

# List of academic fields

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The following outline is provided as an overview of and topical guide to academic disciplines:

An **academic discipline** or **field of study** is a branch of knowledge that is taught and researched as part of higher education. A scholar's discipline is commonly defined and recognized by the university faculties and learned societies to which he or she belongs and the academic journals in which he or she publishes research. However, no formal criteria exist for defining an academic discipline.

Disciplines vary between well-established ones that exist in almost all universities and have well-defined rosters of journals and conferences and nascent ones supported by only a few universities and publications. A discipline may have branches, and these are often called sub-disciplines.

There is no consensus on how some academic disciplines should be classified (e.g., whether anthropology and linguistics are disciplines of social sciences or fields within the humanities). More generally, the proper criteria for organizing knowledge into disciplines are also open to debate.



Mind map of top level disciplines and professions

## Contents

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### Historical background

#### Humanities

- Anthropology
  - Archaeology
- History
- Linguistics and languages
- Philosophy
- Religion
- The arts
  - Literature
  - Performing arts
  - Visual arts

#### Social sciences

- Economics
- Geography
- Interdisciplinary studies
  - Area studies
  - Ethnic and cultural studies

Gender and sexuality studies

Organizational studies

Political science

Psychology

Sociology

**Natural sciences**

Biology

Chemistry

Earth sciences

Physics

Space sciences

**Formal sciences**

Computer sciences

Logic

Mathematics

Pure mathematics

Applied mathematics

Statistics

Systems science

**Professions and applied sciences**

Agriculture

Architecture and design

Business

Divinity

Education

Engineering and technology

Environmental studies and forestry

Family and consumer science

Human physical performance and recreation

Journalism, media studies and communication

Law

Library and museum studies

Medicine

Military sciences

Public administration

Public policy

Social work

Transportation

**See also**

**Notes**

**References**

**External links**

# Historical background

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History of academic disciplines – academic disciplines arose from learning institutions as those grew to include specialized faculties or departments

- Faculty
- Academic department

## Humanities

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### Anthropology

- Anthropological criminology
- Anthropological linguistics
  - Synchronic linguistics (or Descriptive linguistics)
  - Diachronic linguistics (or Historical linguistics)
  - Ethnolinguistics
  - Sociolinguistics
- Biological anthropology
  - Forensic anthropology
  - Gene-culture coevolution
  - Human behavioral ecology
  - Human evolution
  - Medical anthropology
  - Paleoanthropology
  - Population genetics
  - Primatology
- Cultural anthropology
  - Anthropology of religion
  - Economic anthropology
  - Ethnography
  - Ethnohistory
  - Ethnology
  - Ethnomusicology
  - Folklore
  - Mythology
  - Missiology
  - Political anthropology

- Psychological anthropology
- Linguistic anthropology
- Social anthropology

## **Archaeology**

- Classical archaeology
- Egyptology
- Architectural analytics
- Experimental archaeology
- Maritime archaeology
- Near Eastern archaeology
- Paleoanthropology
- Prehistoric archaeology

## **History**

- African history
- American history
- Ancient history
- Australian history
- Asian history
  - Chinese history
  - Indian history (outline)
  - Iranian history
  - Indonesian history
- European history
- Economic history
- Environmental history
- Ancient Greek history (outline)
- Intellectual history
- Latin American history
- Modern history
- Political history
- Pre-Columbian era
- Ancient Roman history (outline)
- Russian history
- Scientific history
- Technological history
- World history

## **Linguistics and languages**

- Classics (outline)
- Languages
  - Business English
  - Classical language
  - Modern language

- Standard English
- World Englishes
- Applied linguistics
- Computational linguistics
- Discourse analysis
- English studies
- Etymology
- Grammar
- Historical linguistics
- History of linguistics
- Interlinguistics
- Lexicology
- Linguistic typology
- Morphology
- Natural language processing
- Philology
- Phonetics
- Phonology
- Pragmatics
- Psycholinguistics
- Semantics
- Semiotics (outline)
- Sociolinguistics
- Syntax
- Composition studies
- Rhetoric
- Usage
- Word usage

