
| | Computer Science and Technology(28.83) | Advanced Programming Languages(30.00) Computer Architecture(22.00) Computer Networks(25.42) | | Surveying and Mapping Science and Technology(26.19) | Digital Surveying and Remote Sensing Applications(25.00) Geodesy and Surveying Engineering(20.00) Textile Chemistry and Dyeing Engineering(14.00) | |
| | | Computer Software and Theory(25.32) Data Structures(19.19) Databases(35.67) | | Textile Science and Engineering(22.00) | Textile Materials Science(30.00) | |
| | | Formal Languages(13.46) Operating Systems(24.71) Pattern Recognition(56.00) Principles of Computer Organization(34.15) | | Transportation Engineering(28.69) | Road and Railway Engineering(10.00) Traffic Information Engineering and Control(27.69) Transportation Planning and Management(37.21) Vehicle Operation Engineering(34.00) | |
| | Control Science and Engineering(21.58) | Control Theory and Control Engineering(22.47) Guidance, Navigation and Control(15.69) | | Weapon Science and Technology(31.00) | Military Chemistry and Pyrotechnics(32.00) Weapon Systems Science and Engineering(30.00) | |
| | | Operations Research and Cybernetics(26.00) | | | Archaeology and Museology(13.46) Historical Geography(14.79) World History(18.46) | |
| | Electrical Engineering(19.60) | Electrical Theory and New Technologies(15.79) High Voltage and Insulation Technology(25.00) Power Electronics and Electrical Drives(19.23) | History(16.91) | History(16.91) | Civil and Commercial Law(18.64) Constitutional and Administrative Law(20.00) | |
| | Electronic Science and Technology(22.36) | Power Systems and Automation(22.92) Circuits and Systems(24.07) | Law(28.20) | Law(28.93) | Contract Law(24.00) Criminal Law(38.79) | |
| | | Electromagnetic Field and Microwave Technology(25.00) Microelectronics and Solid-State Electronics(14.00) | | | International Law(15.79) | |
| | Environmental Science and Engineering(28.57) | Environmental Engineering(15.73) Environmental Science(38.00) | | | Law and Social Governance(32.00) Legal Theory and Legal History(34.00) Military Law(66.00) | |
| | Food Science and Engineering(38.53) | Environmental and Resource Protection(42.00) Food Biochemistry(58.00) | | | Procedural Law(14.00) | |
| | Forestry Engineering(42.00) | Food Processing and Storage Engineering(22.03) Forest Engineering(48.00) | | Political Science(21.54) | Political Science(21.54) | |
| Engineering(23.04) | Forestry Engineering(42.00) | Wood Science and Technology(36.00) | | - | - | |

Table 59. Model Scores Across Three Levels of Disciplines: Yi-1.5-9B-Chat.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|-------------------------------------|--|------------------------|--|--|
| Literature and Arts(20.70) | Art Studies(18.91) | Broadcasting and Television Art(24.00) | Philosophy(27.09) | Philosophy(27.09) | Religious Studies(42.00) |
| | | Dance Studies(16.00) | | Astronomy(19.51) | Astronomical Observation and Technology(18.00) |
| | | Design Arts(16.13) | | Astrophysics(21.74) | Cosmology(15.38) |
| | | Drama and Opera Studies(20.73) | | Solar System Science(18.18) | Stellar and Interstellar Evolution(25.71) |
| | | Film Studies(22.15) | | Atmospheric Science(25.62) | Atmospheric Physics and Atmospheric Environment(27.54) |
| | Journalism and Communication(20.77) | Fine Arts(15.92) | | Dynamic Meteorology(32.00) | |
| | | Communication and Broadcasting(13.79) | | Meteorology(20.24) | |
| | Language and Literature(21.82) | History and Theory of Journalism and Media Management(20.34) | Biology(24.46) | Biochemistry and Molecular Biology(25.25) | |
| | | Journalism and News Practice(25.56) | | Biophysics(42.00) | |
| | | Classical Chinese Literature(26.00) | | Botany(22.29) | |
| | | French Language and Literature(26.00) | | Cell Biology(22.99) | |
| | | Linguistics and Applied Linguistics(26.00) | | Ecology(22.22) | |
| Management(31.94) | Business Administration(28.17) | Literary History(15.94) | | Genetics(25.54) | |
| | | Literary Theory(12.50) | | Microbiology(26.71) | |
| | | Modern and Contemporary Chinese Literature(26.00) | | Physiology(25.00) | |
| | | Philology and Bibliography(20.00) | | Zoology(17.43) | |
| | | Russian Language and Literature(26.32) | | Chemistry(16.51) | |
| | Musicology(22.07) | Composition(22.00) | | Analytical Chemistry(18.69) | |
| | | Harmony(21.67) | | Electrochemistry(16.22) | |
| | | Instrumentation and Performance(20.00) | | Inorganic Chemistry(17.39) | |
| | | Music History, Education, and Technology(16.55) | | Organic Chemistry(18.13) | |
| | | Musical Forms and Analysis(36.00) | | Physical Chemistry(14.73) | |
| Medicine(25.74) | Clinical Medicine(24.79) | Pitch and Scales(26.79) | | Polymer Chemistry and Physics(19.74) | |
| | | Business and Accounting Management(29.35) | | Radiochemistry(13.33) | |
| | | Tourism Management and Technological Economics Management(26.00) | | Geography(28.57) | Human Geography(44.00) |
| | | Library, Information and Archival Management(36.67) | | Physical Geography(19.28) | |
| | | Information Management Science(22.00) | | Geology(25.81) | Geochemistry(40.00) |
| | Public Administration(27.15) | Information Management and Communication(62.00) | | Mineralogy, Petrology, and Economic Geology(23.14) | |
| | | Library and Archival Science(26.00) | | Paleontology and Stratigraphy(30.00) | |
| | | Management Science and Engineering(41.38) | | Principles of Seismic Exploration(26.00) | |
| | | Education Economics, Management and Social Security(22.00) | | Structural Geology(17.14) | |
| | | Land Resource Management and Administrative Management(21.57) | | Geophysics(26.00) | Solid Earth Geophysics(32.00) |
| Pharmacy(22.66) | Clinical Medicine(24.79) | Social Medicine and Health Management(38.00) | | Space physics(20.00) | |
| | | Forensic Medicine(38.00) | | Advanced Algebra(24.75) | |
| | | Human Anatomy and Histology-Embryology(31.22) | | Combinatorial Mathematics(13.09) | |
| | | Immunology(31.88) | | Computational Mathematics(38.00) | |
| | | Pathogen Biology(27.66) | | Cryptography(42.00) | |
| | Pharmacy(22.66) | Pathology and Pathophysiology(24.35) | | Discrete Mathematics(11.24) | |
| | | Radiation Medicine(46.00) | | Functions of Complex Variables(27.87) | |
| | | Anesthesiology(32.00) | | Functions of Real Variables(31.34) | |
| | | Clinical Laboratory Diagnostics(30.00) | | Fundamental Mathematics(22.84) | |
| | | Dermatology and Venereology(31.82) | | Fuzzy Mathematics(30.00) | |
| Public Health and Preventive Medicine(25.34) | Stomatology(20.45) | Emergency Medicine(24.24) | | Geometry and Topology(14.34) | |
| | | Geriatric Medicine(30.00) | | Graph Theory(13.73) | |
| | | Imaging and Nuclear Medicine(19.40) | | Group Theory(14.00) | |
| | | Internal Medicine(28.22) | | Mathematical Analysis(22.22) | |
| | | Neurology(17.46) | | Number Theory(15.45) | |
| | Traditional Chinese Medicine(24.63) | Nursing and Rehabilitation Medicine(20.00) | | Numerical Analysis(26.87) | |
| | | Obstetrics and Gynecology(24.51) | | Ordinary Differential Equations(30.00) | |
| | | Oncology(20.69) | | Polynomials and Series Expansions(16.76) | |
| | | Ophthalmology(34.00) | | Probability and Statistics(23.21) | |
| | | Otorhinolaryngology(24.00) | | Special Number Theory(14.00) | |
| Military Science(28.29) | Military Science(28.29) | Pediatrics(16.00) | | Stochastic Processes(44.00) | |
| | | Psychiatry and Mental Health(34.00) | | Hydrogeology(52.00) | |
| | | Surgery(22.06) | | Marine Biology(58.00) | |
| | | Medicinal Chemistry(20.00) | | Marine Chemistry(36.00) | |
| | | Microbiology and Biochemical Pharmacy(24.00) | | Underwater Acoustics(28.00) | |
| | Philosophy(27.09) | Pharmaceutical Analysis(20.00) | | Physical Oceanography(14.00) | |
| | | Pharmacetics(23.29) | | Physics(19.75) | Acoustics(21.22) |
| | | Pharmacology(25.45) | | | |
| | | Epidemiology and Health Statistics(25.30) | | | |
| | | Health Toxicology and Environmental Health(21.25) | | | |
| Philosophy(27.09) | Traditional Chinese Medicine(24.63) | Maternal, Child and Adolescent Health(17.72) | | | |
| | | Nutrition and Food Hygiene(44.00) | | | |
| | | Basic Stomatology(22.64) | | | |
| | | Clinical Stomatology(18.99) | | | |
| | | Traditional Chinese Health Preservation(32.20) | | | |
| | Sociology(30.77) | Traditional Chinese Medicine Theory(18.89) | | | |
| | | Traditional Chinese Pharmacy(25.21) | | | |
| | | Military Command and Information Systems(32.00) | | | |
| | | Military Logistics and Equipment(22.22) | | | |
| | | Military Management(42.00) | | | |
| Philosophy(27.09) | Military Science(28.29) | Military Thought and History(17.65) | | | |
| | | Ethics(16.18) | | | |
| | | Logic(15.71) | | | |
| | | Philosophical Aesthetics(26.61) | | | |
| | | Philosophy of Science and Technology(44.00) | | | |
| | Systems Science(34.00) | Sociology(30.77) | Sociology(30.77) | Demography and Anthropology(32.00) | |
| | | Systems Science(34.00) | Systems Science(34.00) | Systems Science(34.00) | |
| | | | | | |
| | | | | | |
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Table 59. Continued: Model Scores Across Three Levels of Disciplines: Yi-1.5-9B-Chat.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|--|--|--------------------------|--|---|
| Agronomy(25.77) | Animal Husbandry(35.92) | Animal Nutrition and Feed Science(36.54) | Engineering(23.59) | Geological Resources and Geological Engineering(34.00) | Geological Resources and Geological Engineering(34.00) |
| | | Animal Rearing and Breeding(35.29) | | | Hydraulics and Hydrology(26.47) |
| | Aquaculture(21.43) Crop Science(21.38) | Aquaculture(21.43) | | Hydraulic Engineering(28.44) | Water conservancy and Hydropower Engineering(31.71) |
| | | Crop Science(21.38) | | | Antenna and Radio Communication(20.18) |
| | Forestry(25.19) | Forest Cultivation and Genetic Breeding(25.93) | | Information and Communication Engineering(42.21) | Communication Principles(25.86) |
| | | Landscape Plants and Ornamental Horticulture(24.00) | | | Communication and Information Systems(27.54) |
| | Veterinary Medicine(24.00) | Veterinary Medicine(24.00) | | Optical Fiber Communication(28.00) | Optical Fiber Communication(28.00) |
| | | Economic Statistics(26.00) | | | Signal and Information Processing(23.23) |
| | Economics(26.12) | Finance(28.41) | | Instrument Science and Technology(32.00) | Instrument Science and Technology(32.00) |
| | | Industrial Economics(23.81) | | | Materials Physics and Chemistry(12.06) |
| | | International Trade(27.54) | | Materials Science and Engineering(15.22) | Materials Processing Engineering(22.22) |
| | | Labor Economics(29.73) | | | Manufacturing Automation(19.05) |
| | | National and Defense Economics(22.00) | | Mechanics(18.94) | Mechatronic Engineering(26.00) |
| | | Public Finance(25.00) | | | Fundamentals of Dynamics and Control(20.17) |
| | | Quantitative Economics(18.00) | | | Rigid Body Mechanics(17.92) |
| | | Theoretical Economics(30.00) | | | Solid Mechanics(18.28) |
| | | Economic History(28.00) | | Metallurgical Engineering(27.06) | Theoretical Fluid Mechanics(22.14) |
| | | Political Economy(26.00) | | | Theoretical Mechanics(14.84) |
| | | Western Economics(36.00) | | | Iron and Steel Metallurgy(19.05) |
| Education(34.71) | Education(37.65) | Educational Technology and Principles(37.50) | | Non-ferrous Metallurgy(22.00) | Non-ferrous Metallurgy(22.00) |
| | | Preschool Education(42.00) | | | Physical Chemistry of Metallurgical Process(28.00) |
| | Physical Education(38.00) | Special Education(46.00) | | Principles of Metallurgy(48.00) | Principles of Metallurgy(48.00) |
| | | Theory of Curriculum and Instruction(25.49) | | | Mining Engineering(31.00) |
| | Psychology(20.69) | Physical Education and Training(30.00) | | Mineral Processing Engineering(32.00) | Mineral Processing Engineering(32.00) |
| | | Sports Humanities and Sociology(38.00) | | | Mining and Safety Engineering(30.00) |
| | | Sports Science and Medicine(46.00) | | Naval Architecture and Ocean Engineering(22.46) | Naval Architecture and Ocean Engineering(24.00) |
| | | Psychology(20.69) | | | Marine Engineering(24.00) |
| | Engineering(23.59) | Aeronautical and Astronautical Science and Technology(15.13) | | Ship Mechanics and Design Principles(21.59) | Ship Mechanics and Design Principles(21.59) |
| | | Agricultural Engineering(29.81) | | | Nuclear Energy and Reactor Technology(17.54) |
| | | Agricultural Environment and Soil-Water Engineering(33.33) | | Nuclear Science and Technology(21.50) | Radiation Protection and Nuclear Technology Applications(26.00) |
| | | Agricultural Mechanization Engineering(26.00) | | | Applied Optics(11.29) |
| | | Architecture(26.54) | | Optical Engineering(18.09) | Laser Technology(24.00) |
| | | Architectural Design and Theory(28.00) | | | Optoelectronic Technology(26.87) |
| | | Architectural History(14.52) | | | Theoretical Optics(17.78) |
| | | Urban Planning and Design(40.00) | | Petroleum and Natural Gas Engineering(27.68) | Oil and Gas Field Development and Storage & Transportation Engineering(22.58) |
| | | Chemical Engineering and Technology(20.49) | | | Poromechanics and Reservoir Physics(34.00) |
| | | Elements of Chemical Reaction Engineering(17.76) | | Power Engineering and Engineering Thermophysics(19.30) | Engineering Fluid Mechanics(19.05) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(21.50) | | | Engineering Thermophysics(20.55) |
| Engineering(23.59) | Civil Engineering(20.39) | Mass Transport and Separation Process in Chemical Engineering(21.23) | | | Fluid Machinery and Engineering(12.50) |
| | | Bridge and Tunnel Engineering(15.69) | | | Heat Transfer(20.93) |
| | Computer Science and Technology(31.06) | Geotechnical Engineering(19.55) | | | Internal Combustion Engineering(30.00) |
| | | Structural Engineering(22.81) | | | Power Machinery and Engineering(9.62) |
| | | Urban Infrastructure Engineering(23.94) | | Surveying and Mapping Science and Technology(28.57) | Refrigeration and Cryogenic Engineering(24.00) |
| | | Computer Science and Technology(31.06) | | | Thermal Energy Engineering(17.43) |
| | | Advanced Programming Languages(40.00) | | | Cartography and Geographic Information Engineering(40.00) |
| | | Computer Architecture(42.00) | | | Digital Surveying and Remote Sensing Applications(16.18) |
| | | Computer Networks(22.03) | | | Geodesy and Surveying Engineering(34.00) |
| | | Computer Software and Theory(30.38) | | | Textile Chemistry and Dyeing Engineering(32.00) |
| Engineering(23.59) | Control Science and Engineering(21.05) | Data Structures(18.18) | | | Textile Materials Science(40.00) |
| | | Databases(33.76) | | | Transportation Engineering(26.69) |
| | Electrical Engineering(21.40) | Formal Languages(26.92) | | | Road and Railway Engineering(22.00) |
| | | Operating Systems(27.06) | | | Traffic Information Engineering and Control(27.69) |
| | | Pattern Recognition(56.00) | | | Transportation Planning and Management(27.91) |
| | | Principles of Computer Organization(28.05) | | | Vehicle Operation Engineering(28.00) |
| | | Control Theory and Control Engineering(20.22) | | Weapon Science and Technology(29.00) | Military Chemistry and Pyrotechnics(36.00) |
| | | Guidance, Navigation and Control(25.49) | | | Weapon Systems Science and Engineering(22.00) |
| | | Operations Research and Cybernetics(18.00) | | | Archaeology and Museology(16.35) |
| | | Electrical Theory and New Technologies(20.00) | History(18.69) | | Historical Geography(18.31) |
| Engineering(23.59) | Electronic Science and Technology(22.36) | High Voltage and Insulation Technology(19.32) | | | World History(19.39) |
| | | Power Electronics and Electrical Drives(20.33) | Law(25.15) | Civil and Commercial Law(23.73) | |
| | Environmental Science and Engineering(26.98) | Power Systems and Automation(28.12) | | Constitutional and Administrative Law(12.00) | |
| | | Circuits and Systems(23.15) | | Contract Law(24.00) | |
| | Food Science and Engineering(38.53) | Electromagnetic Field and Microwave Technology(19.32) | | Criminal Law(27.59) | |
| | | Microelectronics and Solid-State Electronics(26.00) | | International Law(21.05) | |
| | Forestry Engineering(34.00) | Environmental Engineering(14.61) | | Law and Social Governance(20.00) | |
| | | Environmental Science(46.00) | | Legal Theory and Legal History(30.00) | |
| | Forestry Engineering(34.00) | Environmental and Resource Protection(30.00) | | Military Law(66.00) | |
| | | Food Biochemistry(58.00) | Political Science(23.08) | Procedural Law(4.00) | |
| | | Food Processing and Storage Engineering(22.03) | | Political Science(23.08) | |
| | | Forest Engineering(40.00) | | - | |
| | | Wood Science and Technology(28.00) | | - | |

Table 60. Model Scores Across Three Levels of Disciplines: Yi-1.5-9B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|------------------------|--|--|
| Literature and Arts(23.21) | Art Studies(20.90) | Broadcasting and Television Art(32.00) | Philosophy(28.53) | Philosophy(28.53) | Religious Studies(38.00) |
| | | Dance Studies(32.00) | | Astronomy(17.04) | Astronomical Observation and Technology(17.00) |
| | | Design Arts(12.90) | | Astrophysics(20.29) | Cosmology(17.95) |
| | | Drama and Opera Studies(19.51) | | Solar System Science(15.91) | Stellar and Interstellar Evolution(14.29) |
| | | Film Studies(25.32) | | Atmospheric Science(28.08) | Atmospheric Physics and Atmospheric Environment(39.13) |
| | Journalism and Communication(23.19) | Fine Arts(14.93) | | Dynamic Meteorology(38.00) | |
| | | Communication and Broadcasting(17.24) | | Biology(22.77) | Meteorology(13.10) |
| | Language and Literature(25.45) | History and Theory of Journalism and Media Management(32.20) | | Biochemistry and Molecular Biology(32.32) | BioPhysics(36.00) |
| | | Journalism and News Practice(21.11) | | Botany(21.08) | Cell Biology(24.14) |
| | | Classical Chinese Literature(30.00) | | Ecology(22.22) | Genetics(23.91) |
| | | French Language and Literature(28.00) | | Microbiology(24.22) | Physiology(12.50) |
| | | Linguistics and Applied Linguistics(26.00) | | Zoology(17.43) | Zoology(17.43) |
| Management(30.54) | Business Administration(23.94) | Literary History(20.29) | | Analytical Chemistry(19.19) | |
| | | Literary Theory(23.44) | | Electrochemistry(14.86) | |
| | | Modern and Contemporary Chinese Literature(24.00) | | Inorganic Chemistry(18.12) | |
| | | Philology and Bibliography(30.00) | | Organic Chemistry(15.20) | |
| | | Russian Language and Literature(24.56) | | Physical Chemistry(16.71) | |
| | Musicology(24.18) | Composition(36.00) | | Polymer Chemistry and Physics(22.37) | |
| | | Harmony(25.00) | | Radiochemistry(13.33) | |
| | | Instrumentation and Performance(29.23) | | Geography(23.31) | Human Geography(48.00) |
| | | Music History, Education, and Technology(16.55) | | Physical Geography(8.43) | |
| | | Musical Forms and Analysis(30.00) | | Geology(24.05) | Geochemistry(36.00) |
| Medicine(23.85) | Business Administration(23.94) | Pitch and Scales(21.43) | | Mineralogy, Petrology, and Economic Geology(32.23) | |
| | | Business and Accounting Management(25.00) | | Paleontology and Stratigraphy(12.00) | |
| | | Tourism Management and Technological Economics Management(22.00) | | Principles of Seismic Exploration(12.00) | |
| | | Information Management Science(14.00) | | Structural Geology(18.57) | |
| | | Information Management and Communication(58.00) | | Geophysics(23.00) | Solid Earth Geophysics(24.00) |
| | Library, Information and Archival Management(34.67) | Library and Archival Science(32.00) | | Space physics(22.00) | |
| | | Management Science and Engineering(27.59) | | Advanced Algebra(23.27) | |
| | | Education Economics, Management and Social Security(30.00) | | Combinatorial Mathematics(14.14) | |
| | | Land Resource Management and Administrative Management(33.33) | | Computational Mathematics(32.00) | |
| | | Social Medicine and Health Management(38.00) | | Cryptography(46.00) | |
| Medicine(23.85) | Clinical Medicine(23.15) | Forensic Medicine(30.00) | | Discrete Mathematics(11.24) | |
| | | Human Anatomy and Histology-Embryology(24.87) | | Functions of Complex Variables(23.77) | |
| | | Immunology(34.78) | | Functions of Real Variables(23.88) | |
| | | Pathogen Biology(29.79) | | Fundamental Mathematics(19.80) | |
| | | Pathology and Pathophysiology(19.13) | | Fuzzy Mathematics(20.00) | |
| | Pharmacy(22.66) | Radiation Medicine(52.00) | | Geometry and Topology(20.38) | |
| | | Anesthesiology(32.00) | | Graph Theory(23.53) | |
| | | Clinical Laboratory Diagnostics(26.00) | | Group Theory(18.00) | |
| | | Dermatology and Venereology(28.79) | | Mathematical Analysis(22.22) | |
| | | Emergency Medicine(24.24) | | Number Theory(9.09) | |
| Medicine(23.85) | Pharmacy(22.66) | Geriatric Medicine(24.00) | | Numerical Analysis(25.37) | |
| | | Imaging and Nuclear Medicine(8.96) | | Ordinary Differential Equations(26.88) | |
| | | Internal Medicine(21.78) | | Polynomials and Series Expansions(23.46) | |
| | | Neurology(22.75) | | Probability and Statistics(26.79) | |
| | | Nursing and Rehabilitation Medicine(22.00) | | Special Number Theory(32.00) | |
| | Public Health and Preventive Medicine(22.95) | Obstetrics and Gynecology(20.59) | | Stochastic Processes(32.00) | |
| | | Oncology(24.14) | | Hydrogeology(52.00) | |
| | | Ophthalmology(28.00) | | Marine Biology(64.00) | |
| | | Otorhinolaryngology(26.00) | | Marine Chemistry(34.00) | |
| | | Pediatrics(24.00) | | Underwater Acoustics(24.00) | |
| Medicine(23.85) | Public Health and Preventive Medicine(22.95) | Psychiatry and Mental Health(32.00) | | Physical Oceanography(22.00) | Physical Oceanography(22.00) |
| | | Surgery(17.65) | | Physics(19.26) | Acoustics(16.33) |
| | | Medicinal Chemistry(12.00) | | | |
| | | Microbiology and Biochemical Pharmacy(26.00) | | | |
| | | Pharmaceutical Analysis(28.00) | | | |
| | Stomatology(20.45) | Pharmacetics(24.66) | | | |
| | | Pharmacology(21.82) | | | |
| | | Epidemiology and Health Statistics(25.30) | | | |
| | | Health Toxicology and Environmental Health(20.00) | | | |
| | | Maternal, Child and Adolescent Health(12.66) | | | |
| Medicine(23.85) | Traditional Chinese Medicine(20.90) | Nutrition and Food Hygiene(40.00) | | | |
| | | Basic Stomatology(16.98) | | | |
| | | Clinical Stomatology(22.78) | | | |
| | | Traditional Chinese Health Preservation(22.03) | | | |
| | | Traditional Chinese Medicine Theory(22.22) | | | |
| | Military Science(31.22) | Traditional Chinese Pharmacy(19.33) | | | |
| | | Military Command and Information Systems(32.00) | | | |
| | | Military Logistics and Equipment(27.78) | | | |
| | | Military Management(40.00) | | | |
| | | Military Thought and History(25.49) | | | |
| Philosophy(28.53) | Philosophy(28.53) | Ethics(25.00) | Systems Science(32.00) | Statistical Mechanics(14.00) | |
| | | Logic(15.71) | | Subatomic and Atomic Physics(17.65) | |
| | | Philosophical Aesthetics(29.36) | | Thermodynamics(20.93) | |
| | | Philosophy of Science and Technology(40.00) | | Thermodynamics and Statistical Physics(18.87) | |
| Military Science(31.22) | Military Science(31.22) | Sociology(27.97) | | Systems Science(32.00) | Systems Science(32.00) |
| | | Sociology(27.97) | | Demography and Anthropology(36.00) | Social and Folklore Studies(23.66) |

Table 60. Continued: Model Scores Across Three Levels of Disciplines: Yi-1.5-9B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|----------------------------|--|---|
| Agronomy(27.22) | Animal Husbandry(29.13) | Animal Nutrition and Feed Science(30.77) | Engineering(21.79) | Geological Resources and Geological Engineering(34.00) | Geological Resources and Geological Engineering(34.00) |
| | | Animal Rearing and Breeding(27.45) | | | Hydraulics and Hydrology(21.32) |
| | Aquaculture(14.29) Crop Science(26.90) | Aquaculture(14.29) | | Hydraulic Engineering(22.02) | Water conservancy and Hydropower Engineering(23.17) |
| | | Crop Science(26.90) | | | Antenna and Radio Communication(14.91) |
| | Forestry(31.30) | Forest Cultivation and Genetic Breeding(30.86) | | Information and Communication Engineering(22.22) | Communication Principles(25.86) |
| | | Landscape Plants and Ornamental Horticulture(32.00) | | | Communication and Information Systems(14.49) |
| | Veterinary Medicine(28.00) | Veterinary Medicine(28.00) | | Optical Fiber Communication(28.00) | Optical Fiber Communication(28.00) |
| | | Economic Statistics(30.00) | | | Signal and Information Processing(26.45) |
| | Economics(26.23) | Finance(26.14) | | Instrument Science and Technology(24.00) | Instrument Science and Technology(24.00) |
| | | Industrial Economics(29.76) | | | Materials Physics and Chemistry(14.57) |
| | | International Trade(20.29) | | Materials Science and Engineering(16.96) | Materials Processing Engineering(22.22) |
| | | Labor Economics(27.03) | | | Manufacturing Automation(23.02) |
| | | National and Defense Economics(28.00) | | Mechanics(16.19) | Mechatronic Engineering(28.00) |
| | | Public Finance(22.50) | | | Fundamentals of Dynamics and Control(14.12) |
| | | Quantitative Economics(25.00) | | | Rigid Body Mechanics(14.45) |
| | | Theoretical Economics(28.67) | | | Solid Mechanics(17.20) |
| | | Economic History(28.00) | | Metallurgical Engineering(26.67) | Theoretical Fluid Mechanics(25.00) |
| | | Political Economy(28.00) | | | Theoretical Mechanics(14.19) |
| Education(30.99) | Education(32.39) | Western Economics(30.00) | | | Iron and Steel Metallurgy(15.24) |
| | | Educational Technology and Principles(27.08) | | Non-ferrous Metallurgy(20.00) | Non-ferrous Metallurgy(20.00) |
| | Physical Education(36.67) | Preschool Education(46.00) | | | Physical Chemistry of Metallurgical Process(34.00) |
| | | Special Education(38.00) | | Mining Engineering(32.00) | Principles of Metallurgy(50.00) |
| | | Theory of Curriculum and Instruction(23.53) | | | Mineral Processing Engineering(28.00) |
| | Psychology(17.24) | Physical Education and Training(30.00) | | | Mining and Safety Engineering(36.00) |
| | | Sports Humanities and Sociology(38.00) | | Naval Architecture and Ocean Engineering(17.39) | Marine Engineering(10.00) |
| | | Sports Science and Medicine(42.00) | | | Ship Mechanics and Design Principles(21.59) |
| | Psychology(17.24) | Psychology(17.24) | | Nuclear Science and Technology(27.10) | Nuclear Energy and Reactor Technology(24.56) |
| | | | | | Radiation Protection and Nuclear Technology Applications(30.00) |
| Engineering(21.79) | Aeronautical and Astronautical Science and Technology(18.49) | Aeronautical and Astronautical Science and Technology(18.49) | Optical Engineering(19.41) | Applied Optics(14.52) | Applied Optics(14.52) |
| | | Agricultural Engineering(31.73) | | | Laser Technology(22.00) |
| | Architecture(30.25) | Agricultural Environment and Soil-Water Engineering(33.33) | | Petroleum and Natural Gas Engineering(21.43) | Optoelectronic Technology(25.37) |
| | | Agricultural Mechanization Engineering(30.00) | | | Theoretical Optics(20.00) |
| | Chemical Engineering and Technology(15.37) | Architectural Design and Theory(22.00) | | Power Engineering and Engineering Thermophysics(17.98) | Polymer and Natural Gas Engineering(21.43) |
| | | Architectural History(29.03) | | | Oil and Gas Field Development and Storage & Transportation Engineering(20.97) |
| | Civil Engineering(18.99) | Urban Planning and Design(40.00) | | | Poromechanics and Reservoir Physics(22.00) |
| | | Chemical Transport Engineering(26.00) | | | Engineering Fluid Mechanics(22.62) |
| | Computer Science and Technology(27.00) | Elements of Chemical Reaction Engineering(13.08) | | | Engineering Thermophysics(15.75) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(11.21) | | | Fluid Machinery and Engineering(12.50) |
| Control Science and Engineering(21.05) | Computer Science and Technology(27.00) | Mass Transport and Separation Process in Chemical Engineering(16.44) | | | Heat Transfer(17.83) |
| | | Civil Engineering(18.99) | | | Internal Combustion Engineering(30.00) |
| | Control Science and Engineering(21.05) | Bridge and Tunnel Engineering(13.73) | | | Power Machinery and Engineering(13.46) |
| | | Geotechnical Engineering(18.99) | | | Refrigeration and Cryogenic Engineering(14.00) |
| | Control Science and Engineering(21.05) | Structural Engineering(14.04) | | Surveying and Mapping Science and Technology(23.81) | Thermal Energy Engineering(19.27) |
| | | Urban Infrastructure Engineering(26.76) | | | Cartography and Geographic Information Engineering(32.00) |
| | Control Science and Engineering(21.05) | Computer Architecture(28.00) | | | Digital Surveying and Remote Sensing Applications(11.76) |
| | | Computer Networks(16.95) | | | Geodesy and Surveying Engineering(32.00) |
| | Control Science and Engineering(21.05) | Computer Software and Theory(24.05) | | | Textile Chemistry and Dyeing Engineering(26.00) |
| | | Data Structures(11.11) | | | Textile Materials Science(34.00) |
| Electrical Engineering(17.81) | Computer Science and Technology(27.00) | Databases(33.76) | | Textile Science and Engineering(30.00) | Transportation Engineering(23.90) |
| | | Formal Languages(23.08) | | | Road and Railway Engineering(12.00) |
| | Control Science and Engineering(21.05) | Operating Systems(23.33) | | | Traffic Information Engineering and Control(29.23) |
| | | Pattern Recognition(64.00) | | | Transportation Planning and Management(19.77) |
| | Control Science and Engineering(21.05) | Principles of Computer Organization(21.95) | | | Vehicle Operation Engineering(36.00) |
| | | Control Theory and Control Engineering(20.22) | | Weapon Science and Technology(25.00) | Weapon Science and Technology(25.00) |
| | Control Science and Engineering(21.05) | Guidance, Navigation and Control(31.37) | | | Military Chemistry and Pyrotechnics(26.00) |
| | | Operations Research and Cybernetics(12.00) | | | Weapon Systems Science and Engineering(24.00) |
| | Control Science and Engineering(21.05) | Circuits and Systems(21.30) | | History(21.81) | Archaeology and Museology(26.92) |
| | | Electromagnetic Field and Microwave Technology(14.77) | | | Historical Geography(18.31) |
| Engineering(21.79) | Control Science and Engineering(21.05) | Microelectronics and Solid-State Electronics(52.00) | | | World History(21.73) |
| | | Environmental Science and Engineering(30.69) | | Law(26.83) | Civil and Commercial Law(24.58) |
| | Control Science and Engineering(21.05) | Environmental Engineering(13.48) | | | Constitutional and Administrative Law(16.00) |
| | | Environmental Science(54.00) | | | Contract Law(32.00) |
| | Control Science and Engineering(21.05) | Environmental and Resource Protection(38.00) | | | Criminal Law(25.00) |
| | | Food Biochemistry(68.00) | | | International Law(22.81) |
| | Control Science and Engineering(21.05) | Food Processing and Storage Engineering(20.34) | | | Law and Social Governance(24.00) |
| | | Forest Engineering(40.00) | | | Legal Theory and Legal History(28.00) |
| | Control Science and Engineering(21.05) | Wood Science and Technology(16.00) | | | Military Law(56.00) |
| | | - | | Political Science(23.08) | Procedural Law(24.00) |
| | | - | | | Political Science(23.08) |

Table 61. Model Scores Across Three Levels of Disciplines: gemma-2-9b.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|-------------------|-------------------|--|
| Literature and Arts(23.81) | Art Studies(25.70) | Broadcasting and Television Art(34.00) | Philosophy(27.09) | Philosophy(27.09) | Religious Studies(38.00) |
| | | Dance Studies(24.00) | | | Astronomical Observation and Technology(20.00) |
| | | Design Arts(27.42) | | | Astrophysics(24.64) |
| | | Drama and Opera Studies(23.17) | | | Cosmology(28.21) |
| | | Film Studies(32.91) | | | Solar System Science(26.14) |
| | Journalism and Communication(15.94) | Fine Arts(18.91) | | | Stellar and Interstellar Evolution(15.71) |
| | | Communication and Broadcasting(12.07) | | | Atmospheric Physics and Atmospheric Environment(34.78) |
| | | History and Theory of Journalism and Media Management(15.25) | | | Dynamic Meteorology(26.00) |
| | | Journalism and News Practice(18.89) | | | Meteorology(16.67) |
| | | Classical Chinese Literature(22.00) | | | Biochemistry and Molecular Biology(22.22) |
| Management(28.94) | Language and Literature(24.32) | French Language and Literature(30.00) | | | Biophysics(34.00) |
| | | Linguistics and Applied Linguistics(26.00) | | | Botany(24.70) |
| | | Literary History(23.19) | | | Cell Biology(34.48) |
| | | Literary Theory(20.31) | | | Ecology(20.14) |
| | | Modern and Contemporary Chinese Literature(18.00) | | | Genetics(17.93) |
| | Musicology(24.41) | Philology and Bibliography(28.00) | | | Microbiology(26.71) |
| | | Russian Language and Literature(28.07) | | | Physiology(25.00) |
| | | Composition(26.00) | | | Zoology(21.10) |
| | | Harmony(23.33) | | | Analytical Chemistry(17.17) |
| | | Instrumentation and Performance(26.15) | | | Electrochemistry(18.02) |
| Medicine(26.06) | Business Administration(25.35) | Music History, Education, and Technology(19.31) | | | Inorganic Chemistry(17.39) |
| | | Musical Forms and Analysis(28.00) | | | Organic Chemistry(18.13) |
| | | Pitch and Scales(32.14) | | | Physical Chemistry(14.59) |
| | | Business and Accounting Management(18.48) | | | Polymer Chemistry and Physics(9.21) |
| | | Tourism Management and Technological Economics Management(38.00) | | | Radiochemistry(20.00) |
| | Library, Information and Archival Management(33.33) | Information Management Science(22.00) | | | Geography(33.08) Human Geography(50.00) |
| | | Information Management and Communication(54.00) | | | Physical Geography(22.89) |
| | | Library and Archival Science(24.00) | | | Geology(24.34) Geochemistry(26.00) |
| | | Management Science and Engineering(31.03) | | | Mineralogy, Petrology, and Economic Geology(27.27) |
| | | Public Administration(27.15) | | | Paleontology and Stratigraphy(22.00) |
| Pharmacy(25.54) | Clinical Medicine(25.94) | Education Economics, Management and Social Security(22.00) | | | Principles of Seismic Exploration(16.00) |
| | | Land Resource Management and Administrative Management(19.61) | | | Structural Geology(25.71) |
| | | Social Medicine and Health Management(40.00) | | | Geophysics(25.00) Solid Earth Geophysics(30.00) |
| | | Forensic Medicine(26.00) | | | Space physics(20.00) |
| | | Human Anatomy and Histology-Embryology(29.63) | | | Advanced Algebra(21.78) |
| | Pharmacy(25.54) | Immunology(33.33) | | | Combinatorial Mathematics(9.95) |
| | | Pathogen Biology(25.53) | | | Computational Mathematics(34.00) |
| | | Pathology and Pathophysiology(20.00) | | | Cryptography(44.00) |
| | | Radiation Medicine(42.00) | | | Discrete Mathematics(12.36) |
| | | Anesthesiology(42.00) | | | Functions of Complex Variables(27.05) |
| Military Science(32.68) | Clinical Laboratory Diagnostics(18.00) | Clinical Laboratory Diagnostics(18.00) | | | Functions of Real Variables(19.40) |
| | | Dermatology and Venereology(30.30) | | | Fundamental Mathematics(16.75) |
| | | Emergency Medicine(19.70) | | | Fuzzy Mathematics(28.00) |
| | | Geriatric Medicine(46.00) | | | Geometry and Topology(14.34) |
| | | Imaging and Nuclear Medicine(19.40) | | | Graph Theory(13.73) |
| | Stomatology(20.45) | Internal Medicine(20.79) | | | Group Theory(12.00) |
| | | Neurology(26.46) | | | Mathematical Analysis(15.62) |
| | | Nursing and Rehabilitation Medicine(24.00) | | | Number Theory(8.18) |
| | | Obstetrics and Gynecology(17.65) | | | Numerical Analysis(20.90) |
| | | Oncology(25.86) | | | Ordinary Differential Equations(20.00) |
| Philosophy(27.09) | Traditional Chinese Medicine(20.90) | Ophthalmology(28.00) | | | Polynomials and Series Expansions(16.76) |
| | | Otorhinolaryngology(32.00) | | | Probability and Statistics(18.75) |
| | | Pediatrics(20.00) | | | Special Number Theory(16.00) |
| | | Psychiatry and Mental Health(42.00) | | | Stochastic Processes(26.00) |
| | | Surgery(27.94) | | | Hydrogeology(54.00) |
| | Public Health and Preventive Medicine(30.14) | Medicinal Chemistry(24.00) | | | Marine Biology(76.00) |
| | | Microbiology and Biochemical Pharmacy(32.00) | | | Marine Chemistry(42.00) |
| | | Pharmaceutical Analysis(32.00) | | | Underwater Acoustics(32.00) |
| | | Pharmacetics(23.29) | | | Physical Oceanography(28.00) |
| | | Pharmacology(18.18) | | | Acoustics(14.29) |
| Sociology(27.97) | Systems Science(32.00) | Epidemiology and Health Statistics(24.10) | | | Atomic and Molecular Physics(22.86) |
| | | Health Toxicology and Environmental Health(28.75) | | | Electrodynamics(18.01) |
| | | Maternal, Child and Adolescent Health(29.11) | | | Fluid Physics(25.37) |
| | | Nutrition and Food Hygiene(44.00) | | | Particle and Nuclear Physics(22.67) |
| | | Basic Stomatology(18.87) | | | Polymer Physics(11.93) |
| | Sociology(27.97) | Clinical Stomatology(21.52) | | | Quantum Mechanics(16.99) |
| | | Traditional Chinese Health Preservation(23.73) | | | Relativity(20.25) |
| | | Traditional Chinese Medicine Theory(16.67) | | | Semiconductor Physics(9.84) |
| | | Traditional Chinese Pharmacy(22.69) | | | Solid State Physics(22.45) |
| | | Military Command and Information Systems(42.00) | | | Statistical Mechanics(30.00) |
| Philosophy(27.09) | Military Science(32.68) | Military Logistics and Equipment(29.63) | | | Subatomic and Atomic Physics(21.57) |
| | | Military Management(40.00) | | | Thermodynamics(17.21) |
| | | Military Thought and History(19.61) | | | Thermodynamics and Statistical Physics(16.98) |
| | | Ethics(23.53) | | | Systems Science(32.00) |
| Philosophy(27.09) | Philosophy(27.09) | Logic(17.14) | | | Demography and Anthropology(40.00) |
| | | Philosophical Aesthetics(25.69) | | | Social and Folklore Studies(21.51) |

Table 61. Continued: Model Scores Across Three Levels of Disciplines: gemma-2-9b.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|-------------------------------------|--|--|----------------------------------|--|---|
| Agronomy(22.68) | Animal Husbandry(26.21) | Animal Nutrition and Feed Science(28.85) | Engineering(23.10) | Geological Resources and Geological Engineering(28.00) | Geological Resources and Geological Engineering(28.00) |
| | | Animal Rearing and Breeding(23.53) | | | Hydraulics and Hydrology(22.79) |
| | Aquaculture(16.07) | Aquaculture(16.07) | | Hydraulic Engineering(25.23) | Water conservancy and Hydropower Engineering(29.27) |
| | Crop Science(20.69) | Crop Science(20.69) | | Information and Communication Engineering(21.63) | Antenna and Radio Communication(20.18) |
| | Forestry(21.37) | Forest Cultivation and Genetic Breeding(19.75) | | | Communication Principles(24.14) |
| | | Landscape Plants and Ornamental Horticulture(24.00) | | | Communication and Information Systems(18.84) |
| | Veterinary Medicine(32.00) | Veterinary Medicine(32.00) | | | Optical Fiber Communication(20.00) |
| | Economics(23.37) | Economic Statistics(30.00) | | | Signal and Information Processing(22.58) |
| | | Finance(20.45) | | | Instrument Science and Technology(24.00) |
| | | Industrial Economics(28.57) | | | Materials Science and Engineering(19.10) |
| | | International Trade(20.29) | | | Materials Processing Engineering(23.33) |
| | | Labor Economics(20.27) | | | Mechanical Engineering(25.57) |
| | | National and Defense Economics(34.00) | | | Manufacturing Automation(25.40) |
| | | Public Finance(21.67) | | | Mechatronic Engineering(26.00) |
| | | Quantitative Economics(15.00) | | | Fundamentals of Dynamics and Control(15.85) |
| | | Theoretical Economics(28.00) | | | Rigid Body Mechanics(18.50) |
| | | Economic History(30.00) | | | Solid Mechanics(18.28) |
| | | Political Economy(24.00) | | | Theoretical Fluid Mechanics(24.29) |
| | | Western Economics(30.00) | | | Theoretical Mechanics(21.29) |
| Education(27.27) | Education(30.36) | Educational Technology and Principles(26.04) | Metallurgical Engineering(30.98) | Iron and Steel Metallurgy(23.81) | Iron and Steel Metallurgy(23.81) |
| | | Preschool Education(26.00) | | | Non-ferrous Metallurgy(36.00) |
| | | Special Education(44.00) | | | Physical Chemistry of Metallurgical Process(30.00) |
| | | Theory of Curriculum and Instruction(29.41) | | | Principles of Metallurgy(42.00) |
| | Physical Education(30.67) | Physical Education and Training(24.00) | | | Mining Engineering(29.00) |
| | | Sports Humanities and Sociology(26.00) | | | Mineral Processing Engineering(24.00) |
| | | Sports Science and Medicine(42.00) | | | Mining and Safety Engineering(34.00) |
| | Psychology(12.64) | Psychology(12.64) | | | Naval Architecture and Ocean Engineering(18.84) |
| | | | | Marine Engineering(20.00) | |
| Engineering(23.10) | Aeronautical and Astronautical Science and Technology(19.33) | Aeronautical and Astronautical Science and Technology(19.33) | | | Ship Mechanics and Design Principles(18.18) |
| | | Agricultural Environment and Soil-Water Engineering(20.37) | | | Nuclear Energy and Reactor Technology(24.56) |
| | | Agricultural Mechanization Engineering(26.00) | | | Radiation Protection and Nuclear Technology Applications(28.00) |
| | | Architecture(27.16) | | | Optical Engineering(22.61) |
| | | Architectural Design and Theory(36.00) | | | Applied Optics(23.39) |
| | | Architectural History(19.35) | | | Laser Technology(28.00) |
| | | Urban Planning and Design(28.00) | | | Optoelectronic Technology(20.90) |
| | Chemical Engineering and Technology(19.02) | Chemical Transport Engineering(16.00) | | | Theoretical Optics(20.74) |
| | | Elements of Chemical Reaction Engineering(19.63) | | | Petroleum and Natural Gas Engineering(29.46) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(16.82) | | | Oil and Gas Field Development and Storage & Transportation Engineering(32.26) |
| | | Mass Transport and Separation Process in Chemical Engineering(21.23) | | | Poromechanics and Reservoir Physics(26.00) |
| | | Civil Engineering(16.48) | | | Engineering Fluid Mechanics(29.76) |
| | | Bridge and Tunnel Engineering(15.69) | | | Engineering Thermophysics(30.82) |
| | | Geotechnical Engineering(15.64) | | | Fluid Machinery and Engineering(21.88) |
| | | Structural Engineering(21.05) | | | Heat Transfer(27.91) |
| | | Urban Infrastructure Engineering(15.49) | | | Internal Combustion Engineering(28.00) |
| | Computer Science and Technology(23.85) | Advanced Programming Languages(26.00) | | | Power Machinery and Engineering(13.46) |
| | | Computer Architecture(16.00) | | | Refrigeration and Cryogenic Engineering(20.00) |
| | | Computer Networks(23.73) | | | Thermal Energy Engineering(17.43) |
| | | Computer Software and Theory(24.05) | | | Cartography and Geographic Information Engineering(38.00) |
| | | Data Structures(17.17) | | | Digital Surveying and Remote Sensing Applications(14.71) |
| | | Databases(30.57) | | | Geodesy and Surveying Engineering(20.00) |
| | | Formal Languages(15.38) | | | Textile Chemistry and Dyeing Engineering(28.00) |
| | | Operating Systems(25.88) | | | Textile Materials Science(32.00) |
| | | Pattern Recognition(48.00) | | | Transportation Engineering(26.69) |
| | Control Science and Engineering(24.21) | Principles of Computer Organization(10.98) | | | Road and Railway Engineering(12.00) |
| | | Control Theory and Control Engineering(25.84) | | | Traffic Information Engineering and Control(26.15) |
| | | Guidance, Navigation and Control(23.53) | | | Transportation Planning and Management(32.56) |
| | | Operations Research and Cybernetics(22.00) | | | Vehicle Operation Engineering(32.00) |
| Electrical Engineering(21.94) | Electrical Theory and New Technologies(17.37) | Electrical Theory and New Technologies(17.37) | History(16.02) | History(16.02) | Military Chemistry and Pyrotechnics(28.00) |
| | | High Voltage and Insulation Technology(28.41) | | | Weapon Science and Technology(26.00) |
| | | Power Electronics and Electrical Drives(23.08) | | | Weapon Systems Science and Engineering(24.00) |
| | | Power Systems and Automation(22.92) | | | Archaeology and Museology(19.23) |
| | Electronic Science and Technology(16.67) | Circuits and Systems(15.74) | | | Historical Geography(14.08) |
| | | Electromagnetic Field and Microwave Technology(19.32) | | | World History(15.89) |
| | | Microelectronics and Solid-State Electronics(14.00) | | | |
| | Environmental Science and Engineering(24.34) | Environmental Engineering(16.85) | | Law(30.49) | Civil and Commercial Law(26.27) |
| | | Environmental Science(36.00) | | | Constitutional and Administrative Law(30.00) |
| | | Environmental and Resource Protection(26.00) | | | Contract Law(34.00) |
| Food Science and Engineering(42.20) | Food Science and Engineering(42.20) | Food Biochemistry(68.00) | | | Criminal Law(32.76) |
| | | Food Processing and Storage Engineering(20.34) | | | International Law(21.05) |
| | | Forest Engineering(42.00) | | | Law and Social Governance(30.00) |
| | Forestry Engineering(35.00) | Wood Science and Technology(28.00) | | Law(31.30) | Legal Theory and Legal History(30.00) |
| | | - | | | Military Law(62.00) |
| Engineering(23.10) | Forestry Engineering(35.00) | - | | Political Science(23.08) | Procedural Law(22.00) |
| | | - | | | Political Science(23.08) |

Table 62. Model Scores Across Three Levels of Disciplines: K2-Chat.

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| Discipline | Field | Subfield | Discipline | Field | Subfield | | |
|----------------------------|---|--|-------------------|-------------------|--|--|--|
| Literature and Arts(23.39) | Art Studies(23.88) | Broadcasting and Television Art(20.00) | Philosophy(27.09) | Philosophy(27.09) | Religious Studies(36.00) | | |
| | | Dance Studies(24.00) | | | Astronomical Observation and Technology(19.00) | | |
| | | Design Arts(16.13) | | | Astrophysics(18.84) | | |
| | | Drama and Opera Studies(24.39) | | | Cosmology(16.67) | | |
| | | Film Studies(36.08) | | | Solar System Science(19.32) | | |
| | Journalism and Communication(22.71) | Fine Arts(17.41) | | | Stellar and Interstellar Evolution(20.00) | | |
| | | Communication and Broadcasting(22.41) | | | Atmospheric Physics and Atmospheric Environment(23.19) | | |
| | Language and Literature(24.32) | History and Theory of Journalism and Media Management(28.81) | | | Dynamic Meteorology(24.00) | | |
| | | Journalism and News Practice(18.89) | | | Meteorology(19.05) | | |
| | | Classical Chinese Literature(20.00) | | | Biochemistry and Molecular Biology(24.24) | | |
| | | French Language and Literature(26.00) | | | Biophysics(28.00) | | |
| | | Linguistics and Applied Linguistics(26.00) | | | Botany(18.67) | | |
| Management(28.74) | Musicology(22.07) | Literary History(18.84) | | | Cell Biology(29.89) | | |
| | | Literary Theory(25.00) | | | Ecology(25.00) | | |
| | | Modern and Contemporary Chinese Literature(30.00) | | | Genetics(21.74) | | |
| | | Philology and Bibliography(18.00) | | | Microbiology(19.88) | | |
| | | Russian Language and Literature(31.58) | | | Physiology(17.50) | | |
| | Business Administration(21.13) | Composition(30.00) | | | Zoology(16.51) | | |
| | | Harmony(18.33) | | | Analytical Chemistry(18.18) | | |
| | | Instrumentation and Performance(26.15) | | | Electrochemistry(14.86) | | |
| | | Music History, Education, and Technology(17.24) | | | Inorganic Chemistry(13.04) | | |
| | | Musical Forms and Analysis(24.00) | | | Organic Chemistry(20.47) | | |
| Medicine(23.99) | Business Administration(21.13) | Pitch and Scales(25.00) | | | Physical Chemistry(16.57) | | |
| | | Business and Accounting Management(20.65) | | | Polymer Chemistry and Physics(18.42) | | |
| | | Tourism Management and Technological Economics Management(22.00) | | | Radiochemistry(20.00) | | |
| | Library, Information and Archival Management(34.00) | Information Management Science(22.00) | | | Geography(35.34) Human Geography(60.00) | | |
| | | Information Management and Communication(50.00) | | | Physical Geography(20.48) | | |
| | Management Science and Engineering(24.14) | Library and Archival Science(30.00) | | | Geology(27.57) Geochemistry(46.00) | | |
| | | Management Science and Engineering(24.14) | | | Mineralogy, Petrology, and Economic Geology(26.45) | | |
| | | Education Economics, Management and Social Security(14.00) | | | Paleontology and Stratigraphy(16.00) | | |
| | Public Administration(32.45) | Land Resource Management and Administrative Management(39.22) | | | Principles of Seismic Exploration(26.00) | | |
| | | Social Medicine and Health Management(44.00) | | | Structural Geology(25.71) | | |
| | | Forensic Medicine(30.00) | | | Geophysics(21.00) Solid Earth Geophysics(22.00) | | |
| | | Human Anatomy and Histology-Embryology(21.69) | | | Space physics(20.00) | | |
| | | Immunology(27.54) | | | Advanced Algebra(16.34) | | |
| Clinical Medicine(24.14) | Basic Medicine(26.81) | Pathogen Biology(29.79) | | | Combinatorial Mathematics(21.99) | | |
| | | Pathology and Pathophysiology(22.61) | | | Computational Mathematics(28.00) | | |
| | | Radiation Medicine(46.00) | | | Cryptography(24.00) | | |
| | | Anesthesiology(20.00) | | | Discrete Mathematics(17.98) | | |
| | | Clinical Laboratory Diagnostics(30.00) | | | Functions of Complex Variables(20.49) | | |
| | Pharmacy(22.30) | Dermatology and Venereology(27.27) | | | Functions of Real Variables(29.85) | | |
| | | Emergency Medicine(22.73) | | | Fundamental Mathematics(11.68) | | |
| | | Geriatric Medicine(40.00) | | | Fuzzy Mathematics(24.00) | | |
| | | Imaging and Nuclear Medicine(23.88) | | | Geometry and Topology(21.51) | | |
| | | Internal Medicine(23.27) | | | Graph Theory(23.53) | | |
| Pharmacy(22.30) | Clinical Medicine(24.14) | Neurology(22.75) | | | Group Theory(28.00) | | |
| | | Nursing and Rehabilitation Medicine(22.00) | | | Mathematical Analysis(15.97) | | |
| | | Obstetrics and Gynecology(26.47) | | | Number Theory(12.27) | | |
| | | Oncology(20.69) | | | Numerical Analysis(26.87) | | |
| | | Ophthalmology(20.00) | | | Ordinary Differential Equations(21.88) | | |
| | Public Health and Preventive Medicine(25.34) | Otorhinolaryngology(22.00) | | | Polynomials and Series Expansions(20.67) | | |
| | | Pediatrics(20.00) | | | Probability and Statistics(16.96) | | |
| | | Psychiatry and Mental Health(34.00) | | | Special Number Theory(28.00) | | |
| | | Surgery(17.65) | | | Stochastic Processes(40.00) | | |
| | | Medicinal Chemistry(18.00) | | | Hydrogeology(40.00) | | |
| Stomatology(19.70) | Pharmacy(22.30) | Microbiology and Biochemical Pharmacy(26.00) | | | Marine Biology(62.00) | | |
| | | Pharmaceutical Analysis(26.00) | | | Marine Chemistry(46.00) | | |
| | | Pharmacetics(19.18) | | | Underwater Acoustics(24.00) | | |
| | | Pharmacology(23.64) | | | Physical Oceanography(24.00) | | |
| | | Epidemiology and Health Statistics(26.51) | | | Acoustics(19.18) | | |
| | Traditional Chinese Medicine(19.78) | Health Toxicology and Environmental Health(30.00) | | | Atomic and Molecular Physics(17.14) | | |
| | | Maternal, Child and Adolescent Health(16.46) | | | Electrodynamics(16.81) | | |
| | | Nutrition and Food Hygiene(30.00) | | | Fluid Physics(14.93) | | |
| | | Basic Stomatology(26.42) | | | Particle and Nuclear Physics(16.89) | | |
| | | Clinical Stomatology(15.19) | | | Polymer Physics(26.61) | | |
| Military Science(28.29) | Traditional Chinese Medicine(19.78) | Traditional Chinese Health Preservation(18.64) | | | Quantum Mechanics(28.16) | | |
| | | Traditional Chinese Medicine Theory(18.89) | | | Relativity(29.11) | | |
| | | Traditional Chinese Pharmacy(21.01) | | | Semiconductor Physics(19.67) | | |
| | | Military Command and Information Systems(38.00) | | | Solid State Physics(15.65) | | |
| | | Military Logistics and Equipment(22.22) | | | Statistical Mechanics(14.00) | | |
| | Philosophy(27.09) | Military Management(32.00) | | | Subatomic and Atomic Physics(11.76) | | |
| | | Military Thought and History(21.57) | | | Thermodynamics(24.65) | | |
| | | Ethics(23.53) | | | Thermodynamics and Statistical Physics(18.68) | | |
| | | Logic(20.00) | | | Systems Science(24.00) | | |
| | | Philosophical Aesthetics(24.77) | | | Demography and Anthropology(20.00) | | |
| Philosophy(27.09) | | Philosophy of Science and Technology(38.00) | Sociology(25.17) | | Social and Folklore Studies(27.96) | | |
| | | Sociology(25.17) Sociology(25.17) | | | | | |