## **Philosophy**

- Meta-philosophy
- Metaphysics (outline)
  - Ontology
  - Teleology
  - Philosophy of mind

- Philosophy of artificial intelligence
- Philosophy of perception
- Philosophy of pain
- Philosophy of space and time
- Philosophy of Action
- Theism and Atheism
- Determinism and Free will
- Epistemology (outline)
  - Justification
  - Reasoning errors
- Ethics (outline)
  - Meta-ethics
  - Normative ethics
    - Virtue ethics
  - Applied ethics
    - Animal rights
    - Bioethics
    - Environmental ethics
  - Moral psychology, Descriptive ethics, Value theory
- Aesthetics (outline) / Philosophy of Art
- Social philosophy and political philosophy
  - Anarchism (outline)
  - Feminist philosophy
  - Libertarianism (outline)
  - Marxism
- Philosophical traditions and schools
  - Platonism
  - Aristotelianism
  - Analytic philosophy
  - Continental philosophy
  - Eastern philosophy
  - Feminist philosophy
- History of philosophy

- Ancient philosophy
- Medieval philosophy
  - Scholasticism
  - Humanism (outline)
- Modern philosophy
- Contemporary philosophy
- Logic (outline)
  - Philosophical logic
  - Mathematical logic
- Applied philosophy
  - Philosophy of education
  - Philosophy of history
  - Philosophy of religion
  - Philosophy of language
  - Philosophy of law
  - Philosophy of mathematics
  - Philosophy of music
  - Philosophy of science
    - Philosophy of social science
    - Philosophy of physics
    - Philosophy of biology
    - Philosophy of chemistry
    - Philosophy of economics
    - Philosophy of psychology
  - Philosophy of engineering
  - Systems philosophy

## Religion

- Abrahamic religions
  - Christianity (outline)
    - Christian theology (outline)
  - Islam (outline)/ Islamic studies
  - Judaism (outline)/ Jewish studies
- Other religions
  - African religions
  - Ancient Egyptian religion
  - Native American religions
  - Gnosticism

- Indian religions
  - Buddhism (outline)/ Buddhist studies
  - Hinduism (outline)
  - Jainism
  - Sikhism (outline)
- East Asian religions
  - Chinese folk religion
  - Confucianism
  - Shinto
  - Daoism (outline)
  - I-Kuan Tao
  - Caodaism
  - Chondogyo
  - Tenrikyo
  - Oomoto
- Esotericism
- New religious movements
- Sumerian religion
- Zoroastrianism
- Comparative religion
- Mythology and Folklore
- Irreligion
  - Agnosticism
  - Atheism (outline) and religious humanism

## The arts

### Literature

- Poetry
- Comparative literature
- English literature
- World literature
  - American literature
  - British literature
- History of literature
  - Medieval literature
  - Post-colonial literature
  - Post-modern literature
- Literary theory
  - Critical theory (outline)
  - Literary criticism
  - Poetics
  - Rhetoric



- Creative writing
  - Creative nonfiction
  - Fiction writing (outline)
  - Non-fiction writing
  - Literary journalism
  - Poetry composition
  - Screenwriting
  - Playwrighting

## **Performing arts**

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|--|--|
| <ul style="list-style-type: none"> <li>▪ <u>Music (outline)</u> <ul style="list-style-type: none"> <li>▪ <u>Accompanying</u></li> <li>▪ <u>Chamber music</u></li> <li>▪ <u>Church music</u></li> <li>▪ <u>Musical composition</u></li> <li>▪ <u>Conducting</u> <ul style="list-style-type: none"> <li>▪ <u>Choral conducting</u></li> <li>▪ <u>Orchestral conducting</u></li> <li>▪ <u>Wind ensemble conducting</u></li> </ul> </li> <li>▪ <u>Early music</u></li> <li>▪ <u>Jazz studies (outline)</u></li> <li>▪ <u>Music education</u></li> <li>▪ <u>Music history</u></li> <li>▪ <u>Music theory</u></li> <li>▪ <u>Musicology</u> <ul style="list-style-type: none"> <li>▪ <u>Historical musicology</u></li> <li>▪ <u>Systematic musicology</u></li> </ul> </li> <li>▪ <u>Ethnomusicology</u></li> <li>▪ <u>Organology</u> <ul style="list-style-type: none"> <li>▪ <u>Organ and historical keyboards</u></li> <li>▪ <u>Piano</u></li> <li>▪ <u>Strings, harp, oud, and guitar (outline)</u></li> <li>▪ <u>Singing</u></li> </ul> </li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>▪ <u>Dance (outline)</u> <ul style="list-style-type: none"> <li>▪ <u>Choreography</u></li> <li>▪ <u>Dance notation</u></li> <li>▪ <u>Ethnochoreology</u></li> <li>▪ <u>History of dance</u></li> </ul> </li> <li>▪ <u>Television (outline)</u> <ul style="list-style-type: none"> <li>▪ <u>Television studies</u></li> </ul> </li> <li>▪ <u>Theatre (outline)</u> <ul style="list-style-type: none"> <li>▪ <u>History</u></li> <li>▪ <u>Acting</u></li> <li>▪ <u>Directing</u></li> <li>▪ <u>Stage design</u></li> <li>▪ <u>Puppetry</u></li> <li>▪ <u>Dramaturgy</u></li> <li>▪ <u>Playwrighting</u></li> <li>▪ <u>Scenography</u></li> <li>▪ <u>Musical theatre</u></li> </ul> </li> <li>▪ <u>Film (outline)</u> <ul style="list-style-type: none"> <li>▪ <u>Animation</u></li> <li>▪ <u>Live action</u></li> <li>▪ <u>Filmmaking</u></li> <li>▪ <u>Film criticism</u></li> <li>▪ <u>Film theory</u></li> </ul> </li> <li>▪ <u>Oral literature</u></li> </ul> |
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- Woodwinds, brass, and percussion
- Recording
- Orchestral studies
- Public speaking
- Performance poetry
- Spoken word
- Storytelling

## Visual arts

- Fine arts
- Graphic arts
  - Drawing (outline)
  - Painting (outline)
  - Photography (outline)
- Sculpture (outline)

# Social sciences

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## Economics

- Agricultural economics
- Anarchist economics
- Applied economics
- Behavioural economics
- Bioeconomics
- Complexity economics
- Computational economics
- Consumer economics
- Development economics
- Ecological economics
- Econometrics
- Economic geography
- Economic history
- Economic sociology
- Economic systems
- Energy economics
- Entrepreneurial economics
- Environmental economics
- Industrial organization
- Information economics
- Institutional economics
- International economics
- Islamic economics
- Labor economics
- Law and economics
- Macroeconomics
- Managerial economics
- Marxian economics
- Mathematical economics
- Microeconomics
- Monetary economics
- Neuroeconomics
- Participatory economics
- Political economy
- Public finance
- Public economics

- Evolutionary economics
- Experimental economics
- Feminist economics
- Financial economics
- Financial econometrics
- Green economics
- Growth economics
- Human development theory
- Real estate economics
- Resource economics
- Social choice theory
- Socialist economics
- Socioeconomics
- Transport economics
- Welfare economics

## Geography

- Cartography (outline)
- Human geography
  - Cultural geography
    - Feminist geography
  - Economic geography
    - Development geography
  - Historical geography
  - Time geography
  - Political geography & geopolitics
    - Military geography
    - Strategic geography
  - Population geography
  - Social geography
    - Behavioral geography
    - Children's geographies
    - Health geography
    - Tourism geography
  - Urban geography
- Environmental geography
- Physical geography
  - Biogeography
  - Climatology
    - Palaeoclimatology
  - Coastal geography
  - Geomorphology
  - Geodesy
  - Hydrology/Hydrography
    - Glaciology
    - Limnology
    - Oceanography
  - Landscape ecology
  - Palaeogeography
- Regional geography
- Remote sensing