Table 62. Continued: Model Scores Across Three Levels of Disciplines: K2-Chat.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|--|---|
| Agronomy(23.92) | Animal Husbandry(24.27) | Animal Nutrition and Feed Science(26.92) | Engineering(22.02) | Geological Resources and Geological Engineering(22.00) | Geological Resources and Geological Engineering(22.00) |
| | | Animal Rearing and Breeding(21.57) | | | Hydraulics and Hydrology(17.65) |
| | Aquaculture(16.07) | Aquaculture(16.07) | | Hydraulic Engineering(18.81) | Water conservancy and Hydropower Engineering(20.73) |
| | Crop Science(23.45) | Crop Science(23.45) | | Information and Communication Engineering(24.21) | Antenna and Radio Communication(20.18) |
| | Forestry(25.19) | Forest Cultivation and Genetic Breeding(25.93) | | | Communication Principles(21.55) |
| | | Landscape Plants and Ornamental Horticulture(24.00) | | | Communication and Information Systems(14.49) |
| | Veterinary Medicine(30.00) | Veterinary Medicine(30.00) | | | Optical Fiber Communication(32.00) |
| | Economics(23.94) | Economic Statistics(20.00) | | | Signal and Information Processing(30.97) |
| | | Finance(22.73) | | Instrument Science and Technology(20.00) | Instrument Science and Technology(20.00) |
| | | Industrial Economics(20.24) | | Materials Science and Engineering(15.57) | Materials Physics and Chemistry(16.58) |
| | | International Trade(21.74) | | | Materials Processing Engineering(13.33) |
| | | Labor Economics(28.38) | | Mechanical Engineering(23.30) | Manufacturing Automation(23.81) |
| | | National and Defense Economics(32.00) | | Mechanics(16.41) | Mechatronic Engineering(22.00) |
| | | Public Finance(25.00) | | | Fundamentals of Dynamics and Control(14.70) |
| | | Quantitative Economics(19.00) | | | Rigid Body Mechanics(13.29) |
| | | Theoretical Economics(27.33) | | | Solid Mechanics(21.51) |
| | | Economic History(34.00) | | | Theoretical Fluid Mechanics(19.29) |
| | | Political Economy(22.00) | | | Theoretical Mechanics(18.06) |
| | | Western Economics(26.00) | | Metallurgical Engineering(27.06) | Iron and Steel Metallurgy(17.14) |
| Education(27.27) | Education(28.34) | Educational Technology and Principles(29.17) | | | Non-ferrous Metallurgy(30.00) |
| | | Preschool Education(22.00) | | | Physical Chemistry of Metallurgical Process(22.00) |
| | Physical Education(28.00) | Special Education(40.00) | | | Principles of Metallurgy(50.00) |
| | | Theory of Curriculum and Instruction(21.57) | | Mining Engineering(23.00) | Mineral Processing Engineering(26.00) |
| | | Physical Education and Training(14.00) | | | Mining and Safety Engineering(20.00) |
| | | Sports Humanities and Sociology(32.00) | | Naval Architecture and Ocean Engineering(23.91) | Marine Engineering(24.00) |
| | | Sports Science and Medicine(38.00) | | | Ship Mechanics and Design Principles(23.86) |
| | Psychology(22.99) | Psychology(22.99) | | Nuclear Science and Technology(29.91) | Nuclear Energy and Reactor Technology(28.07) |
| Engineering(22.02) | Aeronautical and Astronautical Science and Technology(18.49) | Aeronautical and Astronautical Science and Technology(18.49) | | | Radiation Protection and Nuclear Technology Applications(32.00) |
| | | Agricultural Engineering(22.12) | | | Optical Engineering(21.28) |
| | Architecture(23.46) | Agricultural Environment and Soil-Water Engineering(18.52) | | | Applied Optics(17.74) |
| | | Agricultural Mechanization Engineering(26.00) | | | Laser Technology(26.00) |
| | Chemical Engineering and Technology(13.41) | Architectural Design and Theory(28.00) | | | Optoelectronic Technology(23.88) |
| | | Architectural History(20.97) | | | Theoretical Optics(21.48) |
| | Civil Engineering(17.32) | Urban Planning and Design(22.00) | | Petroleum and Natural Gas Engineering(27.68) | Oil and Gas Field Development and Storage & Transportation Engineering(20.97) |
| | | Chemical Transport Engineering(22.00) | | | Poromechanics and Reservoir Physics(36.00) |
| | Computer Science and Technology(28.83) | Elements of Chemical Reaction Engineering(10.28) | | | Engineering Fluid Mechanics(16.67) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(14.95) | | | Engineering Thermophysics(16.44) |
| | | Mass Transport and Separation Process in Chemical Engineering(11.64) | | | Fluid Machinery and Engineering(10.94) |
| Control Science and Engineering(25.26) | Computer Science and Technology(28.83) | Bridge and Tunnel Engineering(25.49) | | | Heat Transfer(17.05) |
| | | Geotechnical Engineering(15.08) | | | Internal Combustion Engineering(32.00) |
| | Electrical Engineering(18.35) | Structural Engineering(14.04) | | | Power Machinery and Engineering(23.08) |
| | | Urban Infrastructure Engineering(19.72) | | | Refrigeration and Cryogenic Engineering(14.00) |
| | Electronic Science and Technology(21.54) | Advanced Programming Languages(52.00) | | | Thermal Energy Engineering(19.27) |
| | | Computer Architecture(22.00) | | | Cartography and Geographic Information Engineering(30.00) |
| | Environmental Science and Engineering(28.57) | Computer Networks(23.73) | | | Digital Surveying and Remote Sensing Applications(19.12) |
| | | Computer Software and Theory(24.05) | | | Geodesy and Surveying Engineering(28.00) |
| | Food Science and Engineering(42.20) | Data Structures(13.13) | | | Textile Chemistry and Dyeing Engineering(18.00) |
| | | Databases(38.85) | | | Textile Materials Science(44.00) |
| | Forestry Engineering(36.00) | Formal Languages(21.15) | | Transportation Engineering(25.50) | Road and Railway Engineering(20.00) |
| | | Operating Systems(24.71) | | | Traffic Information Engineering and Control(13.85) |
| | Food Science and Engineering(42.20) | Pattern Recognition(52.00) | | | Transportation Planning and Management(32.56) |
| | | Principles of Computer Organization(21.95) | | | Vehicle Operation Engineering(34.00) |
| | Forestry Engineering(36.00) | Control Theory and Control Engineering(29.21) | | Weapon Science and Technology(32.00) | Military Chemistry and Pyrotechnics(34.00) |
| | | Guidance, Navigation and Control(19.61) | | | Weapon Systems Science and Engineering(30.00) |
| | Engineering(22.02) | Operations Research and Cybernetics(24.00) | | | Archaeology and Museology(26.92) |
| | | Electrical Theory and New Technologies(19.47) | History(20.33) | | Historical Geography(16.20) |
| | Electrical Engineering(18.35) | High Voltage and Insulation Technology(20.45) | | | World History(20.09) |
| | | Power Electronics and Electrical Drives(14.84) | | Law(27.59) | Law(28.43) |
| | Electronic Science and Technology(21.54) | Power Systems and Automation(20.83) | | | Civil and Commercial Law(23.73) |
| | | Circuits and Systems(23.15) | | | Constitutional and Administrative Law(30.00) |
| | Environmental Science and Engineering(28.57) | Electromagnetic Field and Microwave Technology(17.05) | | | Contract Law(28.00) |
| | | Microelectronics and Solid-State Electronics(26.00) | | | Criminal Law(32.76) |
| | Food Science and Engineering(42.20) | Environmental Engineering(12.36) | | | International Law(15.79) |
| | | Environmental Science(46.00) | | | Law and Social Governance(24.00) |
| | Forestry Engineering(36.00) | Environmental and Resource Protection(40.00) | | | Legal Theory and Legal History(24.00) |
| | | Food Biochemistry(72.00) | | | Military Law(58.00) |
| | Forestry Engineering(36.00) | Food Processing and Storage Engineering(16.95) | | | Procedural Law(22.00) |
| | | Forest Engineering(32.00) | | | Political Science(20.00) |
| | | Wood Science and Technology(40.00) | | | - |

Table 63. Model Scores Across Three Levels of Disciplines: Mixtral-8x22B-v0.1.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|-------------------|--|
| Literature and Arts(24.64) | Art Studies(26.87) | Broadcasting and Television Art(38.00) | Philosophy(24.50) | Philosophy(24.50) | Religious Studies(34.00) |
| | | Dance Studies(30.00) | | | Astronomical Observation and Technology(23.00) |
| | | Design Arts(19.35) | | | Astrophysics(21.74) |
| | | Drama and Opera Studies(23.17) | | | Cosmology(26.92) |
| | | Film Studies(32.28) | | | Solar System Science(28.41) |
| | Journalism and Communication(18.84) | Fine Arts(22.89) | | | Stellar and Interstellar Evolution(17.14) |
| | | Communication and Broadcasting(12.07) | | | Atmospheric Physics and Atmospheric Environment(28.99) |
| | | History and Theory of Journalism and Media Management(23.73) | | | Dynamic Meteorology(34.00) |
| | | Journalism and News Practice(20.00) | | | Meteorology(23.81) |
| | | Classical Chinese Literature(16.00) | | | Biochemistry and Molecular Biology(28.28) |
| Management(30.14) | Language and Literature(23.41) | French Language and Literature(24.00) | | | Biophysics(38.00) |
| | | Linguistics and Applied Linguistics(22.00) | | | Botany(25.90) |
| | | Literary History(20.29) | | | Cell Biology(26.44) |
| | | Literary Theory(32.81) | | | Ecology(20.83) |
| | | Modern and Contemporary Chinese Literature(18.00) | | | Genetics(22.28) |
| | Musicology(25.59) | Philology and Bibliography(24.00) | | | Microbiology(22.98) |
| | | Russian Language and Literature(28.07) | | | Physiology(16.67) |
| | | Composition(28.00) | | | Zoology(12.84) |
| | | Harmony(13.33) | | | Analytical Chemistry(16.16) |
| | | Instrumentation and Performance(26.15) | | | Electrochemistry(18.02) |
| Medicine(22.50) | Business Administration(30.28) | Music History, Education, and Technology(24.83) | | | Inorganic Chemistry(16.67) |
| | | Musical Forms and Analysis(36.00) | | | Organic Chemistry(14.62) |
| | | Pitch and Scales(28.57) | | | Physical Chemistry(16.57) |
| | | Business and Accounting Management(25.00) | | | Polymer Chemistry and Physics(14.47) |
| | | Tourism Management and Technological Economics Management(40.00) | | | Radiochemistry(21.67) |
| | Library, Information and Archival Management(34.00) | Information Management Science(26.00) | | | Geography(42.11) Human Geography(56.00) |
| | | Information Management and Communication(50.00) | | | Physical Geography(33.73) |
| | | Library and Archival Science(26.00) | | | Geochemistry(32.00) |
| | | Management Science and Engineering(15.52) | | | Mineralogy, Petrology, and Economic Geology(33.88) |
| | | Education Economics, Management and Social Security(28.00) | | | Paleontology and Stratigraphy(24.00) |
| Pharmacy(21.58) | Management Science and Engineering(15.52) | Land Resource Management and Administrative Management(21.57) | | | Principles of Seismic Exploration(24.00) |
| | | Social Medicine and Health Management(46.00) | | | Structural Geology(28.57) |
| | | Forensic Medicine(28.00) | | | Geophysics(27.00) Solid Earth Geophysics(34.00) |
| | | Human Anatomy and Histology-Embryology(22.22) | | | Space physics(20.00) |
| | | Immunology(28.99) | | | Advanced Algebra(21.29) |
| | Clinical Medicine(22.33) | Pathogen Biology(24.47) | | | Combinatorial Mathematics(13.61) |
| | | Pathology and Pathophysiology(19.13) | | | Computational Mathematics(16.00) |
| | | Radiation Medicine(42.00) | | | Cryptography(42.00) |
| | | Anesthesiology(20.00) | | | Discrete Mathematics(12.36) |
| | | Clinical Laboratory Diagnostics(20.00) | | | Functions of Complex Variables(28.69) |
| Public Health and Preventive Medicine(27.40) | Public Administration(31.79) | Dermatology and Venereology(40.91) | | | Functions of Real Variables(20.90) |
| | | Emergency Medicine(19.70) | | | Fundamental Mathematics(24.87) |
| | | Geriatric Medicine(30.00) | | | Fuzzy Mathematics(34.00) |
| | | Imaging and Nuclear Medicine(13.43) | | | Geometry and Topology(17.36) |
| | | Internal Medicine(15.84) | | | Graph Theory(5.88) |
| | Stomatology(20.45) | Neurology(24.34) | | | Group Theory(18.00) |
| | | Nursing and Rehabilitation Medicine(20.00) | | | Mathematical Analysis(20.49) |
| | | Obstetrics and Gynecology(17.65) | | | Number Theory(13.18) |
| | | Oncology(29.31) | | | Numerical Analysis(11.94) |
| | | Ophthalmology(28.00) | | | Ordinary Differential Equations(20.62) |
| Military Science(28.78) | Traditional Chinese Medicine(14.55) | Otorhinolaryngology(14.00) | | | Polynomials and Series Expansions(18.44) |
| | | Pediatrics(12.00) | | | Probability and Statistics(23.66) |
| | | Psychiatry and Mental Health(50.00) | | | Special Number Theory(32.00) |
| | | Surgery(19.12) | | | Stochastic Processes(38.00) |
| | | Medicinal Chemistry(18.00) | | | Hydrogeology(50.00) |
| | Military Science(28.78) | Microbiology and Biochemical Pharmacy(28.00) | | | Marine Biology(70.00) |
| | | Pharmaceutical Analysis(20.00) | | | Marine Chemistry(46.00) |
| | | Pharmacetics(20.55) | | | Underwater Acoustics(32.00) |
| | | Pharmacology(21.82) | | | Physical Oceanography(40.00) |
| | | Epidemiology and Health Statistics(25.30) | | | Acoustics(20.82) |
| Philosophy(24.50) | Military Science(28.78) | Health Toxicology and Environmental Health(22.50) | | | Atomic and Molecular Physics(20.95) |
| | | Maternal, Child and Adolescent Health(24.05) | | | Electrodynamics(15.09) |
| | | Nutrition and Food Hygiene(44.00) | | | Fluid Physics(21.64) |
| | | Basic Stomatology(22.64) | | | Particle and Nuclear Physics(19.11) |
| | | Clinical Stomatology(18.99) | | | Polymer Physics(17.43) |
| | Philosophy(24.50) | Traditional Chinese Medicine(3.39) | | | Quantum Mechanics(21.36) |
| | | Traditional Chinese Medicine Theory(15.56) | | | Relativity(15.19) |
| | | Traditional Chinese Pharmacy(19.33) | | | Semiconductor Physics(16.39) |
| | | Military Command and Information Systems(40.00) | | | Solid State Physics(18.37) |
| | | Military Logistics and Equipment(27.78) | | | Statistical Mechanics(22.00) |
| Sociology(28.67) | Philosophy(24.50) | Military Management(24.00) | | | Subatomic and Atomic Physics(25.49) |
| | | Military Thought and History(23.53) | | | Thermodynamics(17.21) |
| | | Ethics(20.59) | | | Thermodynamics and Statistical Physics(15.85) |
| | | Logic(17.14) | | | Systems Science(28.00) |
| Sociology(28.67) | Philosophy(24.50) | Philosophical Aesthetics(22.02) | | | Demography and Anthropology(24.00) |
| | | Philosophy of Science and Technology(36.00) | | | Social and Folklore Studies(31.18) |

Table 63. Continued: Model Scores Across Three Levels of Disciplines: Mixtral-8x22B-v0.1.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|--|---|
| Agronomy(27.22) | Animal Husbandry(32.04) | Animal Nutrition and Feed Science(32.69) | Engineering(21.16) | Geological Resources and Geological Engineering(24.00) | Geological Resources and Geological Engineering(24.00) |
| | | Animal Rearing and Breeding(31.37) | | Hydraulic Engineering(20.18) | Hydraulics and Hydrology(16.18) |
| | Aquaculture(21.43) | Aquaculture(21.43) | | | Water conservancy and Hydropower Engineering(26.83) |
| | Crop Science(24.83) | Crop Science(24.83) | | Information and Communication Engineering(24.80) | Antenna and Radio Communication(24.56) |
| | Forestry(29.77) | Forest Cultivation and Genetic Breeding(25.93) | | | Communication Principles(20.69) |
| | | Landscape Plants and Ornamental Horticulture(36.00) | | | Communication and Information Systems(24.64) |
| | Veterinary Medicine(24.00) | Veterinary Medicine(24.00) | | | Optical Fiber Communication(28.00) |
| | Economics(24.51) | Applied Economics(23.65) | | | Signal and Information Processing(27.10) |
| | | Economic Statistics(22.00) | | Instrument Science and Technology(30.00) | Instrument Science and Technology(30.00) |
| | | Finance(25.00) | | Materials Science and Engineering(16.26) | Materials Physics and Chemistry(15.08) |
| Economics(24.51) | | Industrial Economics(25.00) | | | Materials Processing Engineering(18.89) |
| | | International Trade(21.74) | | Mechanical Engineering(21.02) | Manufacturing Automation(19.84) |
| | | Labor Economics(33.78) | | Mechanics(13.88) | Mechatronic Engineering(24.00) |
| | | National and Defense Economics(20.00) | | | Fundamentals of Dynamics and Control(12.10) |
| | | Public Finance(23.33) | | | Rigid Body Mechanics(13.29) |
| | | Quantitative Economics(17.00) | | | Solid Mechanics(16.13) |
| | | Theoretical Economics(28.67) | | | Theoretical Fluid Mechanics(17.86) |
| | | Economic History(26.00) | | | Theoretical Mechanics(13.55) |
| | | Political Economy(24.00) | | Metallurgical Engineering(25.88) | Iron and Steel Metallurgy(16.19) |
| | | Western Economics(36.00) | | | Non-ferrous Metallurgy(26.00) |
| Education(28.31) | Education(28.74) | Educational Technology and Principles(29.17) | | | Physical Chemistry of Metallurgical Process(24.00) |
| | | Preschool Education(22.00) | | | Principles of Metallurgy(48.00) |
| | | Special Education(46.00) | | Mining Engineering(28.00) | Mineral Processing Engineering(28.00) |
| | | Theory of Curriculum and Instruction(17.65) | | | Mining and Safety Engineering(28.00) |
| | Physical Education(33.33) | Physical Education and Training(24.00) | | Naval Architecture and Ocean Engineering(22.46) | Marine Engineering(24.00) |
| | | Sports Humanities and Sociology(30.00) | | | Ship Mechanics and Design Principles(21.59) |
| | | Sports Science and Medicine(46.00) | | Nuclear Science and Technology(16.82) | Nuclear Energy and Reactor Technology(14.04) |
| | Psychology(18.39) | Psychology(18.39) | | | Radiation Protection and Nuclear Technology Applications(20.00) |
| | Aeronautical and Astronautical Science and Technology(21.85) | Aeronautical and Astronautical Science and Technology(21.85) | | | Optical Engineering(16.22) |
| | Agricultural Engineering(24.04) | Agricultural Environment and Soil-Water Engineering(18.52) | | | Applied Optics(12.90) |
| Engineering(21.16) | | Agricultural Mechanization Engineering(30.00) | | | Laser Technology(20.00) |
| | Architecture(34.57) | Architectural Design and Theory(38.00) | | | Optoelectronic Technology(19.40) |
| | | Architectural History(32.26) | | | Theoretical Optics(16.30) |
| | | Urban Planning and Design(34.00) | | Petroleum and Natural Gas Engineering(24.11) | Oil and Gas Field Development and Storage & Transportation Engineering(25.81) |
| | Chemical Engineering and Technology(17.56) | Chemical Transport Engineering(18.00) | | | Poromechanics and Reservoir Physics(22.00) |
| | | Elements of Chemical Reaction Engineering(21.50) | | | Engineering Fluid Mechanics(19.05) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(13.08) | | | Engineering Thermophysics(19.59) |
| | | Mass Transport and Separation Process in Chemical Engineering(17.81) | | | Engineering Thermophysics(19.18) |
| | Civil Engineering(15.92) | Bridge and Tunnel Engineering(21.57) | | | Fluid Machinery and Engineering(12.50) |
| | | Geotechnical Engineering(16.20) | | | Heat Transfer(25.58) |
| Computer Science and Technology(25.29) | Structural Engineering(12.28) | Structural Engineering(12.28) | | | Internal Combustion Engineering(30.00) |
| | | Urban Infrastructure Engineering(14.08) | | | Power Machinery and Engineering(13.46) |
| | Computer Science and Technology(25.29) | Advanced Programming Languages(34.00) | | | Refrigeration and Cryogenic Engineering(24.00) |
| | | Computer Architecture(24.00) | | | Thermal Energy Engineering(13.76) |
| | | Computer Networks(27.12) | | | Cartography and Geographic Information Engineering(36.00) |
| | | Computer Software and Theory(31.65) | | | Digital Surveying and Remote Sensing Applications(10.29) |
| | | Data Structures(20.20) | | | Geodesy and Surveying Engineering(16.00) |
| | | Databases(26.75) | | | Textile Chemistry and Dyeing Engineering(24.00) |
| | | Formal Languages(11.54) | | | Textile Materials Science(44.00) |
| | | Operating Systems(23.53) | | | Transportation Engineering(21.12) |
| Control Science and Engineering(16.84) | | Pattern Recognition(44.00) | | | Road and Railway Engineering(14.00) |
| | | Principles of Computer Organization(15.85) | | | Traffic Information Engineering and Control(16.92) |
| | | Control Theory and Control Engineering(16.85) | | | Transportation Planning and Management(30.23) |
| | | Guidance, Navigation and Control(15.69) | | | Vehicle Operation Engineering(18.00) |
| | | Operations Research and Cybernetics(18.00) | | Weapon Science and Technology(34.00) | Military Chemistry and Pyrotechnics(40.00) |
| | Electrical Engineering(16.91) | Electrical Theory and New Technologies(17.89) | | | Weapon Systems Science and Engineering(28.00) |
| | | High Voltage and Insulation Technology(18.18) | | | Archaeology and Museology(25.96) |
| | | Power Electronics and Electrical Drives(15.38) | | | Historical Geography(21.83) |
| | | Power Systems and Automation(16.67) | | | World History(26.40) |
| | Electronic Science and Technology(25.61) | Circuits and Systems(29.63) | | Law(30.79) | Law(31.13) |
| Environmental Science and Engineering(28.04) | | Electromagnetic Field and Microwave Technology(21.59) | | | Civil and Commercial Law(25.42) |
| | | Microelectronics and Solid-State Electronics(24.00) | | | Constitutional and Administrative Law(34.00) |
| | | Environmental Engineering(17.98) | | | Contract Law(30.00) |
| | | Environmental Science(42.00) | | | Criminal Law(27.59) |
| | | Environmental and Resource Protection(32.00) | | | International Law(26.32) |
| | Food Science and Engineering(42.20) | Food Biochemistry(62.00) | | | Law and Social Governance(34.00) |
| | | Food Processing and Storage Engineering(25.42) | | | Legal Theory and Legal History(38.00) |
| | | Forest Engineering(38.00) | | | Military Law(58.00) |
| | Forestry Engineering(28.00) | Wood Science and Technology(18.00) | | Political Science(27.69) | Procedural Law(20.00) |
| | Engineering(21.16) | Forestry Engineering(28.00) | | | Political Science(27.69) |

Table 64. Model Scores Across Three Levels of Disciplines: Mixtral-8x7B-Instruct-v0.1.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|---|-------------------|--|--|
| Literature and Arts(26.85) | Art Studies(27.36) | Broadcasting and Television Art(24.00) Dance Studies(24.00) Design Arts(33.87) Drama and Opera Studies(25.61) Film Studies(30.38) Fine Arts(25.37) Journalism and Communication(25.12) History and Theory of Journalism and Media Management(27.12) Language and Literature(26.36) Classical Chinese Literature(18.00) French Language and Literature(34.00) Linguistics and Applied Linguistics(52.00) Literary History(24.64) Literary Theory(25.00) Modern and Contemporary Chinese Literature(20.00) Philology and Bibliography(20.00) Russian Language and Literature(19.30) | Philosophy(25.94) | Philosophy(25.94) | Religious Studies(38.00) |
| | | Astronomy(19.26) Atmospheric Science(21.18) Biology(21.52) Chemistry(15.55) Geography(33.08) Geology(23.75) Geophysics(24.00) Mathematics(18.80) Oceanography(44.00) Physical Oceanography(18.00) Physics(15.85) | Science(18.70) | Astronomy(19.26) Atmospheric Science(21.18) Biology(21.52) Chemistry(15.55) Geography(33.08) Geology(23.75) Geophysics(24.00) Mathematics(18.80) Oceanography(44.00) Physical Oceanography(18.00) Physics(15.85) | Astronomical Observation and Technology(22.00) Astrophysics(17.39) Cosmology(19.23) Solar System Science(18.18) Stellar and Interstellar Evolution(18.57) Atmospheric Physics and Atmospheric Environment(20.29) Dynamic Meteorology(22.00) Meteorology(21.43) Biochemistry and Molecular Biology(20.20) Biophysics(38.00) Botany(21.69) Cell Biology(36.78) Ecology(15.97) Genetics(20.11) Microbiology(21.74) Physiology(17.30) Zoology(16.51) Analytical Chemistry(16.16) Electrochemistry(13.06) Inorganic Chemistry(17.39) Organic Chemistry(22.22) |
| Management(26.15) | Business Administration(21.83) | Business and Accounting Management(17.39) Tourism Management and Technological Economics Management(30.00) | | | |
| | Library, Information and Archival Management(33.33) | Information Management Science(16.00) Information Management and Communication(58.00) Library and Archival Science(26.00) | | | |
| | Management Science and Engineering(18.97) | Management Science and Engineering(18.97) | | | |
| | Public Administration(25.83) | Education Economics, Management and Social Security(18.00) Land Resource Management and Administrative Management(19.61) Social Medicine and Health Management(40.00) | | | |
| Medicine(26.13) | Basic Medicine(26.63) | Forensic Medicine(34.00) Human Anatomy and Histology-Embryology(24.34) Immunology(24.64) Pathogen Biology(28.72) Pathology and Pathophysiology(17.39) Radiation Medicine(48.00) | | | |
| | Clinical Medicine(27.67) | Anesthesiology(38.00) Clinical Laboratory Diagnostics(26.00) Dermatology and Venereology(36.36) Emergency Medicine(24.24) Geriatric Medicine(48.00) Imaging and Nuclear Medicine(29.85) Internal Medicine(25.74) Neurology(24.34) Nursing and Rehabilitation Medicine(36.00) Obstetrics and Gynecology(17.65) Oncology(25.86) Ophthalmology(24.00) Otorhinolaryngology(28.00) Pediatrics(26.00) Psychiatry and Mental Health(40.00) Surgery(19.12) | | | |
| | Pharmacy(25.90) | Medicinal Chemistry(24.00) Microbiology and Biochemical Pharmacy(26.00) Pharmaceutical Analysis(34.00) Pharmacetics(17.81) Pharmacology(30.91) | | | |
| | Public Health and Preventive Medicine(30.48) | Epidemiology and Health Statistics(24.10) Health Toxicology and Environmental Health(37.50) Maternal, Child and Adolescent Health(27.85) Nutrition and Food Hygiene(34.00) | | | |
| | Stomatology(21.21) | Basic Stomatology(24.53) Clinical Stomatology(18.99) | | | |
| | Traditional Chinese Medicine(16.04) | Traditional Chinese Health Preservation(11.86) Traditional Chinese Medicine Theory(13.33) Traditional Chinese Pharmacy(20.17) | | | |
| Military Science(30.73) | Military Science(30.73) | Military Command and Information Systems(38.00) Military Logistics and Equipment(22.22) Military Management(34.00) Military Thought and History(29.41) | | | |
| Philosophy(25.94) | Philosophy(25.94) | Ethics(25.00) Logic(11.43) Philosophical Aesthetics(22.94) Philosophy of Science and Technology(42.00) | Sociology(30.77) | Systems Science(26.00) Sociology(30.77) | Thermodynamics and Statistical Physics(11.32) Systems Science(26.00) Demography and Anthropology(28.00) Social and Folklore Studies(32.26) |

Table 64. Continued: Model Scores Across Three Levels of Disciplines:

Mixtral-8x7B-Instruct-v0.1.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|--|---|
| Agronomy(28.04) | Animal Husbandry(24.27) | Animal Nutrition and Feed Science(26.92) | Engineering(20.67) | Geological Resources and Geological Engineering(20.00) | Geological Resources and Geological Engineering(20.00) |
| | | Animal Rearing and Breeding(21.57) | | | Hydraulics and Hydrology(21.32) |
| | Aquaculture(30.36) | Aquaculture(30.36) | | Hydraulic Engineering(23.85) | Water conservancy and Hydropower Engineering(28.05) |
| | Crop Science(26.21) | Crop Science(26.21) | | Information and Communication Engineering(20.24) | Antenna and Radio Communication(14.04) |
| | Forestry(32.06) | Forest Cultivation and Genetic Breeding(30.86) | | Communication Principles(24.14) | Communication and Information Systems(14.49) |
| | | Landscape Plants and Ornamental Horticulture(34.00) | | Optical Fiber Communication(24.00) | Optical Fiber Communication(24.00) |
| | Veterinary Medicine(28.00) | Veterinary Medicine(28.00) | | Signal and Information Processing(23.23) | Signal and Information Processing(23.23) |
| | Economics(24.97) | Economic Statistics(28.00) | | Instrument Science and Technology(24.00) | Instrument Science and Technology(24.00) |
| | | Finance(23.30) | | Materials Science and Engineering(14.88) | Materials Physics and Chemistry(12.56) |
| | | Industrial Economics(16.67) | | Mechanical Engineering(20.45) | Materials Processing Engineering(20.00) |
| | | International Trade(31.88) | | Mechanics(15.42) | Manufacturing Automation(19.05) |
| | | Labor Economics(18.92) | | Mechatronic Engineering(24.00) | Mechatronic Engineering(24.00) |
| | | National and Defense Economics(28.00) | | Fundamentals of Dynamics and Control(13.26) | Fundamentals of Dynamics and Control(13.26) |
| | | Public Finance(23.33) | | Rigid Body Mechanics(13.29) | Rigid Body Mechanics(13.29) |
| | | Quantitative Economics(21.00) | | Solid Mechanics(20.43) | Solid Mechanics(20.43) |
| | | Theoretical Economics(33.33) | | Theoretical Fluid Mechanics(20.00) | Theoretical Fluid Mechanics(20.00) |
| | | Economic History(28.00) | | Theoretical Mechanics(15.48) | Theoretical Mechanics(15.48) |
| | | Political Economy(30.00) | | Metallurgical Engineering(26.27) | Iron and Steel Metallurgy(17.14) |
| | | Western Economics(42.00) | | | Non-ferrous Metallurgy(24.00) |
| Education(29.34) | Education(30.77) | Educational Technology and Principles(26.04) | | | Physical Chemistry of Metallurgical Process(28.00) |
| | | Preschool Education(32.00) | | | Principles of Metallurgy(46.00) |
| | | Special Education(46.00) | | Mining Engineering(29.00) | Mineral Processing Engineering(24.00) |
| | Physical Education(30.67) | Theory of Curriculum and Instruction(23.53) | | | Mining and Safety Engineering(34.00) |
| | | Physical Education and Training(16.00) | | Naval Architecture and Ocean Engineering(18.12) | Marine Engineering(20.00) |
| | | Sports Humanities and Sociology(24.00) | | | Ship Mechanics and Design Principles(17.05) |
| | | Sports Science and Medicine(52.00) | | Nuclear Science and Technology(20.56) | Nuclear Energy and Reactor Technology(15.79) |
| | Psychology(22.99) | Psychology(22.99) | | | Radiation Protection and Nuclear Technology Applications(26.00) |
| Engineering(20.67) | Aeronautical and Astronautical Science and Technology(19.33) | Aeronautical and Astronautical Science and Technology(19.33) | | | Applied Optics(9.68) |
| | | Agricultural Environment and Soil-Water Engineering(27.78) | | | Laser Technology(24.00) |
| | | Agricultural Mechanization Engineering(28.00) | | | Optoelectronic Technology(19.40) |
| | | Architecture(27.78) | | | Theoretical Optics(17.04) |
| | Chemical Engineering and Technology(16.34) | Architectural Design and Theory(24.00) | | Petroleum and Natural Gas Engineering(24.11) | Oil and Gas Field Development and Storage & Transportation Engineering(22.58) |
| | | Architectural History(32.26) | | | Poromechanics and Reservoir Physics(26.00) |
| | | Urban Planning and Design(26.00) | | | Engineering Fluid Mechanics(17.86) |
| | | Chemical Transport Engineering(22.00) | | | Engineering Thermophysics(18.49) |
| | | Elements of Chemical Reaction Engineering(14.95) | | | Fluid Machinery and Engineering(9.38) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(14.02) | | | Heat Transfer(13.18) |
| | Civil Engineering(18.72) | Mass Transport and Separation Process in Chemical Engineering(17.12) | | | Internal Combustion Engineering(30.00) |
| | | Civil Engineering(15.69) | | | Power Machinery and Engineering(9.62) |
| | | Geotechnical Engineering(18.44) | | | Refrigeration and Cryogenic Engineering(10.00) |
| | | Structural Engineering(21.05) | | | Thermal Energy Engineering(12.84) |
| | | Urban Infrastructure Engineering(19.72) | | | Cartography and Geographic Information Engineering(36.00) |
| | Computer Science and Technology(25.95) | Advanced Programming Languages(44.00) | | | Digital Surveying and Remote Sensing Applications(22.06) |
| | | Computer Architecture(36.00) | | | Geodesy and Surveying Engineering(28.00) |
| | | Computer Networks(23.73) | | | Textile Chemistry and Dyeing Engineering(22.00) |
| | | Computer Software and Theory(26.58) | | | Textile Materials Science(42.00) |
| | | Data Structures(14.14) | | | Transportation Engineering(23.51) |
| | | Databases(28.03) | | | Road and Railway Engineering(14.00) |
| | | Formal Languages(23.08) | | | Traffic Information Engineering and Control(20.00) |
| | | Operating Systems(23.53) | | | Transportation Planning and Management(29.07) |
| | | Pattern Recognition(50.00) | | | Vehicle Operation Engineering(28.00) |
| | | Principles of Computer Organization(9.76) | | Weapon Science and Technology(33.00) | Military Chemistry and Pyrotechnics(46.00) |
| Control Science and Engineering(18.42) | Control Theory and Control Engineering(16.85) | Control Theory and Control Engineering(16.85) | | | Weapon Systems Science and Engineering(20.00) |
| | | Guidance, Navigation and Control(21.57) | | | Archaeology and Museology(27.88) |
| | | Operations Research and Cybernetics(18.00) | | | Historical Geography(22.54) |
| | | Electrical Engineering(12.95) | | | World History(23.36) |
| | | Electrical Theory and New Technologies(13.16) | History(23.89) | | Civil and Commercial Law(22.88) |
| | | High Voltage and Insulation Technology(10.23) | | | Constitutional and Administrative Law(28.00) |
| | | Power Electronics and Electrical Drives(14.84) | | | Contract Law(38.00) |
| | | Power Systems and Automation(11.46) | | | Criminal Law(31.03) |
| | | Circuits and Systems(24.07) | | | International Law(31.58) |
| | | Electromagnetic Field and Microwave Technology(19.32) | | | Law and Social Governance(34.00) |
| Electronic Science and Technology(21.95) | Microelectronics and Solid-State Electronics(22.00) | Microelectronics and Solid-State Electronics(22.00) | | | Legal Theory and Legal History(30.00) |
| | | Environmental Science and Engineering(13.48) | | | Military Law(60.00) |
| | | Environmental Science(56.00) | | | Procedural Law(16.00) |
| | | Environmental and Resource Protection(36.00) | | | Political Science(27.69) |
| | | Food Biochemistry(68.00) | | | Political Science(27.69) |
| Environmental Science and Engineering(30.69) | Food Science and Engineering(42.20) | Food Processing and Storage Engineering(20.34) | Law(30.79) | | - |
| | | Forest Engineering(40.00) | | | - |
| | | Wood Science and Technology(34.00) | | | - |
| Food Science and Engineering(42.20) | Forestry Engineering(37.00) | | | | - |
| | | | | | - |
| Engineering(20.67) | Forestry Engineering(37.00) | | | | - |

Table 65. Model Scores Across Three Levels of Disciplines: Mixtral-8x7B-v0.1.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|------------------------|--|--|
| Literature and Arts(27.27) | Art Studies(27.69) | Broadcasting and Television Art(50.00) | Philosophy(30.84) | Philosophy(30.84) | Religious Studies(36.00) |
| | | Dance Studies(14.00) | | Astronomy(17.04) | Astronomical Observation and Technology(19.00) |
| | | Design Arts(22.58) | | Astrophysics(15.94) | Cosmology(16.67) |
| | | Drama and Opera Studies(24.39) | | Solar System Science(19.32) | Stellar and Interstellar Evolution(12.86) |
| | | Film Studies(36.08) | | Atmospheric Science(21.67) | Atmospheric Physics and Atmospheric Environment(26.09) |
| | Journalism and Communication(25.12) | Fine Arts(21.89) | | Dynamic Meteorology(22.00) | |
| | | Communication and Broadcasting(22.41) | | Meteorology(17.86) | |
| | Language and Literature(28.86) | History and Theory of Journalism and Media Management(22.03) | Biology(20.71) | Biochemistry and Molecular Biology(21.21) | |
| | | Journalism and News Practice(28.89) | | Biophysics(28.00) | |
| | | Classical Chinese Literature(32.00) | | Botany(19.28) | |
| | | French Language and Literature(42.00) | | Cell Biology(25.29) | |
| | | Linguistics and Applied Linguistics(40.00) | | Ecology(23.61) | |
| Management(30.74) | Business Administration(28.87) | Literary History(21.74) | | Genetics(17.93) | |
| | | Literary Theory(29.69) | | Microbiology(16.77) | |
| | | Modern and Contemporary Chinese Literature(22.00) | | Physiology(26.67) | |
| | | Philology and Bibliography(26.00) | | Zoology(15.40) | |
| | | Russian Language and Literature(21.05) | | Chemistry(13.79) | |
| | Musicology(26.06) | Composition(36.00) | | Analytical Chemistry(15.15) | |
| | | Harmony(28.33) | | Electrochemistry(13.06) | |
| | | Instrumentation and Performance(30.77) | | Inorganic Chemistry(11.59) | |
| | | Music History, Education, and Technology(19.31) | | Organic Chemistry(13.45) | |
| | | Musical Forms and Analysis(24.00) | | Physical Chemistry(13.74) | |
| | Library, Information and Archival Management(37.33) | Pitch and Scales(28.57) | | Polymer Chemistry and Physics(10.53) | |
| | | Business and Accounting Management(23.91) | | Radiochemistry(18.33) | |
| | | Tourism Management and Technological Economics Management(38.00) | | Geography(36.09) | Human Geography(56.00) |
| | | Information Management Science(16.00) | | Physical Geography(24.10) | |
| | | Information Management and Communication(64.00) | | Geology(26.39) | Geochemistry(40.00) |
| Medicine(25.05) | Management Science and Engineering(22.41) | Library and Archival Science(32.00) | | Mineralogy, Petrology, and Economic Geology(22.31) | |
| | | Management Science and Engineering(22.41) | | Paleontology and Stratigraphy(30.00) | |
| | | Education Economics, Management and Social Security(24.00) | | Principles of Seismic Exploration(14.00) | |
| | | Land Resource Management and Administrative Management(27.45) | | Structural Geology(30.00) | |
| | | Social Medicine and Health Management(36.00) | | Geophysics(24.00) | Solid Earth Geophysics(30.00) |
| | Clinical Medicine(26.68) | Forensic Medicine(38.00) | | Space physics(18.00) | |
| | | Human Anatomy and Histology-Embryology(25.93) | | Advanced Algebra(21.29) | |
| | | Immunology(24.64) | | Combinatorial Mathematics(12.04) | |
| | | Pathogen Biology(19.15) | | Computational Mathematics(32.00) | |
| | | Pathology and Pathophysiology(18.26) | | Cryptography(46.00) | |
| Pharmacy(20.50) | Clinical Medicine(26.68) | Radiation Medicine(36.00) | | Discrete Mathematics(17.98) | |
| | | Anesthesiology(34.00) | | Functions of Complex Variables(20.49) | |
| | | Clinical Laboratory Diagnostics(28.00) | | Functions of Real Variables(22.39) | |
| | | Dermatology and Venereology(30.30) | | Fundamental Mathematics(12.69) | |
| | | Emergency Medicine(27.27) | | Fuzzy Mathematics(24.00) | |
| | Pharmacy(20.50) | Geriatric Medicine(32.00) | | Geometry and Topology(15.47) | |
| | | Imaging and Nuclear Medicine(22.39) | | Graph Theory(25.49) | |
| | | Internal Medicine(27.72) | | Group Theory(20.00) | |
| | | Neurology(23.28) | | Mathematical Analysis(10.42) | |
| | | Nursing and Rehabilitation Medicine(20.00) | | Number Theory(17.27) | |
| Public Health and Preventive Medicine(27.05) | Stomatology(22.73) | Obstetrics and Gynecology(23.53) | | Numerical Analysis(20.90) | |
| | | Oncology(29.31) | | Ordinary Differential Equations(11.88) | |
| | | Ophthalmology(22.00) | | Polynomials and Series Expansions(13.97) | |
| | | Otorhinolaryngology(24.00) | | Probability and Statistics(18.75) | |
| | | Pediatrics(22.00) | | Special Number Theory(18.00) | |
| | Traditional Chinese Medicine(21.27) | Psychiatry and Mental Health(48.00) | | Stochastic Processes(36.00) | |
| | | Surgery(23.53) | | Hydrogeology(54.00) | |
| | | Medicinal Chemistry(22.00) | | Marine Biology(72.00) | |
| | | Microbiology and Biochemical Pharmacy(24.00) | | Marine Chemistry(44.00) | |
| | | Pharmaceutical Analysis(20.00) | | Underwater Acoustics(22.00) | |
| Military Science(37.56) | Traditional Chinese Medicine(21.27) | Pharmacetics(19.18) | | Physical Oceanography(30.00) | Physical Oceanography(30.00) |
| | | Pharmacology(18.18) | | Physics(14.94) | Acoustics(12.65) |
| | | Epidemiology and Health Statistics(32.53) | | | |
| | | Health Toxicology and Environmental Health(27.50) | | | |
| | | Maternal, Child and Adolescent Health(18.99) | | | |
| | Philosophy(30.84) | Nutrition and Food Hygiene(30.00) | | | |
| | | Basic Stomatology(26.42) | | | |
| | | Clinical Stomatology(20.25) | | | |
| | | Traditional Chinese Health Preservation(28.81) | | | |
| | | Traditional Chinese Medicine Theory(15.56) | | | |
| | | Traditional Chinese Pharmacy(21.85) | | | |
| Philosophy(30.84) | Military Science(37.56) | Military Command and Information Systems(54.00) | | | |
| | | Military Logistics and Equipment(24.07) | | | |
| | | Military Management(50.00) | | | |
| | | Military Thought and History(23.53) | | | |
| | | Ethics(32.35) | Systems Science(28.00) | | |
| | Philosophy(30.84) | Logic(12.86) | | | |
| | | Philosophical Aesthetics(27.52) | | | |
| | | Philosophy of Science and Technology(56.00) | | | |
| | | Sociology(28.67) | | | |
| | | Sociology(28.67) | | | |

Table 65. Continued: Model Scores Across Three Levels of Disciplines: Mixtral-8x7B-v0.1.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-----------------------------------|---|---|
| Agronomy(22.68) | Animal Husbandry(23.30) | Animal Nutrition and Feed Science(26.92) | Engineering(20.50) | Geological Resources and Geological Engineering(36.00) | Geological Resources and Geological Engineering(36.00) |
| | | Animal Rearing and Breeding(19.61) | | | Hydraulics and Hydrology(18.38) |
| | Aquaculture(19.64) Crop Science(18.62) | Aquaculture(19.64) | | Hydraulic Engineering(20.18) | Water conservancy and Hydropower Engineering(23.17) |
| | | Crop Science(18.62) | | | Antenna and Radio Communication(16.67) |
| | Forestry(22.90) | Forest Cultivation and Genetic Breeding(20.99) | | Information and Communication Engineering(20.83) | Communication Principles(15.52) |
| | | Landscape Plants and Ornamental Horticulture(26.00) | | | Communication and Information Systems(21.74) |
| | Veterinary Medicine(36.00) | Veterinary Medicine(36.00) | | Optical Fiber Communication(36.00) | Optical Fiber Communication(36.00) |
| | | Economic Statistics(14.00) | | | Signal and Information Processing(22.58) |
| | Economics(20.62) | Finance(22.16) | | Instrument Science and Technology(30.00) | Instrument Science and Technology(30.00) |
| | | Industrial Economics(22.62) | | | Materials Physics and Chemistry(13.57) |
| | | International Trade(23.19) | | Materials Science and Engineering(15.22) | Materials Processing Engineering(18.89) |
| | | Labor Economics(17.57) | | | Manufacturing Automation(19.05) |
| | | National and Defense Economics(20.00) | | Mechanical Engineering(19.89) | Mechatronic Engineering(22.00) |
| | | Public Finance(20.00) | | | Fundamentals of Dynamics and Control(17.00) |
| | | Quantitative Economics(15.00) | | Mechanics(15.75) | Rigid Body Mechanics(13.29) |
| | | Theoretical Economics(24.67) | | | Solid Mechanics(12.90) |
| | | Economic History(28.00) | | Metallurgical Engineering(24.31) | Theoretical Fluid Mechanics(22.86) |
| | | Political Economy(26.00) | | | Theoretical Mechanics(10.97) |
| | | Western Economics(20.00) | | | Iron and Steel Metallurgy(13.33) |
| Education(28.93) | Education(26.32) | Educational Technology and Principles(18.75) | Metallurgical Engineering(24.31) | Non-ferrous Metallurgy(24.00) | Non-ferrous Metallurgy(24.00) |
| | | Preschool Education(30.00) | | | Physical Chemistry of Metallurgical Process(26.00) |
| | Physical Education(38.67) | Special Education(40.00) | | Principles of Metallurgy(46.00) | Principles of Metallurgy(46.00) |
| | | Theory of Curriculum and Instruction(23.53) | | | Mining Engineering(28.00) |
| | | Physical Education and Training(34.00) | | | Mineral Processing Engineering(26.00) |
| | Psychology(19.54) | Sports Humanities and Sociology(38.00) | | Mining and Safety Engineering(30.00) | Mining and Safety Engineering(30.00) |
| | | Sports Science and Medicine(44.00) | | | Naval Architecture and Ocean Engineering(21.74) |
| Engineering(20.50) | Aeronautical and Astronautical Science and Technology(17.65) Agricultural Engineering(25.96) | Psychology(19.54) | Metallurgical Engineering(24.31) | Marine Engineering(18.00) | Marine Engineering(18.00) |
| | | Aeronautical and Astronautical Science and Technology(17.65) | | | Ship Mechanics and Design Principles(23.86) |
| | | Agricultural Environment and Soil-Water Engineering(29.63) | | Nuclear Energy and Reactor Technology(15.79) | Nuclear Energy and Reactor Technology(15.79) |
| | | Agricultural Mechanization Engineering(22.00) | | | Radiation Protection and Nuclear Technology Applications(28.00) |
| | Architecture(20.37) | Architectural Design and Theory(28.00) | | Optical Engineering(23.67) | Applied Optics(20.97) |
| | | Architectural History(14.52) | | | Laser Technology(32.00) |
| | Chemical Engineering and Technology(13.90) | Urban Planning and Design(20.00) | | | Optoelectronic Technology(31.34) |
| | | Chemical Transport Engineering(20.00) | | | Theoretical Optics(19.26) |
| | Civil Engineering(15.08) | Elements of Chemical Reaction Engineering(10.28) | | Petroleum and Natural Gas Engineering(20.54) | Polymerization and Reservoir Physics(28.00) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(14.02) | | | Engineering Fluid Mechanics(19.05) |
| | | Mass Transport and Separation Process in Chemical Engineering(14.38) | | | Engineering Thermodynamics(14.38) |
| | | Bridge and Tunnel Engineering(15.69) | | | Fluid Machinery and Engineering(10.94) |
| | Computer Science and Technology(26.34) | Geotechnical Engineering(15.64) | | Power Engineering and Engineering Thermodynamics(17.54) | Heat Transfer(19.38) |
| | | Structural Engineering(14.04) | | | Internal Combustion Engineering(32.00) |
| | | Urban Infrastructure Engineering(14.08) | | | Power Machinery and Engineering(13.46) |
| | | Advanced Programming Languages(34.00) | | Refrigeration and Cryogenic Engineering(28.00) | Refrigeration and Cryogenic Engineering(28.00) |
| | | Computer Architecture(20.00) | | | Thermal Energy Engineering(12.84) |
| | | Computer Networks(13.56) | | Surveying and Mapping Science and Technology(21.43) | Cartography and Geographic Information Engineering(30.00) |
| | | Computer Software and Theory(24.05) | | | Digital Surveying and Remote Sensing Applications(14.71) |
| | | Data Structures(18.18) | | | Geodesy and Surveying Engineering(22.00) |
| | | Databases(37.58) | | | Textile Chemistry and Dyeing Engineering(22.00) |
| | | Formal Languages(30.77) | | | Textile Materials Science(36.00) |
| Control Science and Engineering(15.79) | Electrical Engineering(18.17) | Operating Systems(22.35) | Transportation Engineering(25.50) | Transportation Engineering(25.50) | Road and Railway Engineering(18.00) |
| | | Pattern Recognition(52.00) | | | Traffic Information Engineering and Control(21.54) |
| | | Principles of Computer Organization(10.98) | | | Transportation Planning and Management(31.40) |
| | | Control Theory and Control Engineering(16.85) | | | Vehicle Operation Engineering(28.00) |
| | | Guidance, Navigation and Control(19.61) | | Weapon Science and Technology(30.00) | Military Chemistry and Pyrotechnics(32.00) |
| | | Operations Research and Cybernetics(10.00) | | | Weapon Systems Science and Engineering(28.00) |
| | | Electrical Theory and New Technologies(14.21) | | History(17.80) | Archaeology and Museology(19.23) |
| | | High Voltage and Insulation Technology(20.45) | | | Historical Geography(14.08) |
| | | Power Electronics and Electrical Drives(19.78) | | | World History(18.69) |
| | | Power Systems and Automation(20.83) | | Law(28.35) | Civil and Commercial Law(22.88) |
| | Electronic Science and Technology(18.29) | Circuits and Systems(17.59) | | | Constitutional and Administrative Law(30.00) |
| | | Electromagnetic Field and Microwave Technology(18.18) | | | Contract Law(30.00) |
| | | Microelectronics and Solid-State Electronics(20.00) | | Law(28.93) | Criminal Law(31.03) |
| | Environmental Science and Engineering(23.81) | Environmental Engineering(12.36) | | | International Law(21.05) |
| | | Environmental Science(34.00) | | | Law and Social Governance(22.00) |
| | | Environmental and Resource Protection(34.00) | | | Legal Theory and Legal History(26.00) |
| | | Food Biochemistry(56.00) | | | Military Law(64.00) |
| Food Science and Engineering(34.86) | Food Processing and Storage Engineering(16.95) | Food Processing and Storage Engineering(16.95) | Political Science(23.08) | Procedural Law(20.00) | Procedural Law(20.00) |
| | | Forest Engineering(28.00) | | | Political Science(23.08) |
| | Forestry Engineering(28.00) | Wood Science and Technology(28.00) | | | - |
| | | - | | | - |

Table 66. Model Scores Across Three Levels of Disciplines: K2.

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| Discipline | Field | Subfield | Discipline | Field | Subfield | |
|----------------------------|---|--|-------------------|---|--|--|
| Literature and Arts(24.40) | Art Studies(25.21) | Broadcasting and Television Art(24.00) | Philosophy(29.11) | Philosophy(29.11) | Religious Studies(32.00) | |
| | | Dance Studies(26.00) | | Astronomy(20.74) | Astronomical Observation and Technology(21.00) | |
| | | Design Arts(24.19) | | Astrophysics(20.29) | Cosmology(23.08) | |
| | | Drama and Opera Studies(28.05) | | Solar System Science(14.77) | Stellar and Interstellar Evolution(25.71) | |
| | | Film Studies(27.22) | | Atmospheric Science(24.14) | Atmospheric Physics and Atmospheric Environment(34.78) | |
| | Journalism and Communication(20.77) | Fine Arts(22.89) | | Dynamic Meteorology(18.00) | | |
| | | Communication and Broadcasting(20.69) | | Meteorology(19.05) | | |
| | | History and Theory of Journalism and Media Management(15.25) | | Biochemistry and Molecular Biology(24.24) | | |
| | | Journalism and News Practice(24.44) | | Biophysics(36.00) | | |
| | | Classical Chinese Literature(32.00) | | Botany(18.07) | | |
| Management(27.74) | Language and Literature(25.23) | French Language and Literature(30.00) | | Cell Biology(31.03) | | |
| | | Linguistics and Applied Linguistics(28.00) | | Ecology(22.92) | | |
| | | Literary History(15.94) | | Genetics(18.48) | | |
| | | Literary Theory(28.12) | | Microbiology(21.74) | | |
| | | Modern and Contemporary Chinese Literature(18.00) | | Physiology(18.33) | | |
| | Musicology(24.18) | Philology and Bibliography(26.00) | | Zoology(18.35) | | |
| | | Russian Language and Literature(26.32) | | Analytical Chemistry(15.66) | | |
| | | Composition(24.00) | | Electrochemistry(14.41) | | |
| | | Harmony(25.00) | | Inorganic Chemistry(15.22) | | |
| | | Instrumentation and Performance(30.77) | | Organic Chemistry(15.20) | | |
| Medicine(22.94) | Business Administration(17.61) | Music History, Education, and Technology(20.00) | | Physical Chemistry(14.16) | | |
| | | Musical Forms and Analysis(32.00) | | Polymer Chemistry and Physics(10.53) | | |
| | | Pitch and Scales(19.64) | | Radiochemistry(16.67) | | |
| | | Business and Accounting Management(15.22) | | Geography(33.83) | Human Geography(46.00) | |
| | | Tourism Management and Technological Economics Management(22.00) | | Physical Geography(26.51) | | |
| | Library, Information and Archival Management(32.00) | Information Management Science(22.00) | | Geology(26.69) | Geochemistry(44.00) | |
| | | Information Management and Communication(48.00) | | | Mineralogy, Petrology, and Economic Geology(19.83) | |
| | | Library and Archival Science(26.00) | | | Paleontology and Stratigraphy(28.00) | |
| | | Management Science and Engineering(29.31) | | | Principles of Seismic Exploration(20.00) | |
| | | Education Economics, Management and Social Security(30.00) | | | Structural Geology(30.00) | |
| Medicine(22.94) | Public Administration(32.45) | Land Resource Management and Administrative Management(23.33) | | Geophysics(26.00) | Solid Earth Geophysics(34.00) | |
| | | Social Medicine and Health Management(44.00) | | | Space physics(18.00) | |
| | | Forensic Medicine(32.00) | | | Advanced Algebra(18.81) | |
| | | Human Anatomy and Histology-Embryology(21.16) | | | Combinatorial Mathematics(16.75) | |
| | | Immunology(33.33) | | | Computational Mathematics(34.00) | |
| | Clinical Medicine(23.15) | Pathogen Biology(29.79) | | | Cryptography(40.00) | |
| | | Pathology and Pathophysiology(20.87) | | | Discrete Mathematics(13.48) | |
| | | Radiation Medicine(40.00) | | | Functions of Complex Variables(14.75) | |
| | | Anesthesiology(26.00) | | | Functions of Real Variables(17.91) | |
| | | Clinical Laboratory Diagnostics(18.00) | | | Fundamental Mathematics(11.17) | |
| Medicine(22.94) | Pharmacy(22.30) | Dermatology and Venereology(33.33) | | | Fuzzy Mathematics(34.00) | |
| | | Emergency Medicine(28.79) | | | Geometry and Topology(15.47) | |
| | | Geriatric Medicine(38.00) | | | Graph Theory(17.65) | |
| | | Imaging and Nuclear Medicine(25.37) | | | Group Theory(18.00) | |
| | | Internal Medicine(17.33) | | | Mathematical Analysis(9.03) | |
| | Public Health and Preventive Medicine(25.34) | Neurology(17.99) | | | Number Theory(7.73) | |
| | | Nursing and Rehabilitation Medicine(26.00) | | | Numerical Analysis(17.91) | |
| | | Obstetrics and Gynecology(26.47) | | | Ordinary Differential Equations(13.12) | |
| | | Oncology(24.14) | | | Polynomials and Series Expansions(12.29) | |
| | | Ophthalmology(26.00) | | | Probability and Statistics(20.98) | |
| Medicine(22.94) | Stomatology(17.42) | Otorhinolaryngology(20.00) | | | Special Number Theory(28.00) | |
| | | Pediatrics(16.00) | | | Stochastic Processes(26.00) | |
| | | Psychiatry and Mental Health(34.00) | | | Hydrogeology(52.00) | |
| | | Surgery(17.65) | | | Marine Biology(68.00) | |
| | | Medicinal Chemistry(20.00) | | | Marine Chemistry(36.00) | |
| | Traditional Chinese Medicine(14.93) | Microbiology and Biochemical Pharmacy(30.00) | | | Underwater Acoustics(26.00) | |
| | | Pharmaceutical Analysis(26.00) | | | Physical Oceanography(26.00) | |
| | | Pharmacetics(20.55) | | | Acoustics(16.33) | |
| | | Pharmacology(16.36) | | | Atomic and Molecular Physics(17.62) | |
| | | Epidemiology and Health Statistics(24.10) | | | Electrodynamics(16.30) | |
| Medicine(22.94) | Public Health and Preventive Medicine(25.34) | Health Toxicology and Environmental Health(30.00) | | | Fluid Physics(17.91) | |
| | | Maternal, Child and Adolescent Health(16.46) | | | Particle and Nuclear Physics(17.78) | |
| | | Nutrition and Food Hygiene(34.00) | | | Polymer Physics(10.09) | |
| | | Basic Stomatology(22.64) | | | Quantum Mechanics(16.50) | |
| | | Clinical Stomatology(13.92) | | | Relativity(17.72) | |
| | Traditional Chinese Medicine(14.93) | Traditional Chinese Health Preservation(10.17) | | | Semiconductor Physics(16.39) | |
| | | Traditional Chinese Medicine Theory(11.11) | | | Solid State Physics(21.09) | |
| | | Traditional Chinese Pharmacy(20.17) | | | Statistical Mechanics(20.00) | |
| | | Military Science(33.17) | | | Subatomic and Atomic Physics(19.61) | |
| | | Military Command and Information Systems(46.00) | | | Thermodynamics(14.88) | |
| Military Science(33.17) | Philosophy(29.11) | Military Logistics and Equipment(18.52) | | | Thermodynamics and Statistical Physics(16.79) | |
| | | Military Management(46.00) | | | Systems Science(24.00) | |
| | | Military Thought and History(23.53) | | | Sociology(25.87) | |
| | | Ethics(26.47) | | | Sociology(25.87) | |
| | | Logic(20.00) | | | Demography and Anthropology(30.00) | |
| Philosophy(29.11) | | Philosophical Aesthetics(30.28) | | | Social and Folklore Studies(23.66) | |
| | | Philosophy of Science and Technology(40.00) | | | | |

Table 66. Continued: Model Scores Across Three Levels of Disciplines: K2.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|--|--|----------------------------------|--|---|
| Agronomy(24.74) | Animal Husbandry(27.18) | Animal Nutrition and Feed Science(30.77) | Engineering(21.60) | Geological Resources and Geological Engineering(34.00) | Geological Resources and Geological Engineering(34.00) |
| | | Animal Rearing and Breeding(23.53) | | | Hydraulics and Hydrology(20.59) |
| | Aquaculture(14.29) Crop Science(20.00) | Aquaculture(14.29) | | Hydraulic Engineering(22.48) | Water conservancy and Hydropower Engineering(25.61) |
| | | Crop Science(20.00) | | | Antenna and Radio Communication(16.67) |
| | Forestry(29.01) | Forest Cultivation and Genetic Breeding(27.16) | | Information and Communication Engineering(25.00) | Communication Principles(29.31) |
| | | Landscape Plants and Ornamental Horticulture(32.00) | | | Communication and Information Systems(21.74) |
| | Veterinary Medicine(34.00) | Veterinary Medicine(34.00) | | Optical Fiber Communication(30.00) | Optical Fiber Communication(30.00) |
| | | Economic Statistics(28.00) | | | Signal and Information Processing(27.74) |
| | Economics(20.16) | Finance(15.34) | | Instrument Science and Technology(18.00) | Instrument Science and Technology(18.00) |
| | | Industrial Economics(21.43) | | | Materials Physics and Chemistry(14.57) |
| | | International Trade(27.54) | | Materials Science and Engineering(16.96) | Materials Processing Engineering(22.22) |
| | | Labor Economics(27.03) | | | Manufacturing Automation(18.25) |
| | | National and Defense Economics(24.00) | | Mechanics(17.29) | Mechatronic Engineering(26.00) |
| | | Public Finance(18.33) | | | Fundamentals of Dynamics and Control(16.14) |
| | | Quantitative Economics(11.00) | | | Rigid Body Mechanics(17.34) |
| | | Theoretical Economics(22.00) | | | Solid Mechanics(12.90) |
| | | Economic History(22.00) | | Metallurgical Engineering(25.49) | Theoretical Fluid Mechanics(21.43) |
| | | Political Economy(18.00) | | | Theoretical Mechanics(18.71) |
| | | Western Economics(26.00) | | | Iron and Steel Metallurgy(13.33) |
| Education(23.76) | Education(24.70) | Educational Technology and Principles(18.75) | Metallurgical Engineering(25.49) | Non-ferrous Metallurgy(28.00) | Non-ferrous Metallurgy(28.00) |
| | | Preschool Education(28.00) | | | Physical Chemistry of Metallurgical Process(30.00) |
| | | Special Education(34.00) | | | Principles of Metallurgy(44.00) |
| | | Theory of Curriculum and Instruction(23.53) | | Mining Engineering(27.00) | Mineral Processing Engineering(24.00) |
| | Physical Education(26.67) | Physical Education and Training(16.00) | | | Mining and Safety Engineering(30.00) |
| | | Sports Humanities and Sociology(28.00) | | | Naval Architecture and Ocean Engineering(19.57) |
| | | Sports Science and Medicine(36.00) | | | Marine Engineering(24.00) |
| | | Psychology(16.09) | | | Ship Mechanics and Design Principles(17.05) |
| Engineering(21.60) | Aeronautical and Astronautical Science and Technology(17.65) | Aeronautical and Astronautical Science and Technology(17.65) | | Nuclear Energy and Reactor Technology(19.30) | Nuclear Energy and Reactor Technology(19.30) |
| | | Agricultural Environment and Soil-Water Engineering(24.07) | | | Radiation Protection and Nuclear Technology Applications(36.00) |
| | | Agricultural Mechanization Engineering(36.00) | | Optical Engineering(23.14) | Applied Optics(16.13) |
| | | Architecture(23.46) | | | Laser Technology(24.00) |
| | Chemical Engineering and Technology(17.80) | Architectural Design and Theory(30.00) | | | Optoelectronic Technology(26.87) |
| | | Architectural History(17.74) | | | Theoretical Optics(27.41) |
| | | Urban Planning and Design(24.00) | | Petroleum and Natural Gas Engineering(16.07) | Petroleum and Natural Gas Engineering(12.90) |
| | | Chemical Transport Engineering(26.00) | | | Poromechanics and Reservoir Physics(20.00) |
| Engineering(21.60) | Civil Engineering(18.44) | Elements of Chemical Reaction Engineering(13.08) | | | Engineering Fluid Mechanics(16.67) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(18.69) | | | Engineering Thermophysics(19.44) |
| | | Mass Transport and Separation Process in Chemical Engineering(17.81) | | | Engineering Thermophysics(23.29) |
| | | Bridge and Tunnel Engineering(13.73) | | | Fluid Machinery and Engineering(18.75) |
| | Computer Science and Technology(24.12) | Geotechnical Engineering(16.20) | | | Heat Transfer(20.16) |
| | | Structural Engineering(24.56) | | | Internal Combustion Engineering(22.00) |
| | | Urban Infrastructure Engineering(22.54) | | | Power Machinery and Engineering(15.38) |
| | | Computer Science and Technology(24.12) | | | Refrigeration and Cryogenic Engineering(18.00) |
| Engineering(21.60) | Control Science and Engineering(19.47) | Advanced Programming Languages(38.00) | | Surveying and Mapping Science and Technology(25.00) | Thermal Energy Engineering(17.43) |
| | | Computer Architecture(18.00) | | | Cartography and Geographic Information Engineering(36.00) |
| | | Computer Networks(25.42) | | | Digital Surveying and Remote Sensing Applications(10.29) |
| | | Computer Software and Theory(11.39) | | | Geodesy and Surveying Engineering(34.00) |
| | Electrical Engineering(16.37) | Data Structures(14.14) | | | Textile Chemistry and Dyeing Engineering(20.00) |
| | | Databases(28.03) | | | Textile Materials Science(38.00) |
| | | Formal Languages(25.00) | | | Transportation Engineering(20.32) |
| | | Operating Systems(24.71) | | | Road and Railway Engineering(14.00) |
| Engineering(21.60) | Electronic Science and Technology(24.39) | Pattern Recognition(48.00) | | | Traffic Information Engineering and Control(12.31) |
| | | Principles of Computer Organization(19.51) | | | Transportation Planning and Management(27.91) |
| | | Control Theory and Control Engineering(22.47) | | | Vehicle Operation Engineering(24.00) |
| | | Guidance, Navigation and Control(13.73) | | Weapon Science and Technology(31.00) | Weapon Science and Technology(31.00) |
| | Environmental Science and Engineering(24.87) | Operations Research and Cybernetics(20.00) | | | Military Chemistry and Pyrotechnics(32.00) |
| | | Electrical Theory and New Technologies(14.74) | | | Weapon Systems Science and Engineering(30.00) |
| | | High Voltage and Insulation Technology(22.73) | | | Archaeology and Museology(16.35) |
| | | Power Electronics and Electrical Drives(17.03) | | | Historical Geography(16.20) |
| Engineering(21.60) | Food Science and Engineering(41.28) | Power Systems and Automation(12.50) | History(16.32) | World History(16.36) | World History(16.36) |
| | | Circuits and Systems(23.15) | | | Law(24.70) |
| | | Electromagnetic Field and Microwave Technology(23.86) | | | Law(25.21) |
| | | Microelectronics and Solid-State Electronics(28.00) | | | Civil and Commercial Law(19.49) |
| | Forestry Engineering(30.00) | Environmental Engineering(13.48) | | | Constitutional and Administrative Law(18.00) |
| | | Environmental Science(46.00) | | | Contract Law(28.00) |
| | | Environmental and Resource Protection(24.00) | | | Criminal Law(23.28) |
| | | Food Biochemistry(62.00) | | | International Law(15.79) |
| Engineering(21.60) | Food Science and Engineering(41.28) | Food Processing and Storage Engineering(23.73) | | | Law and Social Governance(22.00) |
| | | Forest Engineering(32.00) | | | Legal Theory and Legal History(32.00) |
| | | Wood Science and Technology(28.00) | | | Military Law(60.00) |
| | | - | | | Procedural Law(20.00) |
| | Forestry Engineering(30.00) | - | | | Political Science(20.00) |
| | | - | | | Political Science(20.00) |
| | | - | | | - |
| | | - | | | - |

Table 67. Model Scores Across Three Levels of Disciplines: granite-3.1-8b-instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|-------------------|--|
| Literature and Arts(20.53) | Art Studies(20.23) | Broadcasting and Television Art(22.00) | Philosophy(21.33) | Philosophy(21.33) | Religious Studies(16.00) |
| | | Dance Studies(22.00) | | | Astronomical Observation and Technology(10.00) |
| | | Design Arts(14.52) | | | Astrophysics(23.19) |
| | | Drama and Opera Studies(18.29) | | | Cosmology(17.95) |
| | | Film Studies(23.42) | | | Solar System Science(14.77) |
| | Journalism and Communication(19.32) | Fine Arts(19.40) | | | Stellar and Interstellar Evolution(18.57) |
| | | Communication and Broadcasting(12.07) | | | Atmospheric Physics and Atmospheric Environment(28.99) |
| | | History and Theory of Journalism and Media Management(22.03) | | | Dynamic Meteorology(20.00) |
| | | Journalism and News Practice(22.22) | | | Meteorology(23.81) |
| | | Classical Chinese Literature(24.00) | | | Biochemistry and Molecular Biology(15.15) |
| Management(25.15) | Language and Literature(21.14) | French Language and Literature(26.00) | | | Biophysics(38.00) |
| | | Linguistics and Applied Linguistics(28.00) | | | Botany(16.27) |
| | | Literary History(14.49) | | | Cell Biology(20.69) |
| | | Literary Theory(18.75) | | | Ecology(12.50) |
| | | Modern and Contemporary Chinese Literature(22.00) | | | Genetics(19.57) |
| | Musicology(20.89) | Phylogeny and Bibliography(20.00) | | | Microbiology(19.88) |
| | | Russian Language and Literature(19.30) | | | Physiology(11.67) |
| | | Composition(26.00) | | | Zoology(14.68) |
| | | Harmony(21.67) | | | Analytical Chemistry(14.90) |
| | | Instrumentation and Performance(26.15) | | | Electrochemistry(17.12) |
| Medicine(20.58) | Business Administration(20.42) | Music History, Education, and Technology(16.55) | | | Inorganic Chemistry(17.39) |
| | | Musical Forms and Analysis(22.00) | | | Organic Chemistry(19.88) |
| | | Pitch and Scales(19.64) | | | Physical Chemistry(16.71) |
| | | Business and Accounting Management(15.22) | | | Polymer Chemistry and Physics(22.37) |
| | | Tourism Management and Technological Economics Management(30.00) | | | Radiochemistry(26.67) |
| | Library, Information and Archival Management(29.33) | Information Management Science(14.00) | | | Geography(30.83) Human Geography(48.00) |
| | | Information Management and Communication(44.00) | | | Physical Geography(20.48) |
| | | Library and Archival Science(30.00) | | | Geology(27.57) Geochemistry(42.00) |
| | | Management Science and Engineering(25.86) | | | Mineralogy, Petrology, and Economic Geology(25.62) |
| | | Education Economics, Management and Social Security(16.00) | | | Paleontology and Stratigraphy(18.00) |
| Pharmacy(23.02) | Public Administration(25.17) | Land Resource Management and Administrative Management(27.45) | | | Principles of Seismic Exploration(28.00) |
| | | Social Medicine and Health Management(32.00) | | | Structural Geology(27.14) |
| | | Forensic Medicine(28.00) | | | Geophysics(21.00) Solid Earth Geophysics(28.00) |
| | | Human Anatomy and Histology-Embryology(22.75) | | | Space physics(14.00) |
| | | Immunology(20.29) | | | Advanced Algebra(25.74) |
| | Clinical Medicine(20.20) | Pathogen Biology(25.53) | | | Combinatorial Mathematics(18.32) |
| | | Pathology and Pathophysiology(13.04) | | | Computational Mathematics(26.00) |
| | | Radiation Medicine(34.00) | | | Cryptography(46.00) |
| | | Anesthesiology(24.00) | | | Discrete Mathematics(15.73) |
| | | Clinical Laboratory Diagnostics(16.00) | | | Functions of Complex Variables(19.67) |
| Public Health and Preventive Medicine(26.71) | Stomatology(12.88) | Dermatology and Venereology(28.79) | | | Functions of Real Variables(31.34) |
| | | Emergency Medicine(21.21) | | | Fundamental Mathematics(20.81) |
| | | Geriatric Medicine(38.00) | | | Fuzzy Mathematics(26.00) |
| | | Imaging and Nuclear Medicine(11.94) | | | Geometry and Topology(19.62) |
| | | Internal Medicine(16.34) | | | Graph Theory(19.61) |
| | Traditional Chinese Medicine(13.06) | Neurology(17.99) | | | Group Theory(14.00) |
| | | Nursing and Rehabilitation Medicine(20.00) | | | Mathematical Analysis(24.31) |
| | | Obstetrics and Gynecology(18.63) | | | Number Theory(13.18) |
| | | Oncology(22.41) | | | Numerical Analysis(16.42) |
| | | Ophthalmology(24.00) | | | Ordinary Differential Equations(21.88) |
| Military Science(27.80) | Pharmacy(23.02) | Otorhinolaryngology(10.00) | | | Polynomials and Series Expansions(21.23) |
| | | Pediatrics(12.00) | | | Probability and Statistics(20.54) |
| | | Psychiatry and Mental Health(38.00) | | | Special Number Theory(22.00) |
| | | Surgery(22.06) | | | Stochastic Processes(44.00) |
| | | Medicinal Chemistry(14.00) | | | Hydrogeology(46.00) |
| | Philosophy(21.33) | Microbiology and Biochemical Pharmacy(24.00) | | | Marine Biology(60.00) |
| | | Pharmaceutical Analysis(28.00) | | | Marine Chemistry(42.00) |
| | | Pharmacetics(20.55) | | | Underwater Acoustics(32.00) |
| | | Pharmacology(29.09) | | | Physical Oceanography(18.00) |
| | | Epidemiology and Health Statistics(24.10) | | | Acoustics(15.92) |
| Philosophy(21.33) | Traditional Chinese Medicine(13.06) | Health Toxicology and Environmental Health(23.75) | | | Atomic and Molecular Physics(14.76) |
| | | Maternal, Child and Adolescent Health(25.32) | | | Electrodynamics(15.61) |
| | | Nutrition and Food Hygiene(58.00) | | | Fluid Physics(15.67) |
| | | Basic Stomatology(11.32) | | | Particle and Nuclear Physics(22.22) |
| | | Clinical Stomatology(13.92) | | | Polymer Physics(12.84) |
| | Military Science(27.80) | Traditional Chinese Health Preservation(10.17) | | | Quantum Mechanics(20.87) |
| | | Traditional Chinese Medicine Theory(11.11) | | | Relativity(15.19) |
| | | Traditional Chinese Pharmacy(15.97) | | | Semiconductor Physics(11.48) |
| | | Military Command and Information Systems(28.00) | | | Solid State Physics(17.69) |
| | | Military Logistics and Equipment(22.22) | | | Statistical Mechanics(26.00) |
| Sociology(23.08) | Philosophy(21.33) | Military Management(42.00) | | | Subatomic and Atomic Physics(11.76) |
| | | Military Thought and History(19.61) | | | Thermodynamics(21.86) |
| | | Ethics(16.18) | | | Thermodynamics and Statistical Physics(16.79) |
| | | Logic(12.86) | | | Systems Science(20.00) |
| Sociology(23.08) | Sociology(23.08) | Philosophical Aesthetics(23.85) | | | Demography and Anthropology(14.00) |
| | | Philosophy of Science and Technology(40.00) | | | Social and Folklore Studies(27.96) |

Table 67. Continued: Model Scores Across Three Levels of Disciplines: granite-3.1-8b-instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|--|---|
| Agronomy(24.74) | Animal Husbandry(34.95) | Animal Nutrition and Feed Science(36.54) | Engineering(19.07) | Geological Resources and Geological Engineering(36.00) | Geological Resources and Geological Engineering(36.00) |
| | | Animal Rearing and Breeding(33.33) | | | Hydraulics and Hydrology(20.59) |
| | Aquaculture(14.29) Crop Science(17.24) | Aquaculture(14.29) | | Hydraulic Engineering(19.72) | Water conservancy and Hydropower Engineering(18.29) |
| | | Crop Science(17.24) | | | Antenna and Radio Communication(15.79) |
| | Forestry(25.95) | Forest Cultivation and Genetic Breeding(24.69) | | Information and Communication Engineering(20.63) | Communication Principles(27.59) |
| | | Landscape Plants and Ornamental Horticulture(28.00) | | | Communication and Information Systems(23.19) |
| | Veterinary Medicine(34.00) | Veterinary Medicine(34.00) | | Optical Fiber Communication(22.00) | Optical Fiber Communication(22.00) |
| | | Economic Statistics(20.00) | | | Signal and Information Processing(17.42) |
| | Economics(24.40) | Finance(15.34) | | Instrument Science and Technology(24.00) | Instrument Science and Technology(24.00) |
| | | Industrial Economics(22.62) | | | Materials Physics and Chemistry(10.05) |
| | | International Trade(30.43) | | Materials Science and Engineering(13.49) | Materials Processing Engineering(21.11) |
| | | Labor Economics(27.03) | | | Manufacturing Automation(19.84) |
| | | National and Defense Economics(34.00) | | Mechanical Engineering(21.59) | Mechatronic Engineering(26.00) |
| | | Public Finance(21.67) | | | Fundamentals of Dynamics and Control(9.80) |
| | | Quantitative Economics(25.00) | | Mechanics(10.68) | Rigid Body Mechanics(8.09) |
| | | Theoretical Economics(32.00) | | | Solid Mechanics(9.68) |
| | | Economic History(30.00) | | Metallurgical Engineering(27.06) | Theoretical Fluid Mechanics(21.43) |
| | | Political Economy(34.00) | | | Theoretical Mechanics(6.45) |
| | | Western Economics(32.00) | | Metallurgy and Steel Metallurgy(13.33) | Iron and Steel Metallurgy(13.33) |
| Education(29.55) | Education(29.96) | Educational Technology and Principles(30.21) | | | Non-ferrous Metallurgy(34.00) |
| | | Preschool Education(36.00) | | Physical Chemistry of Metallurgical Process(22.00) | Physical Chemistry of Metallurgical Process(22.00) |
| | Physical Education(36.67) | Special Education(38.00) | | | Principles of Metallurgy(54.00) |
| | | Theory of Curriculum and Instruction(15.69) | | Mining Engineering(33.00) | Mineral Processing Engineering(26.00) |
| | Psychology(16.09) | Physical Education and Training(26.00) | | | Mining and Safety Engineering(40.00) |
| | | Sports Humanities and Sociology(30.00) | | Naval Architecture and Ocean Engineering(23.91) | Marine Engineering(20.00) |
| | | Sports Science and Medicine(54.00) | | | Ship Mechanics and Design Principles(26.14) |
| | Psychology(16.09) | Psychology(16.09) | | Nuclear Science and Technology(18.69) | Nuclear Energy and Reactor Technology(14.04) |
| | | Psychology(16.09) | | | Radiation Protection and Nuclear Technology Applications(24.00) |
| Engineering(19.07) | Aeronautical and Astronautical Science and Technology(13.45) | Aeronautical and Astronautical Science and Technology(13.45) | | Optical Engineering(14.36) | Applied Optics(12.90) |
| | | Agricultural Environment and Soil-Water Engineering(25.93) | | | Laser Technology(12.00) |
| | Architecture(30.25) | Agricultural Mechanization Engineering(32.00) | | Petroleum and Natural Gas Engineering(25.89) | Optoelectronic Technology(20.90) |
| | | Architectural Design and Theory(28.00) | | | Theoretical Optics(13.33) |
| | Chemical Engineering and Technology(11.71) | Architectural History(25.81) | | Power Engineering and Engineering Thermophysics(13.89) | Oil and Gas Field Development and Storage & Transportation Engineering(25.81) |
| | | Urban Planning and Design(38.00) | | | Poromechanics and Reservoir Physics(26.00) |
| | Civil Engineering(13.69) | Chemical Transport Engineering(16.00) | | | Engineering Fluid Mechanics(19.05) |
| | | Elements of Chemical Reaction Engineering(8.41) | | | Engineering Thermophysics(8.90) |
| | Computer Science and Technology(23.46) | Fluid Flow and Heat Transfer in Chemical Engineering(13.08) | | Surveying and Mapping Science and Technology(27.38) | Fluid Machinery and Engineering(6.25) |
| | | Mass Transport and Separation Process in Chemical Engineering(11.64) | | | Heat Transfer(17.83) |
| Control Science and Engineering(22.11) | Computer Science and Technology(23.46) | Bridge and Tunnel Engineering(11.76) | | | Internal Combustion Engineering(28.00) |
| | | Geotechnical Engineering(12.29) | | | Power Machinery and Engineering(3.85) |
| | Control Science and Engineering(22.11) | Structural Engineering(15.79) | | Textile Science and Engineering(31.00) | Refrigeration and Cryogenic Engineering(8.00) |
| | | Urban Infrastructure Engineering(16.90) | | | Thermal Energy Engineering(17.43) |
| | Electrical Engineering(12.59) | Advanced Programming Languages(46.00) | | Transportation Engineering(19.12) | Cartography and Geographic Information Engineering(36.00) |
| | | Computer Architecture(26.00) | | | Digital Surveying and Remote Sensing Applications(23.53) |
| | Electronics and Technology(15.85) | Computer Networks(15.25) | | | Geodesy and Surveying Engineering(24.00) |
| | | Computer Software and Theory(16.46) | | | Textile Chemistry and Dyeing Engineering(24.00) |
| | Environmental Science and Engineering(33.33) | Data Structures(16.16) | | Textile Materials Science(38.00) | Textile Materials Science(38.00) |
| | | Databases(28.03) | | | Road and Railway Engineering(8.00) |
| Engineering(19.07) | Food Science and Engineering(44.04) | Formal Languages(13.46) | | | Traffic Information Engineering and Control(16.92) |
| | | Operating Systems(16.47) | | | Transportation Planning and Management(23.26) |
| | Forestry Engineering(29.00) | Pattern Recognition(52.00) | | Weapon Science and Technology(34.00) | Vehicle Operation Engineering(26.00) |
| | | Principles of Computer Organization(17.07) | | | Military Chemistry and Pyrotechnics(38.00) |
| | Food Science and Engineering(44.04) | Control Theory and Control Engineering(25.84) | | | Weapon Systems Science and Engineering(30.00) |
| | | Guidance, Navigation and Control(11.76) | | History(20.03) | Archaeology and Museology(25.96) |
| | Forestry Engineering(29.00) | Operations Research and Cybernetics(26.00) | | | Historical Geography(21.83) |
| | | Power Systems and Automation(14.58) | | | World History(17.99) |
| | Electronic Science and Technology(15.85) | Circuits and Systems(18.52) | Law(26.68) | Law(27.92) | Civil and Commercial Law(19.49) |
| | | Electromagnetic Field and Microwave Technology(9.09) | | | Constitutional and Administrative Law(24.00) |
| | Environmental Science and Engineering(33.33) | Microelectronics and Solid-State Electronics(22.00) | | Law(27.92) | Contract Law(42.00) |
| | | Environmental Engineering(17.98) | | | Criminal Law(23.28) |
| | Food Science and Engineering(44.04) | Environmental Science(50.00) | | Political Science(15.38) | International Law(24.56) |
| | | Environmental and Resource Protection(44.00) | | | Law and Social Governance(28.00) |
| | Forestry Engineering(29.00) | Food Biochemistry(64.00) | | | Legal Theory and Legal History(36.00) |
| | | Food Processing and Storage Engineering(27.12) | | | Military Law(54.00) |
| | Forestry Engineering(29.00) | Forest Engineering(26.00) | | | Procedural Law(16.00) |
| | | Wood Science and Technology(32.00) | | | Political Science(15.38) |

Table 68. Model Scores Across Three Levels of Disciplines: Llama-3.1-8B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|-------------------|--|
| Literature and Arts(20.94) | Art Studies(21.39) | Broadcasting and Television Art(28.00) | Philosophy(27.67) | Philosophy(27.67) | Religious Studies(38.00) |
| | | Dance Studies(18.00) | | | Astronomical Observation and Technology(16.00) |
| | | Design Arts(20.97) | | | Astrophysics(13.04) |
| | | Drama and Opera Studies(25.61) | | | Cosmology(16.67) |
| | | Film Studies(23.42) | | | Solar System Science(18.18) |
| | Journalism and Communication(18.36) | Fine Arts(17.41) | | | Stellar and Interstellar Evolution(10.00) |
| | | Communication and Broadcasting(18.97) | | | Atmospheric Physics and Atmospheric Environment(24.64) |
| | | History and Theory of Journalism and Media Management(16.95) | | | Dynamic Meteorology(30.00) |
| | | Journalism and News Practice(18.89) | | | Meteorology(23.81) |
| | | Classical Chinese Literature(24.00) | | | Biochemistry and Molecular Biology(24.24) |
| Management(34.13) | Language and Literature(22.50) | French Language and Literature(32.00) | | | Biophysics(30.00) |
| | | Linguistics and Applied Linguistics(30.00) | | | Botany(27.11) |
| | | Literary History(13.04) | | | Cell Biology(17.24) |
| | | Literary Theory(15.62) | | | Ecology(21.53) |
| | | Modern and Contemporary Chinese Literature(18.00) | | | Genetics(17.93) |
| | Musicology(19.95) | Philology and Bibliography(20.00) | | | Microbiology(24.22) |
| | | Russian Language and Literature(31.58) | | | Physiology(19.17) |
| | | Composition(24.00) | | | Zoology(15.60) |
| | | Harmony(18.33) | | | Analytical Chemistry(13.89) |
| | | Instrumentation and Performance(10.77) | | | Electrochemistry(11.71) |
| Medicine(30.20) | Business Administration(30.28) | Music History, Education, and Technology(19.31) | | | Inorganic Chemistry(13.04) |
| | | Musical Forms and Analysis(30.00) | | | Organic Chemistry(14.62) |
| | | Pitch and Scales(21.43) | | | Physical Chemistry(12.61) |
| | | Business and Accounting Management(25.00) | | | Polymer Chemistry and Physics(3.95) |
| | | Tourism Management and Technological Economics Management(40.00) | | | Radiochemistry(13.33) |
| | Library, Information and Archival Management(38.00) | Information Management Science(24.00) | | | Geography(32.33) |
| | | Information Management and Communication(64.00) | | | Human Geography(54.00) |
| | | Library and Archival Science(26.00) | | | Physical Geography(19.28) |
| | | Management Science and Engineering(22.41) | | | Geology(23.75) |
| | | Education Economics, Management and Social Security(32.00) | | | Geochemistry(30.00) |
| Pharmacy(24.46) | Public Administration(38.41) | Land Resource Management and Administrative Management(29.41) | | | Mineralogy, Petrology, and Economic Geology(25.62) |
| | | Social Medicine and Health Management(54.00) | | | Paleontology and Stratigraphy(26.00) |
| | | Forensic Medicine(50.00) | | | Principles of Seismic Exploration(16.00) |
| | | Human Anatomy and Histology-Embryology(25.93) | | | Structural Geology(20.00) |
| | | Immunology(28.99) | | | Geophysics(21.00) |
| | Clinical Medicine(33.09) | Pathogen Biology(35.11) | | | Solid Earth Geophysics(22.00) |
| | | Pathology and Pathophysiology(20.87) | | | Space physics(20.00) |
| | | Radiation Medicine(54.00) | | | Advanced Algebra(15.84) |
| | | Anesthesiology(38.00) | | | Combinatorial Mathematics(9.42) |
| | | Clinical Laboratory Diagnostics(22.00) | | | Computational Mathematics(24.00) |
| Public Health and Preventive Medicine(37.33) | Stomatology(18.18) | Dermatology and Venereology(42.42) | | | Cryptography(40.00) |
| | | Emergency Medicine(30.30) | | | Discrete Mathematics(8.99) |
| | | Geriatric Medicine(46.00) | | | Functions of Complex Variables(13.93) |
| | | Imaging and Nuclear Medicine(31.34) | | | Functions of Real Variables(17.91) |
| | | Internal Medicine(27.72) | | | Fundamental Mathematics(15.23) |
| | Traditional Chinese Medicine(18.66) | Neurology(36.51) | | | Fuzzy Mathematics(20.00) |
| | | Nursing and Rehabilitation Medicine(30.00) | | | Geometry and Topology(10.57) |
| | | Obstetrics and Gynecology(25.49) | | | Graph Theory(15.69) |
| | | Oncology(27.59) | | | Group Theory(10.00) |
| | | Ophthalmology(42.00) | | | Mathematical Analysis(8.68) |
| Military Science(34.63) | Pharmacy(24.46) | Otorhinolaryngology(40.00) | | | Number Theory(7.27) |
| | | Pediatrics(34.00) | | | Numerical Analysis(0.45) |
| | | Psychiatry and Mental Health(52.00) | | | Ordinary Differential Equations(15.00) |
| | | Surgery(22.06) | | | Polynomials and Series Expansions(13.97) |
| | | Medicinal Chemistry(32.00) | | | Probability and Statistics(17.86) |
| | Sociology(31.47) | Microbiology and Biochemical Pharmacy(32.00) | | | Special Number Theory(26.00) |
| | | Pharmaceutical Analysis(20.00) | | | Stochastic Processes(26.00) |
| | | Pharmacetics(17.81) | | | Hydrogeology(48.00) |
| | | Pharmacology(23.64) | | | Marine Biology(70.00) |
| | | Epidemiology and Health Statistics(31.33) | | | Marine Chemistry(48.00) |
| Philosophy(27.67) | Military Science(34.63) | Health Toxicology and Environmental Health(41.25) | | | Underwater Acoustics(26.00) |
| | | Maternal, Child and Adolescent Health(37.97) | | | Physical Oceanography(26.00) |
| | | Nutrition and Food Hygiene(40.00) | | | Acoustics(13.06) |
| | | Basic Stomatology(20.75) | | | Atomic and Molecular Physics(14.76) |
| | | Clinical Stomatology(16.46) | | | Electrodynamics(12.69) |
| | Systems Science(24.00) | Traditional Chinese Health Preservation(16.95) | | | Fluid Physics(11.94) |
| | | Traditional Chinese Medicine Theory(15.56) | | | Particle and Nuclear Physics(12.89) |
| | | Traditional Chinese Pharmacy(21.85) | | | Polymer Physics(13.76) |
| | | Military Command and Information Systems(46.00) | | | Quantum Mechanics(12.62) |
| | | Military Logistics and Equipment(25.93) | | | Relativity(12.66) |
| Philosophy(27.67) | Philosophy(27.67) | Military Management(46.00) | | | Semiconductor Physics(13.11) |
| | | Military Thought and History(21.57) | | | Solid State Physics(17.69) |
| | | Ethics(32.35) | | | Statistical Mechanics(24.00) |
| | | Logic(10.00) | | | Subatomic and Atomic Physics(11.76) |
| | | Philosophical Aesthetics(24.77) | | | Thermodynamics(9.77) |
| | | Philosophy of Science and Technology(42.00) | | | Thermodynamics and Statistical Physics(12.83) |
| | | Sociology(31.47) | | | Systems Science(24.00) |
| | | Sociology(31.47) | | | Demography and Anthropology(34.00) |
| | | Sociology(31.47) | | | Social and Folklore Studies(30.11) |

Table 68. Continued: Model Scores Across Three Levels of Disciplines: Llama-3.1-8B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield | |
|--|---|--|--------------------|--|---|--|
| Agronomy(22.06) | Animal Husbandry(27.18) | Animal Nutrition and Feed Science(28.85) | Engineering(19.93) | Geological Resources and Geological Engineering(28.00) | Geological Resources and Geological Engineering(28.00) | |
| | | Animal Rearing and Breeding(25.49) | | | Hydraulics and Hydrology(20.59) | |
| | Aquaculture(12.50) Crop Science(19.31) | Aquaculture(12.50) | | Hydraulic Engineering(21.10) | Water conservancy and Hydropower Engineering(21.95) | |
| | | Crop Science(19.31) | | | Antenna and Radio Communication(15.79) | |
| | Forestry(25.19) | Forest Cultivation and Genetic Breeding(22.22) | | Information and Communication Engineering(20.24) | Communication Principles(23.28) | |
| | | Landscape Plants and Ornamental Horticulture(30.00) | | | Communication and Information Systems(13.04) | |
| | Veterinary Medicine(22.00) | Veterinary Medicine(22.00) | | Optical Fiber Communication(26.00) | Optical Fiber Communication(26.00) | |
| | | Economic Statistics(20.00) | | | Signal and Information Processing(22.58) | |
| | Economics(25.89) | Finance(25.00) | | Instrument Science and Technology(22.00) | Instrument Science and Technology(22.00) | |
| | | Industrial Economics(23.81) | | | Materials Physics and Chemistry(15.58) | |
| | | International Trade(36.23) | | Materials Science and Engineering(16.61) | Materials Processing Engineering(18.89) | |
| | | Labor Economics(24.32) | | | Manufacturing Automation(17.46) | |
| | | National and Defense Economics(38.00) | | Mechanics(16.08) | Mechatronic Engineering(14.00) | |
| | | Public Finance(25.00) | | | Fundamentals of Dynamics and Control(15.27) | |
| | | Quantitative Economics(19.00) | | | Rigid Body Mechanics(13.87) | |
| | | Theoretical Economics(27.33) | | | Solid Mechanics(17.20) | |
| | | Economic History(30.00) | | Metallurgical Engineering(25.10) | Theoretical Fluid Mechanics(22.86) | |
| | | Political Economy(34.00) | | | Theoretical Mechanics(13.55) | |
| Education(27.07) | Education(29.15) | Western Economics(18.00) | | | Iron and Steel Metallurgy(16.19) | |
| | | Educational Technology and Principles(20.83) | | Non-ferrous Metallurgy(20.00) | Non-ferrous Metallurgy(20.00) | |
| | Physical Education(29.33) | Preschool Education(50.00) | | | Physical Chemistry of Metallurgical Process(30.00) | |
| | | Special Education(30.00) | | Mining Engineering(25.00) | Principles of Metallurgy(44.00) | |
| | | Theory of Curriculum and Instruction(23.53) | | | Mineral Processing Engineering(22.00) | |
| | | Physical Education and Training(12.00) | | Naval Architecture and Ocean Engineering(23.19) | Mining and Safety Engineering(28.00) | |
| | | Sports Humanities and Sociology(26.00) | | | Marine Engineering(22.00) | |
| | | Sports Science and Medicine(50.00) | | Ship Mechanics and Design Principles(23.86) | Ship Mechanics and Design Principles(23.86) | |
| | Psychology(17.24) | Psychology(17.24) | | | Nuclear Energy and Reactor Technology(22.81) | |
| | | Aeronautical and Astronautical Science and Technology(14.29) | | Nuclear Science and Technology(26.17) | Radiation Protection and Nuclear Technology Applications(30.00) | |
| Engineering(19.93) | Agricultural and Environmental Engineering(22.12) | Agricultural Environment and Soil-Water Engineering(29.63) | | | Applied Optics(19.35) | |
| | | Agricultural Mechanization Engineering(14.00) | | Optical Engineering(17.55) | Laser Technology(24.00) | |
| | Architecture(20.99) | Architectural Design and Theory(22.00) | | | Optoelectronic Technology(13.43) | |
| | | Architectural History(14.52) | | Petroleum and Natural Gas Engineering(26.79) | Theoretical Optics(15.56) | |
| | | Urban Planning and Design(28.00) | | | Oil and Gas Field Development and Storage & Transportation Engineering(16.13) | |
| | Chemical Engineering and Technology(14.63) | Chemical Transport Engineering(20.00) | | Power Engineering and Engineering Thermophysics(16.67) | Poromechanics and Reservoir Physics(40.00) | |
| | | Elements of Chemical Reaction Engineering(12.15) | | | Engineering Fluid Mechanics(29.76) | |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(14.02) | | Engineering Thermophysics(15.07) | Engineering Thermophysics(15.07) | |
| | | Mass Transport and Separation Process in Chemical Engineering(15.07) | | | Fluid Machinery and Engineering(10.94) | |
| | Civil Engineering(17.04) | Bridge and Tunnel Engineering(23.53) | | | Heat Transfer(20.93) | |
| | | Geotechnical Engineering(13.41) | | | Internal Combustion Engineering(12.00) | |
| Computer Science and Technology(22.67) | Structural Engineering(17.54) | Structural Engineering(17.54) | | | Power Machinery and Engineering(5.77) | |
| | | Urban Infrastructure Engineering(21.13) | | Refrigeration and Cryogenic Engineering(18.00) | Refrigeration and Cryogenic Engineering(18.00) | |
| | Computer Science and Technology(22.67) | Advanced Programming Languages(28.00) | | | Thermal Energy Engineering(13.76) | |
| | | Computer Architecture(22.00) | | Surveying and Mapping Science and Technology(24.40) | Cartography and Geographic Information Engineering(30.00) | |
| | | Computer Networks(13.56) | | | Digital Surveying and Remote Sensing Applications(19.12) | |
| | | Computer Software and Theory(20.25) | | Textile Science and Engineering(23.00) | Geodesy and Surveying Engineering(26.00) | |
| | | Data Structures(15.15) | | | Textile Chemistry and Dyeing Engineering(12.00) | |
| | | Databases(29.94) | | | Textile Materials Science(34.00) | |
| | | Formal Languages(21.15) | | Transportation Engineering(25.10) | Transportation Engineering(25.10) | |
| | | Operating Systems(20.00) | | | Road and Railway Engineering(10.00) | |
| Control Science and Engineering(18.42) | Pattern Recognition(50.00) | Pattern Recognition(50.00) | | | Traffic Information Engineering and Control(29.23) | |
| | | Principles of Computer Organization(10.98) | | | Transportation Planning and Management(31.40) | |
| | Control Theory and Control Engineering(24.72) | Control Theory and Control Engineering(24.72) | | | Vehicle Operation Engineering(24.00) | |
| | | Guidance, Navigation and Control(11.76) | | Weapon Science and Technology(29.00) | Military Chemistry and Pyrotechnics(32.00) | |
| | Operations Research and Cybernetics(14.00) | Operations Research and Cybernetics(14.00) | | | Weapon Systems Science and Engineering(26.00) | |
| | | Electrical Theory and New Technologies(19.47) | History(14.99) | | Archaeology and Museology(14.42) | |
| | Electrical Engineering(17.81) | High Voltage and Insulation Technology(17.05) | | | Historical Geography(11.97) | |
| | | Power Electronics and Electrical Drives(18.13) | | | World History(16.12) | |
| Electronic Science and Technology(20.33) | Power Systems and Automation(14.58) | Power Systems and Automation(14.58) | Law(25.46) | Law(25.72) | Civil and Commercial Law(21.19) | |
| | | Circuits and Systems(23.15) | | | Constitutional and Administrative Law(12.00) | |
| | Electromagnetic Field and Microwave Technology(18.18) | Electromagnetic Field and Microwave Technology(18.18) | | | Contract Law(30.00) | |
| | | Microelectronics and Solid-State Electronics(18.00) | | | Criminal Law(27.59) | |
| | Environmental Science and Engineering(24.87) | Environmental Engineering(16.85) | | | International Law(26.32) | |
| | | Environmental Science(36.00) | | | Law and Social Governance(16.00) | |
| | Food Science and Engineering(31.19) | Environmental and Resource Protection(28.00) | | | Legal Theory and Legal History(34.00) | |
| | | Food Biochemistry(54.00) | | | Military Law(56.00) | |
| Engineering(19.93) | Food Processing and Storage Engineering(11.86) | Food Processing and Storage Engineering(11.86) | | Political Science(23.08) | Procedural Law(12.00) | |
| | | Forest Engineering(36.00) | | | Political Science(23.08) | |
| | Forestry Engineering(29.00) | Wood Science and Technology(22.00) | - | - | - | |

Table 69. Model Scores Across Three Levels of Disciplines: Yi-1.5-6B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield | |
|----------------------------|---|--|------------------------|-------------------|--|--|
| Literature and Arts(21.36) | Art Studies(19.90) | Broadcasting and Television Art(24.00) | Philosophy(26.80) | Philosophy(26.80) | Religious Studies(32.00) | |
| | | Dance Studies(16.00) | | | Astronomical Observation and Technology(8.00) | |
| | | Design Arts(14.52) | | | Astrophysics(23.19) | |
| | | Drama and Opera Studies(18.29) | | | Cosmology(12.82) | |
| | | Film Studies(25.95) | | | Solar System Science(15.91) | |
| | Journalism and Communication(18.36) | Fine Arts(17.41) | | | Stellar and Interstellar Evolution(14.29) | |
| | | Communication and Broadcasting(13.79) | | | Atmospheric Physics and Atmospheric Environment(15.94) | |
| | | History and Theory of Journalism and Media Management(18.64) | | | Dynamic Meteorology(14.00) | |
| | | Journalism and News Practice(21.11) | | | Meteorology(23.81) | |
| | | Classical Chinese Literature(24.00) | | | Biochemistry and Molecular Biology(18.18) | |
| Management(26.75) | Language and Literature(22.73) | French Language and Literature(22.00) | | | Biophysics(30.00) | |
| | | Linguistics and Applied Linguistics(18.00) | | | Botany(22.29) | |
| | | Literary History(18.84) | | | Cell Biology(24.14) | |
| | | Literary Theory(21.88) | | | Ecology(20.14) | |
| | | Modern and Contemporary Chinese Literature(26.00) | | | Genetics(16.30) | |
| | Musicology(23.47) | Philology and Bibliography(22.00) | | | Microbiology(17.39) | |
| | | Russian Language and Literature(29.82) | | | Physiology(13.33) | |
| | | Composition(26.00) | | | Zoology(12.84) | |
| | | Harmony(25.00) | | | Chemistry(14.36) Analytical Chemistry(17.68) | |
| | | Instrumentation and Performance(24.62) | | | Electrochemistry(18.02) | |
| Medicine(21.92) | Business Administration(23.94) | Music History, Education, and Technology(20.00) | | | Inorganic Chemistry(13.77) | |
| | | Musical Forms and Analysis(28.00) | | | Organic Chemistry(12.87) | |
| | | Pitch and Scales(23.21) | | | Physical Chemistry(12.32) | |
| | | Business and Accounting Management(20.65) | | | Polymer Chemistry and Physics(10.53) | |
| | | Tourism Management and Technological Economics Management(30.00) | | | Radiochemistry(13.33) | |
| | Library, Information and Archival Management(28.67) | Information Management Science(16.00) | | | Geography(27.07) Human Geography(46.00) | |
| | | Information Management and Communication(50.00) | | | Physical Geography(15.66) | |
| | | Library and Archival Science(20.00) | | | Geology(22.29) Geochemistry(28.00) | |
| | | Management Science and Engineering(27.59) | | | Mineralogy, Petrology, and Economic Geology(25.62) | |
| | | Education Economics, Management and Social Security(16.00) | | | Paleontology and Stratigraphy(16.00) | |
| Medicine(21.92) | Public Administration(27.15) | Land Resource Management and Administrative Management(23.33) | | | Principles of Seismic Exploration(16.00) | |
| | | Social Medicine and Health Management(42.00) | | | Structural Geology(21.43) | |
| | | Forensic Medicine(22.00) | | | Geophysics(22.00) Solid Earth Geophysics(30.00) | |
| | | Human Anatomy and Histology-Embryology(28.57) | | | Space physics(14.00) | |
| | | Immunology(23.19) | | | Advanced Algebra(12.87) | |
| | Clinical Medicine(21.26) | Pathogen Biology(28.72) | | | Combinatorial Mathematics(14.66) | |
| | | Pathology and Pathophysiology(21.74) | | | Computational Mathematics(32.00) | |
| | | Radiation Medicine(26.00) | | | Cryptography(40.00) | |
| | | Anesthesiology(28.00) | | | Discrete Mathematics(15.73) | |
| | | Clinical Laboratory Diagnostics(10.00) | | | Functions of Complex Variables(23.77) | |
| Medicine(21.92) | Pharmacy(17.99) | Dermatology and Venereology(27.27) | | | Functions of Real Variables(22.39) | |
| | | Emergency Medicine(24.24) | | | Fundamental Mathematics(17.26) | |
| | | Geriatric Medicine(34.00) | | | Fuzzy Mathematics(18.00) | |
| | | Imaging and Nuclear Medicine(13.43) | | | Geometry and Topology(18.49) | |
| | | Internal Medicine(20.79) | | | Graph Theory(15.69) | |
| | Public Health and Preventive Medicine(26.03) | Neurology(19.58) | | | Group Theory(12.00) | |
| | | Nursing and Rehabilitation Medicine(14.00) | | | Mathematical Analysis(18.06) | |
| | | Obstetrics and Gynecology(29.41) | | | Number Theory(9.09) | |
| | | Oncology(18.97) | | | Numerical Analysis(11.94) | |
| | | Ophthalmology(20.00) | | | Ordinary Differential Equations(26.25) | |
| Medicine(21.92) | Stomatology(21.97) | Otorhinolaryngology(16.00) | | | Polynomials and Series Expansions(12.85) | |
| | | Pediatrics(14.00) | | | Probability and Statistics(19.20) | |
| | | Psychiatry and Mental Health(36.00) | | | Special Number Theory(22.00) | |
| | | Surgery(14.71) | | | Stochastic Processes(24.00) | |
| | | Medicinal Chemistry(14.00) | | | Hydrogeology(40.00) | |
| | Traditional Chinese Medicine(16.42) | Microbiology and Biochemical Pharmacy(22.00) | | | Marine Biology(60.00) | |
| | | Pharmaceutical Analysis(22.00) | | | Marine Chemistry(40.00) | |
| | | Pharmacetics(19.18) | | | Underwater Acoustics(22.00) | |
| | | Pharmacology(12.73) | | | Physical Oceanography(18.00) | |
| | | Epidemiology and Health Statistics(22.89) | | | Acoustics(18.37) | |
| Military Science(30.73) | Military Science(30.73) | Health Toxicology and Environmental Health(25.00) | | | Atomic and Molecular Physics(19.05) | |
| | | Maternal, Child and Adolescent Health(24.05) | | | Electrodynamics(16.81) | |
| | | Nutrition and Food Hygiene(36.00) | | | Fluid Physics(23.13) | |
| | | Basic Stomatology(26.42) | | | Particle and Nuclear Physics(17.78) | |
| | | Clinical Stomatology(18.99) | | | Polymer Physics(16.51) | |
| | Traditional Chinese Medicine(16.42) | Traditional Chinese Health Preservation(18.64) | | | Quantum Mechanics(20.39) | |
| | | Traditional Chinese Medicine Theory(16.67) | | | Relativity(22.78) | |
| | | Traditional Chinese Pharmacy(15.13) | | | Semiconductor Physics(9.84) | |
| | | Military Command and Information Systems(42.00) | | | Solid State Physics(17.01) | |
| | | Military Logistics and Equipment(22.22) | | | Statistical Mechanics(20.00) | |
| Philosophy(26.80) | Philosophy(26.80) | Military Management(40.00) | Systems Science(36.00) | Sociology(23.78) | Subatomic and Atomic Physics(15.69) | |
| | | Military Thought and History(19.61) | | | Thermodynamics(16.74) | |
| | | Ethics(27.94) | | | Thermodynamics and Statistical Physics(16.42) | |
| | | Logic(22.86) | | | Systems Science(36.00) | |
| Philosophy(26.80) | | Philosophical Aesthetics(20.18) | | | Demography and Anthropology(26.00) | |
| | | Philosophy of Science and Technology(40.00) | | | Social and Folklore Studies(22.58) | |

Table 69. Continued: Model Scores Across Three Levels of Disciplines: Yi-1.5-6B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|--------------------|--|---|
| Agronomy(22.47) | Animal Husbandry(28.16) | Animal Nutrition and Feed Science(28.85) | Engineering(19.74) | Geological Resources and Geological Engineering(28.00) | Geological Resources and Geological Engineering(28.00) |
| | | Animal Rearing and Breeding(27.45) | | | Hydraulics and Hydrology(19.12) |
| | Aquaculture(12.50) Crop Science(17.93) | Aquaculture(12.50) | | Hydraulic Engineering(19.27) | Water conservancy and Hydropower Engineering(19.51) |
| | | Crop Science(17.93) | | | Antenna and Radio Communication(13.16) |
| | Forestry(25.19) | Forest Cultivation and Genetic Breeding(23.46) | | Information and Communication Engineering(17.66) | Communication Principles(19.83) |
| | | Landscape Plants and Ornamental Horticulture(28.00) | | | Communication and Information Systems(24.64) |
| | Veterinary Medicine(28.00) | Veterinary Medicine(28.00) | | Optical Fiber Communication(12.00) | Optical Fiber Communication(12.00) |
| | | Economic Statistics(34.00) | | | Signal and Information Processing(18.06) |
| | Economics(23.83) | Finance(25.57) | | Instrument Science and Technology(28.00) | Instrument Science and Technology(28.00) |
| | | Industrial Economics(21.43) | | | Materials Physics and Chemistry(10.05) |
| | | International Trade(15.94) | | Materials Science and Engineering(13.84) | Materials Processing Engineering(22.22) |
| | | Labor Economics(27.03) | | | Manufacturing Automation(21.43) |
| | | National and Defense Economics(18.00) | | Mechanics(13.99) | Mechatronic Engineering(30.00) |
| | | Public Finance(22.50) | | | Fundamentals of Dynamics and Control(13.26) |
| | | Quantitative Economics(20.00) | | | Rigid Body Mechanics(12.14) |
| | | Theoretical Economics(27.33) | | | Solid Mechanics(17.20) |
| | | Economic History(20.00) | | Metallurgical Engineering(25.49) | Theoretical Fluid Mechanics(17.86) |
| | | Political Economy(32.00) | | | Theoretical Mechanics(12.26) |
| Education(28.31) | Education(29.55) | Western Economics(30.00) | | | Iron and Steel Metallurgy(17.14) |
| | | Educational Technology and Principles(25.00) | | Non-ferrous Metallurgy(26.00) | Non-ferrous Metallurgy(26.00) |
| | Physical Education(33.33) | Preschool Education(44.00) | | | Physical Chemistry of Metallurgical Process(28.00) |
| | | Special Education(40.00) | | Mining Engineering(30.00) | Principles of Metallurgy(40.00) |
| | | Theory of Curriculum and Instruction(13.73) | | | Mineral Processing Engineering(25.00) |
| | Psychology(16.09) | Physical Education and Training(26.00) | | | Mining and Safety Engineering(32.00) |
| | | Sports Humanities and Sociology(34.00) | | Naval Architecture and Ocean Engineering(19.57) | Marine Engineering(18.00) |
| | | Sports Science and Medicine(40.00) | | | Ship Mechanics and Design Principles(20.45) |
| | Engineering(19.74) | Psychology(16.09) | | Nuclear Science and Technology(27.10) | Nuclear Energy and Reactor Technology(22.81) |
| | | Aeronautical and Astronautical Science and Technology(15.13) | | | Radiation Protection and Nuclear Technology Applications(32.00) |
| | | Agricultural Engineering(31.73) | | Optical Engineering(16.22) | Applied Optics(15.32) |
| | | Agricultural Environment and Soil-Water Engineering(25.93) | | | Laser Technology(20.00) |
| | | Agricultural Mechanization Engineering(38.00) | | Petroleum and Natural Gas Engineering(17.86) | Optoelectronic Technology(25.81) |
| | | Architecture(32.10) | | | Theoretical Optics(16.42) |
| | | Architectural Design and Theory(28.00) | | | Theoretical Optics(15.56) |
| | | Architectural History(25.81) | | Power Engineering and Engineering Thermophysics(17.40) | Oil and Gas Field Development and Storage & Transportation Engineering(17.74) |
| | | Urban Planning and Design(44.00) | | | Poromechanics and Reservoir Physics(18.00) |
| | Control Science and Engineering(15.26) | Chemical Transport Engineering(16.00) | | | Engineering Fluid Mechanics(17.86) |
| | | Elements of Chemical Reaction Engineering(17.76) | | | Engineering Thermophysics(18.49) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(14.02) | | Surveying and Mapping Science and Technology(27.38) | Fluid Machinery and Engineering(7.81) |
| | | Mass Transport and Separation Process in Chemical Engineering(18.49) | | | Heat Transfer(22.48) |
| | | Civil Engineering(16.76) | | | Internal Combustion Engineering(26.00) |
| | | Bridge and Tunnel Engineering(13.73) | | | Power Machinery and Engineering(13.46) |
| | | Geotechnical Engineering(15.08) | | Textile Science and Engineering(22.00) | Refrigeration and Cryogenic Engineering(16.00) |
| | | Structural Engineering(17.54) | | | Thermal Energy Engineering(13.76) |
| | | Urban Infrastructure Engineering(22.54) | | | Cartography and Geographic Information Engineering(34.00) |
| | | Computer Science and Technology(22.54) | | | Digital Surveying and Remote Sensing Applications(26.47) |
| Electrical Engineering(15.65) | Advanced Programming Languages(36.00) | Data Structures(11.11) | | | Geodesy and Surveying Engineering(22.00) |
| | | Databases(28.03) | | | Textile Chemistry and Dyeing Engineering(16.00) |
| | Computer Software and Theory(27.85) | Formal Languages(13.46) | | Transportation Engineering(25.50) | Textile Materials Science(28.00) |
| | | Operating Systems(21.18) | | | Road and Railway Engineering(20.00) |
| | Control Theory and Control Engineering(14.61) | Pattern Recognition(44.00) | | | Traffic Information Engineering and Control(21.54) |
| | | Principles of Computer Organization(7.32) | | | Transportation Planning and Management(30.23) |
| | Guidance, Navigation and Control(11.76) | Control Theory and Control Engineering(14.61) | | | Vehicle Operation Engineering(28.00) |
| | | Operations Research and Cybernetics(20.00) | | Weapon Science and Technology(24.00) | Weapon Science and Technology(28.00) |
| | Power Systems and Automation(16.67) | Electrical Theory and New Technologies(15.26) | | | Military Chemistry and Pyrotechnics(28.00) |
| | | High Voltage and Insulation Technology(17.05) | | | Weapon Systems Science and Engineering(20.00) |
| Electronic Science and Technology(18.29) | Power Electronics and Electrical Drives(14.84) | Power Electronics(14.84) | History(18.40) | History(18.40) | Archaeology and Museology(22.12) |
| | | Power Systems and Automation(16.67) | | | Historical Geography(18.31) |
| | Circuits and Systems(21.30) | Circuits and Systems(21.30) | | | World History(17.52) |
| | | Electromagnetic Field and Microwave Technology(13.64) | Law(26.37) | Law(26.06) | Civil and Commercial Law(24.58) |
| | Microelectronics and Solid-State Electronics(20.00) | Microelectronics and Solid-State Electronics(20.00) | | | Constitutional and Administrative Law(28.00) |
| | | Environmental Science(44.00) | | | Contract Law(18.00) |
| | Environmental and Resource Protection(38.00) | Environmental and Resource Protection(38.00) | | | Criminal Law(26.72) |
| | | Food Biochemistry(60.00) | | | International Law(19.30) |
| | Food Processing and Storage Engineering(23.73) | Food Processing and Storage Engineering(23.73) | | Political Science(29.23) | Law and Social Governance(24.00) |
| | | Forest Engineering(28.00) | | | Legal Theory and Legal History(32.00) |
| Engineering(19.74) | Wood Science and Technology(18.00) | Wood Science and Technology(18.00) | | | Military Law(56.00) |
| | | - | | | Procedural Law(8.00) |
| | | - | | | Political Science(29.23) |

Table 70. Model Scores Across Three Levels of Disciplines: Qwen2.5-3B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|-------------------|--|--|
| Literature and Arts(21.60) | Art Studies(20.23) | Broadcasting and Television Art(20.00) | Philosophy(29.39) | Philosophy(29.39) | Religious Studies(36.00) |
| | | Dance Studies(32.00) | | Astronomy(13.58) | Astronomical Observation and Technology(13.00) |
| | | Design Arts(14.52) | | Astrophysics(17.39) | Cosmology(21.79) |
| | | Drama and Opera Studies(21.95) | | Solar System Science(10.23) | Stellar and Interstellar Evolution(5.71) |
| | | Film Studies(22.15) | | Atmospheric Science(24.14) | Atmospheric Physics and Atmospheric Environment(34.78) |
| | Journalism and Communication(15.46) | Fine Arts(16.92) | | Dynamic Meteorology(20.00) | |
| | | Communication and Broadcasting(8.62) | | Meteorology(17.86) | |
| | Language and Literature(23.18) | History and Theory of Journalism and Media Management(25.42) | Biology(20.71) | Biochemistry and Molecular Biology(24.24) | |
| | | Journalism and News Practice(13.33) | | Biophysics(24.00) | |
| | | Classical Chinese Literature(16.00) | | Botany(23.49) | |
| | | French Language and Literature(36.00) | | Cell Biology(25.29) | |
| | | Linguistics and Applied Linguistics(20.00) | | Ecology(18.75) | |
| Management(28.14) | Business Administration(23.94) | Literary History(18.84) | | Genetics(14.67) | |
| | | Literary Theory(28.12) | | Microbiology(22.98) | |
| | | Modern and Contemporary Chinese Literature(30.00) | | Physiology(21.67) | |
| | | Philology and Bibliography(20.00) | | Zoology(16.51) | |
| | | Russian Language and Literature(17.54) | | Chemistry(12.21) | |
| | Musicology(24.88) | Composition(38.00) | | Analytical Chemistry(13.89) | |
| | | Harmony(23.33) | | Electrochemistry(14.86) | |
| | | Instrumentation and Performance(24.62) | | Inorganic Chemistry(12.32) | |
| | | Music History, Education, and Technology(15.86) | | Organic Chemistry(14.62) | |
| | | Musical Forms and Analysis(34.00) | | Physical Chemistry(10.06) | |
| Medicine(25.41) | Business Administration(23.94) | Pitch and Scales(30.36) | | Polymer Chemistry and Physics(14.47) | |
| | | Business and Accounting Management(20.65) | | Radiochemistry(6.67) | |
| | | Tourism Management and Technological Economics Management(30.00) | | Geography(31.58) | Human Geography(50.00) |
| | Library, Information and Archival Management(30.67) | Information Management Science(22.00) | | Physical Geography(20.48) | |
| | | Information Management and Communication(42.00) | | Geology(26.69) | Geochemistry(24.00) |
| | Public Administration(32.45) | Library and Archival Science(28.00) | | Mineralogy, Petrology, and Economic Geology(31.40) | |
| | | Management Science and Engineering(20.69) | | Paleontology and Stratigraphy(20.00) | |
| | | Education Economics, Management and Social Security(20.00) | | Principles of Seismic Exploration(18.00) | |
| | | Land Resource Management and Administrative Management(31.37) | | Structural Geology(31.43) | |
| | | Social Medicine and Health Management(46.00) | | Geophysics(25.00) | Solid Earth Geophysics(30.00) |
| Medicine(25.41) | Basic Medicine(26.63) | Forensic Medicine(22.00) | | Space physics(20.00) | |
| | | Human Anatomy and Histology-Embryology(24.87) | | Advanced Algebra(22.77) | |
| | | Immunology(30.43) | | Combinatorial Mathematics(13.09) | |
| | | Pathogen Biology(24.47) | | Computational Mathematics(28.00) | |
| | | Pathology and Pathophysiology(25.22) | | Cryptography(48.00) | |
| | Clinical Medicine(25.78) | Radiation Medicine(40.00) | | Discrete Mathematics(10.11) | |
| | | Anesthesiology(28.00) | | Functions of Complex Variables(13.11) | |
| | | Clinical Laboratory Diagnostics(26.00) | | Functions of Real Variables(19.40) | |
| | | Dermatology and Venereology(25.76) | | Fundamental Mathematics(17.77) | |
| | | Emergency Medicine(24.24) | | Fuzzy Mathematics(18.00) | |
| Medicine(25.41) | Pharmacy(25.18) | Geriatric Medicine(40.00) | | Geometry and Topology(13.96) | |
| | | Imaging and Nuclear Medicine(17.91) | | Graph Theory(11.76) | |
| | | Internal Medicine(30.20) | | Group Theory(14.00) | |
| | | Neurology(19.05) | | Mathematical Analysis(17.01) | |
| | | Nursing and Rehabilitation Medicine(14.00) | | Number Theory(10.00) | |
| | Public Health and Preventive Medicine(26.37) | Obstetrics and Gynecology(27.45) | | Numerical Analysis(11.94) | |
| | | Oncology(27.59) | | Ordinary Differential Equations(18.12) | |
| | | Ophthalmology(32.00) | | Polynomials and Series Expansions(13.41) | |
| | | Otorhinolaryngology(22.00) | | Probability and Statistics(25.45) | |
| | | Pediatrics(24.00) | | Special Number Theory(20.00) | |
| Medicine(25.41) | Pharmacy(25.18) | Psychiatry and Mental Health(32.00) | | Stochastic Processes(14.00) | |
| | | Surgery(27.94) | | Hydrogeology(42.00) | |
| | | Medicinal Chemistry(16.00) | | Marine Biology(60.00) | |
| | | Microbiology and Biochemical Pharmacy(34.00) | | Marine Chemistry(40.00) | |
| | | Pharmaceutical Analysis(20.00) | | Underwater Acoustics(14.00) | |
| | Public Health and Preventive Medicine(26.37) | Pharmacetics(28.77) | | Physical Oceanography(22.00) | |
| | | Pharmacology(25.45) | | Physics(13.01) | |
| | | Epidemiology and Health Statistics(24.10) | | Atomic and Molecular Physics(13.81) | |
| | | Health Toxicology and Environmental Health(25.00) | | Electrodynamics(12.69) | |
| | | Maternal, Child and Adolescent Health(26.58) | | Fluid Physics(11.94) | |
| Medicine(25.41) | Stomatology(18.18) | Nutrition and Food Hygiene(32.00) | | Particle and Nuclear Physics(12.89) | |
| | | Basic Stomatology(16.98) | | Polymer Physics(11.93) | |
| | | Clinical Stomatology(18.99) | | Quantum Mechanics(14.56) | |
| | | Traditional Chinese Medicine(23.88) | | Relativity(11.39) | |
| | | Traditional Chinese Health Preservation(27.12) | | Semiconductor Physics(6.56) | |
| | Traditional Chinese Medicine(23.88) | Traditional Chinese Medicine Theory(25.56) | | Solid State Physics(13.61) | |
| | | Traditional Chinese Pharmacy(21.01) | | Statistical Mechanics(16.00) | |
| | | Military Science(30.73) | | Subatomic and Atomic Physics(21.57) | |
| | | Military Command and Information Systems(36.00) | | Thermodynamics(13.49) | |
| | | Military Logistics and Equipment(24.07) | | Thermodynamics and Statistical Physics(12.08) | |
| Philosophy(29.39) | Philosophy(29.39) | Military Management(42.00) | | Systems Science(22.00) | |
| | | Military Thought and History(21.57) | | Sociology(26.57) | |
| | | Ethics(35.29) | | Sociology(26.57) | Demography and Anthropology(22.00) |
| | | Logic(21.43) | | | Social and Folklore Studies(29.03) |
| | | Philosophical Aesthetics(22.02) | | | |
| | | Philosophy of Science and Technology(42.00) | | | |