## Interdisciplinary studies

### Area studies

- African studies
- American studies
  - Appalachian studies
  - Canadian studies
  - Latin American studies
- Asian studies
  - Central Asian studies
  - East Asian studies
  - Indology (Indian studies)
  - Iranian studies
  - Japanology (Japanese studies)
  - Korean studies
  - Pakistan studies
  - Sindhology
  - Sinology (outline) (Chinese studies)
  - Southeast Asian studies
- European studies
  - Celtic studies
  - German studies
  - Scandinavian studies
  - Slavic studies
- Australian studies
- Middle East studies
- Russian and Eastern European studies

### **Ethnic and cultural studies**

- Cultural studies
- Ethnic studies
- Ethnology
- Culturology
- Cross-cultural studies
- White studies
- Black studies

### **Gender and sexuality studies**

- |                                       |                                     |
|---------------------------------------|-------------------------------------|
| ▪ <u>Feminine psychology</u>          | ▪ <u>Men's studies</u>              |
| ▪ <u>Gender studies/Gender theory</u> | ▪ <u>Queer studies/Queer theory</u> |
| ▪ <u>Heterosexism</u>                 | ▪ <u>Sex education</u>              |

- Human sexual behavior
- Human sexuality (outline)
- Masculine psychology
- Sexology
- Women's studies

### **Organizational studies**

- Business economics
- Business ethics
- Decision science
- Entrepreneurship
- Human resources management
- Industrial organization
- Organizational behavior
- Organization theory
- Strategy

### **Political science**

- American politics
- Canadian politics
- Civics
- Comparative politics
- European studies
- Geopolitics (Political geography)
- International relations
- International organizations
- Nationalism studies
- Peace and conflict studies
- Policy studies
- Political behavior
- Political culture
- Political economy
- Political history
- Political philosophy
- Psephology
- Public administration
  - Nonprofit administration
  - Non-governmental organization (NGO) administration

- Public policy
- Social choice theory

## **Psychology**

- Abnormal psychology
- Applied psychology
- Asian psychology
- Biological psychology
- Black psychology
- Clinical psychology
- Clinical neuropsychology
- Cognitive psychology
- Community psychology
- Comparative psychology
- Conservation psychology
- Consumer psychology
- Counseling psychology
- Criminal psychology
- Cultural psychology
- Developmental psychology
- Differential psychology
- Ecological psychology
- Educational psychology
- Environmental psychology
- Evolutionary psychology
- Experimental psychology
- Group psychology
- Family psychology
- Feminine psychology
- Forensic psychology
- Forensic developmental psychology
- Health psychology
- Humanistic psychology
- Indigenous psychology
- Legal psychology
- Masculine psychology
- Mathematical psychology
- Media psychology
- Medical psychology
- Military psychology
- Moral psychology and Descriptive ethics
- Music psychology
- Neuropsychology
- Occupational psychology
- Occupational health psychology
- Organizational psychology
- Parapsychology (outline)
- Pediatric psychology
- Pedology (children study)
- Personality psychology
- Phenomenology
- Political psychology
- Positive psychology
- Psychoanalysis
- Psychobiology
- Psychometrics
- Psychology of religion
- Psychopathology
  - Child psychopathology
- Psychophysics
- Quantitative psychology
- Rehabilitation psychology
- School psychology
- Social psychology

- Sport psychology
- Traffic psychology
- Transpersonal psychology
- Travel psychology

## **Sociology**

- Analytical sociology
- Applied sociology
  - Political sociology
  - Public sociology
  - Social engineering
  - Leisure studies
- Architectural sociology
- Behavioral sociology
- Chinese sociology
- Collective behavior
  - Social movements
- Community informatics
  - Social network analysis
- Comparative sociology
- Conflict theory
- Critical sociology
- Cultural sociology
- Cultural studies
- Criminology/Criminal justice (outline)
- Critical management studies
- Demography/Population
- Digital sociology
- Dramaturgical sociology
- Economic sociology
- Educational sociology
- Empirical sociology
- Environmental sociology
- Evolutionary sociology
- Sociology of aging
- Sociology of agriculture
- Sociology of art
- Societal of autism
- Sociology of childhood
- Sociology of conflict
- Sociology of culture
- Sociology of cyberspace
- Sociology of deviance
- Sociology of development
- Sociology of disaster
- Sociology of education
- Sociology of emotions
- Sociology of fatherhood
- Sociology of film
- Sociology of finance
- Sociology of food
- Sociology of gender
- Sociology of generations
- Sociology of globalization
- Sociology of government
- Sociology of health and illness
- Sociology of human consciousness
- Sociology of immigration
- Sociology of knowledge
- Sociology of language
- Sociology of law
- Sociology of leisure
- Sociology of literature