Table 70. Continued: Model Scores Across Three Levels of Disciplines: Qwen2.5-3B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|----------------------------------|--|---|
| Agronomy(23.30) | Animal Husbandry(28.16) | Animal Nutrition and Feed Science(26.92) | Engineering(19.56) | Geological Resources and Geological Engineering(26.00) | Geological Resources and Geological Engineering(26.00) |
| | | Animal Rearing and Breeding(29.41) | | | Hydraulics and Hydrology(25.00) |
| | Aquaculture(23.21) Crop Science(16.55) | Aquaculture(23.21) | | Hydraulic Engineering(23.39) | Water conservancy and Hydropower Engineering(20.73) |
| | | Crop Science(16.55) | | | Antenna and Radio Communication(14.04) |
| | Forestry(25.95) | Forest Cultivation and Genetic Breeding(18.52) | | Information and Communication Engineering(17.66) | Communication Principles(22.41) |
| | | Landscape Plants and Ornamental Horticulture(38.00) | | | Communication and Information Systems(13.04) |
| | Veterinary Medicine(26.00) | Veterinary Medicine(26.00) | | Optical Fiber Communication(14.00) | Optical Fiber Communication(14.00) |
| | | Economic Statistics(20.00) | | | Signal and Information Processing(20.00) |
| | Economics(22.22) | Finance(20.45) | | Instrument Science and Technology(22.00) | Instrument Science and Technology(22.00) |
| | | Industrial Economics(26.19) | | | Materials Physics and Chemistry(13.57) |
| | | International Trade(18.84) | | Materials Science and Engineering(14.19) | Materials Processing Engineering(15.56) |
| | | Labor Economics(37.84) | | | Manufacturing Automation(23.81) |
| | | National and Defense Economics(26.00) | | Mechanics(15.09) | Mechatronic Engineering(30.00) |
| | | Public Finance(16.67) | | | Fundamentals of Dynamics and Control(13.83) |
| | | Quantitative Economics(16.00) | | | Rigid Body Mechanics(15.03) |
| | | Theoretical Economics(24.00) | | | Solid Mechanics(15.05) |
| | | Economic History(26.00) | | Metallurgical Engineering(20.78) | Theoretical Fluid Mechanics(18.57) |
| | | Political Economy(18.00) | | | Theoretical Mechanics(14.84) |
| | | Western Economics(28.00) | | | Iron and Steel Metallurgy(11.43) |
| Education(25.00) | Education(27.53) | Educational Technology and Principles(22.92) | Metallurgical Engineering(20.78) | Non-ferrous Metallurgy(18.00) | Non-ferrous Metallurgy(18.00) |
| | | Preschool Education(38.00) | | | Physical Chemistry of Metallurgical Process(22.00) |
| | | Special Education(30.00) | | | Principles of Metallurgy(42.00) |
| | | Theory of Curriculum and Instruction(23.53) | | Mining Engineering(28.00) | Mineral Processing Engineering(22.00) |
| | Physical Education(30.00) | Physical Education and Training(24.00) | | | Mining and Safety Engineering(34.00) |
| | | Sports Humanities and Sociology(30.00) | | | Naval Architecture and Ocean Engineering(23.91) |
| | | Sports Science and Medicine(36.00) | | Marine Engineering(20.00) | Marine Engineering(20.00) |
| | | Psychology(9.20) | | | Ship Mechanics and Design Principles(26.14) |
| Engineering(19.56) | Aeronautical and Astronautical Science and Technology(12.61) | Aeronautical and Astronautical Science and Technology(12.61) | | Nuclear Energy and Reactor Technology(17.54) | Nuclear Energy and Reactor Technology(17.54) |
| | | Agricultural Environment and Soil-Water Engineering(29.63) | | | Radiation Protection and Nuclear Technology Applications(26.00) |
| | | Agricultural Mechanization Engineering(22.00) | | Optical Engineering(18.62) | Applied Optics(16.94) |
| | | Architecture(24.69) | | | Laser Technology(18.00) |
| | | Architectural Design and Theory(28.00) | | Petroleum and Natural Gas Engineering(23.21) | Optoelectronic Technology(22.39) |
| | | Architectural History(19.35) | | | Theoretical Optics(18.52) |
| | | Urban Planning and Design(28.00) | | Power Engineering and Engineering Thermophysics(15.20) | Oil and Gas Field Development and Storage & Transportation Engineering(20.97) |
| | Chemical Engineering and Technology(15.85) | Chemical Transport Engineering(20.00) | | | Poromechanics and Reservoir Physics(26.00) |
| | | Elements of Chemical Reaction Engineering(11.21) | | | Engineering Fluid Mechanics(14.29) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(13.08) | | | Engineering Thermophysics(11.64) |
| | | Mass Transport and Separation Process in Chemical Engineering(19.86) | | | Fluid Machinery and Engineering(20.31) |
| | Civil Engineering(16.48) | Bridge and Tunnel Engineering(15.69) | | | Heat Transfer(11.63) |
| | | Geotechnical Engineering(13.41) | | | Internal Combustion Engineering(24.00) |
| | | Structural Engineering(17.54) | | | Power Machinery and Engineering(15.38) |
| | | Urban Infrastructure Engineering(23.94) | | | Refrigeration and Cryogenic Engineering(22.00) |
| | Computer Science and Technology(23.07) | Advanced Programming Languages(38.00) | | Surveying and Mapping Science and Technology(22.02) | Thermal Energy Engineering(14.68) |
| | | Computer Architecture(22.00) | | | Cartography and Geographic Information Engineering(28.00) |
| | | Computer Networks(15.25) | | | Digital Surveying and Remote Sensing Applications(19.12) |
| | | Computer Software and Theory(18.99) | | Textile Science and Engineering(24.00) | Geodesy and Surveying Engineering(20.00) |
| | | Data Structures(14.14) | | | Textile Chemistry and Dyeing Engineering(22.00) |
| | | Databases(25.48) | | | Textile Materials Science(26.00) |
| | | Formal Languages(15.38) | | Transportation Engineering(26.29) | Transportation Engineering(26.29) |
| | | Operating Systems(20.00) | | | Road and Railway Engineering(10.00) |
| | | Pattern Recognition(58.00) | | | Traffic Information Engineering and Control(21.54) |
| | | Principles of Computer Organization(17.07) | | | Transportation Planning and Management(34.88) |
| Control Science and Engineering(17.89) | Control Theory and Control Engineering(21.35) | Control Theory and Control Engineering(21.35) | | | Vehicle Operation Engineering(34.00) |
| | | Guidance, Navigation and Control(19.61) | | Weapon Science and Technology(32.00) | Military Chemistry and Pyrotechnics(38.00) |
| | | Operations Research and Cybernetics(10.00) | | | Weapon Systems Science and Engineering(26.00) |
| | | Electrical Theory and New Technologies(17.37) | History(20.92) | History(20.92) | Archaeology and Museology(20.19) |
| | Electrical Engineering(16.01) | High Voltage and Insulation Technology(17.05) | | | Historical Geography(22.54) |
| | | Power Electronics and Electrical Drives(14.29) | | | World History(20.56) |
| | | Power Systems and Automation(15.62) | | Law(26.98) | Civil and Commercial Law(22.03) |
| | | Circuits and Systems(12.96) | | | Constitutional and Administrative Law(26.00) |
| | Electronic Science and Technology(12.60) | Electromagnetic Field and Microwave Technology(10.23) | | Law(27.07) | Contract Law(28.00) |
| | | Microelectronics and Solid-State Electronics(16.00) | | | Criminal Law(28.45) |
| | | Environmental Science and Engineering(14.61) | | Political Science(26.15) | International Law(19.30) |
| | | Environmental Science(42.00) | | | Law and Social Governance(24.00) |
| Environmental Science and Engineering(27.51) | Environmental and Resource Protection(36.00) | Environmental and Resource Protection(36.00) | | | Legal Theory and Legal History(32.00) |
| | | Food Biochemistry(60.00) | | | Military Law(56.00) |
| | | Food Processing and Storage Engineering(23.73) | | Political Science(26.15) | Procedural Law(14.00) |
| | | Forest Engineering(40.00) | | | Political Science(26.15) |
| | Food Science and Engineering(40.37) | Wood Science and Technology(18.00) | | | - |
| | | Forestry Engineering(29.00) | | | - |
| | | Forestry Engineering(29.00) | | | - |
| | | Forestry Engineering(18.00) | | | - |

Table 71. Model Scores Across Three Levels of Disciplines: Llama-3.1-8B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|--|--|
| Literature and Arts(21.48) | Art Studies(23.22) | Broadcasting and Television Art(36.00) | Philosophy(26.80) | Philosophy(26.80) | Religious Studies(38.00) |
| | | Dance Studies(22.00) | | Astronomy(15.80) | Astronomical Observation and Technology(16.00) |
| | | Design Arts(19.35) | | Astrophysics(18.84) | Cosmology(17.95) |
| | | Drama and Opera Studies(21.95) | | Solar System Science(13.64) | Stellar and Interstellar Evolution(12.86) |
| | | Film Studies(25.32) | | Atmospheric Science(24.14) | Atmospheric Physics and Atmospheric Environment(21.74) |
| | Journalism and Communication(17.39) | Fine Arts(20.40) | | Dynamic Meteorology(34.00) | |
| | | Communication and Broadcasting(12.07) | | Meteorology(20.24) | |
| | Language and Literature(20.45) | History and Theory of Journalism and Media Management(22.03) | Biology(20.54) | Biochemistry and Molecular Biology(21.21) | |
| | | Journalism and News Practice(17.78) | | Biophysics(28.00) | |
| | | Classical Chinese Literature(18.00) | | Botany(22.89) | |
| | | French Language and Literature(16.00) | | Cell Biology(24.14) | |
| | | Linguistics and Applied Linguistics(22.00) | | Ecology(22.22) | |
| Management(25.95) | Musicology(22.07) | Literary History(14.49) | | Genetics(16.30) | |
| | | Literary Theory(23.44) | | Microbiology(27.33) | |
| | | Modern and Contemporary Chinese Literature(24.00) | | Physiology(15.00) | |
| | | Philology and Bibliography(20.00) | | Zoology(11.01) | |
| | | Russian Language and Literature(26.32) | | Chemistry(12.78) | |
| | | Composition(32.00) | | Analytical Chemistry(12.37) | |
| | | Harmony(21.67) | | Electrochemistry(8.56) | |
| | | Instrumentation and Performance(26.15) | | Inorganic Chemistry(17.39) | |
| | | Music History, Education, and Technology(15.86) | | Organic Chemistry(16.37) | |
| | | Musical Forms and Analysis(28.00) | | Physical Chemistry(12.89) | |
| | Business Administration(19.01) | Pitch and Scales(19.64) | | Polymer Chemistry and Physics(5.26) | |
| | | Business and Accounting Management(18.48) | | Radiochemistry(18.33) | |
| | | Tourism Management and Technological Economics Management(20.00) | | Geography(32.33) | Human Geography(54.00) |
| | | Information Management Science(20.00) | | Physical Geography(19.28) | |
| | | Information Management and Communication(44.00) | | Geology(24.05) | Geochemistry(22.00) |
| Medicine(24.54) | Library, Information and Archival Management(30.67) | Library and Archival Science(28.00) | | Mineralogy, Petrology, and Economic Geology(24.79) | |
| | | Management Science and Engineering(20.69) | | Paleontology and Stratigraphy(24.00) | |
| | | Education Economics, Management and Social Security(22.00) | | Principles of Seismic Exploration(20.00) | |
| | | Land Resource Management and Administrative Management(31.37) | | Structural Geology(27.14) | |
| | | Social Medicine and Health Management(36.00) | | Geophysics(20.00) | Solid Earth Geophysics(20.00) |
| | Clinical Medicine(25.12) | Forensic Medicine(34.00) | | Space physics(20.00) | |
| | | Human Anatomy and Histology-Embryology(24.34) | | Advanced Algebra(15.35) | |
| | | Immunology(31.88) | | Combinatorial Mathematics(10.99) | |
| | | Pathogen Biology(36.17) | | Computational Mathematics(28.00) | |
| | | Pathology and Pathophysiology(16.52) | | Cryptography(36.00) | |
| Pharmacy(23.02) | Basic Medicine(27.87) | Radiation Medicine(40.00) | | Discrete Mathematics(8.99) | |
| | | Anesthesiology(24.00) | | Functions of Complex Variables(17.21) | |
| | | Clinical Laboratory Diagnostics(16.00) | | Functions of Real Variables(17.91) | |
| | | Dermatology and Venereology(22.73) | | Fundamental Mathematics(10.15) | |
| | | Emergency Medicine(28.79) | | Fuzzy Mathematics(24.00) | |
| | Pharmacology(23.64) | Geriatric Medicine(24.00) | | Geometry and Topology(16.98) | |
| | | Imaging and Nuclear Medicine(22.39) | | Graph Theory(9.80) | |
| | | Internal Medicine(24.75) | | Group Theory(12.00) | |
| | | Neurology(26.98) | | Mathematical Analysis(7.64) | |
| | | Nursing and Rehabilitation Medicine(22.00) | | Number Theory(7.27) | |
| Public Health and Preventive Medicine(28.08) | Clinical Pharmacy(23.02) | Obstetrics and Gynecology(23.53) | | Numerical Analysis(4.93) | |
| | | Oncology(27.59) | | Ordinary Differential Equations(12.50) | |
| | | Ophthalmology(26.00) | | Polynomials and Series Expansions(8.38) | |
| | | Otorhinolaryngology(26.00) | | Probability and Statistics(18.75) | |
| | | Pediatrics(20.00) | | Special Number Theory(26.00) | |
| | Public Health and Preventive Medicine(28.08) | Psychiatry and Mental Health(44.00) | | Stochastic Processes(22.00) | |
| | | Surgery(22.06) | | Hydrogeology(42.00) | |
| | | Medicinal Chemistry(24.00) | | Marine Biology(64.00) | |
| | | Microbiology and Biochemical Pharmacy(24.00) | | Marine Chemistry(28.00) | |
| | | Pharmaceutical Analysis(16.00) | | Underwater Acoustics(22.00) | |
| Stomatology(18.18) | Pharmacy(23.02) | Pharmaceutics(26.03) | | Physical Oceanography(16.00) | Physical Oceanography(16.00) |
| | | Pharmacology(23.64) | | Physics(16.06) | Acoustics(14.69) |
| | | Epidemiology and Health Statistics(24.10) | | | |
| | | Health Toxicology and Environmental Health(32.50) | | | |
| | | Maternal, Child and Adolescent Health(25.32) | | | |
| | Traditional Chinese Medicine(15.67) | Nutrition and Food Hygiene(32.00) | | | |
| | | Basic Stomatology(24.53) | | | |
| | | Clinical Stomatology(13.92) | | | |
| | | Traditional Chinese Medicine Preservation(13.56) | | | |
| | | Traditional Chinese Medicine Theory(12.22) | | | |
| Military Science(33.17) | Military Science(33.17) | Traditional Chinese Pharmacy(19.33) | | | |
| | | Military Command and Information Systems(46.00) | | | |
| | | Military Logistics and Equipment(27.78) | | | |
| | | Military Management(34.00) | | | |
| Philosophy(26.80) | Philosophy(26.80) | Military Thought and History(25.49) | | | |
| | | Ethics(32.35) | | | |
| | | Logic(12.86) | | | |
| | | Philosophical Aesthetics(20.18) | | | |
| Sociology(23.78) | Sociology(23.78) | Philosophy of Science and Technology(42.00) | | | |
| | | | | | |
| | | | | | |
| Systems Science(32.00) | Systems Science(32.00) | | | | |
| | | | | | |
| Sociology(23.78) | Sociology(23.78) | | | | |
| | | | | | |

Table 71. Continued: Model Scores Across Three Levels of Disciplines: Llama-3.1-8B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|--|--|--------------------|--|---|
| Agronomy(25.98) | Animal Husbandry(26.21) | Animal Nutrition and Feed Science(23.08) | Engineering(19.02) | Geological Resources and Geological Engineering(32.00) | Geological Resources and Geological Engineering(32.00) |
| | | Animal Rearing and Breeding(29.41) | | | Hydraulics and Hydrology(19.12) |
| | Aquaculture(19.64) Crop Science(19.31) | Aquaculture(19.64) | | Hydraulic Engineering(23.39) | Water conservancy and Hydropower Engineering(30.49) |
| | | Crop Science(19.31) | | | Antenna and Radio Communication(12.28) |
| | Forestry(36.64) | Forest Cultivation and Genetic Breeding(39.51) | | Information and Communication Engineering(18.45) | Communication Principles(20.69) |
| | | Landscape Plants and Ornamental Horticulture(32.00) | | | Communication and Information Systems(13.04) |
| | Veterinary Medicine(24.00) | Veterinary Medicine(24.00) | | Optical Fiber Communication(24.00) | Optical Fiber Communication(24.00) |
| | | Economic Statistics(24.00) | | | Signal and Information Processing(21.94) |
| | Economics(20.96) | Finance(17.61) | | Instrument Science and Technology(16.00) | Instrument Science and Technology(16.00) |
| | | Industrial Economics(17.86) | | | Materials Physics and Chemistry(12.56) |
| | | International Trade(18.84) | | Materials Science and Engineering(14.53) | Materials Processing Engineering(18.89) |
| | | Labor Economics(28.38) | | | Manufacturing Automation(15.08) |
| | | National and Defense Economics(28.00) | | Mechanics(14.87) | Mechatronic Engineering(24.00) |
| | | Public Finance(21.67) | | | Fundamentals of Dynamics and Control(12.68) |
| | | Quantitative Economics(16.00) | | | Rigid Body Mechanics(15.03) |
| | | Theoretical Economics(23.33) | | | Solid Mechanics(12.90) |
| | | Economic History(14.00) | | Metallurgical Engineering(26.27) | Theoretical Fluid Mechanics(20.71) |
| | | Political Economy(34.00) | | | Theoretical Mechanics(15.48) |
| Education(25.62) | Education(25.91) | Western Economics(22.00) | | | Iron and Steel Metallurgy(18.10) |
| | | Educational Technology and Principles(21.88) | | Non-ferrous Metallurgy(28.00) | Non-ferrous Metallurgy(28.00) |
| | Physical Education(29.33) | Preschool Education(38.00) | | | Physical Chemistry of Metallurgical Process(30.00) |
| | | Special Education(34.00) | | Mining Engineering(22.00) | Principles of Metallurgy(38.00) |
| | | Theory of Curriculum and Instruction(13.73) | | | Mineral Processing Engineering(14.00) |
| | Psychology(18.39) | Physical Education and Training(30.00) | | | Mining and Safety Engineering(30.00) |
| | | Sports Humanities and Sociology(22.00) | | Naval Architecture and Ocean Engineering(24.64) | Marine Engineering(26.00) |
| | | Sports Science and Medicine(36.00) | | | Ship Mechanics and Design Principles(23.86) |
| | Engineering(19.02) | Psychology(18.39) | | Nuclear Science and Technology(20.56) | Nuclear Energy and Reactor Technology(14.04) |
| | | Aeronautical and Astronautical Science and Technology(15.13) | | | Radiation Protection and Nuclear Technology Applications(28.00) |
| Engineering(19.02) | Agricultural Engineering(20.19) | Agricultural Environment and Soil-Water Engineering(24.07) | | Optical Engineering(17.29) | Applied Optics(12.10) |
| | | Agricultural Mechanization Engineering(16.00) | | | Laser Technology(24.00) |
| | Architecture(20.37) | Architectural Design and Theory(26.00) | | Petroleum and Natural Gas Engineering(26.79) | Optoelectronic Technology(23.88) |
| | | Architectural History(14.52) | | | Theoretical Optics(16.30) |
| | Chemical Engineering and Technology(16.83) | Urban Planning and Design(22.00) | | Power Engineering and Engineering Thermophysics(14.47) | Oil and Gas Field Development and Storage & Transportation Engineering(20.97) |
| | | Chemical Transport Engineering(20.00) | | | Poromechanics and Reservoir Physics(34.00) |
| | Civil Engineering(15.08) | Elements of Chemical Reaction Engineering(11.21) | | | Engineering Fluid Mechanics(23.81) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(18.69) | | | Engineering Thermophysics(15.75) |
| | Computer Science and Technology(21.10) | Mass Transport and Separation Process in Chemical Engineering(18.49) | | Surveying and Mapping Science and Technology(17.86) | Fluid Machinery and Engineering(6.25) |
| | | Civil Infrastructure Engineering(19.72) | | | Heat Transfer(16.28) |
| Engineering(19.02) | Computer Science and Technology(21.10) | Advanced Programming Languages(22.00) | | | Internal Combustion Engineering(14.00) |
| | | Computer Architecture(8.00) | | | Power Machinery and Engineering(15.38) |
| | Control Science and Engineering(18.95) | Computer Networks(13.56) | | Textile Science and Engineering(31.00) | Refrigeration and Cryogenic Engineering(8.00) |
| | | Computer Software and Theory(16.46) | | | Thermal Energy Engineering(11.01) |
| | Electrical Engineering(19.06) | Data Structures(21.21) | | Transportation Engineering(21.12) | Cartography and Geographic Information Engineering(24.00) |
| | | Databases(28.03) | | | Digital Surveying and Remote Sensing Applications(14.71) |
| | Electronic Science and Technology(18.70) | Formal Languages(15.38) | | | Geodesy and Surveying Engineering(16.00) |
| | | Operating Systems(14.12) | | | Textile Chemistry and Dyeing Engineering(22.00) |
| | Environmental Science and Engineering(19.58) | Pattern Recognition(38.00) | | Textile Materials Science(40.00) | Textile Materials Science(40.00) |
| | | Principles of Computer Organization(25.61) | | | Road and Railway Engineering(14.00) |
| Engineering(19.02) | Food Science and Engineering(37.61) | Control Theory and Control Engineering(19.10) | | | Traffic Information Engineering and Control(15.38) |
| | | Guidance, Navigation and Control(25.49) | | | Transportation Planning and Management(30.23) |
| | Forestry Engineering(23.00) | Operations Research and Cybernetics(12.00) | | Vehicle Operation Engineering(20.00) | Vehicle Operation Engineering(20.00) |
| | | Electrical Theory and New Technologies(15.79) | | | Weapon Science and Technology(27.00) |
| | Food Science and Engineering(37.61) | High Voltage and Insulation Technology(13.64) | History(14.84) | Military Chemistry and Pyrotechnics(34.00) | Military Chemistry and Pyrotechnics(34.00) |
| | | Power Electronics and Electrical Drives(25.27) | | | Weapon Systems Science and Engineering(20.00) |
| | Forestry Engineering(23.00) | Power Systems and Automation(18.75) | | Law(24.24) | Archaeology and Museology(17.31) |
| | | Circuits and Systems(23.15) | | | Historical Geography(19.01) |
| | Forestry Engineering(23.00) | Electromagnetic Field and Microwave Technology(15.91) | | | World History(12.85) |
| | | Microelectronics and Solid-State Electronics(14.00) | | Law(24.53) | Civil and Commercial Law(19.49) |
| | Food Science and Engineering(37.61) | Environmental Engineering(13.48) | | | Constitutional and Administrative Law(26.00) |
| | | Environmental Science(26.00) | | | Contract Law(20.00) |
| | Forestry Engineering(23.00) | Environmental and Resource Protection(24.00) | | Political Science(21.54) | Criminal Law(23.28) |
| | | Food Biochemistry(62.00) | | | International Law(24.56) |
| | Forestry Engineering(23.00) | Food Processing and Storage Engineering(16.95) | | | Law and Social Governance(20.00) |
| | | Forest Engineering(18.00) | | | Legal Theory and Legal History(24.00) |
| | | Wood Science and Technology(28.00) | | | Military Law(58.00) |

Table 72. Model Scores Across Three Levels of Disciplines: Mistral-7B-v0.3.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|--|--|------------------------|--|--|
| Literature and Arts(20.11) | Art Studies(23.55) | Broadcasting and Television Art(34.00) | Philosophy(25.94) | Philosophy(25.94) | Religious Studies(36.00) |
| | | Dance Studies(16.00) | | Astronomy(15.06) | Astronomical Observation and Technology(15.00) |
| | | Design Arts(17.74) | | Astrophysics(18.84) | Cosmology(17.95) |
| | | Drama and Opera Studies(21.95) | | Solar System Science(13.64) | Stellar and Interstellar Evolution(10.00) |
| | | Film Studies(22.85) | | Atmospheric Science(21.67) | Atmospheric Physics and Atmospheric Environment(27.54) |
| | Journalism and Communication(16.91) | Fine Arts(21.89) | | Dynamic Meteorology(16.00) | |
| | | Communication and Broadcasting(13.79) | | Meteorology(20.24) | |
| | Language and Literature(17.73) | History and Theory of Journalism and Media Management(22.03) | Biology(19.55) | Biochemistry and Molecular Biology(22.22) | |
| | | Journalism and News Practice(15.56) | | Biophysics(28.00) | |
| | | Classical Chinese Literature(18.00) | | Botany(18.07) | |
| | | French Language and Literature(10.00) | | Cell Biology(21.84) | |
| | | Linguistics and Applied Linguistics(18.00) | | Ecology(18.06) | |
| Management(23.55) | Musicology(19.25) | Literary History(15.94) | | Genetics(20.11) | |
| | | Literary Theory(23.44) | | Microbiology(19.88) | |
| | | Modern and Contemporary Chinese Literature(30.00) | | Physiology(16.67) | |
| | | Philology and Bibliography(10.00) | | Zoology(17.43) | |
| | | Russian Language and Literature(15.79) | | Chemistry(13.57) | |
| | | Composition(12.00) | | Analytical Chemistry(14.65) | |
| | | Harmony(20.00) | | Electrochemistry(12.16) | |
| | | Instrumentation and Performance(23.08) | | Inorganic Chemistry(13.04) | |
| | | Music History, Education, and Technology(15.86) | | Organic Chemistry(17.54) | |
| | | Musical Forms and Analysis(24.00) | | Physical Chemistry(12.46) | |
| | Business Administration(16.20) | Pitch and Scales(25.00) | | Polymer Chemistry and Physics(14.47) | |
| | | Business and Accounting Management(14.13) | | Radiochemistry(13.33) | |
| | | Tourism Management and Technological Economics Management(20.00) | | Geography(32.33) | Human Geography(40.00) |
| | | Library, Information and Archival Management(32.00) | | Physical Geography(27.71) | |
| | | Information Management Science(22.00) | | Geology(21.99) | Geochemistry(32.00) |
| Medicine(22.61) | Management Science and Engineering(18.97) | Information Management and Communication(50.00) | | Mineralogy, Petrology, and Economic Geology(19.83) | |
| | | Library and Archival Science(24.00) | | Paleontology and Stratigraphy(28.00) | |
| | | Management Science and Engineering(18.97) | | Principles of Seismic Exploration(22.00) | |
| | | Public Administration(23.84) | | Structural Geology(14.29) | |
| | | Education Economics, Management and Social Security(20.00) | | Geophysics(17.00) | Solid Earth Geophysics(16.00) |
| | Clinical Medicine(22.25) | Land Resource Management and Administrative Management(29.41) | | Space physics(18.00) | |
| | | Social Medicine and Health Management(22.00) | | Advanced Algebra(21.29) | |
| | | Forensic Medicine(36.00) | | Combinatorial Mathematics(13.09) | |
| | | Human Anatomy and Histology-Embryology(21.69) | | Computational Mathematics(26.00) | |
| | | Immunology(30.43) | | Cryptography(34.00) | |
| Pharmacy(20.86) | Basic Medicine(24.69) | Pathogen Biology(19.15) | | Discrete Mathematics(24.72) | |
| | | Pathology and Pathophysiology(19.13) | | Functions of Complex Variables(13.93) | |
| | | Radiation Medicine(40.00) | | Functions of Real Variables(28.36) | |
| | | Anesthesiology(20.00) | | Fundamental Mathematics(10.15) | |
| | | Clinical Laboratory Diagnostics(20.00) | | Fuzzy Mathematics(30.00) | |
| | Stomatology(19.70) | Dermatology and Venereology(31.82) | | Geometry and Topology(18.11) | |
| | | Emergency Medicine(18.18) | | Graph Theory(25.49) | |
| | | Geriatric Medicine(28.00) | | Group Theory(26.00) | |
| | | Imaging and Nuclear Medicine(23.88) | | Mathematical Analysis(13.89) | |
| | | Internal Medicine(21.78) | | Number Theory(14.09) | |
| Military Science(30.24) | Clinical Medicine(22.25) | Neurology(21.16) | | Numerical Analysis(14.93) | |
| | | Nursing and Rehabilitation Medicine(18.00) | | Ordinary Differential Equations(18.12) | |
| | | Obstetrics and Gynecology(25.49) | | Polynomials and Series Expansions(11.73) | |
| | | Oncology(18.97) | | Probability and Statistics(14.73) | |
| | | Ophthalmology(30.00) | | Special Number Theory(20.00) | |
| | Traditional Chinese Medicine(20.15) | Otorhinolaryngology(18.00) | | Stochastic Processes(26.00) | |
| | | Pediatrics(22.00) | | Hydrogeology(46.00) | |
| | | Psychiatry and Mental Health(22.00) | | Marine Biology(68.00) | |
| | | Surgery(17.65) | | Marine Chemistry(38.00) | |
| | | Medicinal Chemistry(16.00) | | Underwater Acoustics(22.00) | |
| Philosophy(25.94) | Pharmacy(20.86) | Microbiology and Biochemical Pharmacy(26.00) | | Physical Oceanography(16.00) | Physical Oceanography(16.00) |
| | | Pharmaceutical Analysis(20.00) | | Physics(16.20) | Acoustics(18.37) |
| | | Pharmacetics(21.92) | | | |
| | | Pharmacology(20.00) | | | |
| | | Epidemiology and Health Statistics(19.28) | | | |
| | Public Health and Preventive Medicine(25.34) | Health Toxicology and Environmental Health(23.75) | Oceanography(43.50) | | |
| | | Maternal, Child and Adolescent Health(30.38) | | | |
| | | Nutrition and Food Hygiene(30.00) | | | |
| | | Basic Stomatology(26.42) | | | |
| | | Clinical Stomatology(15.19) | | | |
| Sociology(18.88) | Traditional Chinese Medicine(20.15) | Traditional Chinese Health Preservation(8.47) | | | |
| | | Traditional Chinese Medicine Theory(13.33) | | | |
| | | Traditional Chinese Pharmacy(31.09) | | | |
| | | Military Science(30.24) | | | |
| | | Military Command and Information Systems(48.00) | | | |
| | Philosophy(25.94) | Military Logistics and Equipment(22.22) | | | |
| | | Military Management(42.00) | | | |
| | | Military Thought and History(9.80) | | | |
| | | Ethics(19.12) | Systems Science(24.00) | | |
| | | Logic(25.71) | | | |
| Sociology(18.88) | Philosophy(25.94) | Philosophical Aesthetics(20.18) | | | |
| | | Philosophy of Science and Technology(38.00) | | | |
| | | Sociology(18.88) | | | |
| | | Sociology(18.88) | | | |
| | | Sociology(18.88) | | | |

Table 72. Continued: Model Scores Across Three Levels of Disciplines: Mistral-7B-v0.3.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|----------------------------------|--|---|
| Agronomy(20.41) | Animal Husbandry(19.42) | Animal Nutrition and Feed Science(15.38) | Engineering(18.50) | Geological Resources and Geological Engineering(22.00) | Geological Resources and Geological Engineering(22.00) |
| | | Animal Rearing and Breeding(23.53) | | | Hydraulics and Hydrology(19.85) |
| | Aquaculture(12.50) Crop Science(17.24) | Aquaculture(12.50) | | Hydraulic Engineering(20.18) | Water conservancy and Hydropower Engineering(20.73) |
| | | Crop Science(17.24) | | | Antenna and Radio Communication(15.79) |
| | Forestry(26.72) | Forest Cultivation and Genetic Breeding(29.63) | | Information and Communication Engineering(19.84) | Communication Principles(19.83) |
| | | Landscape Plants and Ornamental Horticulture(22.00) | | | Communication and Information Systems(14.49) |
| | Veterinary Medicine(24.00) | Veterinary Medicine(24.00) | | Optical Fiber Communication(18.00) | Optical Fiber Communication(18.00) |
| | | Economic Statistics(18.00) | | | Signal and Information Processing(25.81) |
| | Economics(23.83) | Finance(19.32) | | Instrument Science and Technology(26.00) | Instrument Science and Technology(26.00) |
| | | Industrial Economics(28.57) | | | Materials Physics and Chemistry(16.08) |
| | | International Trade(27.54) | | Materials Science and Engineering(17.99) | Materials Processing Engineering(22.22) |
| | | Labor Economics(21.62) | | | Manufacturing Automation(18.25) |
| | | National and Defense Economics(22.00) | | Mechanics(14.87) | Mechatronic Engineering(8.00) |
| | | Public Finance(25.00) | | | Fundamentals of Dynamics and Control(13.83) |
| | | Quantitative Economics(18.00) | | | Rigid Body Mechanics(11.56) |
| | | Theoretical Economics(31.33) | | | Solid Mechanics(20.43) |
| | | Economic History(22.00) | | | Theoretical Fluid Mechanics(20.71) |
| | | Political Economy(42.00) | | | Theoretical Mechanics(12.26) |
| | | Western Economics(30.00) | | | Iron and Steel Metallurgy(17.14) |
| Education(25.62) | Education(25.10) | Educational Technology and Principles(23.96) | Metallurgical Engineering(26.67) | Non-ferrous Metallurgy(26.00) | Non-ferrous Metallurgy(26.00) |
| | | Preschool Education(40.00) | | | Physical Chemistry of Metallurgical Process(28.00) |
| | Physical Education(29.33) | Special Education(22.00) | | Principles of Metallurgy(46.00) | Principles of Metallurgy(46.00) |
| | | Theory of Curriculum and Instruction(15.69) | | | Mining Engineering(32.00) |
| | Psychology(20.69) | Physical Education and Training(22.00) | | Mineral Processing Engineering(36.00) | Mineral Processing Engineering(36.00) |
| | | Sports Humanities and Sociology(26.00) | | | Mining and Safety Engineering(28.00) |
| | | Sports Science and Medicine(40.00) | | Naval Architecture and Ocean Engineering(20.29) | Naval Architecture and Ocean Engineering(20.29) |
| | | Psychology(20.69) | | | Marine Engineering(12.00) |
| | Engineering(18.50) | Aeronautical and Astronautical Science and Technology(15.97) | | Ship Mechanics and Design Principles(25.00) | Ship Mechanics and Design Principles(25.00) |
| | | Agricultural Engineering(30.77) | | | Nuclear Energy and Reactor Technology(21.05) |
| | | Aeronautical and Astronautical Science and Technology(15.97) | | Nuclear Science and Technology(18.69) | Radiation Protection and Nuclear Technology Applications(16.00) |
| | | Agricultural Environment and Soil-Water Engineering(25.93) | | | Applied Optics(16.13) |
| | | Agricultural Mechanization Engineering(36.00) | | Optical Engineering(13.83) | Laser Technology(4.00) |
| | | Architecture(21.60) | | | Optoelectronic Technology(14.93) |
| | | Architectural Design and Theory(26.00) | | | Theoretical Optics(14.81) |
| | | Architectural History(9.68) | | Petroleum and Natural Gas Engineering(14.29) | Petroleum and Natural Gas Engineering(14.29) |
| | | Urban Planning and Design(32.00) | | | Oil and Gas Field Development and Storage & Transportation Engineering(16.13) |
| Control Science and Engineering(17.37) | Chemical Engineering and Technology(14.63) | Chemical Transport Engineering(22.00) | | Poromechanics and Reservoir Physics(12.00) | Poromechanics and Reservoir Physics(12.00) |
| | | Elements of Chemical Reaction Engineering(11.21) | | | Engineering Fluid Mechanics(16.67) |
| | Civil Engineering(15.08) | Fluid Flow and Heat Transfer in Chemical Engineering(13.08) | | Power Engineering and Engineering Thermophysics(15.50) | Engineering Thermophysics(17.12) |
| | | Mass Transport and Separation Process in Chemical Engineering(15.75) | | | Fluid Machinery and Engineering(6.25) |
| | Computer Science and Technology(20.31) | Bridge and Tunnel Engineering(19.61) | | Heat Transfer(21.71) | Heat Transfer(21.71) |
| | | Geotechnical Engineering(14.53) | | | Internal Combustion Engineering(16.00) |
| | | Structural Engineering(15.79) | | Power Machinery and Engineering(15.38) | Power Machinery and Engineering(15.38) |
| | | Urban Infrastructure Engineering(12.68) | | | Refrigeration and Cryogenic Engineering(18.00) |
| | Electrical Engineering(14.75) | Advanced Programming Languages(24.00) | | Surveying and Mapping Science and Technology(20.83) | Thermal Energy Engineering(9.17) |
| | | Computer Architecture(10.00) | | | Cartography and Geographic Information Engineering(20.00) |
| | | Computer Networks(16.95) | | Textile Science and Engineering(30.00) | Digital Surveying and Remote Sensing Applications(20.59) |
| | | Computer Software and Theory(17.72) | | | Geodesy and Surveying Engineering(22.00) |
| | | Data Structures(21.21) | | Transportation Engineering(20.72) | Textile Chemistry and Dyeing Engineering(22.00) |
| | | Databases(17.83) | | | Textile Materials Science(38.00) |
| | | Formal Languages(26.92) | | Textile Materials Science(38.00) | Road and Railway Engineering(14.00) |
| | | Operating Systems(20.00) | | | Traffic Information Engineering and Control(15.38) |
| | | Pattern Recognition(46.00) | | Weapon Science and Technology(25.00) | Transportation Planning and Management(27.91) |
| | | Principles of Computer Organization(13.41) | | | Vehicle Operation Engineering(22.00) |
| Engineering(18.50) | Control Science and Engineering(17.37) | Control Theory and Control Engineering(16.85) | History(13.95) | Military Chemistry and Pyrotechnics(24.00) | Military Chemistry and Pyrotechnics(24.00) |
| | | Guidance, Navigation and Control(13.73) | | | Weapon Systems Science and Engineering(26.00) |
| | Electrical Engineering(14.75) | Operations Research and Cybernetics(22.00) | | Archaeology and Museology(14.42) | Archaeology and Museology(14.42) |
| | | Electrical Theory and New Technologies(12.11) | | | Historical Geography(13.38) |
| | Electronic Science and Technology(17.89) | High Voltage and Insulation Technology(14.77) | | World History(14.02) | World History(14.02) |
| | | Power Electronics and Electrical Drives(15.38) | | | |
| | Environmental Science and Engineering(16.40) | Power Systems and Automation(18.75) | | Law(25.61) | Civil and Commercial Law(15.25) |
| | | Circuits and Systems(19.44) | | | Constitutional and Administrative Law(26.00) |
| | Food Science and Engineering(37.61) | Electromagnetic Field and Microwave Technology(14.77) | | Law(26.06) | Contract Law(24.00) |
| | | Microelectronics and Solid-State Electronics(20.00) | | | Criminal Law(25.00) |
| | Forestry Engineering(28.00) | Environmental Engineering(8.99) | | Political Science(21.54) | International Law(19.30) |
| | | Environmental Science(30.00) | | | Law and Social Governance(28.00) |
| | | Environmental and Resource Protection(16.00) | | | Legal Theory and Legal History(32.00) |
| | Forestry Engineering(28.00) | Food Biochemistry(54.00) | | | Military Law(56.00) |
| | | Food Processing and Storage Engineering(23.73) | | | Procedural Law(26.00) |
| | | Forest Engineering(26.00) | | | Political Science(21.54) |
| | | Wood Science and Technology(30.00) | | | - |

Table 73. Model Scores Across Three Levels of Disciplines: Yi-1.5-6B-Chat.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|-------------------|---|--|
| Literature and Arts(18.79) | Art Studies(17.08) | Broadcasting and Television Art(26.00) | Philosophy(25.36) | Philosophy(25.36) | Religious Studies(22.00) |
| | | Dance Studies(14.00) | | Astronomy(14.32) | Astronomical Observation and Technology(16.00) |
| | | Design Arts(14.52) | | Astrophysics(10.14) | Cosmology(17.95) |
| | | Drama and Opera Studies(15.85) | | Solar System Science(10.23) | Stellar and Interstellar Evolution(17.14) |
| | | Film Studies(20.89) | | Atmospheric Science(19.70) | Atmospheric Physics and Atmospheric Environment(20.29) |
| | Journalism and Communication(15.46) | Fine Arts(13.93) | | Dynamic Meteorology(22.00) | |
| | | Communication and Broadcasting(15.52) | | Biology(18.93) | Meteorology(17.86) |
| | Language and Literature(18.86) | History and Theory of Journalism and Media Management(15.25) | | Biochemistry and Molecular Biology(18.18) | Biophysics(40.00) |
| | | Journalism and News Practice(15.56) | | Botany(20.48) | Botany(20.48) |
| | | Classical Chinese Literature(24.00) | | Cell Biology(24.14) | Cell Biology(24.14) |
| | | French Language and Literature(24.00) | | Ecology(15.97) | Ecology(15.97) |
| | | Linguistics and Applied Linguistics(14.00) | | Genetics(15.76) | Genetics(15.76) |
| Management(24.15) | Business Administration(21.83) | Literary History(15.94) | | Microbiology(18.01) | Microbiology(18.01) |
| | | Literary Theory(17.19) | | Physiology(20.00) | Physiology(20.00) |
| | | Modern and Contemporary Chinese Literature(14.00) | | Zoology(12.84) | Zoology(12.84) |
| | | Philology and Bibliography(24.00) | | Chemistry(13.45) | Analytical Chemistry(14.65) |
| | | Russian Language and Literature(19.30) | | Electrochemistry(13.51) | Electrochemistry(13.51) |
| | Musicology(22.77) | Composition(24.00) | | Inorganic Chemistry(13.77) | Inorganic Chemistry(13.77) |
| | | Harmony(18.33) | | Organic Chemistry(14.04) | Organic Chemistry(14.04) |
| | | Instrumentation and Performance(35.38) | | Physical Chemistry(13.03) | Physical Chemistry(13.03) |
| | | Music History, Education, and Technology(17.24) | | Polymer Chemistry and Physics(11.84) | Polymer Chemistry and Physics(11.84) |
| | | Musical Forms and Analysis(30.00) | | Radiochemistry(10.00) | Radiochemistry(10.00) |
| Medicine(21.89) | Clinical Medicine(22.50) | Pitch and Scales(19.64) | | Geography(22.56) | Human Geography(30.00) |
| | | Business and Accounting Management(21.74) | | Geology(21.11) | Physical Geography(18.07) |
| | | Tourism Management and Technological Economics Management(22.00) | | Geology(21.11) | Geochemistry(20.00) |
| | | Information Management Science(12.00) | | Geology(21.11) | Mineralogy, Petrology, and Economic Geology(21.49) |
| | | Information Management and Communication(50.00) | | Geology(21.11) | Paleontology and Stratigraphy(26.00) |
| | Public Administration(23.84) | Library and Archival Science(14.00) | | Geology(21.11) | Principles of Seismic Exploration(16.00) |
| | | Management Science and Engineering(27.59) | | Geology(21.11) | Structural Geology(21.43) |
| | | Education Economics, Management and Social Security(24.00) | | Geophysics(21.00) | Solid Earth Geophysics(28.00) |
| | | Land Resource Management and Administrative Management(25.49) | | Mathematics(19.34) | Space physics(14.00) |
| | | Social Medicine and Health Management(22.00) | | Mathematics(19.34) | Advanced Algebra(16.34) |
| Pharmacy(21.58) | Clinical Medicine(22.50) | Forensic Medicine(22.00) | | Mathematics(19.34) | Combinatorial Mathematics(14.14) |
| | | Human Anatomy and Histology-Embryology(17.99) | | Mathematics(19.34) | Computational Mathematics(22.00) |
| | | Immunology(30.43) | | Mathematics(19.34) | Cryptography(38.00) |
| | | Pathogen Biology(24.47) | | Mathematics(19.34) | Discrete Mathematics(19.10) |
| | | Pathology and Pathophysiology(19.13) | | Mathematics(19.34) | Functions of Complex Variables(20.49) |
| | Pharmacy(21.58) | Radiation Medicine(34.00) | | Mathematics(19.34) | Functions of Real Variables(29.85) |
| | | Anesthesiology(22.00) | | Mathematics(19.34) | Fundamental Mathematics(19.80) |
| | | Clinical Laboratory Diagnostics(28.00) | | Mathematics(19.34) | Fuzzy Mathematics(20.00) |
| | | Dermatology and Venereology(27.27) | | Mathematics(19.34) | Geometry and Topology(15.47) |
| | | Emergency Medicine(25.76) | | Mathematics(19.34) | Graph Theory(27.45) |
| Public Health and Preventive Medicine(21.58) | Clinical Medicine(22.50) | Geriatric Medicine(30.00) | | Mathematics(19.34) | Group Theory(32.00) |
| | | Imaging and Nuclear Medicine(5.97) | | Oceanography(38.50) | Mathematical Analysis(16.67) |
| | | Internal Medicine(23.27) | | Oceanography(38.50) | Number Theory(12.73) |
| | | Neurology(13.76) | | Oceanography(38.50) | Numerical Analysis(25.37) |
| | | Nursing and Rehabilitation Medicine(30.00) | | Oceanography(38.50) | Ordinary Differential Equations(18.75) |
| | Public Health and Preventive Medicine(21.58) | Obstetrics and Gynecology(23.53) | | Oceanography(38.50) | Polynomials and Series Expansions(16.76) |
| | | Oncology(25.86) | | Oceanography(38.50) | Probability and Statistics(23.21) |
| | | Ophthalmology(28.00) | | Oceanography(38.50) | Special Number Theory(22.00) |
| | | Otorhinolaryngology(18.00) | | Oceanography(38.50) | Stochastic Processes(38.00) |
| | | Pediatrics(20.00) | | Oceanography(38.50) | Hydrogeology(46.00) |
| Traditional Chinese Medicine(19.40) | Stomatology(19.70) | Psychiatry and Mental Health(40.00) | | Oceanography(38.50) | Marine Biology(56.00) |
| | | Surgery(22.06) | | Oceanography(38.50) | Marine Chemistry(40.00) |
| | | Medicinal Chemistry(24.00) | | Oceanography(38.50) | Underwater Acoustics(12.00) |
| | | Microbiology and Biochemical Pharmacy(14.00) | | Oceanography(38.50) | Physical Oceanography(18.00) |
| | | Pharmaceutical Analysis(36.00) | | Physics(15.99) | Acoustics(16.33) |
| | Traditional Chinese Medicine(19.40) | Pharmacetics(19.18) | | Physics(15.99) | Atomic and Molecular Physics(15.24) |
| | | Pharmacology(16.36) | | Physics(15.99) | Electrodynamics(17.84) |
| | | Epidemiology and Health Statistics(31.33) | | Physics(15.99) | Fluid Physics(16.42) |
| | | Health Toxicology and Environmental Health(16.25) | | Physics(15.99) | Particle and Nuclear Physics(16.89) |
| | | Maternal, Child and Adolescent Health(15.19) | | Physics(15.99) | Polymer Physics(15.60) |
| Military Science(29.27) | Military Science(29.27) | Nutrition and Food Hygiene(24.00) | | Physics(15.99) | Quantum Mechanics(16.99) |
| | | Basic Stomatology(22.64) | | Physics(15.99) | Relativity(17.72) |
| | | Clinical Stomatology(17.72) | | Physics(15.99) | Semiconductor Physics(6.56) |
| | | Traditional Chinese Health Preservation(25.42) | | Physics(15.99) | Solid State Physics(14.29) |
| | | Traditional Chinese Medicine Theory(17.78) | | Physics(15.99) | Statistical Mechanics(24.00) |
| | Philosophy(25.36) | Traditional Chinese Pharmacy(17.65) | | Physics(15.99) | Subatomic and Atomic Physics(15.69) |
| | | Military Command and Information Systems(28.00) | | Physics(15.99) | Thermodynamics(19.53) |
| | | Military Logistics and Equipment(29.63) | | Physics(15.99) | Thermodynamics and Statistical Physics(12.45) |
| | | Military Management(46.00) | | Physics(15.99) | Systems Science(24.00) |
| | | Military Thought and History(13.73) | | Sociology(23.78) | Sociology(23.78) |
| Philosophy(25.36) | Philosophy(25.36) | Ethics(20.59) | | Sociology(23.78) | Demography and Anthropology(24.00) |
| | | Logic(17.14) | | Sociology(23.78) | Social and Folklore Studies(23.66) |
| | | Philosophical Aesthetics(30.28) | | | |
| | | Philosophy of Science and Technology(36.00) | | | |

Table 73. Continued: Model Scores Across Three Levels of Disciplines: Yi-1.5-6B-Chat.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|--|---|
| Agronomy(22.27) | Animal Husbandry(26.21) | Animal Nutrition and Feed Science(30.77) | Engineering(17.64) | Geological Resources and Geological Engineering(22.00) | Geological Resources and Geological Engineering(22.00) |
| | | Animal Rearing and Breeding(21.57) | | Hydraulic Engineering(17.43) | Hydraulics and Hydrology(17.65) |
| | Aquaculture(14.29) | Aquaculture(14.29) | | | Water conservancy and Hydropower Engineering(17.07) |
| | Crop Science(16.55) | Crop Science(16.55) | | Information and Communication Engineering(18.25) | Antenna and Radio Communication(10.53) |
| | Forestry(26.72) | Forest Cultivation and Genetic Breeding(27.16) | | | Communication Principles(20.69) |
| | | Landscape Plants and Ornamental Horticulture(26.00) | | | Communication and Information Systems(21.74) |
| | Veterinary Medicine(28.00) | Veterinary Medicine(28.00) | | | Optical Fiber Communication(30.00) |
| | Economics(22.57) | Economic Statistics(22.00) | | | Signal and Information Processing(16.77) |
| | Applied Economics(21.99) | Finance(20.45) | | Instrument Science and Technology(32.00) | Instrument Science and Technology(32.00) |
| Education(27.27) | | Industrial Economics(23.81) | | Materials Science and Engineering(10.38) | Materials Physics and Chemistry(11.56) |
| | | International Trade(21.74) | | | Materials Processing Engineering(7.78) |
| | | Labor Economics(20.27) | | Mechanical Engineering(18.18) | Manufacturing Automation(16.67) |
| | | National and Defense Economics(30.00) | | Mechanics(13.66) | Mechatronic Engineering(22.00) |
| | | Public Finance(25.83) | | | Fundamentals of Dynamics and Control(12.97) |
| | | Quantitative Economics(16.00) | | | Rigid Body Mechanics(13.29) |
| | Theoretical Economics(25.33) | Economic History(26.00) | | | Solid Mechanics(9.68) |
| | | Political Economy(32.00) | | | Theoretical Fluid Mechanics(17.14) |
| | | Western Economics(18.00) | | | Theoretical Mechanics(14.84) |
| | Psychology(16.09) | Psychology(16.09) | | Metallurgical Engineering(25.88) | Iron and Steel Metallurgy(16.19) |
| Engineering(17.64) | Aeronautical and Astronautical Science and Technology(15.13) | Aeronautical and Astronautical Science and Technology(15.13) | | | Non-ferrous Metallurgy(36.00) |
| | Agricultural Engineering(27.88) | Agricultural Environment and Soil-Water Engineering(33.33) | | | Physical Chemistry of Metallurgical Process(28.00) |
| | | Agricultural Mechanization Engineering(22.00) | | | Principles of Metallurgy(34.00) |
| | Architecture(24.07) | Architectural Design and Theory(28.00) | | Mining Engineering(17.00) | Mineral Processing Engineering(14.00) |
| | | Architectural History(16.13) | | | Mining and Safety Engineering(20.00) |
| | | Urban Planning and Design(30.00) | | Naval Architecture and Ocean Engineering(18.12) | Marine Engineering(20.00) |
| | Chemical Engineering and Technology(11.22) | Chemical Transport Engineering(10.00) | | | Ship Mechanics and Design Principles(17.05) |
| | | Elements of Chemical Reaction Engineering(10.28) | | | Nuclear Energy and Reactor Technology(8.77) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(9.35) | | | Radiation Protection and Nuclear Technology Applications(14.00) |
| | | Mass Transport and Separation Process in Chemical Engineering(13.70) | | | Optical Engineering(14.10) Applied Optics(13.71) |
| Civil Engineering(14.80) | | Bridge and Tunnel Engineering(19.61) | | | Laser Technology(20.00) |
| | | Geotechnical Engineering(7.26) | | | Optoelectronic Technology(13.43) |
| | | Structural Engineering(26.32) | | | Theoretical Optics(12.59) |
| | | Urban Infrastructure Engineering(21.13) | | Petroleum and Natural Gas Engineering(19.64) | Oil and Gas Field Development and Storage & Transportation Engineering(16.13) |
| | Computer Science and Technology(22.02) | Advanced Programming Languages(22.00) | | | Poromechanics and Reservoir Physics(24.00) |
| | | Computer Architecture(22.00) | | | Engineering Fluid Mechanics(11.90) |
| | | Computer Networks(16.95) | | | Engineering Thermophysics(12.72) |
| | | Computer Software and Theory(29.11) | | | Engineering Thermophysics(11.64) |
| | | Data Structures(12.12) | | | Fluid Machinery and Engineering(7.81) |
| | | Databases(29.30) | | | Heat Transfer(14.73) |
| Control Science and Engineering(18.95) | | Formal Languages(15.38) | | | Internal Combustion Engineering(18.00) |
| | | Operating Systems(15.29) | | | Power Machinery and Engineering(11.54) |
| | | Pattern Recognition(42.00) | | | Refrigeration and Cryogenic Engineering(20.00) |
| | | Principles of Computer Organization(15.85) | | | Thermal Energy Engineering(10.09) |
| | | Control Theory and Control Engineering(17.98) | | | Cartography and Geographic Information Engineering(28.00) |
| | | Guidance, Navigation and Control(17.65) | | | Digital Surveying and Remote Sensing Applications(17.65) |
| | | Operations Research and Cybernetics(22.00) | | | Geodesy and Surveying Engineering(14.00) |
| | | Electrical Engineering(17.45) | | | Textile Chemistry and Dyeing Engineering(20.00) |
| | | Electrical Theory and New Technologies(18.95) | | | Textile Materials Science(36.00) |
| | | High Voltage and Insulation Technology(18.18) | | | Transportation Engineering(25.90) |
| Electrical Engineering(17.45) | | Power Electronics and Electrical Drives(16.48) | | | Road and Railway Engineering(14.00) |
| | | Power Systems and Automation(15.62) | | | Traffic Information Engineering and Control(20.00) |
| | Electronic Science and Technology(15.45) | Circuits and Systems(17.59) | | | Transportation Planning and Management(34.88) |
| | | Electromagnetic Field and Microwave Technology(7.95) | | | Vehicle Operation Engineering(30.00) |
| | | Microelectronics and Solid-State Electronics(24.00) | | | Weapon Science and Technology(22.00) |
| | Environmental Science and Engineering(19.58) | Environmental Engineering(6.74) | | | Military Chemistry and Pyrotechnics(28.00) |
| | | Environmental Science(44.00) | | | Weapon Systems Science and Engineering(16.00) |
| | | Environmental and Resource Protection(18.00) | | | Archaeology and Museology(17.31) |
| | Food Science and Engineering(30.28) | Food Biochemistry(52.00) | | | Historical Geography(16.20) |
| | | Food Processing and Storage Engineering(11.86) | | | World History(16.36) |
| Engineering(17.64) | Forestry Engineering(25.00) | Forest Engineering(32.00) | | | Civil and Commercial Law(20.34) |
| | | Wood Science and Technology(18.00) | | | Constitutional and Administrative Law(26.00) |
| | | | History(16.47) | History(16.47) | Contract Law(24.00) |
| | | | | | Criminal Law(34.48) |
| | | | Law(26.37) | Law(27.41) | International Law(22.81) |
| | | | | | Law and Social Governance(28.00) |
| | | | | | Legal Theory and Legal History(26.00) |
| | | | | | Military Law(52.00) |
| | | | | Political Science(16.92) | Procedural Law(14.00) |
| | | | | | Political Science(16.92) |

Table 74. Model Scores Across Three Levels of Disciplines: Qwen2.5-1.5B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|--|--|
| Literature and Arts(17.84) | Art Studies(17.74) | Broadcasting and Television Art(34.00) | Philosophy(27.67) | Philosophy(27.67) | Religious Studies(36.00) |
| | | Dance Studies(10.00) | | Astronomy(14.32) | Astronomical Observation and Technology(12.00) |
| | | Design Arts(14.52) | | Astrophysics(15.94) | Cosmology(14.10) |
| | | Drama and Opera Studies(15.85) | | Solar System Science(13.64) | Stellar and Interstellar Evolution(17.14) |
| | | Film Studies(21.52) | | Atmospheric Science(21.67) | Atmospheric Physics and Atmospheric Environment(21.74) |
| | Journalism and Communication(11.59) | Fine Arts(14.43) | | Dynamic Meteorology(20.00) | |
| | | Communication and Broadcasting(5.17) | | Meteorology(22.62) | |
| | Language and Literature(18.18) | History and Theory of Journalism and Media Management(20.34) | Biology(17.86) | Biochemistry and Molecular Biology(19.19) | |
| | | Journalism and News Practice(10.00) | | Biophysics(24.00) | |
| | | Classical Chinese Literature(14.00) | | Botany(17.47) | |
| | | French Language and Literature(20.00) | | Cell Biology(17.24) | |
| | | Linguistics and Applied Linguistics(16.00) | | Ecology(15.97) | |
| Management(24.95) | Musicology(20.66) | Literary History(15.94) | | Genetics(16.85) | |
| | | Literary Theory(21.88) | | Microbiology(22.36) | |
| | | Modern and Contemporary Chinese Literature(28.00) | | Physiology(17.50) | |
| | | Philology and Bibliography(16.00) | | Zoology(12.84) | |
| | | Russian Language and Literature(14.04) | | Chemistry(12.89) | |
| | | Composition(28.00) | | Analytical Chemistry(13.89) | |
| | | Harmony(18.33) | | Electrochemistry(12.16) | |
| | | Instrumentation and Performance(24.62) | | Inorganic Chemistry(13.04) | |
| | | Music History, Education, and Technology(13.79) | | Organic Chemistry(16.37) | |
| | | Musical Forms and Analysis(24.00) | | Physical Chemistry(11.33) | |
| | Business Administration(21.13) | Pitch and Scales(26.79) | | Polymer Chemistry and Physics(13.16) | |
| | | Business and Accounting Management(17.39) | | Radiochemistry(16.67) | |
| | | Tourism Management and Technological Economics Management(28.00) | | Geography(22.56) | Human Geography(36.00) |
| | | Information Management Science(18.00) | | Physical Geography(14.46) | |
| | | Information Management and Communication(50.00) | | Geology(21.99) | Geochemistry(34.00) |
| Medicine(22.58) | Library, Information and Archival Management(34.00) | Library and Archival Science(34.00) | | Mineralogy, Petrology, and Economic Geology(23.97) | |
| | | Management Science and Engineering(18.97) | | Paleontology and Stratigraphy(14.00) | |
| | | Education Economics, Management and Social Security(16.00) | | Principles of Seismic Exploration(20.00) | |
| | | Land Resource Management and Administrative Management(25.49) | | Structural Geology(17.14) | |
| | | Social Medicine and Health Management(24.00) | | Geophysics(16.00) | Solid Earth Geophysics(20.00) |
| | Clinical Medicine(23.40) | Forensic Medicine(28.00) | | Space physics(12.00) | |
| | | Human Anatomy and Histology-Embryology(16.93) | | Advanced Algebra(20.79) | |
| | | Immunology(30.43) | | Combinatorial Mathematics(12.04) | |
| | | Pathogen Biology(22.34) | | Computational Mathematics(20.00) | |
| | | Pathology and Pathophysiology(20.87) | | Cryptography(32.00) | |
| Pharmacy(20.14) | Radiation Medicine(46.00) | Radiation Medicine(46.00) | | Discrete Mathematics(7.87) | |
| | | Anesthesiology(26.00) | | Functions of Complex Variables(22.13) | |
| | | Clinical Laboratory Diagnostics(18.00) | | Functions of Real Variables(22.39) | |
| | | Dermatology and Venereology(22.73) | | Fundamental Mathematics(13.71) | |
| | | Emergency Medicine(22.73) | | Fuzzy Mathematics(18.00) | |
| | Public Administration(21.85) | Geriatric Medicine(30.00) | | Geometry and Topology(14.34) | |
| | | Imaging and Nuclear Medicine(17.91) | | Graph Theory(15.69) | |
| | | Internal Medicine(25.74) | | Group Theory(14.00) | |
| | | Neurology(20.11) | | Mathematical Analysis(21.53) | |
| | | Nursing and Rehabilitation Medicine(16.00) | | Number Theory(15.91) | |
| Public Health and Preventive Medicine(25.68) | Obstetrics and Gynecology(29.41) | Obstetrics and Gynecology(29.41) | | Numerical Analysis(14.93) | |
| | | Oncology(18.97) | | Ordinary Differential Equations(20.00) | |
| | | Ophthalmology(26.00) | | Polynomials and Series Expansions(17.32) | |
| | | Otorhinolaryngology(20.00) | | Probability and Statistics(21.43) | |
| | | Pediatrics(18.00) | | Special Number Theory(18.00) | |
| | Health Toxicology and Environmental Health(17.50) | Psychiatry and Mental Health(36.00) | | Stochastic Processes(26.00) | |
| | | Surgery(25.00) | | Hydrogeology(50.00) | |
| | | Medicinal Chemistry(18.00) | | Marine Biology(54.00) | |
| | | Microbiology and Biochemical Pharmacy(24.00) | | Marine Chemistry(34.00) | |
| | | Pharmaceutical Analysis(22.00) | | Underwater Acoustics(14.00) | |
| Stomatology(15.91) | Pharmacuetics(17.81) | Pharmacuetics(17.81) | | Physical Oceanography(18.00) | |
| | | Pharmacology(20.00) | | Physics(15.43) | |
| | | Epidemiology and Health Statistics(25.30) | | Atomic and Molecular Physics(15.71) | |
| | | Health Toxicology and Environmental Health(17.50) | | Electrodynamics(15.09) | |
| | | Maternal, Child and Adolescent Health(24.05) | | Fluid Physics(15.67) | |
| | Traditional Chinese Medicine(18.66) | Nutrition and Food Hygiene(42.00) | | Particle and Nuclear Physics(13.78) | |
| | | Basic Stomatology(24.53) | | Polymer Physics(17.43) | |
| | | Clinical Stomatology(10.13) | | Quantum Mechanics(22.33) | |
| | | Traditional Chinese Health Preservation(22.03) | | Relativity(11.39) | |
| | | Traditional Chinese Medicine Theory(17.78) | | Semiconductor Physics(18.03) | |
| Military Science(25.37) | Military Science(25.37) | Traditional Chinese Pharmacy(17.65) | | Solid State Physics(16.33) | |
| | | Military Command and Information Systems(38.00) | | Statistical Mechanics(10.00) | |
| | | Military Logistics and Equipment(20.37) | | Subatomic and Atomic Physics(13.73) | |
| | | Military Management(26.00) | | Thermodynamics(19.53) | |
| | | Military Thought and History(17.65) | | Thermodynamics and Statistical Physics(13.21) | |
| Philosophy(27.67) | Philosophy(27.67) | Ethics(30.88) | | Systems Science(28.00) | |
| | | Logic(17.14) | | Sociology(19.58) | |
| | | Philosophical Aesthetics(22.02) | | Sociology(19.58) | Demography and Anthropology(18.00) |
| | | Philosophy of Science and Technology(42.00) | | Sociology(19.58) | Social and Folklore Studies(20.43) |

Table 74. Continued: Model Scores Across Three Levels of Disciplines: Qwen2.5-1.5B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|--|--|--------------------|--|---|
| Agronomy(20.82) | Animal Husbandry(25.24) | Animal Nutrition and Feed Science(30.77) | Engineering(18.18) | Geological Resources and Geological Engineering(24.00) | Geological Resources and Geological Engineering(24.00) |
| | | Animal Rearing and Breeding(19.61) | | | Hydraulics and Hydrology(16.18) |
| | Aquaculture(25.00) | Aquaculture(25.00) | | | Water conservancy and Hydropower Engineering(20.73) |
| | | Crop Science(14.48) | | | Antenna and Radio Communication(14.04) |
| | Forestry(21.37) | Forest Cultivation and Genetic Breeding(20.99) | | | Communication Principles(14.66) |
| | | Landscape Plants and Ornamental Horticulture(22.00) | | | Communication and Information Systems(17.39) |
| | Veterinary Medicine(24.00) | Veterinary Medicine(24.00) | | | Optical Fiber Communication(16.00) |
| | | Economic Statistics(24.00) | | | Signal and Information Processing(19.35) |
| | Economics(22.68) | Finance(27.27) | | | Instrument Science and Technology(22.00) |
| | | Industrial Economics(19.05) | | | Materials Physics and Chemistry(15.08) |
| | | International Trade(10.14) | | | Materials Processing Engineering(11.11) |
| | | Labor Economics(18.92) | | | Manufacturing Automation(20.63) |
| | | National and Defense Economics(28.00) | | | Mechatronic Engineering(22.00) |
| | | Public Finance(23.33) | | | Fundamentals of Dynamics and Control(13.83) |
| | | Quantitative Economics(23.00) | | | Rigid Body Mechanics(13.87) |
| | | Theoretical Economics(24.00) | | | Solid Mechanics(11.83) |
| | | Economic History(24.00) | | | Theoretical Fluid Mechanics(16.43) |
| | | Political Economy(30.00) | | | Theoretical Mechanics(14.84) |
| | | Western Economics(18.00) | | | Iron and Steel Metallurgy(18.10) |
| Education(25.21) | Education(25.10) | Educational Technology and Principles(22.92) | | | Non-ferrous Metallurgy(26.00) |
| | | Preschool Education(30.00) | | | Physical Chemistry of Metallurgical Process(20.00) |
| | Physical Education(28.67) | Special Education(38.00) | | | Principles of Metallurgy(34.00) |
| | | Theory of Curriculum and Instruction(11.76) | | | Mining Engineering(20.00) |
| | Psychology(19.54) | Physical Education and Training(20.00) | | | Mineral Processing Engineering(18.00) |
| | | Sports Humanities and Sociology(28.00) | | | Mining and Safety Engineering(22.00) |
| | | Sports Science and Medicine(38.00) | | | Naval Architecture and Ocean Engineering(18.84) |
| | Psychology(19.54) | Psychology(19.54) | | | Marine Engineering(6.00) |
| | | Aeronautical and Astronautical Science and Technology(15.97) | | | Ship Mechanics and Design Principles(26.14) |
| Engineering(18.18) | Agricultural Engineering(26.92) | Agricultural Environment and Soil-Water Engineering(37.04) | | | Nuclear Energy and Reactor Technology(10.53) |
| | | Agricultural Mechanization Engineering(16.00) | | | Radiation Protection and Nuclear Technology Applications(28.00) |
| | Architecture(19.75) | Architectural Design and Theory(24.00) | | | Optical Engineering(17.55) |
| | | Architectural History(19.35) | | | Applied Optics(21.77) |
| | Chemical Engineering and Technology(12.20) | Urban Planning and Design(16.00) | | | Laser Technology(14.00) |
| | | Chemical Transport Engineering(6.00) | | | Optoelectronic Technology(11.94) |
| | Civil Engineering(16.76) | Elements of Chemical Reaction Engineering(7.48) | | | Theoretical Optics(17.78) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(14.02) | | | Petroleum and Natural Gas Engineering(16.07) |
| | Computer Science and Technology(22.67) | Mass Transport and Separation Process in Chemical Engineering(16.44) | | | Oil and Gas Field Development and Storage & Transportation Engineering(17.74) |
| | | Bridge and Tunnel Engineering(25.49) | | | Poromechanics and Reservoir Physics(14.00) |
| Engineering(18.18) | Control Science and Engineering(18.42) | Geotechnical Engineering(13.97) | | | Engineering Fluid Mechanics(14.29) |
| | | Structural Engineering(15.79) | | | Engineering Thermophysics(14.91) |
| | Electrical Engineering(15.83) | Urban Infrastructure Engineering(18.31) | | | Engineering Thermophysics(17.12) |
| | | Civil Engineering(16.76) | | | Fluid Machinery and Engineering(9.38) |
| | Electronic Science and Technology(16.26) | Advanced Programming Languages(16.00) | | | Heat Transfer(10.85) |
| | | Computer Architecture(18.00) | | | Internal Combustion Engineering(22.00) |
| | Environmental Science and Engineering(20.11) | Computer Networks(23.73) | | | Power Machinery and Engineering(11.54) |
| | | Computer Software and Theory(22.78) | | | Refrigeration and Cryogenic Engineering(16.00) |
| | Food Science and Engineering(40.37) | Data Structures(20.20) | | | Thermal Energy Engineering(18.35) |
| | | Databases(24.20) | | | Cartography and Geographic Information Engineering(34.00) |
| | Forestry Engineering(25.00) | Formal Languages(15.38) | | | Digital Surveying and Remote Sensing Applications(22.06) |
| | | Operating Systems(24.71) | | | Geodesy and Surveying Engineering(18.00) |
| Engineering(18.18) | Food Science and Technology(25.00) | Pattern Recognition(42.00) | | | Textile Chemistry and Dyeing Engineering(26.00) |
| | | Principles of Computer Organization(19.51) | | | Textile Materials Science(30.00) |
| | History(16.91) | Control Theory and Control Engineering(15.73) | | | Transportation Engineering(19.52) |
| | | Guidance, Navigation and Control(15.69) | | | Road and Railway Engineering(0.00) |
| | Law(22.10) | Operations Research and Cybernetics(26.00) | | | Traffic Information Engineering and Control(20.00) |
| | | Electrical Theory and New Technologies(13.68) | | | Transportation Planning and Management(25.58) |
| | Law(22.10) | High Voltage and Insulation Technology(13.64) | | | Vehicle Operation Engineering(28.00) |
| | | Power Electronics and Electrical Drives(18.68) | | | Weapon Science and Technology(23.00) |
| | Law(22.10) | Power Systems and Automation(16.67) | | | Military Chemistry and Pyrotechnics(22.00) |
| | | Circuits and Systems(25.00) | | | Weapon Systems Science and Engineering(24.00) |
| Engineering(18.18) | Microelectronics and Solid-State Electronics(6.00) | Electromagnetic Field and Microwave Technology(11.36) | | | Archaeology and Museology(26.92) |
| | | Microelectronics and Solid-State Electronics(6.00) | | | Historical Geography(14.08) |
| | Environmental Science and Engineering(20.11) | Environmental Engineering(15.73) | | | World History(15.42) |
| | | Environmental Science(28.00) | | | Civil and Commercial Law(19.49) |
| | Food Processing and Storage Engineering(23.73) | Environmental and Resource Protection(20.00) | | | Constitutional and Administrative Law(18.00) |
| | | Food Biochemistry(60.00) | | | Contract Law(20.00) |
| | Food Science and Technology(20.00) | Food Engineering(30.00) | | | Criminal Law(22.41) |
| | | Wood Science and Technology(20.00) | | | International Law(24.56) |
| | History(16.91) | - | | | Law and Social Governance(16.00) |
| | | - | | | Legal Theory and Legal History(20.00) |
| | Law(22.10) | - | | | Military Law(56.00) |
| | | - | | | Procedural Law(16.00) |
| | Political Science(13.85) | - | | | Political Science(13.85) |
| | | - | | | - |

Table 75. Model Scores Across Three Levels of Disciplines: OLMo-2-1124-13B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|-------------------|--|--|
| Literature and Arts(19.57) | Art Studies(19.07) | Broadcasting and Television Art(18.00) | Philosophy(27.38) | Philosophy(27.38) | Religious Studies(38.00) |
| | | Dance Studies(10.00) | | Astronomy(13.83) | Astronomical Observation and Technology(13.00) |
| | | Design Arts(19.35) | | Astrophysics(15.94) | Cosmology(15.38) |
| | | Drama and Opera Studies(21.95) | | Solar System Science(11.36) | Stellar and Interstellar Evolution(14.29) |
| | | Film Studies(20.89) | | Atmospheric Science(21.67) | Atmospheric Physics and Atmospheric Environment(24.64) |
| | Journalism and Communication(15.94) | Fine Arts(18.91) | | | Dynamic Meteorology(16.00) |
| | | Communication and Broadcasting(22.41) | | | Meteorology(22.62) |
| | | History and Theory of Journalism and Media Management(13.56) | | | Biochemistry and Molecular Biology(21.21) |
| | | Journalism and News Practice(13.33) | | | Biophysics(30.00) |
| | | Classical Chinese Literature(10.00) | | | Botany(19.28) |
| Management(21.96) | Language and Literature(17.50) | French Language and Literature(16.00) | Biology(19.64) | Cell Biology(34.48) | Cell Biology(34.48) |
| | | Linguistics and Applied Linguistics(14.00) | | Ecology(15.97) | Ecology(15.97) |
| | | Literary History(15.94) | | Genetics(15.76) | Genetics(15.76) |
| | | Literary Theory(14.06) | | Microbiology(21.12) | Microbiology(21.12) |
| | | Modern and Contemporary Chinese Literature(22.00) | | Physiology(15.00) | Physiology(15.00) |
| | Musicology(24.18) | Philology and Bibliography(22.00) | | Zoology(16.51) | Zoology(16.51) |
| | | Russian Language and Literature(26.32) | | Chemistry(13.23) | Analytical Chemistry(12.88) |
| | | Composition(34.00) | | Electrochemistry(11.26) | Electrochemistry(11.26) |
| | | Harmony(26.67) | | Inorganic Chemistry(18.12) | Inorganic Chemistry(18.12) |
| | | Instrumentation and Performance(21.54) | | Organic Chemistry(14.62) | Organic Chemistry(14.62) |
| Medicine(21.81) | Business Administration(17.61) | Music History, Education, and Technology(16.55) | | Physical Chemistry(12.75) | Physical Chemistry and Physics(18.42) |
| | | Musical Forms and Analysis(32.00) | | Polymer Chemistry and Physics(6.67) | Radiochemistry(6.67) |
| | | Pitch and Scales(28.57) | | | |
| | | Business and Accounting Management(17.39) | Geography(24.06) | Human Geography(36.00) | |
| | | Tourism Management and Technological Economics Management(18.00) | | Physical Geography(16.87) | |
| | Library, Information and Archival Management(32.00) | Information Management Science(22.00) | | Geochemistry(26.00) | Geochemistry(26.00) |
| | | Information Management and Communication(50.00) | | Mineralogy, Petrology, and Economic Geology(22.31) | Mineralogy, Petrology, and Economic Geology(22.31) |
| | | Library and Archival Science(24.00) | | Paleontology and Stratigraphy(2.00) | Paleontology and Stratigraphy(2.00) |
| | | Management Science and Engineering(15.52) | | Principles of Seismic Exploration(10.00) | Principles of Seismic Exploration(10.00) |
| | | Public Administration(18.54) | | Structural Geology(25.71) | Structural Geology(25.71) |
| Military Science(25.85) | Basic Medicine(23.10) | Management Science and Engineering(15.52) | | Solid Earth Geophysics(18.00) | Solid Earth Geophysics(18.00) |
| | | Education Economics, Management and Social Security(14.00) | | Space physics(20.00) | Space physics(20.00) |
| | | Land Resource Management and Administrative Management(13.73) | | Mathematics(15.56) | Advanced Algebra(14.85) |
| | | Social Medicine and Health Management(28.00) | | Combinatorial Mathematics(12.57) | Combinatorial Mathematics(12.57) |
| | | Forensic Medicine(30.00) | | Computational Mathematics(24.00) | Computational Mathematics(24.00) |
| | Clinical Medicine(22.58) | Human Anatomy and Histology-Embryology(22.75) | | Cryptography(40.00) | Cryptography(40.00) |
| | | Immunology(26.09) | | Discrete Mathematics(17.98) | Discrete Mathematics(17.98) |
| | | Pathogen Biology(23.40) | | Functions of Complex Variables(20.49) | Functions of Complex Variables(20.49) |
| | | Pathology and Pathophysiology(13.04) | | Functions of Real Variables(22.39) | Functions of Real Variables(22.39) |
| | | Radiation Medicine(36.00) | | Fundamental Mathematics(12.18) | Fundamental Mathematics(12.18) |
| Philosophy(27.38) | Pharmacy(21.22) | Anesthesiology(26.00) | | Fuzzy Mathematics(18.00) | Fuzzy Mathematics(18.00) |
| | | Clinical Laboratory Diagnostics(26.00) | | Geometry and Topology(16.23) | Geometry and Topology(16.23) |
| | | Dermatology and Venereology(30.30) | | Graph Theory(7.84) | Graph Theory(7.84) |
| | | Emergency Medicine(19.70) | | Group Theory(10.00) | Group Theory(10.00) |
| | | Geriatric Medicine(36.00) | | Mathematical Analysis(14.93) | Mathematical Analysis(14.93) |
| | Public Health and Preventive Medicine(23.97) | Imaging and Nuclear Medicine(11.94) | | Number Theory(9.55) | Number Theory(9.55) |
| | | Internal Medicine(20.30) | | Numerical Analysis(11.94) | Numerical Analysis(11.94) |
| | | Neurology(15.87) | | Ordinary Differential Equations(19.38) | Ordinary Differential Equations(19.38) |
| | | Nursing and Rehabilitation Medicine(24.00) | | Polynomials and Series Expansions(10.06) | Polynomials and Series Expansions(10.06) |
| | | Obstetrics and Gynecology(17.65) | | Probability and Statistics(16.96) | Probability and Statistics(16.96) |
| Sociology(24.48) | Stomatology(12.12) | Oncology(27.59) | | Special Number Theory(24.00) | Special Number Theory(24.00) |
| | | Ophthalmology(26.00) | | Stochastic Processes(20.00) | Stochastic Processes(20.00) |
| | | Otorhinolaryngology(26.00) | | Oceanography(35.00) | Hydrogeology(40.00) |
| | | Pediatrics(26.00) | | Marine Biology(56.00) | Marine Biology(56.00) |
| | | Psychiatry and Mental Health(42.00) | | Marine Chemistry(30.00) | Marine Chemistry(30.00) |
| | Traditional Chinese Medicine(18.66) | Surgery(19.12) | | Underwater Acoustics(14.00) | Underwater Acoustics(14.00) |
| | | Medicinal Chemistry(14.00) | | Physical Oceanography(20.00) | Physical Oceanography(20.00) |
| | | Microbiology and Biochemical Pharmacy(28.00) | | Physics(15.64) | Acoustics(11.43) |
| | | Pharmaceutical Analysis(26.00) | | | |
| | | Pharmacaceutics(21.92) | | | |
| Military Science(25.85) | Military Science(25.85) | Pharmacology(16.36) | | | |
| | | Epidemiology and Health Statistics(30.12) | | | |
| | | Health Toxicology and Environmental Health(20.00) | | | |
| | | Maternal, Child and Adolescent Health(18.99) | | | |
| | | Nutrition and Food Hygiene(28.00) | | | |
| | Philosophy(27.38) | Basic Stomatology(16.98) | | | |
| | | Clinical Stomatology(8.86) | | | |
| | | Traditional Chinese Health Preservation(23.73) | | | |
| | | Traditional Chinese Medicine Theory(15.56) | | | |
| | | Traditional Chinese Pharmacy(18.49) | | | |
| Philosophy(27.38) | Military Science(25.85) | Military Command and Information Systems(42.00) | | | |
| | | Military Logistics and Equipment(22.22) | | | |
| | | Military Management(26.00) | | | |
| | | Military Thought and History(13.73) | | | |
| | | Ethics(25.00) | | | |
| | Sociology(24.48) | Logic(14.29) | | | |
| | | Philosophical Aesthetics(28.44) | | | |
| | | Philosophy of Science and Technology(36.00) | | | |
| | | Systems Science(20.00) | | | |
| | | Sociology(24.48) | | | |

Table 75. Continued: Model Scores Across Three Levels of Disciplines:

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|---|---|---|
| Agronomy(24.33) | Animal Husbandry(26.21) | Animal Nutrition and Feed Science(25.00) | Engineering(18.30) | Geological Resources and Geological Engineering(20.00) | Geological Resources and Geological Engineering(20.00) |
| | | Animal Rearing and Breeding(27.45) | | | Hydraulics and Hydrology(20.59) |
| | Aquaculture(12.50) Crop Science(18.62) | Aquaculture(12.50) | | Hydraulic Engineering(19.27) | Water conservancy and Hydropower Engineering(17.07) |
| | | Crop Science(18.62) | | | Antenna and Radio Communication(13.16) |
| | Forestry(32.06) | Forest Cultivation and Genetic Breeding(30.86) | | Information and Communication Engineering(15.48) | Communication Principles(18.97) |
| | | Landscape Plants and Ornamental Horticulture(34.00) | | | Communication and Information Systems(13.04) |
| | Veterinary Medicine(30.00) | Veterinary Medicine(30.00) | | Optical Fiber Communication(18.00) | Optical Fiber Communication(18.00) |
| | | Economic Statistics(24.00) | | | Signal and Information Processing(14.84) |
| | Economics(21.31) | Finance(15.34) | | Instrument Science and Technology(14.00) | Instrument Science and Technology(14.00) |
| | | Industrial Economics(23.81) | | | Materials Science and Chemistry(13.07) |
| | | International Trade(24.64) | | Mechanical Engineering(13.07) | Materials Processing Engineering(20.00) |
| | | Labor Economics(29.73) | | | Manufacturing Automation(11.90) |
| | | National and Defense Economics(20.00) | | Mechanics(17.18) | Mechatronic Engineering(16.00) |
| | | Public Finance(21.67) | | | Fundamentals of Dynamics and Control(17.87) |
| | | Quantitative Economics(18.00) | | | Rigid Body Mechanics(17.92) |
| | | Theoretical Economics(22.67) | | | Solid Mechanics(10.75) |
| | | Economic History(16.00) | | Metallurgical Engineering(20.00) | Theoretical Fluid Mechanics(23.57) |
| | | Political Economy(26.00) | | | Theoretical Mechanics(12.90) |
| | | Western Economics(26.00) | | | Iron and Steel Metallurgy(11.43) |
| Education(19.42) | Education(19.03) | Educational Technology and Principles(11.46) | Metallurgical Engineering(20.00) | Non-ferrous Metallurgy(28.00) | Non-ferrous Metallurgy(28.00) |
| | | Preschool Education(24.00) | | | Physical Chemistry of Metallurgical Process(18.00) |
| | Physical Education(26.00) | Special Education(28.00) | | Principles of Metallurgy(32.00) | Principles of Metallurgy(32.00) |
| | | Theory of Curriculum and Instruction(19.61) | | | Mining Engineering(33.00) |
| | Psychology(9.20) | Physical Education and Training(16.00) | | Mineral Processing Engineering(34.00) | Mineral Processing Engineering(34.00) |
| | | Sports Humanities and Sociology(20.00) | | | Mining and Safety Engineering(32.00) |
| | | Sports Science and Medicine(42.00) | | Naval Architecture and Ocean Engineering(20.29) | Naval Architecture and Ocean Engineering(18.00) |
| | | Psychology(9.20) | | | Marine Engineering(18.00) |
| | Engineering(18.30) | Aeronautical and Astronautical Science and Technology(11.76) | | Ship Mechanics and Design Principles(21.59) | Ship Mechanics and Design Principles(21.59) |
| | | Agricultural Engineering(30.77) | | | Nuclear Energy and Reactor Technology(14.04) |
| | | Agricultural Environment and Soil-Water Engineering(31.48) | | Nuclear Science and Technology(15.89) | Radiation Protection and Nuclear Technology Applications(18.00) |
| | | Agricultural Mechanization Engineering(30.00) | | | Applied Optics(15.32) |
| | | Architecture(24.69) | | Optical Engineering(17.82) | Laser Technology(14.00) |
| | | Architectural Design and Theory(32.00) | | | Optoelectronic Technology(31.34) |
| | | Architectural History(19.35) | | | Theoretical Optics(14.81) |
| | | Urban Planning and Design(24.00) | | Petroleum and Natural Gas Engineering(17.86) | Petroleum and Natural Gas Engineering(17.86) |
| | | Chemical Transport Engineering(26.00) | | | Oil and Gas Field Development and Storage & Transportation Engineering(20.97) |
| | Control Science and Engineering(15.79) | Elements of Chemical Reaction Engineering(11.21) | | | Poromechanics and Reservoir Physics(14.00) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(17.76) | | | Engineering Fluid Mechanics(25.00) |
| | | Mass Transport and Separation Process in Chemical Engineering(15.75) | | | Engineering Thermophysics(16.67) |
| | | Civil Engineering(16.20) | | | Engineering Thermophysics(17.81) |
| | | Bridge and Tunnel Engineering(11.76) | | Fluid Machinery and Engineering(17.19) | Fluid Machinery and Engineering(17.19) |
| | | Geotechnical Engineering(16.76) | | | Heat Transfer(17.05) |
| | | Structural Engineering(19.30) | | | Internal Combustion Engineering(18.00) |
| | | Urban Infrastructure Engineering(15.49) | | | Power Machinery and Engineering(3.85) |
| | | Computer Science and Technology(20.58) | | Refrigeration and Cryogenic Engineering(22.00) | Refrigeration and Cryogenic Engineering(22.00) |
| | | Advanced Programming Languages(22.00) | | | Thermal Energy Engineering(11.01) |
| Electrical Engineering(15.83) | Computer Architecture(16.00) | Computer Architecture(16.00) | Surveying and Mapping Science and Technology(21.43) | Cartography and Geographic Information Engineering(32.00) | Cartography and Geographic Information Engineering(32.00) |
| | | Computer Networks(5.08) | | | Digital Surveying and Remote Sensing Applications(16.18) |
| | Computer Software and Theory(20.25) | Computer Software and Theory(20.25) | | Geodesy and Surveying Engineering(18.00) | Geodesy and Surveying Engineering(18.00) |
| | | Data Structures(15.15) | | | Textile Chemistry and Dyeing Engineering(20.00) |
| | Control Theory and Control Engineering(19.10) | Databases(27.39) | | | Textile Materials Science(26.00) |
| | | Formal Languages(11.54) | | Transportation Engineering(20.72) | Transportation Engineering(20.72) |
| | Principles of Computer Organization(23.17) | Operating Systems(16.47) | | | Road and Railway Engineering(10.00) |
| | | Pattern Recognition(44.00) | | | Traffic Information Engineering and Control(16.92) |
| | Operations Research and Cybernetics(18.00) | Principles of Computer Organization(23.17) | | | Transportation Planning and Management(27.91) |
| | | Control Theory and Control Engineering(19.10) | | | Vehicle Operation Engineering(24.00) |
| Electronic Science and Technology(14.63) | Guidance, Navigation and Control(7.84) | Guidance, Navigation and Control(7.84) | Weapon Science and Technology(25.00) | Military Chemistry and Pyrotechnics(32.00) | Military Chemistry and Pyrotechnics(32.00) |
| | | Operations Research and Cybernetics(18.00) | | | Weapon Systems Science and Engineering(18.00) |
| | Electrical Theory and New Technologies(15.26) | Electrical Theory and New Technologies(15.26) | | Archaeology and Museology(23.08) | Archaeology and Museology(23.08) |
| | | High Voltage and Insulation Technology(18.18) | | | Historical Geography(16.90) |
| | Power Electronics and Electrical Drives(17.03) | Power Electronics and Electrical Drives(17.03) | | World History(15.65) | World History(15.65) |
| | | Power Systems and Automation(12.50) | | | |
| | Circuits and Systems(15.74) | Circuits and Systems(15.74) | | Civil and Commercial Law(16.95) | Civil and Commercial Law(16.95) |
| | | Electromagnetic Field and Microwave Technology(14.77) | | | Constitutional and Administrative Law(18.00) |
| | Microelectronics and Solid-State Electronics(12.00) | Microelectronics and Solid-State Electronics(12.00) | | Contract Law(28.00) | Contract Law(28.00) |
| | | Environmental Science(10.11) | | | Criminal Law(24.14) |
| Environmental Science and Engineering(15.34) | Environmental Science(26.00) | Environmental Science(26.00) | | International Law(17.54) | International Law(17.54) |
| | | Environmental and Resource Protection(14.00) | | | Law and Social Governance(18.00) |
| | Food Biochemistry(60.00) | Food Biochemistry(60.00) | | Legal Theory and Legal History(28.00) | Legal Theory and Legal History(28.00) |
| | | Food Processing and Storage Engineering(15.25) | | | Military Law(46.00) |
| | Food Science and Engineering(35.78) | Food Engineering(36.00) | | Procedural Law(6.00) | Procedural Law(6.00) |
| | | Wood Science and Technology(20.00) | | | Political Science(20.00) |
| | Forestry Engineering(28.00) | Forestry Engineering(28.00) | | Political Science(20.00) | Political Science(20.00) |
| | | Forestry Engineering(28.00) | | | - |

Table 76. Model Scores Across Three Levels of Disciplines: gemma-2-2b-it.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|-------------------|--|
| Literature and Arts(19.21) | Art Studies(17.41) | Broadcasting and Television Art(20.00) | Philosophy(19.60) | Philosophy(19.60) | Religious Studies(20.00) |
| | | Dance Studies(12.00) | | | Astronomical Observation and Technology(10.00) |
| | | Design Arts(14.52) | | | Astrophysics(23.19) |
| | | Drama and Opera Studies(21.95) | | | Cosmology(12.82) |
| | | Film Studies(19.62) | | | Solar System Science(10.23) |
| | Journalism and Communication(15.46) | Fine Arts(15.42) | | | Stellar and Interstellar Evolution(20.00) |
| | | Communication and Broadcasting(22.41) | | | Atmospheric Physics and Atmospheric Environment(14.49) |
| | | History and Theory of Journalism and Media Management(13.56) | | | Dynamic Meteorology(22.00) |
| | | Journalism and News Practice(12.22) | | | Meteorology(20.24) |
| | | Classical Chinese Literature(14.00) | | | Biochemistry and Molecular Biology(26.26) |
| Management(21.56) | Language and Literature(20.23) | French Language and Literature(34.00) | | | Biophysics(26.00) |
| | | Linguistics and Applied Linguistics(22.00) | | | Botany(15.06) |
| | | Literary History(11.59) | | | Cell Biology(25.29) |
| | | Literary Theory(21.88) | | | Ecology(21.53) |
| | | Modern and Contemporary Chinese Literature(30.00) | | | Genetics(19.57) |
| | Musicology(22.54) | Philology and Bibliography(10.00) | | | Microbiology(23.60) |
| | | Russian Language and Literature(21.05) | | | Physiology(10.83) |
| | | Composition(24.00) | | | Zoology(13.76) |
| | | Harmony(25.00) | | | Analytical Chemistry(15.91) |
| | | Instrumentation and Performance(16.92) | | | Electrochemistry(13.96) |
| Medicine(19.27) | Business Administration(19.01) | Music History, Education, and Technology(21.38) | | | Inorganic Chemistry(17.39) |
| | | Musical Forms and Analysis(22.00) | | | Organic Chemistry(16.37) |
| | | Pitch and Scales(28.57) | | | Physical Chemistry(13.31) |
| | | Business and Accounting Management(15.22) | | | Polymer Chemistry and Physics(17.11) |
| | | Tourism Management and Technological Economics Management(26.00) | | | Radiochemistry(10.00) |
| | Library, Information and Archival Management(28.67) | Information Management Science(20.00) | | | Geography(24.81) Human Geography(38.00) |
| | | Information Management and Communication(40.00) | | | Physical Geography(16.87) |
| | | Library and Archival Science(26.00) | | | Geology(20.82) Geochemistry(26.00) |
| | | Management Science and Engineering(15.52) | | | Mineralogy, Petrology, and Economic Geology(19.01) |
| | | Education Economics, Management and Social Security(14.00) | | | Paleontology and Stratigraphy(16.00) |
| Pharmacy(17.27) | Public Administration(19.21) | Land Resource Management and Administrative Management(19.61) | | | Principles of Seismic Exploration(20.00) |
| | | Social Medicine and Health Management(24.00) | | | Structural Geology(24.29) |
| | | Forensic Medicine(20.00) | | | Geophysics(15.00) Solid Earth Geophysics(20.00) |
| | | Human Anatomy and Histology-Embryology(21.16) | | | Space physics(10.00) |
| | | Immunology(20.29) | | | Advanced Algebra(23.76) |
| | Clinical Medicine(19.05) | Pathogen Biology(24.47) | | | Combinatorial Mathematics(12.57) |
| | | Pathology and Pathophysiology(15.65) | | | Computational Mathematics(24.00) |
| | | Radiation Medicine(36.00) | | | Cryptography(24.00) |
| | | Anesthesiology(28.00) | | | Discrete Mathematics(12.36) |
| | | Clinical Laboratory Diagnostics(22.00) | | | Functions of Complex Variables(13.93) |
| Public Health and Preventive Medicine(23.29) | Pharmacy(17.27) | Dermatology and Venereology(21.21) | | | Functions of Real Variables(40.30) |
| | | Emergency Medicine(16.67) | | | Fundamental Mathematics(16.75) |
| | | Geriatric Medicine(22.00) | | | Fuzzy Mathematics(8.00) |
| | | Imaging and Nuclear Medicine(11.94) | | | Geometry and Topology(16.60) |
| | | Internal Medicine(22.77) | | | Graph Theory(5.88) |
| | Stomatology(17.42) | Neurology(17.99) | | | Group Theory(14.00) |
| | | Nursing and Rehabilitation Medicine(10.00) | | | Mathematical Analysis(12.50) |
| | | Obstetrics and Gynecology(15.69) | | | Number Theory(13.64) |
| | | Oncology(13.79) | | | Numerical Analysis(8.96) |
| | | Ophthalmology(20.00) | | | Ordinary Differential Equations(20.00) |
| Military Science(26.83) | Traditional Chinese Medicine(13.81) | Otorhinolaryngology(18.00) | | | Polynomials and Series Expansions(18.99) |
| | | Pediatrics(10.00) | | | Probability and Statistics(16.07) |
| | | Psychiatry and Mental Health(36.00) | | | Special Number Theory(18.00) |
| | | Surgery(17.65) | | | Stochastic Processes(24.00) |
| | | Medicinal Chemistry(24.00) | | | Hydrogeology(46.00) |
| | Philosophy(19.60) | Microbiology and Biochemical Pharmacy(22.00) | | | Marine Biology(58.00) |
| | | Pharmaceutical Analysis(12.00) | | | Marine Chemistry(42.00) |
| | | Pharmacetics(16.44) | | | Underwater Acoustics(14.00) |
| | | Pharmacology(12.73) | | | Physical Oceanography(14.00) |
| | | Epidemiology and Health Statistics(25.30) | | | Acoustics(18.78) |
| Philosophy(19.60) | Military Science(26.83) | Health Toxicology and Environmental Health(18.75) | | | Atomic and Molecular Physics(20.95) |
| | | Maternal, Child and Adolescent Health(20.25) | | | Electrodynamics(19.90) |
| | | Nutrition and Food Hygiene(32.00) | | | Fluid Physics(15.67) |
| | | Basic Stomatology(24.53) | | | Particle and Nuclear Physics(15.11) |
| | | Clinical Stomatology(12.66) | | | Polymer Physics(19.27) |
| | Systems Science(16.00) | Traditional Chinese Health Preservation(11.86) | | | Quantum Mechanics(19.42) |
| | | Traditional Chinese Medicine Theory(13.33) | | | Relativity(8.86) |
| | | Traditional Chinese Pharmacy(15.13) | | | Semiconductor Physics(11.48) |
| | | Military Command and Information Systems(36.00) | | | Solid State Physics(17.01) |
| | | Military Logistics and Equipment(20.37) | | | Statistical Mechanics(28.00) |
| Sociology(20.28) | Philosophy(19.60) | Military Management(44.00) | | | Subatomic and Atomic Physics(7.84) |
| | | Military Thought and History(7.84) | | | Thermodynamics(14.88) |
| | | Ethics(19.12) | | | Thermodynamics and Statistical Physics(16.60) |
| | | Logic(14.29) | | | Systems Science(16.00) |
| Sociology(20.28) | Philosophy(19.60) | Philosophical Aesthetics(17.43) | | | Demography and Anthropology(16.00) |
| | | Philosophy of Science and Technology(32.00) | | | Social and Folklore Studies(22.58) |

Table 76. Continued: Model Scores Across Three Levels of Disciplines: gemma-2-2b-it.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|-------------------------------------|--|--|--------------------|--|---|
| Agronomy(18.14) | Animal Husbandry(20.39) | Animal Nutrition and Feed Science(25.00) | Engineering(17.64) | Geological Resources and Geological Engineering(24.00) | Geological Resources and Geological Engineering(24.00) |
| | | Animal Rearing and Breeding(15.69) | | | Hydraulics and Hydrology(27.21) |
| | Aquaculture(10.71) | Aquaculture(10.71) | | Hydraulic Engineering(25.69) | Water conservancy and Hydropower Engineering(23.17) |
| | Crop Science(17.93) | Crop Science(17.93) | | Information and Communication Engineering(18.45) | Antenna and Radio Communication(7.89) |
| | Forestry(18.32) | Forest Cultivation and Genetic Breeding(20.99) | | Communication Principles(23.28) | Communication and Information Systems(18.84) |
| | | Landscape Plants and Ornamental Horticulture(14.00) | | Optical Fiber Communication(16.00) | Optical Fiber Communication(16.00) |
| | Veterinary Medicine(22.00) | Veterinary Medicine(22.00) | | Signal and Information Processing(23.23) | Signal and Information Processing(23.23) |
| | Economics(19.93) | Applied Economics(18.81) | | Instrument Science and Technology(16.00) | Instrument Science and Technology(16.00) |
| | | Finance(17.61) | | Materials Science and Engineering(14.53) | Materials Physics and Chemistry(12.56) |
| Education(19.83) | Education(21.46) | Industrial Economics(17.86) | | Materials Processing Engineering(18.89) | Materials Processing Engineering(18.89) |
| | | International Trade(18.84) | | Mechanical Engineering(12.50) | Manufacturing Automation(11.90) |
| | Physical Education(20.67) | Labor Economics(22.97) | | Mechanics(15.64) | Mechatronic Engineering(14.00) |
| | | National and Defense Economics(28.00) | | | Fundamentals of Dynamics and Control(12.97) |
| | Psychology(13.79) | Public Finance(15.00) | | | Rigid Body Mechanics(12.14) |
| | | Quantitative Economics(17.00) | | | Solid Mechanics(20.43) |
| | Theoretical Economics(25.33) | Economic History(16.00) | | | Theoretical Fluid Mechanics(19.29) |
| | | Political Economy(32.00) | | | Theoretical Mechanics(19.35) |
| | Psychology(13.79) | Western Economics(28.00) | | Metallurgical Engineering(23.92) | Iron and Steel Metallurgy(19.05) |
| | | | | | Non-ferrous Metallurgy(28.00) |
| Engineering(17.64) | Aeronautical and Astronautical Science and Technology(19.33) | Theory of Curriculum and Instruction(17.65) | | | Physical Chemistry of Metallurgical Process(20.00) |
| | | Physical Education and Training(10.00) | | | Principles of Metallurgy(34.00) |
| | Chemical Engineering and Technology(12.44) | Sports Humanities and Sociology(20.00) | | Mining Engineering(23.00) | Mineral Processing Engineering(18.00) |
| | | Sports Science and Medicine(32.00) | | | Mining and Safety Engineering(28.00) |
| | Computer Science and Technology(19.79) | Psychology(13.79) | | Naval Architecture and Ocean Engineering(17.39) | Marine Engineering(16.00) |
| | | | | | Ship Mechanics and Design Principles(18.18) |
| | Control Science and Engineering(17.37) | Aeronautical and Astronautical Science and Technology(19.33) | | Nuclear Science and Technology(11.21) | Nuclear Energy and Reactor Technology(12.28) |
| | | Agricultural Environment and Soil-Water Engineering(25.93) | | | Radiation Protection and Nuclear Technology Applications(10.00) |
| | Electrical Engineering(16.19) | Agricultural Mechanization Engineering(14.00) | | | Optical Engineering(17.29) |
| | | Architecture(18.52) | | | Applied Optics(14.52) |
| Food Science and Engineering(30.28) | Chemical Engineering and Technology(12.44) | Architectural Design and Theory(20.00) | | | Laser Technology(18.00) |
| | | Architectural History(12.90) | | | Optoelectronic Technology(19.40) |
| | Control Science and Engineering(17.37) | Urban Planning and Design(24.00) | | | Theoretical Optics(18.52) |
| | | Chemical Transport Engineering(10.00) | | Petroleum and Natural Gas Engineering(23.21) | Oil and Gas Field Development and Storage & Transportation Engineering(16.13) |
| | Environmental Science and Engineering(16.93) | Elements of Chemical Reaction Engineering(7.48) | | | Poromechanics and Reservoir Physics(32.00) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(13.08) | | | Engineering Fluid Mechanics(21.43) |
| | Forestry Engineering(27.00) | Mass Transport and Separation Process in Chemical Engineering(16.44) | | | Engineering Thermophysics(14.18) |
| | | Civil Engineering(15.36) | | | Engineering Thermophysics(13.01) |
| | Food Science and Technology(30.28) | Bridge and Tunnel Engineering(15.69) | | | Fluid Machinery and Engineering(4.69) |
| | | Geotechnical Engineering(15.08) | | | Heat Transfer(17.05) |
| Engineering(17.64) | Food Science and Technology(30.28) | Structural Engineering(19.30) | | | Internal Combustion Engineering(22.00) |
| | | Urban Infrastructure Engineering(12.68) | | | Power Machinery and Engineering(19.23) |
| | Forestry Engineering(27.00) | Computer Science and Technology(19.79) | | | Refrigeration and Cryogenic Engineering(8.00) |
| | | Advanced Programming Languages(28.00) | | | Thermal Energy Engineering(9.17) |
| | Food Science and Technology(30.28) | Computer Architecture(20.00) | | | Cartography and Geographic Information Engineering(38.00) |
| | | Computer Networks(10.17) | | | Digital Surveying and Remote Sensing Applications(10.29) |
| | Food Science and Technology(30.28) | Computer Software and Theory(24.05) | | | Geodesy and Surveying Engineering(12.00) |
| | | Data Structures(13.13) | | | Textile Chemistry and Dyeing Engineering(14.00) |
| | Food Science and Technology(30.28) | Databases(19.75) | | | Textile Materials Science(18.00) |
| | | Formal Languages(9.62) | | | Transportation Engineering(18.73) |
| History(16.77) | Food Science and Technology(30.28) | Operating Systems(17.65) | | | Road and Railway Engineering(12.00) |
| | | Pattern Recognition(38.00) | | | Traffic Information Engineering and Control(10.77) |
| | Food Science and Technology(30.28) | Principles of Computer Organization(23.17) | | | Transportation Planning and Management(26.74) |
| | | Control Theory and Control Engineering(17.98) | | | Vehicle Operation Engineering(22.00) |
| | Food Science and Technology(30.28) | Guidance, Navigation and Control(21.57) | | Weapon Science and Technology(30.00) | Military Chemistry and Pyrotechnics(26.00) |
| | | Operations Research and Cybernetics(12.00) | | | Weapon Systems Science and Engineering(34.00) |
| | Food Science and Technology(30.28) | Electrical Engineering(16.19) | | | Archaeology and Museology(15.38) |
| | | Electrical Theory and New Technologies(18.42) | | | Historical Geography(16.90) |
| Law(23.02) | Food Science and Technology(30.28) | High Voltage and Insulation Technology(10.23) | | | World History(17.06) |
| | | Power Electronics and Electrical Drives(18.13) | | | Civil and Commercial Law(20.34) |
| | Food Science and Technology(30.28) | Power Systems and Automation(13.54) | | | Constitutional and Administrative Law(20.00) |
| | | Circuits and Systems(15.74) | | | Contract Law(26.00) |
| | Food Science and Technology(30.28) | Electromagnetic Field and Microwave Technology(15.91) | | | Criminal Law(24.14) |
| | | Microelectronics and Solid-State Electronics(14.00) | | | International Law(28.07) |
| | Food Science and Technology(30.28) | Environmental Science and Engineering(16.85) | | | Law and Social Governance(16.00) |
| | | Environmental Science(12.00) | | | Legal Theory and Legal History(22.00) |
| Political Science(20.00) | Food Science and Technology(30.28) | Environmental and Resource Protection(22.00) | | | Military Law(40.00) |
| | | Food Biochemistry(48.00) | | | Procedural Law(16.00) |
| | Food Science and Technology(30.28) | Food Processing and Storage Engineering(15.25) | | | Political Science(20.00) |
| | | Forest Engineering(28.00) | | | |
| | Food Science and Technology(30.28) | Wood Science and Technology(26.00) | | | |
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Table 77. Model Scores Across Three Levels of Disciplines: granite-3.1-2b-instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield | |
|----------------------------|---|--|-------------------|-------------------|--|--|
| Literature and Arts(19.03) | Art Studies(19.40) | Broadcasting and Television Art(24.00) | Philosophy(19.02) | Philosophy(19.02) | Religious Studies(32.00) | |
| | | Dance Studies(14.00) | | | Astronomical Observation and Technology(16.00) | |
| | | Design Arts(11.29) | | | Astrophysics(24.64) | |
| | | Drama and Opera Studies(20.73) | | | Cosmology(24.36) | |
| | | Film Studies(20.89) | | | Solar System Science(13.64) | |
| | Journalism and Communication(13.53) | Fine Arts(20.40) | | | Stellar and Interstellar Evolution(22.86) | |
| | | Communication and Broadcasting(6.90) | | | Atmospheric Physics and Atmospheric Environment(23.19) | |
| | | History and Theory of Journalism and Media Management(18.64) | | | Dynamic Meteorology(22.00) | |
| | | Journalism and News Practice(14.44) | | | Meteorology(20.24) | |
| | | Classical Chinese Literature(20.00) | | | Biochemistry and Molecular Biology(16.16) | |
| Management(23.15) | Language and Literature(18.86) | French Language and Literature(26.00) | | | Biophysics(26.00) | |
| | | Linguistics and Applied Linguistics(16.00) | | | Botany(18.67) | |
| | | Literary History(13.04) | | | Cell Biology(24.14) | |
| | | Literary Theory(29.69) | | | Ecology(13.89) | |
| | | Modern and Contemporary Chinese Literature(20.00) | | | Genetics(20.11) | |
| | Musicology(21.36) | Philology and Bibliography(12.00) | | | Microbiology(21.74) | |
| | | Russian Language and Literature(14.04) | | | Physiology(16.67) | |
| | | Composition(34.00) | | | Zoology(10.09) | |
| | | Harmony(13.33) | | | Chemistry(15.49) | |
| | | Instrumentation and Performance(27.69) | | | Analytical Chemistry(14.65) | |
| Medicine(17.46) | Business Administration(24.00) | Music History, Education, and Technology(17.24) | | | Electrochemistry(13.06) | |
| | | Musical Forms and Analysis(24.00) | | | Inorganic Chemistry(14.49) | |
| | | Pitch and Scales(19.64) | | | Organic Chemistry(20.47) | |
| | | Business and Accounting Management(25.00) | | | Physical Chemistry(15.72) | |
| | | Tourism Management and Technological Economics Management(24.00) | | | Polymer Chemistry and Physics(11.84) | |
| | Library, Information and Archival Management(26.00) | Information Management Science(4.00) | | | Radiochemistry(20.00) | |
| | | Information Management and Communication(48.00) | | | Geography(19.55) | |
| | | Library and Archival Science(26.00) | | | Human Geography(28.00) | |
| | | Management Science and Engineering(17.24) | | | Physical Geography(14.46) | |
| | | Education Economics, Management and Social Security(12.00) | | | Geology(16.72) | |
| Medicine(17.46) | Public Administration(21.19) | Land Resource Management and Administrative Management(25.49) | | | Geochemistry(22.00) | |
| | | Social Medicine and Health Management(26.00) | | | Mineralogy, Petrology, and Economic Geology(18.18) | |
| | | Forensic Medicine(28.00) | | | Paleontology and Stratigraphy(16.00) | |
| | | Human Anatomy and Histology-Embryology(20.11) | | | Principles of Seismic Exploration(14.00) | |
| | | Immunology(28.99) | | | Structural Geology(12.86) | |
| | Clinical Medicine(17.08) | Pathogen Biology(19.15) | | | Geophysics(11.00) | |
| | | Pathology and Pathophysiology(15.65) | | | Solid Earth Geophysics(14.00) | |
| | | Radiation Medicine(22.00) | | | Space physics(8.00) | |
| | | Anesthesiology(16.00) | | | Advanced Algebra(16.34) | |
| | | Clinical Laboratory Diagnostics(12.00) | | | Combinatorial Mathematics(14.14) | |
| Medicine(17.46) | Pharmacy(17.63) | Dermatology and Venereology(16.67) | | | Computational Mathematics(24.00) | |
| | | Emergency Medicine(21.21) | | | Cryptography(24.00) | |
| | | Geriatric Medicine(26.00) | | | Discrete Mathematics(11.24) | |
| | | Imaging and Nuclear Medicine(10.45) | | | Functions of Complex Variables(18.03) | |
| | | Internal Medicine(21.29) | | | Functions of Real Variables(28.36) | |
| | Public Health and Preventive Medicine(16.78) | Neurology(16.40) | | | Fundamental Mathematics(9.64) | |
| | | Nursing and Rehabilitation Medicine(24.00) | | | Fuzzy Mathematics(22.00) | |
| | | Obstetrics and Gynecology(11.76) | | | Geometry and Topology(14.72) | |
| | | Oncology(15.52) | | | Graph Theory(17.65) | |
| | | Ophthalmology(14.00) | | | Group Theory(24.00) | |
| Medicine(17.46) | Pharmacy(17.63) | Otorhinolaryngology(12.00) | | | Mathematical Analysis(18.06) | |
| | | Pediatrics(18.00) | | | Number Theory(13.64) | |
| | | Psychiatry and Mental Health(22.00) | | | Numerical Analysis(19.40) | |
| | | Surgery(13.24) | | | Ordinary Differential Equations(19.38) | |
| | | Medicinal Chemistry(16.00) | | | Polynomials and Series Expansions(9.50) | |
| | Public Health and Preventive Medicine(16.78) | Microbiology and Biochemical Pharmacy(18.00) | | | Probability and Statistics(18.30) | |
| | | Pharmaceutical Analysis(28.00) | | | Special Number Theory(34.00) | |
| | | Pharmacetics(9.59) | | | Stochastic Processes(18.00) | |
| | | Pharmacology(20.00) | | | Hydrogeology(38.00) | |
| | | Epidemiology and Health Statistics(20.48) | | | Marine Biology(46.00) | |
| Medicine(17.46) | Stomatology(13.64) | Health Toxicology and Environmental Health(17.50) | | | Marine Chemistry(22.00) | |
| | | Maternal, Child and Adolescent Health(8.86) | | | Underwater Acoustics(16.00) | |
| | | Nutrition and Food Hygiene(22.00) | | | Physical Oceanography(18.00) | |
| | | Basic Stomatology(22.64) | | | Acoustics(14.29) | |
| | | Clinical Stomatology(7.59) | | | Atomic and Molecular Physics(18.57) | |
| | Traditional Chinese Medicine(14.18) | Traditional Chinese Health Preservation(11.86) | | | Electrodynamics(18.87) | |
| | | Traditional Chinese Medicine Theory(14.44) | | | Fluid Physics(13.43) | |
| | | Traditional Chinese Pharmacy(15.13) | | | Particle and Nuclear Physics(17.33) | |
| | | Military Science(22.44) | | | Polymer Physics(15.60) | |
| | | Military Command and Information Systems(22.00) | | | Quantum Mechanics(22.33) | |
| Military Science(22.44) | Philosophy(19.02) | Military Logistics and Equipment(20.37) | | | Relativity(13.92) | |
| | | Military Management(32.00) | | | Semiconductor Physics(8.20) | |
| | | Military Thought and History(15.69) | | | Solid State Physics(19.73) | |
| | | Ethics(17.65) | | | Statistical Mechanics(14.00) | |
| Military Science(22.44) | | Logic(11.43) | | | Subatomic and Atomic Physics(17.65) | |
| | | Philosophical Aesthetics(13.76) | | | Thermodynamics(16.74) | |
| | | Philosophy of Science and Technology(30.00) | | | Thermodynamics and Statistical Physics(12.26) | |
| | | Sociology(20.98) | | | Systems Science(28.00) | |
| Philosophy(19.02) | | Sociology(20.98) | | | Demography and Anthropology(16.00) | |
| | | Sociology(20.98) | | | Social and Folklore Studies(23.66) | |

Table 77. Continued: Model Scores Across Three Levels of Disciplines: granite-3.1-2b-instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|---|---|
| Agronomy(20.00) | Animal Husbandry(16.50) | Animal Nutrition and Feed Science(25.00) | Engineering(17.28) | Geological Resources and Geological Engineering(24.00) | Geological Resources and Geological Engineering(24.00) |
| | | Animal Rearing and Breeding(7.84) | | | Hydraulics and Hydrology(19.12) |
| | Aquaculture(19.64) | Aquaculture(19.64) | | Hydraulic Engineering(21.10) | Water conservancy and Hydropower Engineering(24.39) |
| | | Crop Science(15.86) | | | Antenna and Radio Communication(14.91) |
| | Forestry(24.43) | Forest Cultivation and Genetic Breeding(27.16) | | Information and Communication Engineering(20.63) | Communication Principles(19.83) |
| | | Landscape Plants and Ornamental Horticulture(20.00) | | | Communication and Information Systems(18.84) |
| | Veterinary Medicine(28.00) | Veterinary Medicine(28.00) | | Optical Fiber Communication(22.00) | Optical Fiber Communication(22.00) |
| | | Economic Statistics(12.00) | | | Signal and Information Processing(25.81) |
| | Economics(17.75) | Finance(11.36) | | Instrument Science and Technology(16.00) | Instrument Science and Technology(16.00) |
| | | Industrial Economics(19.05) | | | Materials Physics and Chemistry(12.56) |
| | | International Trade(15.94) | | Materials Science and Engineering(12.80) | Materials Processing Engineering(13.33) |
| | | Labor Economics(21.62) | | | Manufacturing Automation(10.32) |
| | | National and Defense Economics(26.00) | | Mechanical Engineering(11.36) | Mechatronic Engineering(14.00) |
| | | Public Finance(19.17) | | | Fundamentals of Dynamics and Control(14.70) |
| | | Quantitative Economics(17.00) | | Mechanics(15.20) | Rigid Body Mechanics(12.72) |
| | | Theoretical Economics(22.00) | | | Solid Mechanics(16.13) |
| | | Economic History(26.00) | | Metallurgical Engineering(19.22) | Theoretical Fluid Mechanics(19.29) |
| | | Political Economy(20.00) | | | Theoretical Mechanics(14.84) |
| | | Western Economics(20.00) | | Metallurgy and Steel Metallurgy(11.43) | Iron and Steel Metallurgy(11.43) |
| Education(18.18) | Education(15.38) | Educational Technology and Principles(12.50) | | | Non-ferrous Metallurgy(26.00) |
| | | Preschool Education(20.00) | | Physical Chemistry of Metallurgical Process(10.00) | Physical Chemistry of Metallurgical Process(10.00) |
| | Physical Education(26.00) | Special Education(24.00) | | | Principles of Metallurgy(38.00) |
| | | Theory of Curriculum and Instruction(7.84) | | Mining Engineering(24.00) | Mineral Processing Engineering(24.00) |
| | Psychology(12.64) | Physical Education and Training(22.00) | | | Mining and Safety Engineering(24.00) |
| | | Sports Humanities and Sociology(24.00) | | Naval Architecture and Ocean Engineering(18.84) | Marine Engineering(18.00) |
| | | Sports Science and Medicine(32.00) | | | Ship Mechanics and Design Principles(19.32) |
| | Psychology(12.64) | Psychology(12.64) | | Nuclear Science and Technology(14.95) | Nuclear Energy and Reactor Technology(14.04) |
| | | Aeronautical and Astronautical Science and Technology(10.92) | | | Radiation Protection and Nuclear Technology Applications(16.00) |
| Engineering(17.28) | Agricultural Engineering(18.27) | Agricultural Environment and Soil-Water Engineering(25.93) | | Optical Engineering(14.89) | Applied Optics(11.29) |
| | | Agricultural Mechanization Engineering(10.00) | | | Laser Technology(12.00) |
| | Architecture(20.99) | Architectural Design and Theory(28.00) | | Petroleum and Natural Gas Engineering(16.96) | Optoelectronic Technology(17.91) |
| | | Architectural History(16.13) | | | Theoretical Optics(17.78) |
| | Chemical Engineering and Technology(12.20) | Urban Planning and Design(20.00) | | Power Engineering and Engineering Thermodynamics(13.45) | Oil and Gas Field Development and Storage & Transportation Engineering(16.13) |
| | | Chemical Transport Engineering(16.00) | | | Poromechanics and Reservoir Physics(18.00) |
| | Civil Engineering(13.41) | Elements of Chemical Reaction Engineering(8.41) | | | Engineering Fluid Mechanics(17.86) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(13.08) | | | Engineering Thermodynamics(15.07) |
| | Computer Science and Technology(20.05) | Mass Transport and Separation Process in Chemical Engineering(13.01) | | Surveying and Mapping Science and Technology(21.43) | Fluid Machinery and Engineering(1.56) |
| | | Civil Infrastructure Engineering(14.08) | | | Heat Transfer(16.28) |
| Control Science and Engineering(18.95) | Computer Science and Technology(20.05) | Advanced Programming Languages(22.00) | | | Internal Combustion Engineering(12.00) |
| | | Computer Architecture(18.00) | | | Power Machinery and Engineering(15.38) |
| | Control Science and Engineering(18.95) | Computer Networks(16.95) | | Textile Science and Engineering(26.00) | Refrigeration and Cryogenic Engineering(14.00) |
| | | Computer Software and Theory(18.99) | | | Thermal Energy Engineering(11.01) |
| | Control Science and Engineering(18.95) | Data Structures(17.17) | | Transportation Engineering(22.71) | Cartography and Geographic Information Engineering(28.00) |
| | | Databases(24.84) | | | Digital Surveying and Remote Sensing Applications(22.06) |
| | Control Science and Engineering(18.95) | Formal Languages(21.15) | | | Geodesy and Surveying Engineering(14.00) |
| | | Operating Systems(12.94) | | | Textile Chemistry and Dyeing Engineering(18.00) |
| | Control Science and Engineering(18.95) | Pattern Recognition(42.00) | | | Textile Materials Science(34.00) |
| | | Principles of Computer Organization(10.98) | | | Road and Railway Engineering(12.00) |
| Electrical Engineering(14.21) | Control Science and Engineering(18.95) | Control Theory and Control Engineering(22.47) | | | Traffic Information Engineering and Control(18.46) |
| | | Guidance, Navigation and Control(15.69) | | | Transportation Planning and Management(31.40) |
| | Control Science and Engineering(18.95) | Operations Research and Cybernetics(16.00) | | Vehicle Operation Engineering(24.00) | Vehicle Operation Engineering(24.00) |
| | | Electrical Engineering(14.21) | | | Weapon Science and Technology(28.00) |
| | Control Science and Engineering(18.95) | Electrical Theory and New Technologies(12.63) | History(15.88) | Military Chemistry and Pyrotechnics(30.00) | Military Chemistry and Pyrotechnics(30.00) |
| | | High Voltage and Insulation Technology(12.50) | | | Weapon Systems Science and Engineering(26.00) |
| | Control Science and Engineering(18.95) | Power Electronics and Electrical Drives(18.13) | | Law(21.19) | Archaeology and Museology(17.31) |
| | | Power Systems and Automation(11.46) | | | Historical Geography(19.72) |
| Electronic Science and Technology(17.48) | Control Science and Engineering(18.95) | Circuits and Systems(19.44) | | Law(21.19) | World History(14.25) |
| | | Electromagnetic Field and Microwave Technology(15.91) | | | Civil and Commercial Law(16.10) |
| | Control Science and Engineering(18.95) | Microelectronics and Solid-State Electronics(16.00) | | | Constitutional and Administrative Law(20.00) |
| | | Environmental Science and Engineering(18.52) | | | Contract Law(28.00) |
| | Food Science and Engineering(37.61) | Environmental Engineering(6.74) | | Political Science(13.85) | Criminal Law(22.41) |
| | | Environmental Science(36.00) | | | International Law(19.30) |
| | Food Science and Engineering(37.61) | Environmental and Resource Protection(22.00) | | | Law and Social Governance(18.00) |
| | | Food Biochemistry(62.00) | | | Legal Theory and Legal History(20.00) |
| | Food Science and Engineering(37.61) | Food Processing and Storage Engineering(16.95) | | | Military Law(46.00) |
| | | Forest Engineering(16.00) | | | Procedural Law(16.00) |
| Engineering(17.28) | Forestry Engineering(19.00) | Wood Science and Technology(22.00) | | | Political Science(13.85) |
| | | - | | | - |