- Feminist sociology
- Figurational sociology
- Futures studies (outline)
- Historical sociology
- Human ecology
- Humanistic sociology
- Industrial sociology
- Interactionism
- Internet sociology
- Interpretive sociology
  - Phenomenology
  - Ethnomethodology
  - Symbolic interactionism
  - Social constructionism
- Jealousy sociology
- Macrosociology
- Marxist sociology
- Mathematical sociology
- Medical sociology
- Mesosociology
- Microsociology
- Military sociology
- Natural resource sociology
- Organizational studies
- Phenomenological sociology
- Policy sociology
- Polish sociology
- Psychoanalytic sociology
- Science studies/Science and technology studies
- Sexology
- Social capital
- Social change
- Social conflict theory
- Social control
- Sociology of markets
- Sociology of marriage
- Sociology of motherhood
- Sociology of music
- Sociology of natural resources
- Sociology of organizations
- Sociology of peace, war, and social conflict
- Sociology of punishment
- Sociology of race and ethnic relations
- Sociology of religion
- Sociology of risk
- Sociology of science
- Sociology of scientific knowledge
- Sociology of social change
- Sociology of social movements
- Sociology of space
- Sociology of sport
- Sociology of technology
- Sociology of terrorism
- Sociology of the body
- Sociology of the family
- Sociology of the history of science
- Sociology of the Internet
- Sociology of work
- Social theory
- Social stratification
- Sociological theory
- Sociobiology
- Sociocybernetics
- Sociolinguistics
- Sociomusicology
- Structural sociology
- Theoretical sociology
- Urban studies or Urban sociology/Rural sociology



- Pure sociology
- Social economy
- Social philosophy
- Social psychology
- Social policy
- Social research
- Social transformation
  - Computational sociology
  - Economic sociology/Socioeconomics
    - Economic development
    - Social development
- Victimology
- Visual sociology

## Natural sciences

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### Biology

- Aerobiology
- Anatomy
  - Comparative anatomy
  - Human anatomy (outline)
- Biochemistry (outline)
- Bioinformatics
- Biophysics (outline)
- Biotechnology (outline)
- Botany (outline)
  - Ethnobotany
  - Phycology
- Cell biology (outline)
- Chronobiology
- Computational biology
- Cryobiology
- Developmental biology
  - Embryology
- Neuroscience (outline)
  - Behavioral neuroscience
- Nutrition (outline)
- Paleobiology
  - Paleontology
- Parasitology
- Pathology
  - Anatomical pathology
  - Clinical pathology
  - Dermatopathology
  - Forensic pathology
  - Hematopathology
  - Histopathology
  - Molecular pathology
  - Surgical pathology
- Physiology
  - Human physiology

- Teratology
- Ecology (outline)
  - Agroecology
  - Ethnoecology
  - Human ecology
  - Landscape ecology
- Genetics (outline)
  - Behavioural genetics
  - Molecular genetics
  - Population genetics
- Endocrinology
- Evolutionary biology
- Histology
- Human biology
- Immunology (outline)
- Limnology
- Linnaean taxonomy
- Marine biology
- Mathematical biology
- Microbiology
- Molecular biology
- Mycology
- Exercise physiology
- Structural Biology
- Systematics (Taxonomy)
- Systems biology
- Virology
  - Molecular virology
- Xenobiology
- Zoology (outline)
  - Animal communications
  - Apiology
  - Arachnology
  - Carcinology
  - Cetology
  - Entomology
    - Forensic entomology
  - Ethnozooology
  - Ethology
  - Helminthology
  - Herpetology
  - Ichthyology (outline)
  - Mammalogy
  - Malacology
    - Conchology
  - Myrmecology (outline)
  - Nematology
  - Neuroethology
  - Oology
  - Ornithology (outline)
  - Planktology
  - Primatology
  - Zootomy
  - Zoosemiotics