Table 78. Model Scores Across Three Levels of Disciplines: Mistral-7B-Instruct-v0.3.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|-------------------|---|--|
| Literature and Arts(21.12) | Art Studies(22.22) | Broadcasting and Television Art(26.00) | Philosophy(22.19) | Philosophy(22.19) | Religious Studies(34.00) |
| | | Dance Studies(18.00) | | Astronomy(15.31) | Astronomical Observation and Technology(15.00) |
| | | Design Arts(14.52) | | Astrophysics(24.64) | Cosmology(11.54) |
| | | Drama and Opera Studies(29.27) | | Solar System Science(11.36) | Stellar and Interstellar Evolution(15.71) |
| | | Film Studies(24.05) | | Atmospheric Science(17.73) | Atmospheric Physics and Atmospheric Environment(27.54) |
| | Journalism and Communication(19.32) | Fine Arts(20.40) | | Dynamic Meteorology(12.00) | |
| | | Communication and Broadcasting(20.69) | | Meteorology(13.10) | |
| | | History and Theory of Journalism and Media Management(20.34) | | Biochemistry and Molecular Biology(24.24) | |
| | | Journalism and News Practice(17.78) | | Biophysics(36.00) | |
| | | Classical Chinese Literature(18.00) | | Botany(14.46) | |
| Management(23.55) | Language and Literature(19.55) | French Language and Literature(18.00) | | Cell Biology(20.69) | |
| | | Linguistics and Applied Linguistics(26.00) | | Ecology(19.44) | |
| | | Literary History(10.14) | | Genetics(11.96) | |
| | | Literary Theory(18.75) | | Microbiology(19.88) | |
| | | Modern and Contemporary Chinese Literature(28.00) | | Physiology(10.83) | |
| | Musicology(22.07) | Philology and Bibliography(20.00) | | Zoology(11.93) | |
| | | Russian Language and Literature(21.05) | | Analytical Chemistry(15.91) | |
| | | Composition(26.00) | | Electrochemistry(12.16) | |
| | | Harmony(26.67) | | Inorganic Chemistry(7.97) | |
| | | Instrumentation and Performance(21.54) | | Organic Chemistry(15.20) | |
| Medicine(20.04) | Business Administration(15.49) | Music History, Education, and Technology(15.86) | | Physical Chemistry(12.32) | |
| | | Musical Forms and Analysis(22.00) | | Polymer Chemistry and Physics(13.16) | |
| | | Pitch and Scales(30.36) | | Radiochemistry(10.00) | |
| | | Business and Accounting Management(10.87) | | Geography(25.56) | Human Geography(38.00) |
| | | Tourism Management and Technological Economics Management(24.00) | | Geology(21.41) | Physical Geography(18.07) |
| | Library, Information and Archival Management(36.00) | Information Management Science(24.00) | | Geochemistry(36.00) | Mineralogy, Petrology, and Economic Geology(18.18) |
| | | Information Management and Communication(54.00) | | Paleontology and Stratigraphy(26.00) | |
| | | Library and Archival Science(30.00) | | Principles of Seismic Exploration(16.00) | |
| | | Management Science and Engineering(17.24) | | Structural Geology(17.14) | |
| | | Education Economics, Management and Social Security(14.00) | | Geophysics(21.00) | Solid Earth Geophysics(22.00) |
| Pharmacy(17.99) | Public Administration(21.19) | Land Resource Management and Administrative Management(21.57) | | Space physics(20.00) | |
| | | Social Medicine and Health Management(28.00) | | Advanced Algebra(18.32) | |
| | | Forensic Medicine(30.00) | | Combinatorial Mathematics(8.38) | |
| | | Human Anatomy and Histology-Embryology(27.51) | | Computational Mathematics(22.00) | |
| | | Immunology(20.29) | | Cryptography(28.00) | |
| | Clinical Medicine(19.46) | Pathogen Biology(24.47) | | Discrete Mathematics(7.87) | |
| | | Pathology and Pathophysiology(15.65) | | Functions of Complex Variables(13.93) | |
| | | Radiation Medicine(40.00) | | Functions of Real Variables(22.39) | |
| | | Anesthesiology(36.00) | | Fundamental Mathematics(12.18) | |
| | | Clinical Laboratory Diagnostics(12.00) | | Fuzzy Mathematics(18.00) | |
| Military Science(26.83) | Stomatology(15.91) | Dermatology and Venereology(30.30) | | Geometry and Topology(14.34) | |
| | | Emergency Medicine(18.18) | | Graph Theory(13.73) | |
| | | Geriatric Medicine(26.00) | | Group Theory(14.00) | |
| | | Imaging and Nuclear Medicine(17.91) | | Mathematical Analysis(14.93) | |
| | | Internal Medicine(19.31) | | Number Theory(9.55) | |
| | Traditional Chinese Medicine(13.06) | Neurology(15.87) | | Numerical Analysis(14.93) | |
| | | Nursing and Rehabilitation Medicine(18.00) | | Ordinary Differential Equations(19.38) | |
| | | Obstetrics and Gynecology(10.78) | | Polynomials and Series Expansions(13.97) | |
| | | Oncology(18.97) | | Probability and Statistics(16.07) | |
| | | Ophthalmology(20.00) | | Special Number Theory(14.00) | |
| Philosophy(22.19) | Pharmacy(17.99) | Otorhinolaryngology(18.00) | | Stochastic Processes(24.00) | |
| | | Pediatrics(16.00) | | Hydrogeology(42.00) | |
| | | Psychiatry and Mental Health(40.00) | | Marine Biology(60.00) | |
| | | Surgery(13.24) | | Marine Chemistry(32.00) | |
| | | Medicinal Chemistry(14.00) | | Underwater Acoustics(30.00) | |
| | Public Health and Preventive Medicine(22.95) | Microbiology and Biochemical Pharmacy(20.00) | | Physical Oceanography(26.00) | Physical Oceanography(26.00) |
| | | Pharmaceutical Analysis(16.00) | | Physics(15.96) | Acoustics(15.10) |
| | | Pharmacetics(16.44) | | | |
| | | Pharmacology(23.64) | | | |
| | | Epidemiology and Health Statistics(19.28) | | | |
| Military Science(26.83) | Traditional Chinese Medicine(13.06) | Health Toxicology and Environmental Health(22.50) | | | |
| | | Maternal, Child and Adolescent Health(21.52) | | | |
| | | Nutrition and Food Hygiene(32.00) | | | |
| | | Basic Stomatology(22.64) | | | |
| | | Clinical Stomatology(11.39) | | | |
| | Philosophy(22.19) | Traditional Chinese Health Preservation(6.78) | | | |
| | | Traditional Chinese Medicine Theory(11.11) | | | |
| | | Traditional Chinese Pharmacy(17.65) | | | |
| | | Military Command and Information Systems(36.00) | | | |
| | | Military Logistics and Equipment(24.07) | | | |
| Philosophy(22.19) | Military Science(26.83) | Military Management(34.00) | | | |
| | | Military Thought and History(13.73) | | | |
| | | Ethics(16.18) | | | |
| | | Logic(15.71) | | | |
| Philosophy(22.19) | Philosophy(22.19) | Philosophical Aesthetics(16.51) | | Systems Science(16.00) | Demography and Anthropology(20.00) |
| | | Philosophy of Science and Technology(40.00) | | Sociology(20.98) | Social and Folklore Studies(21.51) |

Table 78. Continued: Model Scores Across Three Levels of Disciplines: Mistral-7B-Instruct-v0.3.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|--|--|--|--|--|
| Agronomy(19.18) | Animal Husbandry(23.30) | Animal Nutrition and Feed Science(25.00) Animal Rearing and Breeding(21.57) | Engineering(16.50) | Geological Resources and Geological Engineering(30.00) Geological Engineering(30.00) | Geological Resources and Geological Engineering(30.00) |
| | Aquaculture(10.71) Crop Science(15.86) | Aquaculture(10.71) Crop Science(15.86) | | Hydraulic Engineering(16.06) | Hydraulics and Hydrology(13.97) Water conservancy and Hydropower Engineering(19.51) |
| | Forestry(21.37) | Forest Cultivation and Genetic Breeding(22.22) Landscape Plants and Ornamental Horticulture(20.00) | Information and Communication Engineering(16.67) | Antenna and Radio Communication(14.91) | Antenna and Radio Communication(14.91) |
| Economics(20.73) | Veterinary Medicine(24.00) | Veterinary Medicine(24.00) | | Communication Principles(14.66) Communication and Information Systems(23.19) Optical Fiber Communication(14.00) Signal and Information Processing(17.42) | Communication Principles(14.66) Communication and Information Systems(23.19) Optical Fiber Communication(14.00) Signal and Information Processing(17.42) |
| | Applied Economics(20.19) | Economic Statistics(16.00) Finance(18.18) Industrial Economics(27.38) International Trade(24.64) Labor Economics(22.97) National and Defense Economics(16.00) Public Finance(21.67) Quantitative Economics(15.00) | Instrument Science and Technology(30.00) Materials Science and Engineering(11.76) | Instrument Science and Technology(30.00) Materials Physics and Chemistry(11.56) | Instrument Science and Technology(30.00) |
| | Theoretical Economics(23.33) | Economic History(24.00) Political Economy(28.00) Western Economics(18.00) | Mechanical Engineering(19.32) | Materials Processing Engineering(12.22) Manufacturing Automation(20.63) Mechatronic Engineering(16.00) Fundamentals of Dynamics and Control(11.24) Rigid Body Mechanics(14.45) Solid Mechanics(15.05) | Materials Processing Engineering(12.22) Manufacturing Automation(20.63) Mechatronic Engineering(16.00) Fundamentals of Dynamics and Control(11.24) Rigid Body Mechanics(14.45) Solid Mechanics(15.05) |
| Education(28.10) | Education(28.34) | Educational Technology and Principles(23.96) Preschool Education(36.00) Special Education(44.00) Theory of Curriculum and Instruction(13.73) | Mechanics(13.00) | Theoretical Fluid Mechanics(17.14) Theoretical Mechanics(10.32) | Theoretical Fluid Mechanics(17.14) Theoretical Mechanics(10.32) |
| | Physical Education(32.00) | Physical Education and Training(28.00) Sports Humanities and Sociology(30.00) Sports Science and Medicine(38.00) | Metallurgical Engineering(20.78) | Iron and Steel Metallurgy(8.57) Non-ferrous Metallurgy(26.00) Physical Chemistry of Metallurgical Process(28.00) Principles of Metallurgy(34.00) | Iron and Steel Metallurgy(8.57) Non-ferrous Metallurgy(26.00) Physical Chemistry of Metallurgical Process(28.00) Principles of Metallurgy(34.00) |
| | Psychology(20.69) | Psychology(20.69) | Mining Engineering(24.00) | Mineral Processing Engineering(24.00) Mining and Safety Engineering(24.00) | Mineral Processing Engineering(24.00) Mining and Safety Engineering(24.00) |
| Engineering(16.50) | Aeronautical and Astronautical Science and Technology(11.76) | Aeronautical and Astronautical Science and Technology(11.76) | Naval Architecture and Ocean Engineering(18.84) | Marine Engineering(10.00) | Marine Engineering(10.00) |
| | Agricultural Engineering(21.15) | Agricultural Environment and Soil-Water Engineering(24.07) Agricultural Mechanization Engineering(18.00) | Nuclear Science and Technology(16.82) | Ship Mechanics and Design Principles(23.86) Nuclear Energy and Reactor Technology(14.04) | Ship Mechanics and Design Principles(23.86) Nuclear Energy and Reactor Technology(14.04) |
| | Architecture(27.78) | Architectural Design and Theory(24.00) Architectural History(25.81) Urban Planning and Design(34.00) | Optical Engineering(15.69) | Radiation Protection and Nuclear Technology Applications(20.00) Applied Optics(16.13) | Radiation Protection and Nuclear Technology Applications(20.00) Applied Optics(16.13) |
| | Chemical Engineering and Technology(10.98) | Chemical Transport Engineering(14.00) Elements of Chemical Reaction Engineering(8.41) Fluid Flow and Heat Transfer in Chemical Engineering(13.08) Mass Transport and Separation Process in Chemical Engineering(10.27) | Petroleum and Natural Gas Engineering(17.86) | Laser Technology(20.00) Optoelectronic Technology(14.93) Theoretical Optics(14.07) | Laser Technology(20.00) Optoelectronic Technology(14.93) Theoretical Optics(14.07) |
| | Civil Engineering(14.80) | Bridge and Tunnel Engineering(7.84) Geotechnical Engineering(12.85) Structural Engineering(17.54) Urban Infrastructure Engineering(22.54) | Power Engineering and Engineering Thermodynamics(11.40) | Oil and Gas Field Development and Storage & Transportation Engineering(17.74) Poromechanics and Reservoir Physics(18.00) Engineering Fluid Mechanics(9.52) | Oil and Gas Field Development and Storage & Transportation Engineering(17.74) Poromechanics and Reservoir Physics(18.00) Engineering Fluid Mechanics(9.52) |
| | Computer Science and Technology(20.05) | Advanced Programming Languages(28.00) Computer Architecture(16.00) Computer Networks(23.73) Computer Software and Theory(25.32) Data Structures(12.12) Databases(23.57) Formal Languages(7.69) Operating Systems(15.29) Pattern Recognition(40.00) Principles of Computer Organization(13.41) | Surveying and Mapping Science and Technology(20.83) | Engineering Thermodynamics(11.64) Fluid Machinery and Engineering(10.94) Heat Transfer(10.85) Internal Combustion Engineering(18.00) Power Machinery and Engineering(11.54) | Engineering Thermodynamics(11.64) Fluid Machinery and Engineering(10.94) Heat Transfer(10.85) Internal Combustion Engineering(18.00) Power Machinery and Engineering(11.54) |
| | Control Science and Engineering(11.05) | Control Theory and Control Engineering(15.73) Guidance, Navigation and Control(3.92) Operations Research and Cybernetics(10.00) | Textile Science and Engineering(17.00) | Refrigeration and Cryogenic Engineering(12.00) Thermal Energy Engineering(10.09) Cartography and Geographic Information Engineering(26.00) Digital Surveying and Remote Sensing Applications(19.12) | Refrigeration and Cryogenic Engineering(12.00) Thermal Energy Engineering(10.09) Cartography and Geographic Information Engineering(26.00) Digital Surveying and Remote Sensing Applications(19.12) |
| | Electrical Engineering(14.21) | Electrical Theory and New Technologies(9.47) High Voltage and Insulation Technology(25.00) Power Electronics and Electrical Drives(13.19) | Transportation Engineering(21.51) | Digital Surveying and Remote Sensing Applications(19.12) Geodesy and Surveying Engineering(18.00) Textile Chemistry and Dyeing Engineering(14.00) | Digital Surveying and Remote Sensing Applications(19.12) Geodesy and Surveying Engineering(18.00) Textile Chemistry and Dyeing Engineering(14.00) |
| | Electronic Science and Technology(12.60) | Power Systems and Automation(15.62) Circuits and Systems(13.89) | Weapon Science and Technology(19.00) | Textile Materials Science(20.00) Road and Railway Engineering(18.00) Traffic Information Engineering and Control(16.92) | Textile Materials Science(20.00) Road and Railway Engineering(18.00) Traffic Information Engineering and Control(16.92) |
| | Environmental Science and Engineering(22.22) | Electromagnetic Field and Microwave Technology(5.68) Microelectronics and Solid-State Electronics(22.00) | Law(21.95) | Transportation Planning and Management(22.09) Vehicle Operation Engineering(30.00) | Transportation Planning and Management(22.09) Vehicle Operation Engineering(30.00) |
| | Food Science and Engineering(32.11) | Environmental Engineering(10.11) Environmental Science(44.00) Environmental and Resource Protection(22.00) | History(15.43) | Weapon Science and Technology(19.00) Military Chemistry and Pyrotechnics(20.00) | Weapon Science and Technology(19.00) Military Chemistry and Pyrotechnics(20.00) |
| | Forestry Engineering(24.00) | Food Biochemistry(56.00) | | Weapon Systems Science and Engineering(18.00) Archaeology and Museology(16.35) | Weapon Systems Science and Engineering(18.00) Archaeology and Museology(16.35) |
| Engineering(16.50) | Forestry Engineering(24.00) | Food Processing and Storage Engineering(11.86) Forest Engineering(28.00) | Law(22.17) | Historical Geography(14.79) World History(15.42) | Historical Geography(14.79) World History(15.42) |
| | | Wood Science and Technology(20.00) | | Civil and Commercial Law(20.34) Constitutional and Administrative Law(14.00) | Civil and Commercial Law(20.34) Constitutional and Administrative Law(14.00) |
| | | | | Contract Law(26.00) Criminal Law(25.86) | Contract Law(26.00) Criminal Law(25.86) |
| | | | | International Law(14.04) | International Law(14.04) |
| | | | | Law and Social Governance(12.00) Legal Theory and Legal History(18.00) | Law and Social Governance(12.00) Legal Theory and Legal History(18.00) |
| | | | | Military Law(52.00) | Military Law(52.00) |
| | | | | Procedural Law(16.00) | Procedural Law(16.00) |
| | | | | Political Science(20.00) | Political Science(20.00) |

Table 79. Model Scores Across Three Levels of Disciplines: Qwen2.5-1.5B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|-------------------|--|
| Literature and Arts(17.72) | Art Studies(17.91) | Broadcasting and Television Art(26.00) | Philosophy(25.65) | Philosophy(25.65) | Religious Studies(38.00) |
| | | Dance Studies(18.00) | | | Astronomical Observation and Technology(9.00) |
| | | Design Arts(17.74) | | | Astrophysics(13.04) |
| | | Drama and Opera Studies(17.07) | | | Cosmology(12.82) |
| | | Film Studies(21.52) | | | Solar System Science(5.68) |
| | Journalism and Communication(13.53) | Fine Arts(13.43) | | | Stellar and Interstellar Evolution(17.14) |
| | | Communication and Broadcasting(10.34) | | | Atmospheric Physics and Atmospheric Environment(26.09) |
| | | History and Theory of Journalism and Media Management(23.73) | | | Dynamic Meteorology(20.00) |
| | | Journalism and News Practice(8.89) | | | Meteorology(20.24) |
| | | Classical Chinese Literature(16.00) | | | Biochemistry and Molecular Biology(15.15) |
| Management(23.35) | Language and Literature(17.27) | French Language and Literature(32.00) | | | Biophysics(16.00) |
| | | Linguistics and Applied Linguistics(18.00) | | | Botany(16.27) |
| | | Literary History(8.70) | | | Cell Biology(27.59) |
| | | Literary Theory(17.19) | | | Ecology(20.14) |
| | | Modern and Contemporary Chinese Literature(18.00) | | | Genetics(9.24) |
| | Musicology(19.95) | Philology and Bibliography(12.00) | | | Microbiology(21.12) |
| | | Russian Language and Literature(19.30) | | | Physiology(15.83) |
| | | Composition(22.00) | | | Zoology(16.51) |
| | | Harmony(23.33) | | | Analytical Chemistry(15.40) |
| | | Instrumentation and Performance(24.62) | | | Electrochemistry(9.46) |
| Medicine(20.87) | Business Administration(22.54) | Music History, Education, and Technology(13.79) | | | Inorganic Chemistry(13.04) |
| | | Musical Forms and Analysis(24.00) | | | Organic Chemistry(16.96) |
| | | Pitch and Scales(21.43) | | | Physical Chemistry(11.33) |
| | | Business and Accounting Management(17.39) | | | Polymer Chemistry and Physics(14.47) |
| | | Tourism Management and Technological Economics Management(32.00) | | | Radiochemistry(18.33) |
| | Library, Information and Archival Management(22.67) | Information Management Science(16.00) | | | Geography(27.07) |
| | | Information Management and Communication(38.00) | | | Human Geography(40.00) |
| | | Library and Archival Science(14.00) | | | Physical Geography(19.28) |
| | | Management Science and Engineering(20.69) | | | Geology(23.46) |
| | | Management Science and Engineering(20.69) | | | Geochemistry(24.00) |
| Pharmacy(19.78) | Public Administration(25.83) | Education Economics, Management and Social Security(16.00) | | | Mineralogy, Petrology, and Economic Geology(27.27) |
| | | Land Resource Management and Administrative Management(23.53) | | | Paleontology and Stratigraphy(20.00) |
| | | Social Medicine and Health Management(38.00) | | | Principles of Seismic Exploration(16.00) |
| | | Forensic Medicine(22.00) | | | Structural Geology(24.29) |
| | | Human Anatomy and Histology-Embryology(17.99) | | | Geophysics(16.00) |
| | Clinical Medicine(20.77) | Immunology(27.54) | | | Solid Earth Geophysics(18.00) |
| | | Pathogen Biology(19.15) | | | Space physics(14.00) |
| | | Pathology and Pathophysiology(20.00) | | | Advanced Algebra(14.85) |
| | | Radiation Medicine(38.00) | | | Combinatorial Mathematics(8.90) |
| | | Anesthesiology(24.00) | | | Computational Mathematics(22.00) |
| Public Health and Preventive Medicine(23.29) | Pharmacology(19.78) | Clinical Laboratory Diagnostics(20.00) | | | Cryptography(34.00) |
| | | Dermatology and Venereology(21.21) | | | Discrete Mathematics(12.36) |
| | | Emergency Medicine(16.67) | | | Functions of Complex Variables(13.11) |
| | | Geriatric Medicine(20.00) | | | Functions of Real Variables(16.42) |
| | | Imaging and Nuclear Medicine(22.39) | | | Fundamental Mathematics(12.18) |
| | Stomatology(16.67) | Internal Medicine(18.32) | | | Fuzzy Mathematics(14.00) |
| | | Neurology(22.22) | | | Geometry and Topology(13.21) |
| | | Nursing and Rehabilitation Medicine(14.00) | | | Graph Theory(5.88) |
| | | Obstetrics and Gynecology(25.49) | | | Group Theory(8.00) |
| | | Oncology(22.41) | | | Mathematical Analysis(11.11) |
| Military Science(24.88) | Traditional Chinese Medicine(19.78) | Ophthalmology(22.00) | | | Number Theory(6.36) |
| | | Otorhinolaryngology(22.00) | | | Numerical Analysis(11.94) |
| | | Pediatrics(22.00) | | | Ordinary Differential Equations(10.00) |
| | | Psychiatry and Mental Health(30.00) | | | Polynomials and Series Expansions(7.82) |
| | | Surgery(11.76) | | | Probability and Statistics(16.96) |
| | Military Science(24.88) | Medicinal Chemistry(12.00) | | | Special Number Theory(20.00) |
| | | Microbiology and Biochemical Pharmacy(26.00) | | | Stochastic Processes(20.00) |
| | | Pharmaceutical Analysis(14.00) | | | Hydrogeology(44.00) |
| | | Pharmaceutics(26.03) | | | Marine Biology(56.00) |
| | | Pharmacology(18.18) | | | Marine Chemistry(26.00) |
| Philosophy(25.65) | Systems Science(20.00) | Epidemiology and Health Statistics(20.48) | | | Underwater Acoustics(18.00) |
| | | Health Toxicology and Environmental Health(22.50) | | | Physical Oceanography(12.00) |
| | | Maternal, Child and Adolescent Health(17.72) | | | Acoustics(11.43) |
| | | Nutrition and Food Hygiene(30.00) | | | Atomic and Molecular Physics(11.90) |
| | | Basic Stomatology(15.09) | | | Electrodynamics(13.72) |
| | Sociology(28.67) | Clinical Stomatology(17.72) | | | Fluid Physics(11.19) |
| | | Traditional Chinese Health Preservation(25.42) | | | Particle and Nuclear Physics(16.00) |
| | | Traditional Chinese Medicine Theory(22.22) | | | Polymer Physics(14.68) |
| | | Traditional Chinese Pharmacy(15.13) | | | Quantum Mechanics(12.62) |
| | | Military Command and Information Systems(38.00) | | | Relativity(15.19) |
| Philosophy(25.65) | Sociology(28.67) | Military Logistics and Equipment(11.11) | | | Semiconductor Physics(9.84) |
| | | Military Management(32.00) | | | Solid State Physics(12.93) |
| | | Military Thought and History(19.61) | | | Statistical Mechanics(10.00) |
| | | Ethics(27.94) | | | Subatomic and Atomic Physics(13.73) |
| Philosophy(25.65) | Sociology(28.67) | Logic(15.71) | | | Thermodynamics(12.56) |
| | | Philosophical Aesthetics(21.10) | | | Thermodynamics and Statistical Physics(11.89) |
| | | Philosophy of Science and Technology(34.00) | | | Systems Science(20.00) |

Table 79. Continued: Model Scores Across Three Levels of Disciplines: Qwen2.5-1.5B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|--|---|
| Agronomy(17.94) | Animal Husbandry(25.24) | Animal Nutrition and Feed Science(21.15) | Engineering(16.79) | Geological Resources and Geological Engineering(26.00) | Geological Resources and Geological Engineering(26.00) |
| | | Animal Rearing and Breeding(29.41) | | | Hydraulics and Hydrology(18.38) |
| | Aquaculture(14.29) Crop Science(16.55) | Aquaculture(14.29) | | Hydraulic Engineering(16.51) | Water conservancy and Hydropower Engineering(13.41) |
| | | Crop Science(16.55) | | | Antenna and Radio Communication(15.79) |
| | Forestry(16.03) | Forest Cultivation and Genetic Breeding(17.28) | | Information and Communication Engineering(18.25) | Communication Principles(22.41) |
| | | Landscape Plants and Ornamental Horticulture(14.00) | | | Communication and Information Systems(17.39) |
| | Veterinary Medicine(16.00) | Veterinary Medicine(16.00) | | Optical Fiber Communication(18.00) | Optical Fiber Communication(18.00) |
| | | Economic Statistics(14.00) | | | Signal and Information Processing(17.42) |
| | Economics(17.64) | Finance(19.32) | | Instrument Science and Technology(14.00) | Instrument Science and Technology(14.00) |
| | | Industrial Economics(9.52) | | | Materials Science and Chemistry(13.07) |
| | | International Trade(15.94) | | Materials Processing Engineering(14.44) | Materials Processing Engineering(14.44) |
| | | Labor Economics(16.22) | | | Manufacturing Automation(13.49) |
| | | National and Defense Economics(26.00) | | Mechanical Engineering(14.20) | Mechatronic Engineering(16.00) |
| | | Public Finance(13.33) | | | Fundamentals of Dynamics and Control(12.10) |
| | | Quantitative Economics(16.00) | | | Rigid Body Mechanics(11.56) |
| | | Theoretical Economics(24.67) | | | Solid Mechanics(10.75) |
| | | Economic History(24.00) | | Metallurgical Engineering(17.25) | Theoretical Fluid Mechanics(17.86) |
| | | Political Economy(28.00) | | | Theoretical Mechanics(12.90) |
| | | Western Economics(22.00) | | Iron and Steel Metallurgy(8.57) | Iron and Steel Metallurgy(8.57) |
| Education(21.69) | Education(21.46) | Educational Technology and Principles(19.79) | | | Non-ferrous Metallurgy(26.00) |
| | | Preschool Education(20.00) | | Physical Chemistry of Metallurgical Process(14.00) | Physical Chemistry of Metallurgical Process(14.00) |
| | Physical Education(26.00) | Special Education(36.00) | | | Principles of Metallurgy(30.00) |
| | | Theory of Curriculum and Instruction(11.76) | | Mining Engineering(20.00) | Mineral Processing Engineering(18.00) |
| | Psychology(14.94) | Physical Education and Training(12.00) | | | Mining and Safety Engineering(22.00) |
| | | Sports Humanities and Sociology(26.00) | | Naval Architecture and Ocean Engineering(18.84) | Marine Engineering(22.00) |
| | | Sports Science and Medicine(40.00) | | | Ship Mechanics and Design Principles(17.05) |
| | Psychology(14.94) | Psychology(14.94) | | Nuclear Science and Technology(15.89) | Nuclear Energy and Reactor Technology(8.77) |
| | | Aeronautical and Astronautical Science and Technology(9.24) | | | Radiation Protection and Nuclear Technology Applications(24.00) |
| Engineering(16.79) | Agricultural Engineering(22.12) | Agricultural Environment and Soil-Water Engineering(24.07) | | Optical Engineering(18.09) | Applied Optics(15.32) |
| | | Agricultural Mechanization Engineering(20.00) | | | Laser Technology(18.00) |
| | Architecture(21.60) | Architectural Design and Theory(28.00) | | Petroleum and Natural Gas Engineering(20.54) | Optoelectronic Technology(22.39) |
| | | Architectural History(16.13) | | | Theoretical Optics(18.52) |
| | Chemical Engineering and Technology(13.17) | Urban Planning and Design(22.00) | | Power Engineering and Engineering Thermophysics(14.04) | Oil and Gas Field Development and Storage & Transportation Engineering(14.52) |
| | | Chemical Transport Engineering(18.00) | | | Poromechanics and Reservoir Physics(28.00) |
| | Civil Engineering(15.64) | Elements of Chemical Reaction Engineering(10.28) | | | Engineering Fluid Mechanics(14.29) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(10.28) | | | Engineering Thermophysics(11.64) |
| | Computer Science and Technology(20.58) | Mass Transport and Separation Process in Chemical Engineering(15.75) | | Surveying and Mapping Science and Technology(16.07) | Fluid Machinery and Engineering(10.94) |
| | | Civil Infrastructure Engineering(16.90) | | | Heat Transfer(13.18) |
| Control Science and Engineering(14.21) | Computer Science and Technology(20.58) | Advanced Programming Languages(24.00) | | Textile Science and Engineering(19.00) | Internal Combustion Engineering(26.00) |
| | | Computer Architecture(16.00) | | | Power Machinery and Engineering(11.54) |
| | Control Science and Engineering(14.21) | Computer Networks(18.64) | | Transportation Engineering(19.52) | Refrigeration and Cryogenic Engineering(18.00) |
| | | Computer Software and Theory(20.25) | | | Thermal Energy Engineering(13.76) |
| | Control Science and Engineering(14.21) | Data Structures(9.09) | | Textile Materials Science(24.00) | Cartography and Geographic Information Engineering(16.00) |
| | | Databases(26.11) | | | Digital Surveying and Remote Sensing Applications(16.18) |
| | Control Science and Engineering(14.21) | Formal Languages(28.85) | | Geodesy and Surveying Engineering(16.00) | Geodesy and Surveying Engineering(16.00) |
| | | Operating Systems(15.29) | | | Textile Chemistry and Dyeing Engineering(14.00) |
| | Control Science and Engineering(14.21) | Pattern Recognition(36.00) | | Textile Materials Science(24.00) | Textile Materials Science(24.00) |
| | | Principles of Computer Organization(17.07) | | | Road and Railway Engineering(10.00) |
| Electrical Engineering(16.73) | Control Science and Engineering(14.21) | Control Theory and Control Engineering(19.10) | | Transportation Engineering(19.52) | Traffic Information Engineering and Control(18.46) |
| | | Guidance, Navigation and Control(9.80) | | | Transportation Planning and Management(22.09) |
| | Control Science and Engineering(14.21) | Operations Research and Cybernetics(10.00) | | Vehicle Operation Engineering(26.00) | Vehicle Operation Engineering(26.00) |
| | | Electrical Engineering(15.69) | | | Weapon Science and Technology(22.00) |
| | Control Science and Engineering(14.21) | Electrical Theory and New Technologies(17.37) | | Military Chemistry and Pyrotechnics(26.00) | Military Chemistry and Pyrotechnics(26.00) |
| | | High Voltage and Insulation Technology(15.91) | | | Weapon Systems Science and Engineering(18.00) |
| | Control Science and Engineering(14.21) | Power Electronics and Electrical Drives(16.48) | | Archaeology and Museology(17.31) | Archaeology and Museology(17.31) |
| | | Power Systems and Automation(16.67) | | | Historical Geography(14.79) |
| Electronic Science and Technology(13.01) | Control Science and Engineering(14.21) | Circuits and Systems(14.81) | | World History(12.15) | World History(12.15) |
| | | Electromagnetic Field and Microwave Technology(11.36) | | | |
| | Control Science and Engineering(14.21) | Microelectronics and Solid-State Electronics(12.00) | | Law(21.19) | |
| | | Environmental Science and Engineering(21.16) | | | Civil and Commercial Law(14.41) |
| | Control Science and Engineering(14.21) | Environmental Engineering(14.61) | | Law(21.66) | Constitutional and Administrative Law(24.00) |
| | | Environmental Science(32.00) | | | Contract Law(22.00) |
| | Control Science and Engineering(14.21) | Environmental and Resource Protection(22.00) | | Political Science(16.92) | Criminal Law(21.55) |
| | | Food Biochemistry(54.00) | | | International Law(17.54) |
| | Control Science and Engineering(14.21) | Food Processing and Storage Engineering(13.56) | | Procedural Law(20.00) | Law and Social Governance(14.00) |
| | | Forest Engineering(28.00) | | | Legal Theory and Legal History(32.00) |
| Environmental Science and Engineering(21.16) | Food Science and Engineering(32.11) | Wood Science and Technology(16.00) | | | Military Law(40.00) |
| | | Forestry Engineering(22.00) | | | Political Science(16.92) |
| Engineering(16.79) | Forestry Engineering(22.00) | Forestry Engineering(22.00) | | | Procedural Law(20.00) |
| | | Forestry Engineering(22.00) | | | Political Science(16.92) |

Table 80. Model Scores Across Three Levels of Disciplines: MAP-Neo-7B-Instruct-v0.1.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|--|--|---------------------|---|--|
| Literature and Arts(16.35) | Art Studies(15.92) | Broadcasting and Television Art(20.00) | Philosophy(21.61) | Philosophy(21.61) | Religious Studies(34.00) |
| | | Dance Studies(12.00) | | Astronomy(12.35) | Astronomical Observation and Technology(15.00) |
| | | Design Arts(17.74) | | Astrophysics(8.70) | Cosmology(12.82) |
| | | Drama and Opera Studies(17.07) | | Solar System Science(11.36) | Stellar and Interstellar Evolution(12.86) |
| | | Film Studies(18.35) | | Atmospheric Science(15.27) | Atmospheric Physics and Atmospheric Environment(17.39) |
| | Journalism and Communication(14.01) | Fine Arts(12.94) | | | Dynamic Meteorology(16.00) |
| | | Communication and Broadcasting(12.07) | | | Meteorology(13.10) |
| | Language and Literature(17.05) | History and Theory of Journalism and Media Management(22.03) | Biology(18.93) | Biochemistry and Molecular Biology(14.14) | Biophysics(28.00) |
| | | Journalism and News Practice(10.00) | | Botany(19.28) | Cell Biology(19.54) |
| | | Classical Chinese Literature(14.00) | | Ecology(19.44) | Genetics(19.57) |
| | | French Language and Literature(30.00) | | Microbiology(18.01) | Microbiology(19.17) |
| | | Linguistics and Applied Linguistics(10.00) | | Physiology(19.17) | Zoology(17.43) |
| Management(20.96) | Musicology(17.37) | Literary History(14.49) | Chemistry(12.49) | Analytical Chemistry(13.13) | Electrochemistry(9.46) |
| | | Literary Theory(18.75) | | Inorganic Chemistry(15.22) | Organic Chemistry(19.30) |
| | | Modern and Contemporary Chinese Literature(24.00) | | Physical Chemistry(11.19) | Polymer Chemistry and Physics(10.53) |
| | | Philology and Bibliography(12.00) | | Radiochemistry(11.67) | |
| | | Russian Language and Literature(14.04) | | | |
| | Business Administration(12.68) | Pitch and Scales(12.50) | | | |
| | | Composition(24.00) | | | |
| | | Harmony(20.00) | | | |
| | | Instrumentation and Performance(18.46) | | | |
| | | Music History, Education, and Technology(15.86) | | | |
| Medicine(18.91) | Basic Medicine(21.52) | Musical Forms and Analysis(16.00) | Geography(20.30) | | |
| | | Pitch and Scales(12.50) | | | |
| | | Business and Accounting Management(10.87) | | | |
| | | Tourism Management and Technological Economics Management(16.00) | | | |
| | | Information Management Science(20.00) | | | |
| | Public Administration(19.21) | Information Management and Communication(48.00) | | | |
| | | Library and Archival Science(22.00) | | | |
| | | Management Science and Engineering(22.41) | | | |
| | | Management Science and Engineering(22.41) | | | |
| | | Education Economics, Management and Social Security(12.00) | | | |
| Military Science(25.85) | Clinical Medicine(18.72) | Land Resource Management and Administrative Management(21.57) | Geology(17.30) | | |
| | | Social Medicine and Health Management(24.00) | | | |
| | | Forensic Medicine(26.00) | | | |
| | | Human Anatomy and Histology-Embryology(24.34) | | | |
| | | Immunology(23.19) | | | |
| | Pharmacy(20.50) | Pathogen Biology(22.34) | | | |
| | | Pathology and Pathophysiology(12.17) | | | |
| | | Radiation Medicine(24.00) | | | |
| | | Anesthesiology(24.00) | | | |
| | | Clinical Laboratory Diagnostics(22.00) | | | |
| Philosophy(21.61) | Military Science(25.85) | Dermatology and Venereology(22.73) | Geophysics(20.00) | | |
| | | Emergency Medicine(15.15) | | | |
| | | Geriatric Medicine(16.00) | | | |
| | | Imaging and Nuclear Medicine(11.94) | | | |
| | | Internal Medicine(17.82) | | | |
| | Sociology(14.69) | Neurology(20.63) | | | |
| | | Nursing and Rehabilitation Medicine(26.00) | | | |
| | | Obstetrics and Gynecology(15.69) | | | |
| | | Oncology(20.69) | | | |
| | | Ophthalmology(16.00) | | | |
| | Public Health and Preventive Medicine(19.18) | Otorhinolaryngology(24.00) | Mathematics(17.01) | | |
| | | Pediatrics(14.00) | | | |
| | | Psychiatry and Mental Health(22.00) | | | |
| | | Surgery(14.71) | | | |
| | | Medicinal Chemistry(18.00) | | | |
| | Traditional Chinese Medicine(13.06) | Microbiology and Biochemical Pharmacy(26.00) | | | |
| | | Pharmaceutical Analysis(18.00) | | | |
| | | Pharmacaceutics(23.29) | | | |
| | | Pharmacology(16.36) | | | |
| | | Epidemiology and Health Statistics(22.89) | | | |
| | Stomatology(17.42) | Health Toxicology and Environmental Health(17.50) | Oceanography(35.50) | | |
| | | Maternal, Child and Adolescent Health(20.25) | | | |
| | | Nutrition and Food Hygiene(14.00) | | | |
| | | Basic Stomatology(11.32) | | | |
| | | Clinical Stomatology(21.52) | | | |
| | Military Science(25.85) | Traditional Chinese Health Preservation(6.78) | | | |
| | | Traditional Chinese Medicine Theory(14.44) | | | |
| | | Traditional Chinese Pharmacy(15.13) | | | |
| | | Military Command and Information Systems(28.00) | | | |
| | | Military Logistics and Equipment(18.52) | | | |
| | Philosophy(21.61) | Military Management(34.00) | | | |
| | | Military Thought and History(23.53) | | | |
| | | Ethics(10.29) | Physics(14.62) | | |
| | | Logic(17.14) | | | |
| | | Philosophical Aesthetics(22.02) | | | |
| | Sociology(14.69) | Philosophy of Science and Technology(30.00) | | | |
| | | Systems Science(22.00) | | | |
| | | Sociology(14.69) | | | |
| | | Sociology(14.69) | | | |
| | | Sociology(14.69) | | | |

Table 80. Continued: Model Scores Across Three Levels of Disciplines:

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--|--|--|
| Agronomy(20.82) | Animal Husbandry(21.36) | Animal Nutrition and Feed Science(28.85) Animal Rearing and Breeding(13.73) | Engineering(16.52) | Geological Resources and Geological Engineering(24.00) Geological Engineering(24.00) | Geological Resources and Geological Engineering(24.00) |
| | Aquaculture(17.86) Crop Science(19.31) | Aquaculture(17.86) Crop Science(19.31) | | Hydraulic Engineering(18.35) | Hydraulics and Hydrology(16.91) Water conservancy and Hydropower Engineering(20.73) |
| | Forestry(21.37) | Forest Cultivation and Genetic Breeding(18.52) Landscape Plants and Ornamental Horticulture(26.00) | Information and Communication Engineering(13.69) | Antenna and Radio Communication(11.40) | Antenna and Radio Communication(11.40) |
| Economics(14.66) | Veterinary Medicine(26.00) | Veterinary Medicine(26.00) | | Communication Principles(11.21) Communication and Information Systems(23.19) | Communication Principles(11.21) |
| | Applied Economics(14.38) | Economic Statistics(16.00) Finance(15.34) | | Optical Fiber Communication(12.00) Signal and Information Processing(13.55) | Optical Fiber Communication(12.00) |
| | | Industrial Economics(11.90) | Instrument Science and Technology(22.00) | Instrument Science and Technology(22.00) | Instrument Science and Technology(22.00) |
| | | International Trade(11.59) Labor Economics(16.22) | Materials Science and Engineering(17.99) | Materials Physics and Chemistry(17.59) | Materials Physics and Chemistry(17.59) |
| | | National and Defense Economics(24.00) Public Finance(13.33) | Mechanical Engineering(14.20) | Materials Processing Engineering(18.89) Manufacturing Automation(15.08) | Materials Processing Engineering(18.89) |
| | | Quantitative Economics(11.00) | Mechanics(14.54) | Mechatronic Engineering(12.00) Fundamentals of Dynamics and Control(14.70) | Mechatronic Engineering(12.00) |
| | Theoretical Economics(16.00) | Economic History(10.00) | | Rigid Body Mechanics(12.14) Solid Mechanics(19.35) | Rigid Body Mechanics(12.14) |
| | | Political Economy(18.00) | | Theoretical Fluid Mechanics(12.14) Theoretical Mechanics(16.13) | Theoretical Fluid Mechanics(12.14) |
| | | Western Economics(20.00) | Metallurgical Engineering(20.00) | Iron and Steel Metallurgy(16.19) Non-ferrous Metallurgy(20.00) | Iron and Steel Metallurgy(16.19) |
| Education(20.25) | Education(19.03) | Educational Technology and Principles(14.58) Preschool Education(18.00) Special Education(26.00) | | Physical Chemistry of Metallurgical Process(14.00) Principles of Metallurgy(34.00) | Physical Chemistry of Metallurgical Process(14.00) |
| | Physical Education(24.67) | Theory of Curriculum and Instruction(21.57) Physical Education and Training(14.00) Sports Humanities and Sociology(24.00) | Mining Engineering(23.00) | Mineral Processing Engineering(24.00) Mining and Safety Engineering(22.00) | Mineral Processing Engineering(24.00) |
| | Psychology(16.09) | Sports Science and Medicine(36.00) | Naval Architecture and Ocean Engineering(15.94) | Marine Engineering(12.00) | Marine Engineering(12.00) |
| Engineering(16.52) | Aeronautical and Astronautical Science and Technology(21.01) Agricultural Engineering(18.27) | Aeronautical and Astronautical Science and Technology(21.01) Agricultural Environment and Soil-Water Engineering(24.07) | Nuclear Science and Technology(11.21) | Ship Mechanics and Design Principles(18.18) Nuclear Energy and Reactor Technology(5.26) | Ship Mechanics and Design Principles(18.18) |
| | Architecture(20.37) | Agricultural Mechanization Engineering(12.00) Architectural Design and Theory(16.00) Architectural History(14.52) | | Radiation Protection and Nuclear Technology Applications(18.00) | Radiation Protection and Nuclear Technology Applications(18.00) |
| | Chemical Engineering and Technology(12.44) | Urban Planning and Design(32.00) Chemical Transport Engineering(12.00) | Optical Engineering(12.50) | Applied Optics(14.52) Laser Technology(8.00) | Applied Optics(14.52) |
| | | Elements of Chemical Reaction Engineering(14.02) Fluid Flow and Heat Transfer in Chemical Engineering(11.21) | Petroleum and Natural Gas Engineering(19.64) | Optoelectronic Technology(14.33) Theoretical Optics(11.85) | Optoelectronic Technology(14.33) |
| | | Mass Transport and Separation Process in Chemical Engineering(12.33) | | Oil and Gas Field Development and Storage & Transportation Engineering(20.97) | Oil and Gas Field Development and Storage & Transportation Engineering(20.97) |
| | Civil Engineering(12.29) | Bridge and Tunnel Engineering(17.65) Geotechnical Engineering(8.94) Structural Engineering(14.04) | Power Engineering and Engineering Thermophysics(13.74) | Poromechanics and Reservoir Physics(18.00) Engineering Fluid Mechanics(14.29) | Poromechanics and Reservoir Physics(18.00) |
| | | Urban Infrastructure Engineering(15.49) | | Engineering Thermophysics(13.01) | Engineering Thermophysics(13.01) |
| | Computer Science and Technology(19.79) | Advanced Programming Languages(22.00) Computer Architecture(24.00) Computer Networks(13.56) | | Fluid Machinery and Engineering(18.75) Heat Transfer(13.18) | Fluid Machinery and Engineering(18.75) |
| | | Computer Software and Theory(25.32) Data Structures(13.13) | | Internal Combustion Engineering(18.00) | Internal Combustion Engineering(18.00) |
| | | Databases(19.75) | | Power Machinery and Engineering(11.54) | Power Machinery and Engineering(11.54) |
| | | Formal Languages(17.31) | | Refrigeration and Cryogenic Engineering(16.00) | Refrigeration and Cryogenic Engineering(16.00) |
| | | Operating Systems(12.94) Pattern Recognition(32.00) | | Thermal Energy Engineering(10.09) Cartography and Geographic Information Engineering(14.00) | Thermal Energy Engineering(10.09) |
| | Control Science and Engineering(18.95) | Principles of Computer Organization(24.39) Control Theory and Control Engineering(16.85) | | Digital Surveying and Remote Sensing Applications(25.00) | Digital Surveying and Remote Sensing Applications(25.00) |
| | | Guidance, Navigation and Control(31.37) | | Geodesy and Surveying Engineering(18.00) | Geodesy and Surveying Engineering(18.00) |
| | | Operations Research and Cybernetics(10.00) | | Textile Chemistry and Dyeing Engineering(18.00) | Textile Chemistry and Dyeing Engineering(18.00) |
| Electrical Engineering(16.37) | Electrical Theory and New Technologies(13.68) High Voltage and Insulation Technology(19.32) Power Electronics and Electrical Drives(18.13) | Electrical Theory and New Technologies(13.68) High Voltage and Insulation Technology(19.32) Power Electronics and Electrical Drives(18.13) | Surveying and Mapping Science and Technology(19.64) | Textile Materials Science(26.00) | Textile Materials Science(26.00) |
| | | Power Systems and Automation(15.62) | | Transportation Engineering(18.73) | Transportation Engineering(18.73) |
| Electronic Science and Technology(12.20) | Circuits and Systems(15.74) | | | Road and Railway Engineering(6.00) Traffic Information Engineering and Control(15.38) | Road and Railway Engineering(6.00) |
| | | Electromagnetic Field and Microwave Technology(7.95) | | Transportation Planning and Management(27.91) | Transportation Planning and Management(27.91) |
| | | Microelectronics and Solid-State Electronics(12.00) | | Vehicle Operation Engineering(20.00) | Vehicle Operation Engineering(20.00) |
| Environmental Science and Engineering(16.40) | Environmental Engineering(12.36) | | | Weapon Science and Technology(24.00) | Weapon Science and Technology(24.00) |
| | | Environmental Science(26.00) | | Military Chemistry and Pyrotechnics(26.00) | Military Chemistry and Pyrotechnics(26.00) |
| Food Science and Engineering(28.44) | Environmental and Resource Protection(14.00) | | | Weapon Systems Science and Engineering(22.00) | Weapon Systems Science and Engineering(22.00) |
| | | Food Biochemistry(42.00) | | | |
| Forestry Engineering(24.00) | Food Processing and Storage Engineering(16.95) | | History(16.32) | Archaeology and Museology(22.12) | Archaeology and Museology(22.12) |
| Engineering(16.52) | Forest Engineering(16.00) | | | Historical Geography(15.49) | Historical Geography(15.49) |
| | Wood Science and Technology(32.00) | | | World History(15.19) | World History(15.19) |
| | | | Law(18.45) | Law(19.12) | Civil and Commercial Law(15.25) |
| | | | | | Constitutional and Administrative Law(24.00) |
| | | | | | Contract Law(18.00) |
| | | | | | Criminal Law(16.38) |
| | | | | | International Law(15.79) |
| | | | | | Law and Social Governance(22.00) |
| | | | | | Legal Theory and Legal History(12.00) |
| | | | | | Military Law(46.00) |
| | | | | Political Science(12.31) | Procedural Law(12.00) |
| | | | | | Political Science(12.31) |

Table 81. Model Scores Across Three Levels of Disciplines: OLMo-2-1124-7B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|------------------------|---|--|
| Literature and Arts(18.08) | Art Studies(19.57) | Broadcasting and Television Art(26.00) | Philosophy(21.90) | Philosophy(21.90) | Religious Studies(28.00) |
| | | Dance Studies(22.00) | | Astronomy(13.83) | Astronomical Observation and Technology(16.00) |
| | | Design Arts(17.74) | | | Astrophysics(17.39) |
| | | Drama and Opera Studies(15.85) | | | Cosmology(11.54) |
| | | Film Studies(19.62) | | | Solar System Science(10.23) |
| | | Fine Arts(19.40) | | | Stellar and Interstellar Evolution(14.29) |
| | Journalism and Communication(13.53) | Communication and Broadcasting(12.07) | | Atmospheric Science(16.75) | Atmospheric Physics and Atmospheric Environment(15.94) |
| | | History and Theory of Journalism and Media Management(16.95) | | | Dynamic Meteorology(20.00) |
| | | Journalism and News Practice(12.22) | | | Meteorology(15.48) |
| | Language and Literature(16.82) | Classical Chinese Literature(12.00) | | | Biochemistry and Molecular Biology(19.19) |
| | | French Language and Literature(16.00) | | | Biophysics(28.00) |
| | | Linguistics and Applied Linguistics(16.00) | | | Botany(15.06) |
| | | Literary History(15.94) | | | Cell Biology(16.09) |
| | | Literary Theory(15.62) | | | Ecology(11.81) |
| | | Modern and Contemporary Chinese Literature(24.00) | | | Genetics(17.93) |
| | | Philology and Bibliography(10.00) | | | Microbiology(19.25) |
| | | Russian Language and Literature(24.56) | | | Physiology(11.67) |
| | Musicology(19.48) | Composition(26.00) | | | Zoology(15.60) |
| | | Harmony(23.33) | | | Analytical Chemistry(13.64) |
| | | Instrumentation and Performance(16.92) | | | Electrochemistry(15.77) |
| | | Music History, Education, and Technology(13.79) | | | Inorganic Chemistry(15.22) |
| | | Musical Forms and Analysis(28.00) | | | Organic Chemistry(12.28) |
| | | Pitch and Scales(19.64) | | | Physical Chemistry(15.72) |
| | Management(22.95) | Business and Accounting Management(27.17) | | | Polymer Chemistry and Physics(18.42) |
| | | Tourism Management and Technological Economics Management(16.00) | | | Radiochemistry(5.00) |
| | Library, Information and Archival Management(24.67) | Information Management Science(14.00) | | | Geography(25.56) |
| | | Information Management and Communication(44.00) | | | Human Geography(42.00) |
| | | Library and Archival Science(16.00) | | | Physical Geography(15.66) |
| | Management Science and Engineering(20.69) | Management Science and Engineering(20.69) | | | Geology(17.60) |
| | Public Administration(21.85) | Education Economics, Management and Social Security(22.00) | | | Geochemistry(30.00) |
| | | Land Resource Management and Administrative Management(13.73) | | | Mineralogy, Petrology, and Economic Geology(20.66) |
| | | Social Medicine and Health Management(30.00) | | | Paleontology and Stratigraphy(12.00) |
| Medicine(17.82) | Basic Medicine(20.11) | Forensic Medicine(28.00) | | | Principles of Seismic Exploration(8.00) |
| | Human Anatomy and Histology-Embryology(15.87) | | | Structural Geology(14.29) | |
| | Immunology(20.29) | | | Geophysics(20.00) | |
| | Pathogen Biology(15.96) | | | Solid Earth Geophysics(14.00) | |
| | Pathology and Pathophysiology(21.74) | | | Space physics(26.00) | |
| | Radiation Medicine(32.00) | | | Advanced Algebra(16.34) | |
| Clinical Medicine(17.49) | Anesthesiology(22.00) | | | Combinatorial Mathematics(14.14) | |
| | Clinical Laboratory Diagnostics(8.00) | | | Computational Mathematics(22.00) | |
| | Dermatology and Venereology(24.24) | | | Cryptography(26.00) | |
| | Emergency Medicine(13.64) | | | Discrete Mathematics(19.10) | |
| | Geriatric Medicine(20.00) | | | Functions of Complex Variables(15.57) | |
| | Imaging and Nuclear Medicine(13.43) | | | Functions of Real Variables(22.39) | |
| | Internal Medicine(12.87) | | | Fundamental Mathematics(11.68) | |
| | Neurology(22.22) | | | Fuzzy Mathematics(12.00) | |
| | Nursing and Rehabilitation Medicine(18.00) | | | Geometry and Topology(13.21) | |
| | Obstetrics and Gynecology(14.71) | | | Graph Theory(13.73) | |
| | Oncology(24.14) | | | Group Theory(18.00) | |
| | Ophthalmology(16.00) | | | Mathematical Analysis(19.44) | |
| | Otorhinolaryngology(28.00) | | | Number Theory(9.55) | |
| Pharmacy(19.06) | Pediatrics(10.00) | | | Numerical Analysis(16.42) | |
| | Psychiatry and Mental Health(24.00) | | | Ordinary Differential Equations(16.25) | |
| | Surgery(13.24) | | | Polynomials and Series Expansions(7.26) | |
| | Medicinal Chemistry(22.00) | | | Probability and Statistics(12.95) | |
| | Microbiology and Biochemical Pharmacy(18.00) | | | Special Number Theory(22.00) | |
| | Pharmaceutical Analysis(28.00) | | | Stochastic Processes(16.00) | |
| | Pharmacetics(21.92) | | | Hydrogeology(40.00) | |
| | Pharmacology(5.45) | | | Marine Biology(36.00) | |
| Public Health and Preventive Medicine(18.15) | Epidemiology and Health Statistics(21.69) | | | Marine Chemistry(32.00) | |
| | Health Toxicology and Environmental Health(17.50) | | | Underwater Acoustics(14.00) | |
| | Maternal, Child and Adolescent Health(12.66) | | | Physical Oceanography(14.00) | |
| | Nutrition and Food Hygiene(22.00) | | | Acoustics(16.33) | |
| Stomatology(17.42) | Basic Stomatology(24.53) | | | Atomic and Molecular Physics(16.19) | |
| | Clinical Stomatology(12.66) | | | Electrodynamics(17.15) | |
| Traditional Chinese Medicine(13.06) | Traditional Chinese Health Preservation(10.17) | | | Fluid Physics(17.91) | |
| | Traditional Chinese Medicine Theory(12.22) | | | Particle and Nuclear Physics(12.89) | |
| | Traditional Chinese Pharmacy(15.13) | | | Polymer Physics(16.51) | |
| Military Science(23.41) | Military Science(23.41) | Military Command and Information Systems(32.00) | | | Solid State Physics(14.97) |
| | Military Logistics and Equipment(20.37) | | | Statistical Mechanics(10.00) | |
| | Military Management(36.00) | | | Subatomic and Atomic Physics(13.73) | |
| | Military Thought and History(5.88) | | | Thermodynamics(12.56) | |
| Philosophy(21.90) | Philosophy(21.90) | Ethics(20.59) | Systems Science(20.00) | | Thermodynamics and Statistical Physics(13.40) |
| | Logic(18.57) | | | Systems Science(20.00) | |
| | Philosophical Aesthetics(19.27) | | | Demography and Anthropology(28.00) | |
| | Philosophy of Science and Technology(28.00) | | | Social and Folklore Studies(12.90) | |
| | Sociology(18.18) | | | | |

Table 81. Continued: Model Scores Across Three Levels of Disciplines: OLMo-2-1124-7B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|---|---|
| Agronomy(18.76) | Animal Husbandry(24.27) | Animal Nutrition and Feed Science(26.92) | Engineering(16.37) | Geological Resources and Geological Engineering(20.00) | Geological Resources and Geological Engineering(20.00) |
| | | Animal Rearing and Breeding(21.57) | | | Hydraulics and Hydrology(16.91) |
| | Aquaculture(16.07) Crop Science(22.76) | Aquaculture(16.07) | | Water conservancy and Hydropower Engineering(19.51) | Water conservancy and Hydropower Engineering(19.51) |
| | | Crop Science(22.76) | | | Antenna and Radio Communication(11.40) |
| | Forestry(12.98) | Forest Cultivation and Genetic Breeding(16.05) | | Communication Principles(14.66) | Communication Principles(14.66) |
| | | Landscape Plants and Ornamental Horticulture(8.00) | | | Communication and Information Systems(15.94) |
| | Veterinary Medicine(14.00) | Veterinary Medicine(14.00) | | Optical Fiber Communication(10.00) | Optical Fiber Communication(10.00) |
| | | Economic Statistics(22.00) | | | Signal and Information Processing(14.19) |
| | Economics(18.33) | Finance(17.05) | | Instrument Science and Technology(26.00) | Instrument Science and Technology(26.00) |
| | | Industrial Economics(13.10) | | | Materials Physics and Chemistry(11.06) |
| | | International Trade(17.39) | | Materials Processing Engineering(15.56) | Materials Processing Engineering(15.56) |
| | | Labor Economics(29.73) | | | Manufacturing Automation(17.46) |
| | | National and Defense Economics(12.00) | | Mechatronic Engineering(16.00) | Mechatronic Engineering(16.00) |
| | | Public Finance(16.67) | | | Fundamentals of Dynamics and Control(13.26) |
| | | Quantitative Economics(18.00) | | Rigid Body Mechanics(12.14) | Rigid Body Mechanics(12.14) |
| | | Theoretical Economics(20.00) | | | Solid Mechanics(11.83) |
| | | Economic History(22.00) | | Theoretical Fluid Mechanics(18.57) | Theoretical Fluid Mechanics(18.57) |
| | | Political Economy(14.00) | | | Theoretical Mechanics(18.06) |
| | | Western Economics(24.00) | | Metallurgical Engineering(15.69) | Iron and Steel Metallurgy(5.71) |
| Education(23.55) | Education(21.46) | Educational Technology and Principles(15.62) | | | Non-ferrous Metallurgy(20.00) |
| | | Preschool Education(32.00) | | | Physical Chemistry of Metallurgical Process(16.00) |
| | Physical Education(30.67) | Special Education(30.00) | | | Principles of Metallurgy(32.00) |
| | | Theory of Curriculum and Instruction(13.73) | | Mining Engineering(21.00) | Mineral Processing Engineering(18.00) |
| | Psychology(17.24) | Physical Education and Training(20.00) | | | Mining and Safety Engineering(24.00) |
| | | Sports Humanities and Sociology(20.00) | | | Naval Architecture and Ocean Engineering(21.74) |
| | | Sports Science and Medicine(52.00) | | | Marine Engineering(14.00) |
| | Engineering(16.37) | Psychology(17.24) | | | Ship Mechanics and Design Principles(26.14) |
| | | Aeronautical and Astronautical Science and Technology(10.08) | | | Nuclear Energy and Reactor Technology(14.04) |
| Engineering(16.37) | Agricultural Engineering(17.31) | Agricultural Environment and Soil-Water Engineering(12.96) | | Radiation Protection and Nuclear Technology Applications(14.00) | Radiation Protection and Nuclear Technology Applications(14.00) |
| | | Agricultural Mechanization Engineering(22.00) | | | Applied Optics(16.13) |
| | Architecture(19.75) | Architectural Design and Theory(20.00) | | Optical Engineering(16.49) | Laser Technology(24.00) |
| | | Architectural History(19.35) | | | Optoelectronic Technology(17.91) |
| | Chemical Engineering and Technology(11.95) | Urban Planning and Design(20.00) | | | Theoretical Optics(13.33) |
| | | Chemical Transport Engineering(14.00) | | Petroleum and Natural Gas Engineering(16.07) | Polymer and Natural Gas Engineering(16.07) |
| | Civil Engineering(16.76) | Elements of Chemical Reaction Engineering(9.35) | | | Oil and Gas Field Development and Storage & Transportation Engineering(17.74) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(13.08) | | | Poromechanics and Reservoir Physics(14.00) |
| | Computer Science and Technology(20.84) | Mass Transport and Separation Process in Chemical Engineering(12.33) | | | Engineering Fluid Mechanics(13.10) |
| | | Bridge and Tunnel Engineering(11.76) | | | Engineering Thermodynamics(16.44) |
| Control Science and Engineering(15.79) | Computer Science and Technology(20.84) | Geotechnical Engineering(16.76) | | | Fluid Machinery and Engineering(7.81) |
| | | Structural Engineering(19.30) | | | Heat Transfer(10.85) |
| | Control Science and Engineering(15.79) | Urban Infrastructure Engineering(18.31) | | | Internal Combustion Engineering(20.00) |
| | | Advanced Programming Languages(28.00) | | | Power Machinery and Engineering(15.38) |
| | Electrical Engineering(12.95) | Computer Architecture(16.00) | | | Refrigeration and Cryogenic Engineering(18.00) |
| | | Computer Networks(18.64) | | | Thermal Energy Engineering(15.60) |
| | Electrical Engineering(12.95) | Computer Software and Theory(17.72) | | Surveying and Mapping Science and Technology(16.67) | Cartography and Geographic Information Engineering(22.00) |
| | | Data Structures(12.12) | | | Digital Surveying and Remote Sensing Applications(11.76) |
| | Electrical Engineering(12.95) | Databases(26.11) | | | Geodesy and Surveying Engineering(18.00) |
| | | Formal Languages(17.31) | | | Textile Chemistry and Dyeing Engineering(16.00) |
| Engineering(16.37) | Electrical Engineering(12.95) | Operating Systems(20.00) | | | Textile Materials Science(26.00) |
| | | Pattern Recognition(42.00) | | | Transportation Engineering(18.33) |
| | Electronic Science and Technology(10.57) | Principles of Computer Organization(14.63) | | | Road and Railway Engineering(18.00) |
| | | Control Theory and Control Engineering(15.73) | | | Traffic Information Engineering and Control(20.00) |
| | Environmental Science and Engineering(20.11) | Guidance, Navigation and Control(19.61) | | | Transportation Planning and Management(11.63) |
| | | Operations Research and Cybernetics(12.00) | | | Vehicle Operation Engineering(28.00) |
| | Food Science and Engineering(32.11) | Electrical Theory and New Technologies(12.11) | History(13.80) | Weapon Science and Technology(29.00) | Military Chemistry and Pyrotechnics(26.00) |
| | | High Voltage and Insulation Technology(13.64) | | | Weapon Systems Science and Engineering(32.00) |
| | Food Science and Engineering(32.11) | Power Electronics and Electrical Drives(13.74) | | | Archaeology and Museology(15.38) |
| | | Power Systems and Automation(12.50) | | | Historical Geography(11.97) |
| Engineering(16.37) | Food Science and Engineering(32.11) | Circuits and Systems(11.11) | | | World History(14.02) |
| | | Electromagnetic Field and Microwave Technology(9.09) | Law(19.21) | Law(19.63) | Civil and Commercial Law(13.56) |
| | Forestry Engineering(25.00) | Microelectronics and Solid-State Electronics(12.00) | | | Constitutional and Administrative Law(20.00) |
| | | Environmental Engineering(8.99) | | | Contract Law(22.00) |
| | Forestry Engineering(25.00) | Environmental Science(28.00) | | | Criminal Law(20.69) |
| | | Environmental and Resource Protection(32.00) | | | International Law(15.79) |
| | Forestry Engineering(25.00) | Food Biochemistry(58.00) | | | Law and Social Governance(18.00) |
| | | Food Processing and Storage Engineering(10.17) | | | Legal Theory and Legal History(16.00) |
| | Forestry Engineering(25.00) | Forest Engineering(30.00) | | | Military Law(46.00) |
| | | Wood Science and Technology(20.00) | | | Procedural Law(12.00) |
| | | - | | | Political Science(15.38) |
| | | - | | | - |