## Chemistry

*See also Branches of chemistry*

- Agrochemistry
- Analytical chemistry
- Astrochemistry
- Atmospheric chemistry
- Biochemistry (outline)
- Chemical engineering (outline)
- Chemical biology
- Cheminformatics
- Computational chemistry
- Cosmochemistry
- Electrochemistry
- Environmental chemistry
- Femtochemistry
- Flavor
- Flow chemistry
- Geochemistry
- Green chemistry
- Histochemistry
- Hydrogenation
- Immunochemistry
- Inorganic chemistry
- Marine chemistry
- Mathematical chemistry
- Mechanochemistry
- Medicinal chemistry
- Molecular biology
- Molecular mechanics
- Nanotechnology
- Natural product chemistry
- Neurochemistry
- Oenology
- Organic chemistry (outline)
- Organometallic chemistry
- Petrochemistry
- Pharmacology
- Photochemistry
- Physical chemistry
- Physical organic chemistry
- Phytochemistry
- Polymer chemistry
- Quantum chemistry
- Radiochemistry
- Solid-state chemistry
- Sonochemistry
- Supramolecular chemistry
- Surface chemistry
- Synthetic chemistry
- Theoretical chemistry
- Thermochemistry

## **Earth sciences**

*See also Branches of earth sciences*

- Edaphology
- Environmental science
- Environmental chemistry
- Gemology
- Meteorology (outline)
- Mineralogy
- Oceanography
- Pedology

- Geodesy
- Geography (outline)
- Geology (outline)
- Geochemistry
- Geomorphology
- Geophysics (outline)
- Glaciology
- Hydrogeology
- Hydrology (outline)
- Paleontology
  - Paleobiology
  - Paleoecology
- Petrology
- Planetary science (alternatively, a part of space science)
- Sedimentology
- Soil science
- Speleology
- Tectonics
- Volcanology

## Physics

- Acoustics
- Applied physics
- Astrophysics
- Atomic, molecular, and optical physics
- Biophysics (outline)
- Computational physics
- Condensed matter physics
- Cryogenics
- Electromagnetism
- Elementary particle physics
- Experimental physics
- Fluid dynamics
- Geophysics (outline)
- Mathematical physics
- Medical physics
- Mechanics
- Molecular physics
- Newtonian dynamics
- Nuclear physics
- Optics
- Plasma physics
- Quantum physics

- Solid mechanics
- Solid state physics
- Statistical mechanics
- Theoretical physics
- Thermodynamics
- Vehicle dynamics

## Space sciences

- Astrobiology
- Astronomy (outline)
  - Observational astronomy
    - Radio astronomy
    - Microwave astronomy
    - Infrared astronomy
    - Optical astronomy
    - UV astronomy
    - X-ray astronomy
    - Gamma ray astronomy
- Astrophysics
  - Gravitational astronomy
    - Black holes
- Interstellar medium
- Numerical simulations
  - Astrophysical plasma
  - Galaxy formation and evolution
  - High-energy astrophysics
  - Hydrodynamics
  - Magnetohydrodynamics
  - Star formation
- Physical cosmology
- Stellar astrophysics
  - Helioseismology
  - Stellar evolution
  - Stellar nucleosynthesis
- Planetary science (alternatively, a part of earth science)

## Formal sciences

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### Computer sciences

*Also a branch of electrical engineering*

- Theory of computation
  - Automata theory (Formal languages)
  - Computability theory
- Information science (outline)
  - Data management
  - Data mining