Table 82. Model Scores Across Three Levels of Disciplines: granite-3.1-2b-base.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|-------------------|-------------------|--|
| Literature and Arts(16.41) | Art Studies(16.75) | Broadcasting and Television Art(28.00) | Philosophy(22.48) | Philosophy(22.48) | Religious Studies(22.00) |
| | | Dance Studies(14.00) | | | Astronomical Observation and Technology(7.00) |
| | | Design Arts(8.06) | | | Astrophysics(17.39) |
| | | Drama and Opera Studies(20.73) | | | Cosmology(12.82) |
| | | Film Studies(20.25) | | | Solar System Science(13.64) |
| | Journalism and Communication(14.98) | Fine Arts(12.94) | | | Stellar and Interstellar Evolution(12.86) |
| | | Communication and Broadcasting(10.34) | | | Atmospheric Physics and Atmospheric Environment(26.09) |
| | | History and Theory of Journalism and Media Management(25.42) | | | Dynamic Meteorology(26.00) |
| | | Journalism and News Practice(11.11) | | | Meteorology(14.29) |
| | | Classical Chinese Literature(16.00) | | | Biochemistry and Molecular Biology(26.26) |
| Management(18.96) | Language and Literature(15.45) | French Language and Literature(20.00) | | | Biophysics(24.00) |
| | | Linguistics and Applied Linguistics(18.00) | | | Botany(16.27) |
| | | Literary History(10.14) | | | Cell Biology(16.09) |
| | | Literary Theory(18.75) | | | Ecology(13.89) |
| | | Modern and Contemporary Chinese Literature(18.00) | | | Genetics(8.70) |
| | Musicology(17.61) | Philology and Bibliography(8.00) | | | Microbiology(17.39) |
| | | Russian Language and Literature(15.79) | | | Physiology(13.33) |
| | | Composition(18.00) | | | Zoology(13.76) |
| | | Harmony(26.67) | | | Chemistry(12.21) Analytical Chemistry(11.62) |
| | | Instrumentation and Performance(24.62) | | | Electrochemistry(12.16) |
| Medicine(17.39) | Business Administration(16.90) | Music History, Education, and Technology(10.34) | | | Inorganic Chemistry(11.59) |
| | | Musical Forms and Analysis(16.00) | | | Organic Chemistry(15.20) |
| | | Pitch and Scales(19.64) | | | Physical Chemistry(11.90) |
| | | Business and Accounting Management(14.13) | | | Polymer Chemistry and Physics(13.16) |
| | | Tourism Management and Technological Economics Management(22.00) | | | Radiochemistry(11.67) |
| | Library, Information and Archival Management(20.67) | Information Management Science(20.00) | | | Geography(17.29) Human Geography(28.00) |
| | | Information Management and Communication(30.00) | | | Physical Geography(10.84) |
| | | Library and Archival Science(12.00) | | | Geology(17.60) Geochemistry(22.00) |
| | | Management Science and Engineering(12.07) | | | Mineralogy, Petrology, and Economic Geology(18.18) |
| | | Education Economics, Management and Social Security(12.00) | | | Paleontology and Stratigraphy(22.00) |
| Pharmacy(16.91) | Public Administration(21.85) | Land Resource Management and Administrative Management(29.41) | | | Principles of Seismic Exploration(10.00) |
| | | Social Medicine and Health Management(24.00) | | | Structural Geology(15.71) |
| | | Forensic Medicine(24.00) | | | Geophysics(19.00) Solid Earth Geophysics(20.00) |
| | | Human Anatomy and Histology-Embryology(14.29) | | | Space physics(18.00) |
| | | Immunology(18.84) | | | Advanced Algebra(15.84) |
| | Clinical Medicine(17.65) | Pathogen Biology(26.60) | | | Combinatorial Mathematics(8.38) |
| | | Pathology and Pathophysiology(14.78) | | | Computational Mathematics(26.00) |
| | | Radiation Medicine(30.00) | | | Cryptography(30.00) |
| | | Anesthesiology(24.00) | | | Discrete Mathematics(7.87) |
| | | Clinical Laboratory Diagnostics(12.00) | | | Functions of Complex Variables(14.75) |
| Military Science(21.46) | Pharmacology(14.55) | Dermatology and Venereology(33.33) | | | Functions of Real Variables(16.42) |
| | | Emergency Medicine(18.18) | | | Fundamental Mathematics(13.20) |
| | | Geriatric Medicine(16.00) | | | Fuzzy Mathematics(24.00) |
| | | Imaging and Nuclear Medicine(10.45) | | | Geometry and Topology(13.96) |
| | | Internal Medicine(11.39) | | | Graph Theory(21.57) |
| | Stomatology(12.88) | Neurology(19.58) | | | Group Theory(16.00) |
| | | Nursing and Rehabilitation Medicine(26.00) | | | Mathematical Analysis(15.97) |
| | | Obstetrics and Gynecology(12.75) | | | Number Theory(11.36) |
| | | Oncology(12.07) | | | Numerical Analysis(22.39) |
| | | Ophthalmology(20.00) | | | Ordinary Differential Equations(14.37) |
| Philosophy(22.48) | Traditional Chinese Medicine(13.81) | Otorhinolaryngology(24.00) | | | Polynomials and Series Expansions(10.06) |
| | | Pediatrics(10.00) | | | Probability and Statistics(15.18) |
| | | Psychiatry and Mental Health(30.00) | | | Special Number Theory(24.00) |
| | | Surgery(19.12) | | | Stochastic Processes(32.00) |
| | | Medicinal Chemistry(16.00) | | | Hydrogeology(24.00) |
| | Public Health and Preventive Medicine(18.49) | Microbiology and Biochemical Pharmacy(20.00) | | | Marine Biology(52.00) |
| | | Pharmaceutical Analysis(22.00) | | | Marine Chemistry(26.00) |
| | | Pharmacetics(13.70) | | | Underwater Acoustics(10.00) |
| | | Pharmacology(14.55) | | | Physical Oceanography(20.00) |
| | | Epidemiology and Health Statistics(21.69) | | | Acoustics(9.80) |
| Sociology(13.99) | Systems Science(20.00) | Health Toxicology and Environmental Health(12.50) | | | Atomic and Molecular Physics(17.14) |
| | | Maternal, Child and Adolescent Health(15.19) | | | Electrodynamics(14.41) |
| | | Nutrition and Food Hygiene(28.00) | | | Fluid Physics(9.70) |
| | | Basic Stomatology(15.09) | | | Particle and Nuclear Physics(12.89) |
| | | Clinical Stomatology(11.39) | | | Polymer Physics(8.26) |
| | Sociology(13.99) | Traditional Chinese Health Preservation(11.86) | | | Quantum Mechanics(14.08) |
| | | Traditional Chinese Medicine Theory(15.56) | | | Relativity(12.66) |
| | | Traditional Chinese Pharmacy(13.45) | | | Semiconductor Physics(3.28) |
| | | Military Command and Information Systems(30.00) | | | Solid State Physics(16.33) |
| | | Military Logistics and Equipment(18.52) | | | Statistical Mechanics(6.00) |
| Philosophy(22.48) | Military Science(21.46) | Military Management(26.00) | | | Subatomic and Atomic Physics(11.76) |
| | | Military Thought and History(11.76) | | | Thermodynamics(20.47) |
| | | Ethics(25.00) | | | Thermodynamics and Statistical Physics(10.57) |
| Philosophy(22.48) | Philosophy(22.48) | Logic(15.71) | | | Systems Science(20.00) |
| | | Philosophical Aesthetics(19.27) | | | Demography and Anthropology(16.00) |
| | | Philosophy of Science and Technology(36.00) | | | Social and Folklore Studies(12.90) |

Table 82. Continued: Model Scores Across Three Levels of Disciplines: granite-3.1-2b-base.

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| Discipline | Field | Subfield | Discipline | Field | Subfield | |
|--|--|--|--------------------|--|---|--|
| Agronomy(19.59) | Animal Husbandry(22.33) | Animal Nutrition and Feed Science(28.85) | Engineering(15.21) | Geological Resources and Geological Engineering(38.00) | Geological Resources and Geological Engineering(38.00) | |
| | | Animal Rearing and Breeding(15.69) | | | Hydraulics and Hydrology(7.35) | |
| | Aquaculture(17.86) | Aquaculture(17.86) | | Hydraulic Engineering(9.63) | Water conservancy and Hydropower Engineering(13.41) | |
| | | Crop Science(16.55) | | | Antenna and Radio Communication(11.40) | |
| | Forestry(22.14) | Forest Cultivation and Genetic Breeding(14.81) | | Information and Communication Engineering(13.29) | Communication Principles(16.38) | |
| | | Landscape Plants and Ornamental Horticulture(34.00) | | | Communication and Information Systems(21.74) | |
| | Veterinary Medicine(18.00) | Veterinary Medicine(18.00) | | Optical Fiber Communication(10.00) | Optical Fiber Communication(10.00) | |
| | | Economic Statistics(18.00) | | | Signal and Information Processing(9.68) | |
| | Economics(20.27) | Finance(20.45) | | Instrument Science and Technology(20.00) | Instrument Science and Technology(20.00) | |
| | | Industrial Economics(28.57) | | | Materials Physics and Chemistry(13.07) | |
| | | International Trade(17.39) | | Materials Science and Engineering(13.49) | Materials Processing Engineering(14.44) | |
| | | Labor Economics(18.92) | | | Manufacturing Automation(17.46) | |
| | | National and Defense Economics(18.00) | | Mechanical Engineering(17.61) | Mechatronic Engineering(18.00) | |
| | | Public Finance(20.83) | | | Fundamentals of Dynamics and Control(11.53) | |
| | | Quantitative Economics(17.00) | | Mechanics(10.24) | Rigid Body Mechanics(7.51) | |
| | | Theoretical Economics(20.67) | | | Solid Mechanics(7.53) | |
| | | Economic History(22.00) | | Metallurgical Engineering(18.82) | Theoretical Fluid Mechanics(12.14) | |
| | | Political Economy(20.00) | | | Theoretical Mechanics(10.32) | |
| | | Western Economics(20.00) | | | Iron and Steel Metallurgy(7.62) | |
| Education(26.24) | Education(23.89) | Educational Technology and Principles(22.92) | | | Non-ferrous Metallurgy(16.00) | |
| | | Preschool Education(20.00) | | | Physical Chemistry of Metallurgical Process(28.00) | |
| | | Special Education(32.00) | | | Principles of Metallurgy(36.00) | |
| | Physical Education(34.67) | Theory of Curriculum and Instruction(21.57) | | Mining Engineering(20.00) | Mineral Processing Engineering(18.00) | |
| | | Physical Education and Training(26.00) | | | Mining and Safety Engineering(22.00) | |
| Engineering(15.21) | Aeronautical and Astronautical Science and Technology(10.08) | Sports Humanities and Sociology(26.00) | | Naval Architecture and Ocean Engineering(18.84) | Marine Engineering(16.00) | |
| | | Sports Science and Medicine(52.00) | | | Ship Mechanics and Design Principles(20.45) | |
| | | Psychology(18.39) | | Nuclear Science and Technology(17.76) | Nuclear Energy and Reactor Technology(7.02) | |
| | | Psychology(18.39) | | | Radiation Protection and Nuclear Technology Applications(30.00) | |
| | Agricultural Engineering(26.92) | Aeronautical and Astronautical Science and Technology(10.08) | | Optical Engineering(13.56) | Applied Optics(10.48) | |
| | | Agricultural Environment and Soil-Water Engineering(27.78) | | | Laser Technology(20.00) | |
| | | Agricultural Mechanization Engineering(26.00) | | | Optoelectronic Technology(13.43) | |
| | Architecture(20.99) | Architectural Design and Theory(20.00) | | | Theoretical Optics(14.07) | |
| | | Architectural History(17.74) | | Petroleum and Natural Gas Engineering(18.75) | Oil and Gas Field Development and Storage & Transportation Engineering(19.35) | |
| Engineering(15.21) | Chemical Engineering and Technology(10.73) | Urban Planning and Design(26.00) | | | Poromechanics and Reservoir Physics(18.00) | |
| | | Chemical Transport Engineering(8.00) | | | Engineering Fluid Mechanics(8.33) | |
| | | Elements of Chemical Reaction Engineering(6.54) | | | Engineering Thermophysics(12.33) | |
| | Civil Engineering(13.41) | Fluid Flow and Heat Transfer in Chemical Engineering(10.28) | | Power Engineering and Engineering Thermophysics(11.26) | Fluid Machinery and Engineering(10.94) | |
| | | Mass Transport and Separation Process in Chemical Engineering(15.07) | | | Heat Transfer(8.53) | |
| | | Bridge and Tunnel Engineering(19.61) | | | Internal Combustion Engineering(30.00) | |
| | Computer Science and Technology(18.22) | Geotechnical Engineering(10.06) | | | Power Machinery and Engineering(5.77) | |
| | | Structural Engineering(14.04) | | | Refrigeration and Cryogenic Engineering(10.00) | |
| | | Urban Infrastructure Engineering(16.90) | | | Thermal Energy Engineering(10.09) | |
| | Control Science and Engineering(12.63) | Advanced Programming Languages(28.00) | | Surveying and Mapping Science and Technology(19.64) | Cartography and Geographic Information Engineering(16.00) | |
| | | Computer Architecture(8.00) | | | Digital Surveying and Remote Sensing Applications(20.59) | |
| | | Computer Networks(15.25) | | | Geodesy and Surveying Engineering(22.00) | |
| | | Computer Software and Theory(24.05) | | | Textile Chemistry and Dyeing Engineering(16.00) | |
| | | Data Structures(8.08) | | | Textile Materials Science(36.00) | |
| | | Databases(21.66) | | | Road and Railway Engineering(6.00) | |
| | | Formal Languages(9.62) | | | Traffic Information Engineering and Control(20.00) | |
| | | Operating Systems(22.35) | | | Transportation Planning and Management(25.58) | |
| | | Pattern Recognition(40.00) | | | Vehicle Operation Engineering(22.00) | |
| | | Principles of Computer Organization(8.54) | | Textile Science and Engineering(26.00) | Weapon Science and Technology(29.00) | |
| Engineering(15.21) | | Control Theory and Control Engineering(13.48) | | | Military Chemistry and Pyrotechnics(32.00) | |
| | | Guidance, Navigation and Control(9.80) | | | Weapon Systems Science and Engineering(26.00) | |
| | | Operations Research and Cybernetics(14.00) | | History(19.73) | Archaeology and Museology(25.96) | |
| | | Power Systems and Automation(14.58) | | | Historical Geography(19.01) | |
| Electrical Engineering(10.61) | Circuits and Systems(11.11) | World History(18.46) | | | | |
| | Electromagnetic Field and Microwave Technology(10.23) | Law(22.41) | | Civil and Commercial Law(19.49) | | |
| | Microelectronics and Solid-State Electronics(12.00) | | | Constitutional and Administrative Law(14.00) | | |
| Environmental Science and Engineering(20.11) | Environmental Engineering(7.87) | Law(22.84) | | Contract Law(26.00) | | |
| | Environmental Science(36.00) | | | Criminal Law(19.83) | | |
| | Environmental and Resource Protection(26.00) | | | International Law(14.04) | | |
| Food Science and Engineering(41.28) | Food Biochemistry(62.00) | Political Science(18.46) | | Law and Social Governance(30.00) | | |
| | Food Processing and Storage Engineering(23.73) | | | Legal Theory and Legal History(22.00) | | |
| | Forest Engineering(24.00) | | | Military Law(56.00) | | |
| Forestry Engineering(23.00) | Wood Science and Technology(22.00) | | | Procedural Law(14.00) | | |
| | - | | | Political Science(18.46) | | |

Table 83. Model Scores Across Three Levels of Disciplines: OLMO-2-1124-13B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|------------------------|--|--|
| Literature and Arts(20.88) | Art Studies(22.55) | Broadcasting and Television Art(28.00) | Philosophy(26.51) | Philosophy(26.51) | Religious Studies(34.00) |
| | | Dance Studies(18.00) | | Astronomy(13.58) | Astronomical Observation and Technology(13.00) |
| | | Design Arts(19.35) | | Astrophysics(20.29) | Cosmology(15.38) |
| | | Drama and Opera Studies(20.73) | | Solar System Science(12.50) | Stellar and Interstellar Evolution(7.14) |
| | | Film Studies(31.01) | | Atmospheric Science(17.73) | Atmospheric Physics and Atmospheric Environment(13.04) |
| | Journalism and Communication(17.39) | Fine Arts(17.41) | | Dynamic Meteorology(18.00) | |
| | | Communication and Broadcasting(20.69) | | Meteorology(21.43) | |
| | Language and Literature(19.09) | History and Theory of Journalism and Media Management(16.95) | Biology(19.46) | Biochemistry and Molecular Biology(18.18) | |
| | | Journalism and News Practice(15.56) | | Biophysics(20.00) | |
| | | Classical Chinese Literature(6.00) | | Botany(22.29) | |
| | | French Language and Literature(28.00) | | Cell Biology(25.29) | |
| | | Linguistics and Applied Linguistics(26.00) | | Ecology(16.67) | |
| Management(26.15) | Musicology(22.07) | Literary History(17.39) | | Genetics(15.22) | |
| | | Literary Theory(21.88) | | Microbiology(19.25) | |
| | | Modern and Contemporary Chinese Literature(16.00) | | Physiology(18.33) | |
| | | Philology and Bibliography(26.00) | | Zoology(23.85) | |
| | | Russian Language and Literature(12.28) | | Chemistry(9.10) | |
| | | Composition(34.00) | | Analytical Chemistry(9.60) | |
| | | Harmony(18.33) | | Electrochemistry(7.21) | |
| | | Instrumentation and Performance(32.31) | | Inorganic Chemistry(7.25) | |
| | | Music History, Education, and Technology(17.24) | | Organic Chemistry(11.11) | |
| | | Musical Forms and Analysis(32.00) | | Physical Chemistry(9.07) | |
| | Business Administration(23.94) | Pitch and Scales(7.14) | | Polymer Chemistry and Physics(9.21) | |
| | | Business and Accounting Management(20.65) | | Radiochemistry(11.67) | |
| | | Tourism Management and Technological Economics Management(30.00) | | Geography(24.81) | Human Geography(44.00) |
| | | Library, Information and Archival Management(25.33) | | Physical Geography(13.25) | |
| | | Information Management Science(14.00) | | Geology(17.01) | Geochemistry(14.00) |
| Medicine(19.96) | Clinical Medicine(18.39) | Information Management and Communication(46.00) | | Mineralogy, Petrology, and Economic Geology(24.79) | |
| | | Library and Archival Science(16.00) | | Paleontology and Stratigraphy(8.00) | |
| | | Management Science and Engineering(29.31) | | Principles of Seismic Exploration(6.00) | |
| | | Public Administration(27.81) | | Structural Geology(20.00) | |
| | | Education Economics, Management and Social Security(22.00) | | Geophysics(21.00) | Solid Earth Geophysics(30.00) |
| | | Land Resource Management and Administrative Management(25.49) | | Mathematics(8.35) | Space physics(12.00) |
| | | Social Medicine and Health Management(36.00) | | | Advanced Algebra(9.90) |
| | | Forensic Medicine(28.00) | | | Combinatorial Mathematics(10.99) |
| | | Human Anatomy and Histology-Embryology(23.28) | | | Computational Mathematics(16.00) |
| | | Immunology(26.09) | | | Cryptography(36.00) |
| Pharmacy(20.14) | Clinical Medicine(18.39) | Pathogen Biology(20.21) | | | Discrete Mathematics(6.74) |
| | | Pathology and Pathophysiology(11.30) | | | Functions of Complex Variables(7.38) |
| | | Radiation Medicine(40.00) | | | Functions of Real Variables(10.45) |
| | | Anesthesiology(16.00) | | | Fundamental Mathematics(7.61) |
| | | Clinical Laboratory Diagnostics(20.00) | | | Fuzzy Mathematics(4.00) |
| | | Dermatology and Venereology(19.70) | | | Geometry and Topology(7.55) |
| | | Emergency Medicine(13.64) | | | Graph Theory(9.80) |
| | | Geriatric Medicine(30.00) | | | Group Theory(6.00) |
| | | Imaging and Nuclear Medicine(14.93) | | | Mathematical Analysis(6.60) |
| | | Internal Medicine(14.36) | | | Number Theory(2.27) |
| Public Health and Preventive Medicine(29.11) | Pharmacy(20.14) | Neurology(17.99) | | | Numerical Analysis(36.42) |
| | | Nursing and Rehabilitation Medicine(24.00) | | | Ordinary Differential Equations(6.25) |
| | | Obstetrics and Gynecology(13.73) | | | Polynomials and Series Expansions(3.91) |
| | | Oncology(27.59) | | | Probability and Statistics(10.27) |
| | | Ophthalmology(20.00) | | | Special Number Theory(4.00) |
| | | Otorhinolaryngology(14.00) | | | Stochastic Processes(16.00) |
| | | Pediatrics(26.00) | | | Hydrogeology(42.00) |
| | | Psychiatry and Mental Health(22.00) | | | Marine Biology(62.00) |
| | | Surgery(19.12) | | | Marine Chemistry(38.00) |
| | | Medicinal Chemistry(14.00) | | | Underwater Acoustics(20.00) |
| Military Science(25.85) | Public Health and Preventive Medicine(29.11) | Microbiology and Biochemical Pharmacy(26.00) | | | Physical Oceanography(16.00) |
| | | Pharmaceutical Analysis(22.00) | | | Physics(9.67) |
| | | Pharmacetics(17.81) | | | |
| | | Pharmacology(21.82) | | | Atomic and Molecular Physics(8.57) |
| | | Epidemiology and Health Statistics(26.51) | | | Electrodynamics(9.95) |
| | | Health Toxicology and Environmental Health(35.00) | | | Fluid Physics(14.18) |
| | | Maternal, Child and Adolescent Health(22.78) | | | Particle and Nuclear Physics(9.33) |
| | | Nutrition and Food Hygiene(34.00) | | | Polymer Physics(11.93) |
| | | Basic Stomatology(16.98) | | | Quantum Mechanics(9.22) |
| | | Clinical Stomatology(11.39) | | | Relativity(8.86) |
| Philosophy(26.51) | Traditional Chinese Medicine(14.55) | Traditional Chinese Health Preservation(20.34) | | | Semiconductor Physics(8.20) |
| | | Traditional Chinese Medicine Theory(12.22) | | | Solid State Physics(11.56) |
| | | Traditional Chinese Pharmacy(13.45) | | | Statistical Mechanics(6.00) |
| | | Military Science(25.85) | | | Subatomic and Atomic Physics(7.84) |
| | | Military Command and Information Systems(38.00) | | | Thermodynamics(8.37) |
| | | Military Logistics and Equipment(18.52) | Systems Science(18.00) | | Thermodynamics and Statistical Physics(8.11) |
| | | Military Management(28.00) | | | Systems Science(18.00) |
| | | Military Thought and History(19.61) | | | |
| | | Ethics(26.47) | | | |
| | | Logic(15.71) | | | |
| | Philosophy(26.51) | Philosophical Aesthetics(25.69) | | | |
| | | Philosophy of Science and Technology(36.00) | | | |
| | Sociology(23.08) | Sociology(23.08) | | | |
| | | Sociology(23.08) | | | |

Table 83. Continued: Model Scores Across Three Levels of Disciplines: OLMo-2-1124-13B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|---|--|--------------------|--|--|
| Agronomy(20.21) | Animal Husbandry(25.24) | Animal Nutrition and Feed Science(23.08) | Engineering(15.43) | Geological Resources and Geological Engineering(20.00) | Geological Resources and Geological Engineering(20.00) |
| | | Animal Rearing and Breeding(27.45) | | | Hydraulics and Hydrology(13.97) |
| | Aquaculture(19.64) Crop Science(15.86) | Aquaculture(19.64) | | Water conservancy and Hydropower Engineering(15.85) | Water conservancy and Hydropower Engineering(15.85) |
| | | Crop Science(15.86) | | | Antenna and Radio Communication(13.16) |
| | Forestry(19.08) | Forest Cultivation and Genetic Breeding(24.69) | | Communication Principles(13.79) | Communication Principles(13.79) |
| | | Landscape Plants and Ornamental Horticulture(10.00) | | | Communication and Information Systems(14.49) |
| | Veterinary Medicine(26.00) | Veterinary Medicine(26.00) | | Optical Fiber Communication(22.00) | Optical Fiber Communication(22.00) |
| | | Economic Statistics(14.00) | | | Signal and Information Processing(14.84) |
| | Economics(18.10) | Finance(19.89) | | Instrument Science and Technology(12.00) | Instrument Science and Technology(12.00) |
| | | Industrial Economics(17.86) | | | Materials Physics and Chemistry(16.08) |
| | | International Trade(18.84) | | Materials Processing Engineering(13.33) | Materials Processing Engineering(13.33) |
| | | Labor Economics(16.22) | | | Manufacturing Automation(19.05) |
| | | National and Defense Economics(14.00) | | Mechatronic Engineering(14.00) | Mechatronic Engineering(14.00) |
| | | Public Finance(15.83) | | | Fundamentals of Dynamics and Control(13.83) |
| | | Quantitative Economics(17.00) | | Rigid Body Mechanics(12.72) | Rigid Body Mechanics(12.72) |
| | | Theoretical Economics(22.00) | | | Solid Mechanics(12.90) |
| | | Economic History(28.00) | | Theoretical Fluid Mechanics(14.29) | Theoretical Fluid Mechanics(14.29) |
| | | Political Economy(20.00) | | | Theoretical Mechanics(7.74) |
| | | Western Economics(18.00) | | Metallurgical Engineering(17.65) | Iron and Steel Metallurgy(10.48) |
| Education(23.35) | Education(20.24) | Educational Technology and Principles(13.54) | | | Non-ferrous Metallurgy(12.00) |
| | | Preschool Education(20.00) | | | Physical Chemistry of Metallurgical Process(20.00) |
| | Physical Education(30.00) | Special Education(28.00) | | | Principles of Metallurgy(36.00) |
| | | Theory of Curriculum and Instruction(25.49) | | Mining Engineering(25.00) | Mineral Processing Engineering(26.00) |
| | Psychology(20.69) | Physical Education and Training(22.00) | | | Mining and Safety Engineering(24.00) |
| | | Sports Humanities and Sociology(26.00) | | | Naval Architecture and Ocean Engineering(20.29) |
| | | Sports Science and Medicine(42.00) | | | Marine Engineering(14.00) |
| | Psychology(20.69) | Psychology(20.69) | | | Ship Mechanics and Design Principles(23.86) |
| | | Aeronautical and Astronautical Science and Technology(12.61) | | Nuclear Science and Technology(12.15) | Nuclear Energy and Reactor Technology(5.26) |
| Engineering(15.43) | Agricultural and Aeronautical Science and Technology(12.61) | Agricultural Environment and Soil-Water Engineering(20.37) | | | Radiation Protection and Nuclear Technology Applications(20.00) |
| | | Agricultural Mechanization Engineering(12.00) | | Optical Engineering(15.69) | Applied Optics(14.52) |
| | Architecture(20.99) | Architectural Design and Theory(14.00) | | | Laser Technology(16.00) |
| | | Architectural History(17.74) | | | Optoelectronic Technology(17.91) |
| | Chemical Engineering and Technology(12.20) | Urban Planning and Design(32.00) | | | Theoretical Optics(15.56) |
| | | Chemical Transport Engineering(10.00) | | Petroleum and Natural Gas Engineering(10.71) | Petroleum and Natural Gas Engineering(10.71) |
| | Civil Engineering(13.13) | Elements of Chemical Reaction Engineering(14.02) | | | Oil and Gas Field Development and Storage & Transportation Engineering(9.68) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(11.21) | | | Poromechanics and Reservoir Physics(12.00) |
| | Computer Science and Technology(17.96) | Mass Transport and Separation Process in Chemical Engineering(12.33) | | | Engineering Fluid Mechanics(5.95) |
| | | Civil Infrastructure Engineering(16.90) | | | Engineering Thermophysics(8.90) |
| Engineering(15.43) | Computer Science and Technology(17.96) | Advanced Programming Languages(18.00) | | Surveying and Mapping Science and Technology(17.26) | Fluid Machinery and Engineering(12.50) |
| | | Computer Architecture(18.00) | | | Heat Transfer(12.40) |
| | Control Science and Engineering(8.42) | Computer Networks(11.86) | | | Internal Combustion Engineering(16.00) |
| | | Computer Software and Theory(17.72) | | | Power Machinery and Engineering(17.31) |
| | Control Science and Engineering(8.42) | Data Structures(13.13) | | Textile Science and Engineering(21.00) | Refrigeration and Cryogenic Engineering(16.00) |
| | | Databases(23.57) | | | Thermal Energy Engineering(14.68) |
| | Control Science and Engineering(8.42) | Formal Languages(15.38) | | | Cartography and Geographic Information Engineering(26.00) |
| | | Operating Systems(15.29) | | | Digital Surveying and Remote Sensing Applications(11.76) |
| | Electrical Engineering(14.39) | Pattern Recognition(28.00) | | | Geodesy and Surveying Engineering(16.00) |
| | | Principles of Computer Organization(15.85) | | | Textile Chemistry and Dyeing Engineering(10.00) |
| Engineering(15.43) | Control Science and Engineering(8.42) | Control Theory and Control Engineering(11.24) | | | Textile Materials Science(32.00) |
| | | Guidance, Navigation and Control(3.92) | | Transportation Engineering(18.73) | Transportation Engineering(18.73) |
| | Control Science and Engineering(8.42) | Operations Research and Cybernetics(8.00) | | | Road and Railway Engineering(10.00) |
| | | Electrical Theory and New Technologies(11.05) | | | Traffic Information Engineering and Control(20.00) |
| | Control Science and Engineering(8.42) | High Voltage and Insulation Technology(12.50) | | | Transportation Planning and Management(22.09) |
| | | Power Electronics and Electrical Drives(18.68) | | | Vehicle Operation Engineering(20.00) |
| | Control Science and Engineering(8.42) | Power Systems and Automation(14.58) | | Weapon Science and Technology(21.00) | Weapon Science and Technology(21.00) |
| | | Circuits and Systems(17.59) | | | Military Chemistry and Pyrotechnics(26.00) |
| | Control Science and Engineering(8.42) | Electromagnetic Field and Microwave Technology(11.36) | | | Weapon Systems Science and Engineering(16.00) |
| | | Microelectronics and Solid-State Electronics(12.00) | | | Archaeology and Museology(18.27) |
| Engineering(15.43) | Environmental Science and Engineering(23.28) | Environmental Engineering(7.87) | History(15.28) | History(15.28) | Historical Geography(9.86) |
| | | Environmental Science(34.00) | | | World History(16.36) |
| | Food Science and Engineering(24.77) | Environmental and Resource Protection(40.00) | | Law(21.34) | Civil and Commercial Law(15.25) |
| | | Food Biochemistry(46.00) | | | Constitutional and Administrative Law(20.00) |
| | Food Science and Engineering(24.77) | Food Processing and Storage Engineering(6.78) | | Law(21.32) | Contract Law(28.00) |
| | | Forest Engineering(26.00) | | | Criminal Law(22.41) |
| | Food Science and Engineering(24.77) | Wood Science and Technology(16.00) | | | International Law(21.05) |
| | | - | | | Law and Social Governance(10.00) |
| | Forestry Engineering(21.00) | - | | Political Science(21.54) | Legal Theory and Legal History(24.00) |
| | | - | | | Military Law(48.00) |
| | Forestry Engineering(21.00) | - | | | Procedural Law(10.00) |
| | | - | | | Political Science(21.54) |

Table 84. Model Scores Across Three Levels of Disciplines: MAP-Neo-7B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|----------------------------|--|
| Literature and Arts(18.79) | Art Studies(18.74) | Broadcasting and Television Art(20.00) | Philosophy(22.19) | Philosophy(22.19) | Religious Studies(26.00) |
| | | Dance Studies(20.00) | | Astronomy(12.84) | Astronomical Observation and Technology(14.00) |
| | | Design Arts(14.52) | | | Astrophysics(15.94) |
| | | Drama and Opera Studies(15.85) | | | Cosmology(11.54) |
| | | Film Studies(22.78) | | | Solar System Science(13.64) |
| | | Fine Arts(17.41) | | | Stellar and Interstellar Evolution(8.57) |
| | Journalism and Communication(14.49) | Communication and Broadcasting(5.17) | | Atmospheric Science(19.70) | Atmospheric Physics and Atmospheric Environment(27.54) |
| | | History and Theory of Journalism and Media Management(22.03) | | | Dynamic Meteorology(16.00) |
| | | Journalism and News Practice(15.56) | | | Meteorology(15.48) |
| | Language and Literature(21.36) | Classical Chinese Literature(16.00) | | | Biochemistry and Molecular Biology(19.19) |
| | | French Language and Literature(26.00) | | | Biophysics(18.00) |
| Management(21.76) | | Linguistics and Applied Linguistics(18.00) | | | Botany(15.66) |
| | | Literary History(15.94) | | | Cell Biology(20.69) |
| | | Literary Theory(23.44) | | | Ecology(10.42) |
| | | Modern and Contemporary Chinese Literature(30.00) | | | Genetics(15.22) |
| | | Philology and Bibliography(12.00) | | | Microbiology(13.66) |
| | | Russian Language and Literature(29.82) | | | Physiology(18.33) |
| | Musicology(18.31) | Composition(14.00) | | | Zoology(13.76) |
| | | Harmony(25.00) | | | Chemistry(11.48) |
| | | Instrumentation and Performance(21.54) | | | Analytical Chemistry(14.65) |
| | | Music History, Education, and Technology(11.03) | | | Electrochemistry(7.66) |
| Business Administration(19.01) | | Musical Forms and Analysis(24.00) | | | Inorganic Chemistry(11.59) |
| | | Pitch and Scales(25.00) | | | Organic Chemistry(11.11) |
| | | Business and Accounting Management(15.22) | | | Physical Chemistry(11.61) |
| | | Tourism Management and Technological Economics Management(26.00) | | | Polymer Chemistry and Physics(5.26) |
| | Library, Information and Archival Management(24.00) | Information Management Science(18.00) | | | Radiochemistry(11.67) |
| | | Information Management and Communication(38.00) | | | Geography(18.80) |
| | | Library and Archival Science(16.00) | | | Human Geography(22.00) |
| | Management Science and Engineering(15.52) | Management Science and Engineering(15.52) | | | Physical Geography(16.87) |
| | Public Administration(24.50) | Education Economics, Management and Social Security(22.00) | | | Geology(23.75) |
| | | Land Resource Management and Administrative Management(23.53) | | | Geochemistry(32.00) |
| Medicine(17.10) | | Social Medicine and Health Management(28.00) | | | Mineralogy, Petrology, and Economic Geology(28.10) |
| | Basic Medicine(17.99) | Forensic Medicine(24.00) | | | Paleontology and Stratigraphy(14.00) |
| | | Human Anatomy and Histology-Embryology(20.11) | | | Principles of Seismic Exploration(16.00) |
| | | Immunology(17.39) | | | Structural Geology(22.86) |
| | | Pathogen Biology(18.09) | | | Geophysics(18.00) |
| | | Pathology and Pathophysiology(9.57) | | | Solid Earth Geophysics(24.00) |
| | | Radiation Medicine(24.00) | | | Space physics(12.00) |
| | | Anesthesiology(20.00) | | | Advanced Algebra(14.85) |
| | Clinical Medicine(16.50) | Clinical Laboratory Diagnostics(16.00) | | | Combinatorial Mathematics(8.38) |
| | | Dermatology and Venereology(15.15) | | | Computational Mathematics(24.00) |
| Pharmacy(17.27) | | Emergency Medicine(21.21) | | | Cryptography(26.00) |
| | | Geriatric Medicine(20.00) | | | Discrete Mathematics(16.85) |
| | | Imaging and Nuclear Medicine(11.94) | | | Functions of Complex Variables(10.66) |
| | | Internal Medicine(18.32) | | | Functions of Real Variables(17.91) |
| | | Neurology(15.34) | | | Fundamental Mathematics(10.15) |
| | | Nursing and Rehabilitation Medicine(10.00) | | | Fuzzy Mathematics(8.00) |
| | | Obstetrics and Gynecology(17.65) | | | Geometry and Topology(12.83) |
| | | Oncology(22.41) | | | Graph Theory(15.69) |
| | | Ophthalmology(22.00) | | | Group Theory(10.00) |
| | | Otorhinolaryngology(16.00) | | | Mathematical Analysis(12.15) |
| Public Health and Preventive Medicine(18.84) | | Pediatrics(2.00) | | | Number Theory(8.18) |
| | | Psychiatry and Mental Health(22.00) | | | Numerical Analysis(20.90) |
| | | Surgery(11.76) | | | Ordinary Differential Equations(11.25) |
| | | Medicinal Chemistry(14.00) | | | Polynomials and Series Expansions(7.26) |
| | | Microbiology and Biochemical Pharmacy(14.00) | | | Probability and Statistics(9.82) |
| | | Pharmaceutical Analysis(12.00) | | | Special Number Theory(8.00) |
| | | Pharmacetics(21.92) | | | Stochastic Processes(14.00) |
| | | Pharmacology(21.82) | | | Hydrogeology(36.00) |
| | | Epidemiology and Health Statistics(24.10) | | | Marine Biology(60.00) |
| | | Health Toxicology and Environmental Health(21.25) | | | Marine Chemistry(30.00) |
| Stomatology(12.88) | | Maternal, Child and Adolescent Health(10.13) | | | Underwater Acoustics(16.00) |
| | | Nutrition and Food Hygiene(20.00) | | | Physical Oceanography(28.00) |
| | | Basic Stomatology(22.64) | | | Acoustics(9.39) |
| | | Clinical Stomatology(6.33) | | | Atomic and Molecular Physics(14.76) |
| | Traditional Chinese Medicine(17.91) | Traditional Chinese Health Preservation(18.64) | | | Electrodynamics(11.32) |
| | | Traditional Chinese Medicine Theory(16.67) | | | Fluid Physics(9.70) |
| | | Traditional Chinese Pharmacy(18.49) | | | Particle and Nuclear Physics(10.22) |
| | | | | | Polymer Physics(11.01) |
| | | | | | Quantum Mechanics(12.14) |
| | | | | | Relativity(6.33) |
| Military Science(24.88) | Military Science(24.88) | Military Command and Information Systems(30.00) | | | Semiconductor Physics(4.92) |
| | | Military Logistics and Equipment(18.52) | | | Solid State Physics(8.84) |
| | | Military Management(32.00) | | | Statistical Mechanics(4.00) |
| | | Military Thought and History(19.61) | | | Subatomic and Atomic Physics(5.88) |
| | Philosophy(22.19) | Ethics(26.47) | | | Thermodynamics(12.56) |
| | | Logic(20.00) | | | Thermodynamics and Statistical Physics(10.00) |
| | | Philosophical Aesthetics(15.60) | | | Systems Science(10.00) |
| | | Philosophy of Science and Technology(30.00) | | | Sociology(22.38) |
| | | | | | Sociology(22.38) |
| | | | | | Demography and Anthropology(20.00) |
| Philosophy(22.19) | | | | | Social and Folklore Studies(23.66) |

Table 84. Continued: Model Scores Across Three Levels of Disciplines: MAP-Neo-7B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|--|--|--------------------|---|---|
| Agronomy(15.46) | Animal Husbandry(24.27) | Animal Nutrition and Feed Science(28.85) | Engineering(16.26) | Geological Resources and Geological Engineering(12.00) | Geological Resources and Geological Engineering(12.00) |
| | | Animal Rearing and Breeding(19.61) | | | Hydraulics and Hydrology(16.91) |
| | Aquaculture(8.93) Crop Science(13.10) | Aquaculture(8.93) | | Hydraulic Engineering(18.35) | Water conservancy and Hydropower Engineering(20.73) |
| | | Crop Science(13.10) | | | Antenna and Radio Communication(17.54) |
| | Forestry(12.98) | Forest Cultivation and Genetic Breeding(13.58) | | Information and Communication Engineering(20.63) | Communication Principles(21.55) |
| | | Landscape Plants and Ornamental Horticulture(12.00) | | | Communication and Information Systems(14.49) |
| | Veterinary Medicine(18.00) | Veterinary Medicine(18.00) | | Optical Fiber Communication(16.00) | Optical Fiber Communication(16.00) |
| | | Economic Statistics(26.00) | | | Signal and Information Processing(26.45) |
| | Economics(17.87) | Finance(17.05) | | Instrument Science and Technology(16.00) | Instrument Science and Technology(16.00) |
| | | Industrial Economics(20.24) | | | Materials Physics and Chemistry(13.07) |
| | | International Trade(11.59) | | Materials Science and Engineering(14.53) | Materials Processing Engineering(17.78) |
| | | Labor Economics(14.86) | | | Manufacturing Automation(18.25) |
| | | National and Defense Economics(20.00) | | Mechanics(13.11) | Mechatronic Engineering(22.00) |
| | | Public Finance(19.17) | | | Fundamentals of Dynamics and Control(12.68) |
| | | Quantitative Economics(18.00) | | | Rigid Body Mechanics(8.67) |
| | | Theoretical Economics(17.33) | | | Solid Mechanics(7.53) |
| | | Economic History(20.00) | | Metallurgical Engineering(19.22) | Theoretical Fluid Mechanics(20.00) |
| | | Political Economy(10.00) | | | Theoretical Mechanics(16.13) |
| | | Western Economics(22.00) | | Iron and Steel Metallurgy(15.24) | Iron and Steel Metallurgy(15.24) |
| Education(15.08) | Education(14.98) | Educational Technology and Principles(9.38) | | | Non-ferrous Metallurgy(18.00) |
| | | Preschool Education(10.00) | | Physical Chemistry of Metallurgical Process(20.00) | Physical Chemistry of Metallurgical Process(20.00) |
| | Physical Education(16.00) | Special Education(28.00) | | | Principles of Metallurgy(28.00) |
| | | Theory of Curriculum and Instruction(17.65) | | Mining Engineering(25.00) | Mineral Processing Engineering(24.00) |
| | Psychology(13.79) | Physical Education and Training(14.00) | | | Mining and Safety Engineering(26.00) |
| | | Sports Humanities and Sociology(12.00) | | Naval Architecture and Ocean Engineering(17.39) | Marine Engineering(18.00) |
| | | Sports Science and Medicine(22.00) | | | Ship Mechanics and Design Principles(17.05) |
| | Psychology(13.79) | Psychology(13.79) | | Nuclear Science and Technology(20.56) | Nuclear Energy and Reactor Technology(21.05) |
| | | Psychology(13.79) | | | Radiation Protection and Nuclear Technology Applications(20.00) |
| Engineering(16.26) | Aeronautical and Astronautical Science and Technology(14.29) | Aeronautical and Astronautical Science and Technology(14.29) | | Optical Engineering(13.56) | Applied Optics(11.29) |
| | | Agricultural Engineering(20.19) | | | Laser Technology(18.00) |
| | Architecture(16.67) | Agricultural Environment and Soil-Water Engineering(16.67) | | Petroleum and Natural Gas Engineering(15.18) | Optoelectronic Technology(14.93) |
| | | Agricultural Mechanization Engineering(24.00) | | | Theoretical Optics(13.33) |
| | Chemical Engineering and Technology(13.41) | Architectural Design and Theory(22.00) | | Power Engineering and Engineering Thermodynamics(12.13) | Oil and Gas Field Development and Storage & Transportation Engineering(11.29) |
| | | Architectural History(11.29) | | | Poromechanics and Reservoir Physics(20.00) |
| | Civil Engineering(13.41) | Urban Planning and Design(18.00) | | | Engineering Fluid Mechanics(10.71) |
| | | Chemical Transport Engineering(10.00) | | | Engineering Thermophysics(8.22) |
| | Computer Science and Technology(18.35) | Elements of Chemical Reaction Engineering(11.21) | | Surveying and Mapping Science and Technology(16.07) | Fluid Machinery and Engineering(10.94) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(8.41) | | | Heat Transfer(10.85) |
| Control Science and Engineering(14.21) | Computer Science and Technology(18.35) | Mass Transport and Separation Process in Chemical Engineering(19.86) | | Textile Science and Engineering(22.00) | Internal Combustion Engineering(18.00) |
| | | Civil Engineering(13.41) | | | Power Machinery and Engineering(13.46) |
| | Control Science and Engineering(14.21) | Bridge and Tunnel Engineering(19.61) | | Transportation Engineering(17.93) | Refrigeration and Cryogenic Engineering(12.00) |
| | | Geotechnical Engineering(11.17) | | | Thermal Energy Engineering(17.43) |
| | Control Science and Engineering(14.21) | Structural Engineering(14.04) | | Surveying and Mapping Science and Technology(16.07) | Cartography and Geographic Information Engineering(14.00) |
| | | Urban Infrastructure Engineering(14.08) | | | Digital Surveying and Remote Sensing Applications(13.24) |
| | Control Science and Engineering(14.21) | Computer Architecture(14.00) | | Textile Science and Engineering(22.00) | Geodesy and Surveying Engineering(22.00) |
| | | Computer Networks(15.25) | | | Textile Chemistry and Dyeing Engineering(20.00) |
| Electrical Engineering(15.47) | Computer Software and Theory(13.92) | Formal Languages(17.31) | | Textile Materials Science(24.00) | Textile Materials Science(24.00) |
| | | Operating Systems(16.47) | | | Transportation Engineering(17.93) |
| | Control Science and Engineering(14.21) | Pattern Recognition(34.00) | | Weapon Science and Technology(22.00) | Road and Railway Engineering(12.00) |
| | | Principles of Computer Organization(18.29) | | | Traffic Information Engineering and Control(18.46) |
| | Control Science and Engineering(14.21) | Control Theory and Control Engineering(12.36) | | Weapon Science and Technology(22.00) | Transportation Planning and Management(15.12) |
| | | Guidance, Navigation and Control(21.57) | | | Vehicle Operation Engineering(28.00) |
| | Control Science and Engineering(14.21) | Operations Research and Cybernetics(10.00) | | Military Chemistry and Pyrotechnics(28.00) | Military Chemistry and Pyrotechnics(28.00) |
| | | Electrical Engineering(15.47) | | | Weapon Systems Science and Engineering(16.00) |
| Electronic Science and Technology(12.20) | Electrical Theory and New Technologies(15.79) | Electrical Theory and New Technologies(15.79) | History(11.72) | History(11.72) | Archaeology and Museology(12.50) |
| | | High Voltage and Insulation Technology(18.18) | | | Historical Geography(8.45) |
| | Control Science and Engineering(14.21) | Power Electronics and Electrical Drives(13.19) | | Law(18.29) | World History(12.62) |
| | | Power Systems and Automation(16.67) | | | Civil and Commercial Law(19.49) |
| | Control Science and Engineering(14.21) | Circuits and Systems(10.19) | | Law(19.46) | Constitutional and Administrative Law(20.00) |
| | | Electromagnetic Field and Microwave Technology(11.36) | | | Contract Law(22.00) |
| | Control Science and Engineering(14.21) | Microelectronics and Solid-State Electronics(18.00) | | Law(19.46) | Criminal Law(19.83) |
| | | Environmental Science and Engineering(13.48) | | | International Law(15.79) |
| Environmental Science and Engineering(21.16) | Food Science and Technology(29.36) | Environmental Science(34.00) | | Law(19.46) | Law and Social Governance(14.00) |
| | | Environmental and Resource Protection(22.00) | | | Legal Theory and Legal History(14.00) |
| | Food Science and Technology(29.36) | Food Biochemistry(44.00) | | Law(19.46) | Military Law(32.00) |
| | | Food Processing and Storage Engineering(16.95) | | | Procedural Law(18.00) |
| | Control Science and Engineering(14.21) | Forest Engineering(20.00) | | Political Science(7.69) | Political Science(7.69) |
| | | Wood Science and Technology(20.00) | | | - |

Table 85. Model Scores Across Three Levels of Disciplines: granite-3.1-8b-base.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|---------------------|--|--|
| Literature and Arts(13.84) | Art Studies(12.77) | Broadcasting and Television Art(10.00) | Philosophy(20.17) | Philosophy(20.17) | Religious Studies(18.00) |
| | | Dance Studies(12.00) | | Astronomy(15.80) | Astronomical Observation and Technology(15.00) |
| | | Design Arts(19.35) | | Astrophysics(18.84) | Cosmology(11.54) |
| | | Drama and Opera Studies(19.51) | | Solar System Science(18.18) | Stellar and Interstellar Evolution(15.71) |
| | | Film Studies(10.76) | | Atmospheric Science(17.24) | Atmospheric Physics and Atmospheric Environment(18.84) |
| | Journalism and Communication(10.14) | Fine Arts(10.45) | | Dynamic Meteorology(16.00) | |
| | | Communication and Broadcasting(5.17) | | Meteorology(16.67) | |
| | Language and Literature(14.77) | History and Theory of Journalism and Media Management(13.56) | Biology(15.36) | Biochemistry and Molecular Biology(16.16) | |
| | | Journalism and News Practice(11.11) | | Biophysics(28.00) | |
| | | Classical Chinese Literature(14.00) | | Botany(15.66) | |
| | | French Language and Literature(22.00) | | Cell Biology(21.84) | |
| | | Linguistics and Applied Linguistics(16.00) | | Ecology(13.89) | |
| Management(14.57) | Musicology(16.20) | Literary History(7.25) | | Genetics(15.76) | |
| | | Literary Theory(21.88) | | Microbiology(16.77) | |
| | | Modern and Contemporary Chinese Literature(6.00) | | Physiology(10.83) | |
| | | Philology and Bibliography(10.00) | | Zoology(7.34) | |
| | | Russian Language and Literature(21.05) | | Chemistry(13.17) | |
| | | Composition(24.00) | | Analytical Chemistry(13.13) | |
| | | Harmony(15.00) | | Electrochemistry(12.61) | |
| | | Instrumentation and Performance(16.92) | | Inorganic Chemistry(10.14) | |
| | | Music History, Education, and Technology(13.10) | | Organic Chemistry(12.87) | |
| | | Musical Forms and Analysis(18.00) | | Physical Chemistry(15.01) | |
| | Business Administration(7.75) | Pitch and Scales(16.07) | | Polymer Chemistry and Physics(5.26) | |
| | | Business and Accounting Management(6.52) | | Radiochemistry(11.67) | |
| | | Tourism Management and Technological Economics Management(10.00) | | Geography(29.32) | Human Geography(44.00) |
| | | Information Management Science(6.00) | | Physical Geography(20.48) | |
| | | Information Management and Communication(30.00) | | Geology(20.23) | Geochemistry(36.00) |
| Medicine(14.81) | Library, Information and Archival Management(16.67) | Library and Archival Science(14.00) | | Mineralogy, Petrology, and Economic Geology(16.53) | |
| | | Management Science and Engineering(20.69) | | Paleontology and Stratigraphy(16.00) | |
| | | Education Economics, Management and Social Security(14.00) | | Principles of Seismic Exploration(20.00) | |
| | | Land Resource Management and Administrative Management(11.76) | | Structural Geology(18.57) | |
| | | Social Medicine and Health Management(24.00) | | Geophysics(21.00) | Solid Earth Geophysics(20.00) |
| | Clinical Medicine(15.68) | Forensic Medicine(24.00) | | Space physics(22.00) | |
| | | Human Anatomy and Histology-Embryology(15.87) | | Advanced Algebra(19.31) | |
| | | Immunology(11.59) | | Combinatorial Mathematics(11.52) | |
| | | Pathogen Biology(19.15) | | Computational Mathematics(22.00) | |
| | | Pathology and Pathophysiology(8.70) | | Cryptography(42.00) | |
| Pharmacy(13.67) | Basic Medicine(16.75) | Radiation Medicine(34.00) | | Discrete Mathematics(13.48) | |
| | | Anesthesiology(12.00) | | Functions of Complex Variables(18.03) | |
| | | Clinical Laboratory Diagnostics(14.00) | | Functions of Real Variables(22.39) | |
| | | Dermatology and Venereology(24.24) | | Fundamental Mathematics(14.21) | |
| | | Emergency Medicine(6.06) | | Fuzzy Mathematics(22.00) | |
| | Public Health and Preventive Medicine(17.81) | Geriatric Medicine(32.00) | | Geometry and Topology(11.32) | |
| | | Imaging and Nuclear Medicine(7.46) | | Graph Theory(21.57) | |
| | | Internal Medicine(14.36) | | Group Theory(12.00) | |
| | | Neurology(15.87) | | Mathematical Analysis(14.58) | |
| | | Nursing and Rehabilitation Medicine(16.00) | | Number Theory(5.45) | |
| Military Science(20.49) | Clinical Pharmacy(13.67) | Obstetrics and Gynecology(19.61) | | Numerical Analysis(11.94) | |
| | | Oncology(8.62) | | Ordinary Differential Equations(10.62) | |
| | | Ophthalmology(24.00) | | Polynomials and Series Expansions(12.29) | |
| | | Otorhinolaryngology(18.00) | | Probability and Statistics(17.41) | |
| | | Pediatrics(8.00) | | Special Number Theory(22.00) | |
| | Traditional Chinese Medicine(7.84) | Psychiatry and Mental Health(20.00) | | Stochastic Processes(34.00) | |
| | | Surgery(14.71) | | Hydrogeology(36.00) | |
| | | Medicinal Chemistry(10.00) | | Marine Biology(34.00) | |
| | | Microbiology and Biochemical Pharmacy(20.00) | | Marine Chemistry(38.00) | |
| | | Pharmaceutical Analysis(16.00) | | Underwater Acoustics(16.00) | |
| Philosophy(20.17) | Stomatology(8.33) | Pharmacetics(13.70) | | Physical Oceanography(14.00) | Physical Oceanography(14.00) |
| | | Pharmacology(9.09) | | Physics(14.38) | Acoustics(15.92) |
| | | Epidemiology and Health Statistics(15.66) | | | |
| | | Health Toxicology and Environmental Health(17.50) | | | |
| | | Maternal, Child and Adolescent Health(16.46) | | | |
| | Military Science(20.49) | Nutrition and Food Hygiene(24.00) | Oceanography(31.00) | | |
| | | Basic Stomatology(13.21) | | | |
| | | Clinical Stomatology(5.06) | | | |
| | | Traditional Chinese Medicine(6.78) | | | |
| | | Traditional Chinese Medicine Theory(6.67) | | | |
| | | Traditional Chinese Pharmacy(9.24) | | | |
| Philosophy(20.17) | Systems Science(24.00) | Military Command and Information Systems(28.00) | | | |
| | | Military Logistics and Equipment(16.67) | | | |
| | | Military Management(24.00) | | | |
| | | Military Thought and History(13.73) | | | |
| | | Ethics(20.59) | Sociology(22.38) | | |
| | Sociology(22.38) | Logic(17.14) | | | |
| | | Philosophical Aesthetics(15.60) | | | |
| | | Philosophy of Science and Technology(36.00) | | | |
| | | | | | |

Table 85. Continued: Model Scores Across Three Levels of Disciplines: granite-3.1-8b-base.

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| Discipline | Field | Subfield | Discipline | Field | Subfield | |
|--|--|--|--------------------|--|---|--|
| Agronomy(18.35) | Animal Husbandry(23.30) | Animal Nutrition and Feed Science(28.85) | Engineering(14.88) | Geological Resources and Geological Engineering(30.00) | Geological Resources and Geological Engineering(30.00) | |
| | | Animal Rearing and Breeding(17.65) | | | Hydraulics and Hydrology(17.65) | |
| | Aquaculture(16.07) Crop Science(14.48) | Aquaculture(16.07) | | Water conservancy and Hydropower Engineering(17.07) | Water conservancy and Hydropower Engineering(17.07) | |
| | | Crop Science(14.48) | | | Antenna and Radio Communication(8.77) | |
| | Forestry(18.32) | Forest Cultivation and Genetic Breeding(12.35) | | Communication Principles(17.24) | Communication Principles(17.24) | |
| | | Landscape Plants and Ornamental Horticulture(28.00) | | | Communication and Information Systems(18.84) | |
| | Veterinary Medicine(22.00) | Veterinary Medicine(22.00) | | Optical Fiber Communication(12.00) | Optical Fiber Communication(12.00) | |
| | | Economic Statistics(14.00) | | | Signal and Information Processing(12.26) | |
| | Economics(17.30) | Finance(15.91) | | Instrument Science and Technology(26.00) | Instrument Science and Technology(26.00) | |
| | | Industrial Economics(20.24) | | | Materials Physics and Chemistry(12.06) | |
| | | International Trade(15.94) | | Materials Processing Engineering(16.67) | Materials Processing Engineering(16.67) | |
| | | Labor Economics(13.51) | | | Manufacturing Automation(13.49) | |
| | | National and Defense Economics(26.00) | | Mechatronic Engineering(16.00) | Mechatronic Engineering(16.00) | |
| | | Public Finance(19.17) | | | Fundamentals of Dynamics and Control(8.65) | |
| | | Quantitative Economics(8.00) | | Rigid Body Mechanics(10.40) | Rigid Body Mechanics(10.40) | |
| | | Theoretical Economics(22.67) | | | Solid Mechanics(8.60) | |
| | | Economic History(20.00) | | Theoretical Fluid Mechanics(9.29) | Theoretical Fluid Mechanics(9.29) | |
| | | Political Economy(22.00) | | | Theoretical Mechanics(10.97) | |
| | | Western Economics(26.00) | | Metallurgical Engineering(19.61) | Iron and Steel Metallurgy(9.52) | |
| Education(25.00) | Education(25.51) | Educational Technology and Principles(19.79) | | | Non-ferrous Metallurgy(28.00) | |
| | | Preschool Education(36.00) | | | Physical Chemistry of Metallurgical Process(22.00) | |
| | | Special Education(30.00) | | | Principles of Metallurgy(30.00) | |
| | | Theory of Curriculum and Instruction(21.57) | | Mining Engineering(23.00) | Mineral Processing Engineering(24.00) | |
| | Physical Education(30.00) | Physical Education and Training(30.00) | | | Mining and Safety Engineering(22.00) | |
| | | Sports Humanities and Sociology(24.00) | | | Naval Architecture and Ocean Engineering(19.57) | |
| | | Sports Science and Medicine(36.00) | | | Marine Engineering(8.00) | |
| | | Psychology(14.94) | | | Ship Mechanics and Design Principles(26.14) | |
| | Engineering(14.88) | Aeronautical and Astronautical Science and Technology(14.29) | | | Nuclear Energy and Reactor Technology(12.28) | |
| | | Agricultural Engineering(20.19) | | | Radiation Protection and Nuclear Technology Applications(24.00) | |
| | | Agricultural Environment and Soil-Water Engineering(24.07) | | Optical Engineering(11.44) | Applied Optics(8.87) | |
| | | Agricultural Mechanization Engineering(16.00) | | | Laser Technology(6.00) | |
| | | Architecture(26.54) | | | Optoelectronic Technology(14.93) | |
| | | Architectural Design and Theory(30.00) | | | Theoretical Optics(14.07) | |
| | | Architectural History(25.81) | | | Petroleum and Natural Gas Engineering(19.64) | |
| | | Urban Planning and Design(24.00) | | | Oil and Gas Field Development and Storage & Transportation Engineering(20.97) | |
| | | Chemical Engineering and Technology(10.24) | | | Poromechanics and Reservoir Physics(18.00) | |
| | | Chemical Transport Engineering(8.00) | | | Engineering Fluid Mechanics(10.71) | |
| Electrical Engineering(10.79) | Computer Science and Technology(16.25) | Elements of Chemical Reaction Engineering(5.61) | | | Engineering Thermophysics(8.90) | |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(12.15) | | | Fluid Machinery and Engineering(9.38) | |
| | | Mass Transport and Separation Process in Chemical Engineering(13.01) | | | Heat Transfer(6.20) | |
| | | Civil Engineering(13.41) | | | Internal Combustion Engineering(24.00) | |
| | | Bridge and Tunnel Engineering(13.73) | | | Power Machinery and Engineering(7.69) | |
| | | Geotechnical Engineering(11.73) | | | Refrigeration and Cryogenic Engineering(14.00) | |
| | | Structural Engineering(21.05) | | | Thermal Energy Engineering(9.17) | |
| | | Urban Infrastructure Engineering(11.27) | | | Cartography and Geographic Information Engineering(22.00) | |
| | | Computer Science and Technology(16.25) | | | Digital Surveying and Remote Sensing Applications(23.53) | |
| | | Advanced Programming Languages(22.00) | | | Geodesy and Surveying Engineering(12.00) | |
| Control Science and Engineering(10.00) | Control Science and Engineering(10.00) | Computer Architecture(14.00) | | | Textile Chemistry and Dyeing Engineering(14.00) | |
| | | Computer Networks(13.56) | | | Textile Materials Science(30.00) | |
| | | Computer Software and Theory(17.72) | | | Transportation Engineering(20.72) | |
| | | Data Structures(11.11) | | | Road and Railway Engineering(10.00) | |
| | | Databases(16.56) | | | Traffic Information Engineering and Control(21.54) | |
| | | Formal Languages(13.46) | | | Transportation Planning and Management(24.42) | |
| | | Operating Systems(20.00) | | | Vehicle Operation Engineering(24.00) | |
| | | Pattern Recognition(36.00) | | | Weapon Science and Technology(25.00) | |
| | | Principles of Computer Organization(6.10) | | | Military Chemistry and Pyrotechnics(24.00) | |
| | | Control Theory and Control Engineering(10.11) | | | Weapon Systems Science and Engineering(26.00) | |
| Environmental Science and Engineering(17.99) | Environmental Science and Engineering(17.99) | Guidance, Navigation and Control(7.84) | | | Archaeology and Museology(25.00) | |
| | | Operations Research and Cybernetics(12.00) | | | Historical Geography(21.13) | |
| | | Electrical Engineering(10.79) | History(19.14) | | World History(17.06) | |
| | | Electrical Theory and New Technologies(10.53) | | | Civil and Commercial Law(13.56) | |
| | | High Voltage and Insulation Technology(10.23) | | | Constitutional and Administrative Law(20.00) | |
| | | Power Electronics and Electrical Drives(11.54) | | | Contract Law(26.00) | |
| | | Power Systems and Automation(10.42) | | | Criminal Law(13.79) | |
| | | Circuits and Systems(12.96) | | | International Law(22.81) | |
| | | Electromagnetic Field and Microwave Technology(11.36) | | | Law and Social Governance(20.00) | |
| | | Microelectronics and Solid-State Electronics(14.00) | | | Legal Theory and Legal History(24.00) | |
| Food Science and Engineering(37.61) | Food Science and Engineering(37.61) | Environmental Engineering(7.87) | | | Military Law(44.00) | |
| | | Environmental Science(34.00) | | | Procedural Law(8.00) | |
| | | Environmental and Resource Protection(20.00) | | | Political Science(16.92) | |
| | | Food Biochemistry(66.00) | | | Political Science(16.92) | |
| | | Food Processing and Storage Engineering(13.56) | | | - | |
| Engineering(14.88) | Forestry Engineering(25.00) | Forest Engineering(28.00) | | | - | |
| | | Wood Science and Technology(22.00) | | | - | |

Table 86. Model Scores Across Three Levels of Disciplines: OLMo-2-1124-7B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|-------------------|--|
| Literature and Arts(17.36) | Art Studies(18.41) | Broadcasting and Television Art(26.00) | Philosophy(22.48) | Philosophy(22.48) | Religious Studies(26.00) |
| | | Dance Studies(20.00) | | | Astronomical Observation and Technology(13.00) |
| | | Design Arts(16.13) | | | Astrophysics(15.94) |
| | | Drama and Opera Studies(10.98) | | | Cosmology(6.41) |
| | | Film Studies(24.05) | | | Solar System Science(20.45) |
| | Journalism and Communication(15.46) | Fine Arts(15.42) | | | Stellar and Interstellar Evolution(18.57) |
| | | Communication and Broadcasting(20.69) | | | Atmospheric Physics and Atmospheric Environment(18.84) |
| | | History and Theory of Journalism and Media Management(16.95) | | | Dynamic Meteorology(18.00) |
| | | Journalism and News Practice(11.11) | | | Meteorology(17.86) |
| | | Classical Chinese Literature(12.00) | | | Biochemistry and Molecular Biology(14.14) |
| Management(20.76) | Language and Literature(17.95) | French Language and Literature(18.00) | | | Biophysics(20.00) |
| | | Linguistics and Applied Linguistics(18.00) | | | Botany(13.25) |
| | | Literary History(11.59) | | | Cell Biology(18.39) |
| | | Literary Theory(23.44) | | | Ecology(13.89) |
| | | Modern and Contemporary Chinese Literature(18.00) | | | Genetics(12.50) |
| | Musicology(16.20) | Philology and Bibliography(22.00) | | | Microbiology(16.77) |
| | | Russian Language and Literature(21.05) | | | Physiology(15.00) |
| | | Composition(26.00) | | | Zoology(14.68) |
| | | Harmony(11.67) | | | Analytical Chemistry(9.34) |
| | | Instrumentation and Performance(23.08) | | | Electrochemistry(6.31) |
| Medicine(18.73) | Business Administration(18.31) | Music History, Education, and Technology(13.10) | | | Inorganic Chemistry(9.42) |
| | | Musical Forms and Analysis(18.00) | | | Organic Chemistry(10.53) |
| | | Pitch and Scales(10.71) | | | Physical Chemistry(9.77) |
| | | Business and Accounting Management(16.30) | | | Polymer Chemistry and Physics(10.53) |
| | | Tourism Management and Technological Economics Management(22.00) | | | Radiochemistry(13.33) |
| | Library, Information and Archival Management(25.33) | Information Management Science(24.00) | | | Geography(22.56) Human Geography(38.00) |
| | | Information Management and Communication(34.00) | | | Physical Geography(13.25) |
| | | Library and Archival Science(18.00) | | | Geology(19.06) Geochemistry(22.00) |
| | | Management Science and Engineering(10.34) | | | Mineralogy, Petrology, and Economic Geology(16.53) |
| | | Public Administration(22.52) | | | Paleontology and Stratigraphy(20.00) |
| Pharmacy(17.63) | Management Science and Engineering(10.34) | Education Economics, Management and Social Security(22.00) | | | Principles of Seismic Exploration(18.00) |
| | | Land Resource Management and Administrative Management(17.65) | | | Structural Geology(21.43) |
| | | Social Medicine and Health Management(28.00) | | | Geophysics(17.00) Solid Earth Geophysics(18.00) |
| | | Forensic Medicine(24.00) | | | Space physics(16.00) |
| | | Human Anatomy and Histology-Embryology(19.05) | | | Advanced Algebra(6.93) |
| | Clinical Medicine(19.38) | Immunology(20.29) | | | Combinatorial Mathematics(8.90) |
| | | Pathogen Biology(25.53) | | | Computational Mathematics(18.00) |
| | | Pathology and Pathophysiology(17.39) | | | Cryptography(40.00) |
| | | Radiation Medicine(32.00) | | | Discrete Mathematics(7.87) |
| | | Anesthesiology(18.00) | | | Functions of Complex Variables(4.10) |
| Public Health and Preventive Medicine(21.92) | Pharmacy(17.63) | Clinical Laboratory Diagnostics(20.00) | | | Functions of Real Variables(20.90) |
| | | Dermatology and Venereology(31.82) | | | Fundamental Mathematics(5.58) |
| | | Emergency Medicine(25.76) | | | Fuzzy Mathematics(12.00) |
| | | Geriatric Medicine(20.00) | | | Geometry and Topology(12.08) |
| | | Imaging and Nuclear Medicine(20.90) | | | Graph Theory(19.61) |
| | Public Health and Preventive Medicine(21.92) | Internal Medicine(12.38) | | | Group Theory(10.00) |
| | | Neurology(21.16) | | | Mathematical Analysis(5.90) |
| | | Nursing and Rehabilitation Medicine(22.00) | | | Number Theory(6.82) |
| | | Obstetrics and Gynecology(16.67) | | | Numerical Analysis(7.46) |
| | | Oncology(17.24) | | | Ordinary Differential Equations(11.25) |
| Military Science(22.44) | Stomatology(9.09) | Ophthalmology(24.00) | | | Polynomials and Series Expansions(3.91) |
| | | Otorhinolaryngology(20.00) | | | Probability and Statistics(7.14) |
| | | Pediatrics(14.00) | | | Special Number Theory(18.00) |
| | | Psychiatry and Mental Health(26.00) | | | Stochastic Processes(12.00) |
| | | Surgery(14.71) | | | Hydrogeology(34.00) |
| | Traditional Chinese Medicine(12.31) | Medicinal Chemistry(12.00) | | | Marine Biology(58.00) |
| | | Microbiology and Biochemical Pharmacy(30.00) | | | Marine Chemistry(30.00) |
| | | Pharmaceutical Analysis(20.00) | | | Underwater Acoustics(18.00) |
| | | Pharmacetics(17.81) | | | Physical Oceanography(6.00) |
| | | Pharmacology(9.09) | | | Acoustics(8.98) |
| Philosophy(22.48) | Systems Science(16.00) | Epidemiology and Health Statistics(22.89) | | | Atomic and Molecular Physics(10.00) |
| | | Health Toxicology and Environmental Health(21.25) | | | Electrodynamics(10.81) |
| | | Maternal, Child and Adolescent Health(15.19) | | | Fluid Physics(17.16) |
| | | Nutrition and Food Hygiene(32.00) | | | Particle and Nuclear Physics(12.44) |
| | | Basic Stomatology(11.32) | | | Polymer Physics(9.17) |
| | Sociology(27.27) | Clinical Stomatology(7.59) | | | Quantum Mechanics(9.22) |
| | | Traditional Chinese Health Preservation(8.47) | | | Relativity(10.13) |
| | | Traditional Chinese Medicine Theory(12.22) | | | Semiconductor Physics(9.84) |
| | | Traditional Chinese Pharmacy(14.29) | | | Solid State Physics(8.16) |
| | | Military Command and Information Systems(36.00) | | | Statistical Mechanics(6.00) |
| Philosophy(22.48) | Sociology(27.27) | Military Logistics and Equipment(16.67) | | | Subatomic and Atomic Physics(5.88) |
| | | Military Management(26.00) | | | Thermodynamics(9.30) |
| | | Military Thought and History(11.76) | | | Thermodynamics and Statistical Physics(9.25) |
| | | Ethics(32.35) | | | Systems Science(16.00) |
| Philosophy(22.48) | Sociology(27.27) | Logic(10.00) | | | Demography and Anthropology(28.00) |
| | | Philosophical Aesthetics(19.27) | | | Social and Folklore Studies(26.88) |

Table 86. Continued: Model Scores Across Three Levels of Disciplines: OLMo-2-1124-7B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|--------------------|--|---|
| Agronomy(18.35) | Animal Husbandry(21.36) | Animal Nutrition and Feed Science(26.92) | Engineering(12.82) | Geological Resources and Geological Engineering(18.00) | Geological Resources and Geological Engineering(18.00) |
| | | Animal Rearing and Breeding(15.69) | | | Hydraulics and Hydrology(14.71) |
| | Aquaculture(12.50) Crop Science(14.48) | Aquaculture(12.50) | | Hydraulic Engineering(14.22) | Water conservancy and Hydropower Engineering(13.41) |
| | | Crop Science(14.48) | | | Antenna and Radio Communication(7.89) |
| | Forestry(20.61) | Forest Cultivation and Genetic Breeding(23.46) | | Information and Communication Engineering(12.90) | Communication Principles(10.34) |
| | | Landscape Plants and Ornamental Horticulture(16.00) | | | Communication and Information Systems(17.39) |
| | Veterinary Medicine(24.00) | Veterinary Medicine(24.00) | | Optical Fiber Communication(12.00) | Optical Fiber Communication(12.00) |
| | | Economic Statistics(10.00) | | | Signal and Information Processing(16.77) |
| | Economics(16.15) | Finance(17.61) | | Instrument Science and Technology(24.00) | Instrument Science and Technology(24.00) |
| | | Industrial Economics(19.05) | | | Materials Physics and Chemistry(8.04) |
| | | International Trade(23.19) | | Materials Science and Engineering(10.73) | Materials Processing Engineering(16.67) |
| | | Labor Economics(16.22) | | | Manufacturing Automation(8.73) |
| | | National and Defense Economics(20.00) | | Mechanical Engineering(11.93) | Mechatronic Engineering(20.00) |
| | | Public Finance(17.50) | | | Fundamentals of Dynamics and Control(12.68) |
| | | Quantitative Economics(10.00) | | Rigid Body Mechanics(9.25) | Rigid Body Mechanics(9.25) |
| | | Theoretical Economics(13.33) | | | Solid Mechanics(6.45) |
| | | Economic History(16.00) | | Solid Mechanics(6.45) | Theoretical Fluid Mechanics(10.71) |
| | | Political Economy(10.00) | | | Theoretical Mechanics(7.74) |
| | | Western Economics(14.00) | | Metallurgical Engineering(16.47) | Iron and Steel Metallurgy(9.52) |
| Education(19.21) | Education(19.03) | Educational Technology and Principles(11.46) | | | Non-ferrous Metallurgy(18.00) |
| | | Preschool Education(28.00) | | Physical Chemistry of Metallurgical Process(20.00) | Physical Chemistry of Metallurgical Process(20.00) |
| | Physical Education(24.00) | Special Education(18.00) | | | Principles of Metallurgy(26.00) |
| | | Theory of Curriculum and Instruction(25.49) | | Mining Engineering(11.00) | Mineral Processing Engineering(8.00) |
| | Psychology(11.49) | Physical Education and Training(20.00) | | | Mining and Safety Engineering(14.00) |
| | | Sports Humanities and Sociology(16.00) | | Naval Architecture and Ocean Engineering(15.94) | Marine Engineering(6.00) |
| | | Sports Science and Medicine(36.00) | | | Ship Mechanics and Design Principles(21.59) |
| | Psychology(11.49) | Psychology(11.49) | | Nuclear Science and Technology(11.21) | Nuclear Energy and Reactor Technology(7.02) |
| | | Aeronautical and Astronautical Science and Technology(5.88) | | | Radiation Protection and Nuclear Technology Applications(16.00) |
| Engineering(12.82) | Agricultural Engineering(16.35) | Agricultural Environment and Soil-Water Engineering(14.81) | | Optical Engineering(11.17) | Applied Optics(10.48) |
| | | Agricultural Mechanization Engineering(18.00) | | | Laser Technology(14.00) |
| | Architecture(12.35) | Architectural Design and Theory(20.00) | | Petroleum and Natural Gas Engineering(16.07) | Optoelectronic Technology(5.97) |
| | | Architectural History(12.90) | | | Theoretical Optics(13.33) |
| | Chemical Engineering and Technology(9.51) | Urban Planning and Design(4.00) | | Power Engineering and Engineering Thermophysics(11.55) | Oil and Gas Field Development and Storage & Transportation Engineering(12.90) |
| | | Chemical Transport Engineering(2.00) | | | Poromechanics and Reservoir Physics(20.00) |
| | Civil Engineering(12.01) | Elements of Chemical Reaction Engineering(5.61) | | | Engineering Fluid Mechanics(8.33) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(13.08) | | | Engineering Thermophysics(13.70) |
| | Computer Science and Technology(14.29) | Mass Transport and Separation Process in Chemical Engineering(12.33) | | Surveying and Mapping Science and Technology(17.86) | Fluid Machinery and Engineering(7.81) |
| | | Civil Engineering(12.01) | | | Heat Transfer(10.85) |
| Control Science and Engineering(10.00) | Computer Science and Technology(14.29) | Bridge and Tunnel Engineering(7.84) | | | Internal Combustion Engineering(12.00) |
| | | Geotechnical Engineering(10.06) | | | Power Machinery and Engineering(9.62) |
| | Control Science and Engineering(10.00) | Structural Engineering(12.28) | | Textile Science and Engineering(19.00) | Refrigeration and Cryogenic Engineering(8.00) |
| | | Urban Infrastructure Engineering(19.72) | | | Thermal Energy Engineering(16.51) |
| | Control Science and Engineering(10.00) | Computer Architecture(14.00) | | Textile Science and Engineering(19.00) | Cartography and Geographic Information Engineering(22.00) |
| | | Computer Networks(20.34) | | | Digital Surveying and Remote Sensing Applications(19.12) |
| | Control Science and Engineering(10.00) | Computer Software and Theory(17.72) | | Transportation Engineering(13.94) | Geodesy and Surveying Engineering(12.00) |
| | | Data Structures(7.07) | | | Textile Chemistry and Dyeing Engineering(12.00) |
| | Control Science and Engineering(10.00) | Databases(20.38) | | | Textile Materials Science(26.00) |
| | | Formal Languages(7.69) | | | Transportation Engineering(13.94) |
| Electrical Engineering(11.33) | Control Science and Engineering(10.00) | Operating Systems(12.94) | History(11.72) | History(11.72) | Road and Railway Engineering(12.00) |
| | | Pattern Recognition(18.00) | | | Traffic Information Engineering and Control(21.54) |
| | Control Science and Engineering(10.00) | Principles of Computer Organization(9.76) | | | Transportation Planning and Management(9.30) |
| | | Control Theory and Control Engineering(11.24) | | | Vehicle Operation Engineering(14.00) |
| | Control Science and Engineering(10.00) | Guidance, Navigation and Control(7.84) | | Weapon Science and Technology(17.00) | Military Chemistry and Pyrotechnics(22.00) |
| | | Operations Research and Cybernetics(10.00) | | | Weapon Systems Science and Engineering(12.00) |
| | Control Science and Engineering(10.00) | Electrical Theory and New Technologies(11.58) | | Law(19.21) | Archaeology and Museology(13.46) |
| | | High Voltage and Insulation Technology(5.68) | | | Historical Geography(10.56) |
| | Control Science and Engineering(10.00) | Power Electronics and Electrical Drives(12.09) | | | World History(11.68) |
| | | Power Systems and Automation(14.58) | | | Civil and Commercial Law(19.49) |
| Electronic Science and Technology(10.98) | Control Science and Engineering(10.00) | Circuits and Systems(12.04) | | Law(19.21) | Constitutional and Administrative Law(16.00) |
| | | Electromagnetic Field and Microwave Technology(9.09) | | | Contract Law(18.00) |
| | Control Science and Engineering(10.00) | Microelectronics and Solid-State Electronics(12.00) | | Law(18.78) | Criminal Law(14.66) |
| | | Environmental Science and Engineering(12.36) | | | International Law(19.30) |
| | Control Science and Engineering(10.00) | Environmental Science(20.00) | | Law(18.78) | Law and Social Governance(18.00) |
| | | Environmental and Resource Protection(24.00) | | | Legal Theory and Legal History(18.00) |
| | Control Science and Engineering(10.00) | Food Biochemistry(44.00) | | | Military Law(30.00) |
| | | Food Processing and Storage Engineering(10.17) | | Political Science(23.08) | Procedural Law(20.00) |
| | Control Science and Engineering(10.00) | Forest Engineering(26.00) | | | Political Science(23.08) |
| | | Wood Science and Technology(10.00) | | | - |
| Engineering(12.82) | Forestry Engineering(18.00) | - | History(11.72) | History(11.72) | - |
| | | - | | | - |

Table 87. Model Scores Across Three Levels of Disciplines: gemma-2-2b.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--|---|--|-------------------|-------------------|--|
| Literature and Arts(15.75) | Art Studies(15.75) | Broadcasting and Television Art(16.00) | Philosophy(19.60) | Philosophy(19.60) | Religious Studies(30.00) |
| | | Dance Studies(16.00) | | | Astronomical Observation and Technology(10.00) |
| | | Design Arts(12.90) | | | Astrophysics(10.14) |
| | | Drama and Opera Studies(15.85) | | | Cosmology(3.85) |
| | | Film Studies(20.25) | | | Solar System Science(10.23) |
| | Journalism and Communication(14.49) | Fine Arts(12.94) | | | Stellar and Interstellar Evolution(11.43) |
| | | Communication and Broadcasting(17.24) | | | Atmospheric Physics and Atmospheric Environment(14.49) |
| | | History and Theory of Journalism and Media Management(13.56) | | | Dynamic Meteorology(12.00) |
| | | Journalism and News Practice(13.33) | | | Meteorology(13.10) |
| | | Classical Chinese Literature(20.00) | | | Biochemistry and Molecular Biology(14.14) |
| Management(18.36) | Language and Literature(16.14) | French Language and Literature(18.00) | | | Biophysics(14.00) |
| | | Linguistics and Applied Linguistics(16.00) | | | Botany(17.47) |
| | | Literary History(8.70) | | | Cell Biology(14.94) |
| | | Literary Theory(17.19) | | | Ecology(13.19) |
| | | Modern and Contemporary Chinese Literature(22.00) | | | Genetics(13.04) |
| | Musicology(15.96) | Philology and Bibliography(8.00) | | | Microbiology(18.01) |
| | | Russian Language and Literature(21.05) | | | Physiology(14.17) |
| | | Composition(10.00) | | | Zoology(13.76) |
| | | Harmony(20.00) | | | Analytical Chemistry(10.61) |
| | | Instrumentation and Performance(21.54) | | | Electrochemistry(7.21) |
| Medicine(16.52) | Business Administration(15.49) | Music History, Education, and Technology(9.66) | | | Inorganic Chemistry(10.14) |
| | | Musical Forms and Analysis(20.00) | | | Organic Chemistry(10.53) |
| | | Pitch and Scales(23.21) | | | Physical Chemistry(9.21) |
| | | Business and Accounting Management(11.96) | | | Polymer Chemistry and Physics(11.84) |
| | | Tourism Management and Technological Economics Management(22.00) | | | Radiochemistry(10.00) |
| | Library, Information and Archival Management(16.67) | Information Management Science(8.00) | | | Geography(21.80) |
| | | Information Management and Communication(28.00) | | | Human Geography(32.00) |
| | | Library and Archival Science(14.00) | | | Physical Geography(15.66) |
| | | Management Science and Engineering(13.79) | | | Geochemistry(24.00) |
| | | Education Economics, Management and Social Security(24.00) | | | Mineralogy, Petrology, and Economic Geology(14.05) |
| Pharmacy(16.91) | Management Science and Engineering(13.79) | Land Resource Management and Administrative Management(25.49) | | | Paleontology and Stratigraphy(8.00) |
| | | Social Medicine and Health Management(24.00) | | | Principles of Seismic Exploration(14.00) |
| | | Forensic Medicine(20.00) | | | Structural Geology(17.14) |
| | | Human Anatomy and Histology-Embryology(15.34) | | | Geophysics(10.00) |
| | | Immunology(24.64) | | | Solid Earth Geophysics(8.00) |
| | Clinical Medicine(16.75) | Pathogen Biology(21.28) | | | Space physics(12.00) |
| | | Pathology and Pathophysiology(14.78) | | | Advanced Algebra(13.86) |
| | | Radiation Medicine(28.00) | | | Combinatorial Mathematics(9.42) |
| | | Anesthesiology(14.00) | | | Computational Mathematics(16.00) |
| | | Clinical Laboratory Diagnostics(18.00) | | | Cryptography(12.00) |
| Public Health and Preventive Medicine(17.12) | Public Administration(24.50) | Dermatology and Venereology(24.24) | | | Discrete Mathematics(6.74) |
| | | Emergency Medicine(16.67) | | | Functions of Complex Variables(8.20) |
| | | Geriatric Medicine(24.00) | | | Functions of Real Variables(9.96) |
| | | Imaging and Nuclear Medicine(11.94) | | | Fundamental Mathematics(10.66) |
| | | Internal Medicine(14.85) | | | Fuzzy Mathematics(20.00) |
| | Stomatology(13.64) | Neurology(14.81) | | | Geometry and Topology(9.81) |
| | | Nursing and Rehabilitation Medicine(18.00) | | | Graph Theory(9.80) |
| | | Obstetrics and Gynecology(14.71) | | | Group Theory(6.00) |
| | | Oncology(18.97) | | | Mathematical Analysis(6.94) |
| | | Ophthalmology(22.00) | | | Number Theory(5.00) |
| Military Science(19.02) | Traditional Chinese Medicine(10.82) | Otorhinolaryngology(10.00) | | | Numerical Analysis(8.96) |
| | | Pediatrics(16.00) | | | Ordinary Differential Equations(8.75) |
| | | Psychiatry and Mental Health(26.00) | | | Polynomials and Series Expansions(5.59) |
| | | Surgery(16.18) | | | Probability and Statistics(13.84) |
| | | Medicinal Chemistry(6.00) | | | Special Number Theory(18.00) |
| | Philosophy(19.60) | Microbiology and Biochemical Pharmacy(24.00) | | | Stochastic Processes(12.00) |
| | | Pharmaceutical Analysis(18.00) | | | Hydrogeology(32.00) |
| | | Pharmacetics(23.29) | | | Marine Biology(44.00) |
| | | Pharmacology(10.91) | | | Marine Chemistry(22.00) |
| | | Epidemiology and Health Statistics(21.69) | | | Underwater Acoustics(6.00) |
| Philosophy(19.60) | Military Science(19.02) | Health Toxicology and Environmental Health(20.00) | | | Physical Oceanography(20.00) |
| | | Maternal, Child and Adolescent Health(11.39) | | | Physics(10.83) |
| | | Nutrition and Food Hygiene(14.00) | | | Acoustics(10.20) |
| | | Basic Stomatology(11.32) | | | Atomic and Molecular Physics(13.33) |
| | | Clinical Stomatology(15.19) | | | Electrodynamics(9.95) |
| | Philosophy(19.60) | Traditional Chinese Medicine(10.17) | | | Fluid Physics(9.70) |
| | | Traditional Chinese Medicine Theory(8.89) | | | Particle and Nuclear Physics(10.22) |
| | | Traditional Chinese Pharmacy(12.61) | | | Polymer Physics(5.50) |
| | | Military Command and Information Systems(22.00) | | | Quantum Mechanics(13.11) |
| | | Military Logistics and Equipment(18.52) | | | Relativity(7.59) |
| Philosophy(19.60) | Philosophy(19.60) | Military Management(22.00) | | | Semiconductor Physics(13.11) |
| | | Military Thought and History(13.73) | | | Solid State Physics(13.61) |
| | | Ethics(20.59) | | | Statistical Mechanics(6.00) |
| | | Logic(14.29) | | | Subatomic and Atomic Physics(9.80) |
| Philosophy(19.60) | Philosophy(19.60) | Philosophical Aesthetics(15.60) | | | Thermodynamics(12.56) |
| | | Philosophy of Science and Technology(24.00) | | | Thermodynamics and Statistical Physics(11.13) |
| | | Sociology(12.59) | | | Systems Science(14.00) |
| | | Sociology(12.59) | | | Demography and Anthropology(12.00) |
| | | Sociology(12.59) | | | Social and Folklore Studies(12.90) |

Table 87. Continued: Model Scores Across Three Levels of Disciplines: gemma-2-2b.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|-------------------|---|---|-------------------|---|---|
| Agronomy(16.91) | Animal Husbandry(20.39) | Animal Nutrition and Feed Science(21.15) | Engineering(9.77) | Geological Resources and Geological Engineering(16.00) | Geological Resources and Geological Engineering(16.00) |
| | | Animal Rearing and Breeding(19.61) | | | Hydraulics and Hydrology(12.50) |
| | Aquaculture(14.29) Crop Science(17.24) | Aquaculture(14.29) | | Water conservancy and Hydropower Engineering(14.63) | Water conservancy and Hydropower Engineering(14.63) |
| | | Crop Science(17.24) | | | Antenna and Radio Communication(3.51) |
| | Forestry(15.27) | Forest Cultivation and Genetic Breeding(13.58) | | Communication Principles(7.76) | Communication Principles(7.76) |
| | | Landscape Plants and Ornamental Horticulture(18.00) | | | Communication and Information Systems(11.59) |
| | Veterinary Medicine(16.00) | Veterinary Medicine(16.00) | | Optical Fiber Communication(4.00) | Optical Fiber Communication(4.00) |
| | | Economic Statistics(12.00) | | | Signal and Information Processing(5.16) |
| | Economics(16.49) | Finance(13.64) | | Instrument Science and Technology(12.00) | Instrument Science and Technology(12.00) |
| | | Industrial Economics(13.10) | | | Materials Physics and Chemistry(9.55) |
| | | International Trade(21.74) | | Materials Processing Engineering(8.89) | Materials Processing Engineering(8.89) |
| | | Labor Economics(22.97) | | | Manufacturing Automation(15.08) |
| | | National and Defense Economics(18.00) | | Mechatronic Engineering(10.00) | Mechatronic Engineering(10.00) |
| | | Public Finance(20.00) | | | Fundamentals of Dynamics and Control(6.34) |
| | | Quantitative Economics(10.00) | | Rigid Body Mechanics(8.09) | Rigid Body Mechanics(8.09) |
| | | Theoretical Economics(18.67) | | | Solid Mechanics(10.75) |
| | | Economic History(24.00) | | Theoretical Fluid Mechanics(10.00) | Theoretical Fluid Mechanics(10.00) |
| | | Political Economy(20.00) | | | Theoretical Mechanics(6.45) |
| | | Western Economics(12.00) | | Metallurgical Engineering(10.59) | Iron and Steel Metallurgy(10.48) |
| Education(17.98) | Education(16.60) | Educational Technology and Principles(10.42) | | | Non-ferrous Metallurgy(10.00) |
| | | Preschool Education(18.00) | | | Physical Chemistry of Metallurgical Process(14.00) |
| | Physical Education(24.00) | Special Education(28.00) | | | Principles of Metallurgy(8.00) |
| | | Theory of Curriculum and Instruction(15.69) | | Mining Engineering(11.00) | Mineral Processing Engineering(6.00) |
| | Psychology(11.49) | Physical Education and Training(18.00) | | | Mining and Safety Engineering(16.00) |
| | | Sports Humanities and Sociology(22.00) | | | Naval Architecture and Ocean Engineering(9.42) |
| | | Sports Science and Medicine(32.00) | | | Marine Engineering(10.00) |
| | Psychology(11.49) | Psychology(11.49) | | | Ship Mechanics and Design Principles(9.09) |
| | | Aeronautical and Astronautical Science and Technology(5.88) | | | Nuclear Energy and Reactor Technology(10.53) |
| Engineering(9.77) | Agricultural Engineering(13.46) | Agricultural Environment and Soil-Water Engineering(11.11) | | Radiation Protection and Nuclear Technology Applications(10.00) | Radiation Protection and Nuclear Technology Applications(10.00) |
| | | Agricultural Mechanization Engineering(16.00) | | | Optical Engineering(8.51) |
| | Architecture(12.96) | Architectural Design and Theory(12.00) | | Applied Optics(8.87) | Applied Optics(8.87) |
| | | Architectural History(12.90) | | | Laser Technology(14.00) |
| | Chemical Engineering and Technology(7.80) | Urban Planning and Design(14.00) | | | Optoelectronic Technology(7.46) |
| | | Chemical Transport Engineering(4.00) | | | Theoretical Optics(6.67) |
| | Civil Engineering(10.61) | Elements of Chemical Reaction Engineering(9.35) | | Petroleum and Natural Gas Engineering(14.29) | Oil and Gas Field Development and Storage & Transportation Engineering(16.13) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(5.61) | | | Poromechanics and Reservoir Physics(12.00) |
| | Computer Science and Technology(12.06) | Mass Transport and Separation Process in Chemical Engineering(9.59) | | Power Engineering and Engineering Thermophysics(7.31) | Engineering Fluid Mechanics(7.14) |
| | | Civil Engineering(10.61) | | | Engineering Thermophysics(6.16) |
| Engineering(9.77) | Computer Science and Technology(12.06) | Bridge and Tunnel Engineering(11.76) | | | Fluid Machinery and Engineering(4.69) |
| | | Geotechnical Engineering(6.70) | | | Heat Transfer(10.08) |
| | Control Science and Engineering(8.42) | Structural Engineering(10.53) | | | Internal Combustion Engineering(6.00) |
| | | Urban Infrastructure Engineering(19.72) | | | Power Machinery and Engineering(9.62) |
| | Electrical Engineering(10.07) | Advanced Programming Languages(18.00) | | Refrigeration and Cryogenic Engineering(6.00) | Refrigeration and Cryogenic Engineering(6.00) |
| | | Computer Architecture(16.00) | | | Thermal Energy Engineering(7.34) |
| | Electronic Science and Technology(8.94) | Computer Networks(10.17) | | | Cartography and Geographic Information Engineering(10.00) |
| | | Computer Software and Theory(10.13) | | | Digital Surveying and Remote Sensing Applications(5.88) |
| | Environmental Science and Engineering(9.52) | Data Structures(12.12) | | | Geodesy and Surveying Engineering(6.00) |
| | | Databases(15.29) | | | Textile Chemistry and Dyeing Engineering(2.00) |
| Engineering(9.77) | Food Science and Engineering(14.68) | Formal Languages(5.77) | | | Textile Materials Science(12.00) |
| | | Operating Systems(8.24) | | | Transportation Engineering(12.75) |
| | Forestry Engineering(17.00) | Pattern Recognition(18.00) | | | Road and Railway Engineering(10.00) |
| | | Principles of Computer Organization(7.32) | | | Traffic Information Engineering and Control(4.62) |
| | Food Science and Engineering(14.68) | Control Theory and Control Engineering(8.99) | | | Transportation Planning and Management(19.77) |
| | | Guidance, Navigation and Control(3.92) | | | Vehicle Operation Engineering(14.00) |
| | Forestry Engineering(17.00) | Operations Research and Cybernetics(12.00) | | Weapon Science and Technology(16.00) | Military Chemistry and Pyrotechnics(22.00) |
| | | Electrical Engineering(10.07) | | | Weapon Systems Science and Engineering(10.00) |
| Engineering(9.77) | Food Science and Engineering(14.68) | Electrical Theory and New Technologies(10.53) | History(10.09) | History(10.09) | Archaeology and Museology(11.54) |
| | | High Voltage and Insulation Technology(10.23) | | | Historical Geography(9.15) |
| | Forestry Engineering(17.00) | Power Electronics and Electrical Drives(9.89) | | | World History(10.05) |
| | | Power Systems and Automation(9.38) | | Law(13.87) | Civil and Commercial Law(16.95) |
| | Electronic Science and Technology(8.94) | Circuits and Systems(13.89) | | | Constitutional and Administrative Law(12.00) |
| | | Electromagnetic Field and Microwave Technology(4.55) | | | Contract Law(14.00) |
| | Environmental Science and Engineering(9.52) | Microelectronics and Solid-State Electronics(6.00) | | | Criminal Law(14.66) |
| | | Environmental Engineering(3.37) | | | International Law(8.77) |
| | Food Science and Engineering(14.68) | Environmental Science(16.00) | | | Law and Social Governance(14.00) |
| | | Environmental and Resource Protection(14.00) | | | Legal Theory and Legal History(10.00) |
| | Forestry Engineering(17.00) | Food Biochemistry(22.00) | | | Military Law(16.00) |
| | | Food Processing and Storage Engineering(8.47) | | Political Science(15.38) | Procedural Law(12.00) |
| | | Forest Engineering(16.00) | | | Political Science(15.38) |
| | | Wood Science and Technology(18.00) | | | - |

Table 88. Model Scores Across Three Levels of Disciplines: Qwen2.5-0.5B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|---|--|-------------------|-------------------|--|
| Literature and Arts(12.89) | Art Studies(12.27) | Broadcasting and Television Art(10.00) | Philosophy(12.68) | Philosophy(12.68) | Religious Studies(8.00) |
| | | Dance Studies(14.00) | | | Astronomical Observation and Technology(5.00) |
| | | Design Arts(11.29) | | | Astrophysics(2.90) |
| | | Drama and Opera Studies(17.07) | | | Cosmology(5.13) |
| | | Film Studies(12.66) | | | Solar System Science(9.09) |
| | Journalism and Communication(8.70) | Fine Arts(10.45) | | | Stellar and Interstellar Evolution(7.14) |
| | | Communication and Broadcasting(12.07) | | | Atmospheric Physics and Atmospheric Environment(17.39) |
| | | History and Theory of Journalism and Media Management(8.47) | | | Dynamic Meteorology(18.00) |
| | | Journalism and News Practice(6.67) | | | Meteorology(14.29) |
| | | Classical Chinese Literature(18.00) | | | Biochemistry and Molecular Biology(10.10) |
| Management(15.97) | Language and Literature(15.68) | French Language and Literature(22.00) | | | Biophysics(14.00) |
| | | Linguistics and Applied Linguistics(12.00) | | | Botany(7.83) |
| | | Literary History(11.59) | | | Cell Biology(14.94) |
| | | Literary Theory(18.75) | | | Ecology(13.89) |
| | | Modern and Contemporary Chinese Literature(16.00) | | | Genetics(12.50) |
| | Musicology(12.91) | Philology and Bibliography(20.00) | | | Microbiology(18.63) |
| | | Russian Language and Literature(8.77) | | | Physiology(14.17) |
| | | Composition(18.00) | | | Zoology(11.93) |
| | | Harmony(21.67) | | | Analytical Chemistry(9.60) |
| | | Instrumentation and Performance(15.38) | | | Electrochemistry(8.11) |
| Medicine(14.12) | Business Administration(16.20) | Music History, Education, and Technology(4.83) | | | Inorganic Chemistry(8.70) |
| | | Musical Forms and Analysis(12.00) | | | Organic Chemistry(14.62) |
| | | Pitch and Scales(17.86) | | | Physical Chemistry(8.36) |
| | | Business and Accounting Management(17.39) | | | Polymer Chemistry and Physics(6.58) |
| | | Tourism Management and Technological Economics Management(14.00) | | | Radiochemistry(1.67) |
| | Library, Information and Archival Management(17.33) | Information Management Science(4.00) | | | Geography(11.28) |
| | | Information Management and Communication(28.00) | | | Human Geography(10.00) |
| | | Library and Archival Science(20.00) | | | Physical Geography(12.05) |
| | | Management Science and Engineering(15.52) | | | Geology(11.14) |
| | | Management Science and Engineering(15.52) | | | Geochemistry(14.00) |
| Pharmacy(16.91) | Public Administration(14.57) | Education Economics, Management and Social Security(10.00) | | | Mineralogy, Petrology, and Economic Geology(10.74) |
| | | Land Resource Management and Administrative Management(21.57) | | | Paleontology and Stratigraphy(16.00) |
| | | Social Medicine and Health Management(12.00) | | | Principles of Seismic Exploration(0.00) |
| | | Forensic Medicine(20.00) | | | Structural Geology(14.29) |
| | | Human Anatomy and Histology-Embryology(14.81) | | | Geophysics(9.00) |
| | Clinical Medicine(14.12) | Immunology(11.59) | | | Solid Earth Geophysics(8.00) |
| | | Pathogen Biology(17.02) | | | Space physics(10.00) |
| | | Pathology and Pathophysiology(13.91) | | | Advanced Algebra(5.45) |
| | | Radiation Medicine(12.00) | | | Combinatorial Mathematics(7.33) |
| | | Anesthesiology(22.00) | | | Computational Mathematics(16.00) |
| Military Science(13.17) | Pharmacology(16.91) | Clinical Laboratory Diagnostics(16.00) | | | Cryptography(8.00) |
| | | Dermatology and Venereology(15.15) | | | Discrete Mathematics(10.11) |
| | | Emergency Medicine(24.24) | | | Functions of Complex Variables(5.74) |
| | | Geriatric Medicine(20.00) | | | Functions of Real Variables(9.96) |
| | | Imaging and Nuclear Medicine(11.94) | | | Fundamental Mathematics(7.61) |
| | Stomatology(16.67) | Internal Medicine(13.37) | | | Fuzzy Mathematics(2.00) |
| | | Neurology(9.52) | | | Geometry and Topology(7.17) |
| | | Nursing and Rehabilitation Medicine(18.00) | | | Graph Theory(11.76) |
| | | Obstetrics and Gynecology(14.71) | | | Group Theory(6.00) |
| | | Oncology(25.86) | | | Mathematical Analysis(4.86) |
| Philosophy(12.68) | Traditional Chinese Medicine(10.45) | Ophthalmology(4.00) | | | Number Theory(5.00) |
| | | Otorhinolaryngology(2.00) | | | Numerical Analysis(7.46) |
| | | Pediatrics(12.00) | | | Ordinary Differential Equations(6.88) |
| | | Psychiatry and Mental Health(20.00) | | | Polynomials and Series Expansions(4.47) |
| | | Surgery(8.82) | | | Probability and Statistics(7.59) |
| | Public Health and Preventive Medicine(12.33) | Medicinal Chemistry(14.00) | | | Special Number Theory(10.00) |
| | | Microbiology and Biochemical Pharmacy(18.00) | | | Stochastic Processes(6.00) |
| | | Pharmaceutical Analysis(16.00) | | | Hydrogeology(14.00) |
| | | Pharmacetics(23.29) | | | Marine Biology(10.00) |
| | | Pharmacology(10.91) | | | Marine Chemistry(12.00) |
| Sociology(12.59) | Systems Science(16.00) | Epidemiology and Health Statistics(10.84) | | | Underwater Acoustics(14.00) |
| | | Health Toxicology and Environmental Health(15.00) | | | Physical Oceanography(10.00) |
| | | Maternal, Child and Adolescent Health(7.59) | | | Acoustics(11.02) |
| | | Nutrition and Food Hygiene(18.00) | | | Atomic and Molecular Physics(9.05) |
| | | Basic Stomatology(18.87) | | | Electrodynamics(6.52) |
| | Military Science(13.17) | Clinical Stomatology(15.19) | | | Fluid Physics(5.97) |
| | | Traditional Chinese Medicine(6.78) | | | Particle and Nuclear Physics(8.89) |
| | | Traditional Chinese Medicine Theory(11.11) | | | Polymer Physics(3.67) |
| | | Traditional Chinese Pharmacy(11.76) | | | Quantum Mechanics(9.71) |
| | | Military Command and Information Systems(16.00) | | | Relativity(8.86) |
| Philosophy(12.68) | Military Science(13.17) | Military Logistics and Equipment(7.41) | | | Semiconductor Physics(3.28) |
| | | Military Management(20.00) | | | Solid State Physics(5.44) |
| | | Military Thought and History(9.80) | | | Statistical Mechanics(0.00) |
| | | Ethics(13.24) | | | Subatomic and Atomic Physics(5.88) |
| | | Logic(12.86) | | | Thermodynamics(6.98) |
| Philosophy(12.68) | Philosophy(12.68) | Philosophical Aesthetics(8.26) | | | Thermodynamics and Statistical Physics(6.04) |
| | | Philosophy of Science and Technology(26.00) | | | Systems Science(16.00) |
| Philosophy(12.68) | Sociology(12.59) | Sociology(12.59) | | | Demography and Anthropology(10.00) |
| | | Sociology(12.59) | | | Social and Folklore Studies(13.98) |

Table 88. Continued: Model Scores Across Three Levels of Disciplines: Qwen2.5-0.5B-Instruct.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|--------------------|--|---|--------------------|---|--|
| Agronomy(15.05) | Animal Husbandry(19.42) | Animal Nutrition and Feed Science(17.31) | Engineering(10.30) | Geological Resources and Geological Engineering(18.00) | Geological Resources and Geological Engineering(18.00) |
| | | Animal Rearing and Breeding(21.57) | | | Hydraulics and Hydrology(10.29) |
| | Aquaculture(8.93) Crop Science(17.24) | Aquaculture(8.93) | | Hydraulic Engineering(9.17) | Water conservancy and Hydropower Engineering(7.32) |
| | | Crop Science(17.24) | | | Antenna and Radio Communication(12.28) |
| | Forestry(12.98) | Forest Cultivation and Genetic Breeding(12.35) | | Information and Communication Engineering(9.52) | Communication Principles(6.03) |
| | | Landscape Plants and Ornamental Horticulture(14.00) | | | Communication and Information Systems(11.59) |
| | Veterinary Medicine(12.00) | Veterinary Medicine(12.00) | | Optical Fiber Communication(6.00) | Optical Fiber Communication(6.00) |
| | | Economic Statistics(10.00) | | | Signal and Information Processing(10.32) |
| | Economics(12.37) | Finance(15.34) | | Instrument Science and Technology(12.00) | Instrument Science and Technology(12.00) |
| | | Industrial Economics(10.71) | | | Materials Physics and Chemistry(10.55) |
| | | International Trade(8.70) | | Materials Science and Engineering(12.11) | Materials Processing Engineering(15.56) |
| | | Labor Economics(21.62) | | | Manufacturing Automation(11.90) |
| | | National and Defense Economics(18.00) | | Mechanics(9.69) | Mechatronic Engineering(8.00) |
| | | Public Finance(11.67) | | | Fundamentals of Dynamics and Control(8.36) |
| | | Quantitative Economics(10.00) | | | Rigid Body Mechanics(12.72) |
| | | Theoretical Economics(8.00) | | | Solid Mechanics(12.90) |
| | | Economic History(8.00) | | Metallurgical Engineering(9.41) | Theoretical Fluid Mechanics(9.29) |
| | | Political Economy(8.00) | | | Theoretical Mechanics(7.74) |
| | | Western Economics(8.00) | | | Iron and Steel Metallurgy(4.76) |
| Education(16.32) | Education(17.00) | Educational Technology and Principles(14.58) | | Non-ferrous Metallurgy(12.00) | Non-ferrous Metallurgy(12.00) |
| | | Preschool Education(16.00) | | | Physical Chemistry of Metallurgical Process(12.00) |
| | Physical Education(16.00) | Special Education(22.00) | | Principles of Metallurgy(14.00) | Principles of Metallurgy(14.00) |
| | | Theory of Curriculum and Instruction(17.65) | | | Mining Engineering(13.00) |
| | Psychology(14.94) | Physical Education and Training(16.00) | | Mineral Processing Engineering(14.00) | Mineral Processing Engineering(14.00) |
| | | Sports Humanities and Sociology(12.00) | | | Mining and Safety Engineering(12.00) |
| | | Sports Science and Medicine(20.00) | | Naval Architecture and Ocean Engineering(19.57) | Naval Architecture and Ocean Engineering(12.00) |
| | | Psychology(14.94) | | | Marine Engineering(12.00) |
| | Engineering(10.30) | Aeronautical and Astronautical Science and Technology(6.72) | | Ship Mechanics and Design Principles(23.86) | Ship Mechanics and Design Principles(23.86) |
| | | Agricultural Engineering(13.46) | | | Nuclear Energy and Reactor Technology(19.30) |
| | | Agricultural Environment and Soil-Water Engineering(14.81) | | Nuclear Science and Technology(21.50) | Radiation Protection and Nuclear Technology Applications(24.00) |
| | | Agricultural Mechanization Engineering(12.00) | | | Applied Optics(9.68) |
| | | Architecture(15.43) | | Optical Engineering(7.71) | Laser Technology(2.00) |
| | | Architectural Design and Theory(10.00) | | | Optoelectronic Technology(2.99) |
| | | Architectural History(11.29) | | | Theoretical Optics(10.37) |
| | | Urban Planning and Design(26.00) | | Petroleum and Natural Gas Engineering(8.93) | Petroleum and Natural Gas Engineering(8.93) |
| | | Chemical Transport Engineering(8.00) | | | Oil and Gas Field Development and Storage & Transportation Engineering(6.45) |
| | Control Science and Engineering(8.42) | Elements of Chemical Reaction Engineering(1.87) | | Poromechanics and Reservoir Physics(12.00) | Poromechanics and Reservoir Physics(12.00) |
| | | Fluid Flow and Heat Transfer in Chemical Engineering(8.41) | | | Engineering Fluid Mechanics(7.14) |
| | | Mass Transport and Separation Process in Chemical Engineering(8.22) | | Power Engineering and Engineering Thermophysics(7.75) | Engineering Thermophysics(6.85) |
| | | Civil Engineering(10.34) | | | Fluid Machinery and Engineering(7.81) |
| | | Bridge and Tunnel Engineering(7.84) | | | Heat Transfer(6.20) |
| | | Geotechnical Engineering(6.70) | | | Internal Combustion Engineering(10.00) |
| | | Structural Engineering(14.04) | | | Power Machinery and Engineering(5.77) |
| | | Urban Infrastructure Engineering(18.31) | | Refrigeration and Cryogenic Engineering(8.00) | Refrigeration and Cryogenic Engineering(8.00) |
| | | Computer Science and Technology(12.32) | | | Thermal Energy Engineering(11.01) |
| | Electrical Engineering(7.55) | Advanced Programming Languages(16.00) | | Cartography and Geographic Information Engineering(16.00) | Cartography and Geographic Information Engineering(16.00) |
| | | Computer Architecture(18.00) | | | Digital Surveying and Remote Sensing Applications(10.29) |
| | | Computer Networks(10.17) | | Geodesy and Surveying Engineering(4.00) | Geodesy and Surveying Engineering(4.00) |
| | | Computer Software and Theory(15.19) | | | Textile Chemistry and Dyeing Engineering(12.00) |
| | | Data Structures(5.05) | | Textile Science and Engineering(14.00) | Textile Materials Science(16.00) |
| | | Databases(15.92) | | | Road and Railway Engineering(16.00) |
| | | Formal Languages(9.62) | | Transportation Engineering(13.15) | Traffic Information Engineering and Control(16.92) |
| | | Operating Systems(9.41) | | | Transportation Planning and Management(12.79) |
| | | Pattern Recognition(18.00) | | | Vehicle Operation Engineering(6.00) |
| | | Principles of Computer Organization(8.54) | | Weapon Science and Technology(14.00) | Weapon Science and Technology(14.00) |
| Engineering(10.30) | Control Science and Engineering(8.42) | Control Theory and Control Engineering(11.24) | | | Military Chemistry and Pyrotechnics(16.00) |
| | | Guidance, Navigation and Control(3.92) | | | Weapon Systems Science and Engineering(12.00) |
| | Computer Science and Technology(12.32) | Operations Research and Cybernetics(8.00) | | Archaeology and Museology(11.54) | Archaeology and Museology(11.54) |
| | | Electrical Engineering(7.55) | | | Historical Geography(15.49) |
| | Electrical Engineering(7.55) | Electrical Theory and New Technologies(6.32) | | World History(10.05) | World History(10.05) |
| | | High Voltage and Insulation Technology(7.95) | | | Civil and Commercial Law(12.71) |
| | Electronic Science and Technology(4.88) | Power Electronics and Electrical Drives(8.79) | | Contract Law(12.00) | Contractual and Administrative Law(12.00) |
| | | Power Systems and Automation(7.29) | | | Criminal Law(15.52) |
| | Environmental Science and Engineering(12.70) | Circuits and Systems(2.78) | | International Law(12.28) | International Law(12.28) |
| | | Electromagnetic Field and Microwave Technology(7.95) | | | Law and Social Governance(8.00) |
| | Food Science and Engineering(17.43) | Microelectronics and Solid-State Electronics(4.00) | | | Legal Theory and Legal History(10.00) |
| | | Environmental Science(14.00) | | | Military Law(18.00) |
| | Food Science and Engineering(17.43) | Environmental and Resource Protection(14.00) | | Procedural Law(18.00) | Procedural Law(18.00) |
| | | Food Biochemistry(20.00) | | | Political Science(9.23) |
| | Forestry Engineering(13.00) | Food Processing and Storage Engineering(15.25) | | | Political Science(9.23) |
| | | Forest Engineering(16.00) | | | - |
| | Forestry Engineering(13.00) | Wood Science and Technology(10.00) | | | - |

Table 89. Model Scores Across Three Levels of Disciplines: Qwen2.5-0.5B.

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| Discipline | Field | Subfield | Discipline | Field | Subfield |
|----------------------------|--|--|----------------------------|--|---|
| Literature and Arts(14.92) | Art Studies(13.27) | Broadcasting and Television Art(6.00) | Philosophy(15.56) | Philosophy(15.56) | Religious Studies(16.00) |
| | | Dance Studies(22.00) | | Astronomy(6.42) | Astronomical Observation and Technology(6.00) |
| | | Design Arts(9.68) | | Astrophysics(7.25) | Cosmology(3.85) |
| | | Drama and Opera Studies(8.54) | | Solar System Science(9.09) | Stellar and Interstellar Evolution(5.71) |
| | Journalism and Communication(13.04) | Film Studies(10.46) | Atmospheric Science(11.33) | Atmospheric Physics and Atmospheric Environment(13.04) | |
| | | Fine Arts(13.43) | | Dynamic Meteorology(12.00) | |
| | | Communication and Broadcasting(10.34) | | Meteorology(9.52) | |
| | Language and Literature(15.91) | History and Theory of Journalism and Media Management(15.25) | Biology(10.18) | Biochemistry and Molecular Biology(17.17) | |
| | | Journalism and News Practice(13.33) | | Biophysics(16.00) | |
| | | Classical Chinese Literature(22.00) | | Botany(10.84) | |
| | | French Language and Literature(8.00) | | Cell Biology(13.79) | |
| | | Linguistics and Applied Linguistics(10.00) | | Ecology(9.72) | |
| | | Literary History(13.04) | | Genetics(7.61) | |
| Management(11.78) | Business Administration(11.97) | Literary Theory(10.94) | | Microbiology(9.32) | |
| | | Modern and Contemporary Chinese Literature(30.00) | | Physiology(6.67) | |
| | | Philology and Bibliography(12.00) | | Zoology(7.34) | |
| | | Russian Language and Literature(22.81) | | Chemistry(8.37) Analytical Chemistry(10.10) | |
| | Musicology(17.14) | Composition(20.00) | | Electrochemistry(4.50) | |
| | | Harmony(20.00) | | Inorganic Chemistry(13.04) | |
| | | Instrumentation and Performance(18.46) | | Organic Chemistry(10.53) | |
| | | Music History, Education, and Technology(8.97) | | Physical Chemistry(6.80) | |
| | | Musical Forms and Analysis(24.00) | | Polymer Chemistry and Physics(9.21) | |
| | | Pitch and Scales(25.00) | | Radiochemistry(11.67) | |
| Medicine(12.23) | Business Administration(11.97) | Business and Accounting Management(10.87) | Geography(13.53) | Human Geography(20.00) | |
| | | Tourism Management and Technological Economics Management(14.00) | | Physical Geography(9.64) | |
| | | Library, Information and Archival Management(9.33) | | Geochimistry(14.00) | |
| | | Information Management Science(4.00) | | Mineralogy, Petrology, and Economic Geology(14.88) | |
| | Management Science and Engineering(13.79) | Information Management and Communication(14.00) | | Paleontology and Stratigraphy(10.00) | |
| | | Library and Archival Science(10.00) | | Principles of Seismic Exploration(8.00) | |
| | | Management Science and Engineering(13.79) | | Structural Geology(11.43) | |
| | | Public Administration(13.25) | | Solid Earth Geophysics(22.00) | |
| | | Education Economics, Management and Social Security(8.00) | | Space Physics(2.00) | |
| | | Land Resource Management and Administrative Management(17.65) | | Mathematics(8.35) Advanced Algebra(9.41) | |
| Medicine(12.23) | Basic Medicine(14.11) | Social Medicine and Health Management(14.00) | | Combinatorial Mathematics(7.33) | |
| | | Forensic Medicine(22.00) | | Computational Mathematics(16.00) | |
| | | Human Anatomy and Histology-Embryology(11.64) | | Cryptography(10.00) | |
| | | Immunology(13.04) | | Discrete Mathematics(4.49) | |
| | Clinical Medicine(11.41) | Pathogen Biology(11.70) | | Functions of Complex Variables(8.20) | |
| | | Pathology and Pathophysiology(14.78) | | Functions of Real Variables(11.94) | |
| | | Radiation Medicine(20.00) | | Fundamental Mathematics(10.66) | |
| | | Anesthesiology(18.00) | | Fuzzy Mathematics(8.00) | |
| | | Clinical Laboratory Diagnostics(10.00) | | Geometry and Topology(7.17) | |
| | | Dermatology and Venereology(10.61) | | Graph Theory(15.69) | |
| Medicine(12.23) | Pharmacy(14.03) | Emergency Medicine(16.67) | | Group Theory(12.00) | |
| | | Geriatric Medicine(12.00) | | Mathematical Analysis(5.21) | |
| | | Imaging and Nuclear Medicine(8.96) | | Number Theory(6.36) | |
| | | Internal Medicine(8.91) | | Numerical Analysis(8.96) | |
| | Public Health and Preventive Medicine(10.62) | Neurology(7.94) | | Ordinary Differential Equations(7.50) | |
| | | Nursing and Rehabilitation Medicine(18.00) | | Polynomials and Series Expansions(7.26) | |
| | | Obstetrics and Gynecology(12.75) | | Probability and Statistics(7.59) | |
| | | Oncology(10.34) | | Special Number Theory(18.00) | |
| | | Ophthalmology(20.00) | | Stochastic Processes(14.80) | |
| | | Otorhinolaryngology(4.00) | Oceanography(15.00) | Hydrogeology(18.00) | |
| Medicine(12.23) | Pharmacy(14.03) | Pediatrics(12.00) | | Marine Biology(20.00) | |
| | | Psychiatry and Mental Health(12.00) | | Marine Chemistry(10.00) | |
| | | Surgery(14.71) | | Underwater Acoustics(12.00) | |
| | | | | Physical Oceanography(10.00) | |
| | Public Health and Preventive Medicine(10.62) | | | Physics(7.73) Acoustics(4.90) | |
| | | Epidemiology and Health Statistics(14.46) | | Atomic and Molecular Physics(7.62) | |
| | | Health Toxicology and Environmental Health(7.50) | | Electrodynamics(8.58) | |
| | | Maternal, Child and Adolescent Health(7.59) | | Fluid Physics(12.69) | |
| | | Nutrition and Food Hygiene(14.00) | | Particle and Nuclear Physics(7.56) | |
| | | | | Polymer Physics(8.26) | |
| Medicine(12.23) | Stomatology(8.33) | Basic Stomatology(7.55) | | Quantum Mechanics(7.28) | |
| | | Clinical Stomatology(8.86) | | Relativity(6.33) | |
| | | Traditional Chinese Medicine(13.81) | | Semiconductor Physics(4.92) | |
| | | Traditional Chinese Health Preservation(6.78) | | Solid State Physics(4.76) | |
| | Traditional Chinese Medicine(13.81) | Traditional Chinese Medicine Theory(18.89) | Oceanography(15.00) | Statistical Mechanics(4.00) | |
| | | Traditional Chinese Pharmacy(13.45) | | Subatomic and Atomic Physics(13.73) | |
| | | | | Thermodynamics(6.98) | |
| | | | | Thermodynamics and Statistical Physics(8.49) | |
| | Military Science(16.59) | Military Command and Information Systems(22.00) | | Systems Science(6.00) | |
| | | Military Logistics and Equipment(7.41) | | Sociology(13.99) Sociology(13.99) | |
| | | Military Management(28.00) | | Demography and Anthropology(14.00) | |
| | | Military Thought and History(9.80) | | Social and Folklore Studies(13.98) | |
| Philosophy(15.56) | Philosophy(15.56) | Ethics(19.12) | | | |
| | | Logic(10.00) | | | |
| | | Philosophical Aesthetics(13.76) | | | |
| | | Philosophy of Science and Technology(22.00) | | | |

Table 89. Continued: Model Scores Across Three Levels of Disciplines: Qwen2.5-0.5B.

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