- Computational complexity theory
- Concurrency theory
- VLSI design
- Operating systems
- Algorithms
  - Randomized algorithms
  - Distributed algorithms
  - Parallel algorithms
  - Computational geometry
- Data structures
- Computer architecture
- Computer communications (networks)
  - Information theory
  - Internet, World Wide Web
  - Wireless computing (Mobile computing)
  - Ubiquitous computing
  - Cloud computing
- Computer security and reliability
  - Cryptography
  - Fault-tolerant computing
- Distributed computing
  - Grid computing
- Parallel computing
  - High-performance computing
- Quantum computing
- Computer graphics
  - Image processing
  - Scientific visualization
- Software engineering
  - Formal methods (Formal verification)
- Programming languages
- Database (outline)
  - Relational database
  - Distributed database
  - Object database
- Information retrieval
- Information management
- Knowledge management
- Multimedia, hypermedia
  - Sound and music computing
- Artificial intelligence (outline)
  - Cognitive science
    - Automated reasoning
    - Machine learning
      - Artificial neural network
      - Support vector machine
    - Natural language processing (Computational linguistics)
    - Computer vision (outline)
  - Expert systems
  - Robotics (outline)
- Computing in mathematics, natural sciences, engineering, and medicine
  - Numerical analysis
  - Algebraic (symbolic) computation
  - Computational number theory
  - Computational mathematics
  - Scientific computing (Computational science)
  - Computational biology (bioinformatics)
  - Computational physics
  - Computational chemistry
  - Computational neuroscience
  - Computer-aided engineering

- Programming paradigms
  - Imperative programming
  - Object-oriented programming
  - Functional programming
  - Logic programming
  - Concurrent programming
- Program semantics
- Type theory
- Compilers
- Human-computer interaction
- Finite element analysis
- Computational fluid dynamics
- Computing in social sciences, arts, humanities, and professions
  - Computational economics
  - Computational sociology
  - Computational finance
  - Digital humanities (Humanities computing)
  - History of computer hardware
  - History of computer science (outline)
  - Humanistic informatics
  - Community informatics

## Logic

- Mathematical logic
  - Set theory
  - Proof theory
  - Model theory
  - Recursion theory
  - Modal logic
  - Intuitionistic logic
- Philosophical logic
  - Logical reasoning
  - Modal logic
    - Deontic logic
    - Doxastic logic
- Logic in computer science
  - Programming language semantics
  - Formal methods (Formal verification)
  - Type theory
  - Logic programming
  - Multi-valued logic
    - Fuzzy logic

## Mathematics

### Pure mathematics

*See also Branches of mathematics and AMS Mathematics Subject Classification (<http://www.ams.org/msc/>)*

- Algebra (outline)
  - Group theory
- Geometry (outline) and Topology
  - General topology

- Group representation
- Ring theory
  - Commutative algebra
  - Noncommutative algebra
- Field theory
- Linear algebra (Vector space)
- Multilinear algebra
- Lie algebra
- Associative algebra
- Non-associative algebra
- Universal algebra
- Homological algebra
- Differential algebra
- Lattice theory (Order theory)
- Representation theory
- K-theory
- Category theory
  - Topos theory
- Analysis
  - Real analysis
    - Calculus (outline)
  - Complex analysis
  - Functional analysis
    - Operator theory
  - Non-standard analysis
  - Harmonic analysis
    - Fourier analysis
  - p-adic analysis
  - Ordinary differential equations
  - Partial differential equations
- Probability theory
  - Measure theory
- Algebraic topology
- Geometric topology
- Differential topology
- Algebraic geometry
- Projective geometry
- Affine geometry
- Non-Euclidean geometry
- Convex geometry
- Discrete geometry
- Integral geometry
- Finite geometry
- Galois geometry
- Noncommutative geometry
- Number theory
  - Analytic number theory
  - Algebraic number theory
  - Geometric number theory
  - Arithmetic combinatorics
- Logic and Foundations of mathematics
  - Set theory
  - Proof theory
  - Model theory
  - Recursion theory
  - Modal logic
  - Intuitionistic logic



- Integral geometry
- Ergodic theory
- Stochastic process

## **Applied mathematics**

- Approximation theory
- Numerical analysis
- Operations research
  - Mathematical optimization
  - Linear programming
  - Dynamic programming
  - Assignment problem
  - Decision analysis
  - Inventory theory
  - Scheduling
  - Real options analysis
  - Systems analysis
  - Stochastic processes
  - Optimal maintenance
- Dynamical systems
  - Chaos theory
  - Fractal geometry
- Mathematical physics
  - Quantum mechanics
  - Quantum field theory
  - Quantum gravity
    - String theory
  - Statistical mechanics
- Theory of computation
  - Computational complexity theory
- Information theory
- Cryptography
- Combinatorics (outline)
  - Coding theory
- Graph theory
- Game theory

## **Statistics**

- Mathematical statistics
- Econometrics
- Actuarial science
- Demography
- Computational statistics
  - Data mining
  - Regression (outline)
  - Simulation
- Statistical modelling
  - Biostatistics
    - Epidemiology
  - Multivariate analysis
    - Structural equation model
    - Time series
  - Reliability theory
  - Quality control

- Bootstrap (statistics)
- Statistical theory
  - Decision theory
  - Mathematical statistics
    - Probability (outline)
  - Survey methodology
- Design of experiments
  - Block design and Analysis of variance
  - Response surface methodology
- Sample Survey
  - Sampling theory

## Systems science

- |  |   |   |
|--|---|---|
| <ul style="list-style-type: none"> <li>▪ <u>Network science</u></li> <li>▪ <u>Chaos theory</u></li> <li>▪ <u>Conceptual systems</u></li> <li>▪ <u>Complex systems</u></li> <li>▪ <u>Complex system</u></li> <li>▪ <u>Cybernetics</u> <ul style="list-style-type: none"> <li>▪ <u>Biocybernetics</u></li> <li>▪ <u>Engineering cybernetics</u></li> <li>▪ <u>Management cybernetics</u></li> <li>▪ <u>Medical cybernetics</u></li> <li>▪ <u>New Cybernetics</u></li> <li>▪ <u>Second-order cybernetics</u></li> <li>▪ <u>Sociocybernetics</u></li> </ul> </li> <li>▪ <u>Control theory</u> <ul style="list-style-type: none"> <li>▪ <u>Affect control theory</u></li> <li>▪ <u>Control engineering</u></li> <li>▪ <u>Control systems</u></li> <li>▪ <u>Dynamical systems</u></li> <li>▪ <u>Perceptual control theory</u></li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>▪ <u>Operations research</u></li> <li>▪ <u>Systems biology</u> <ul style="list-style-type: none"> <li>▪ <u>Computational systems biology</u></li> <li>▪ <u>Synthetic biology</u></li> <li>▪ <u>Systems immunology</u></li> <li>▪ <u>Systems neuroscience</u></li> </ul> </li> <li>▪ <u>System dynamics</u> <ul style="list-style-type: none"> <li>▪ <u>Social dynamics</u></li> </ul> </li> <li>▪ <u>Systems ecology</u> <ul style="list-style-type: none"> <li>▪ <u>Ecosystem ecology</u></li> </ul> </li> <li>▪ <u>Systems engineering</u> <ul style="list-style-type: none"> <li>▪ <u>Biological systems engineering</u></li> <li>▪ <u>Earth systems engineering and management</u></li> <li>▪ <u>Enterprise systems engineering</u></li> <li>▪ <u>Systems analysis</u></li> </ul> </li> <li>▪ <u>Systems theory in anthropology</u></li> </ul> | <ul style="list-style-type: none"> <li>▪ <u>Systems psychology</u> <ul style="list-style-type: none"> <li>▪ <u>Ergonomics</u></li> <li>▪ <u>Family systems theory</u></li> <li>▪ <u>Systemic therapy</u></li> </ul> </li> <li>▪ <u>Systems theory</u> <ul style="list-style-type: none"> <li>▪ <u>Biochemical systems theory</u></li> <li>▪ <u>Ecological systems theory</u></li> <li>▪ <u>Developmental systems theory</u></li> <li>▪ <u>General systems theory</u></li> <li>▪ <u>Living systems theory</u></li> <li>▪ <u>LTI system theory</u></li> <li>▪ <u>Sociotechnical systems theory</u></li> <li>▪ <u>Mathematical system theory</u></li> <li>▪ <u>World-systems theory</u></li> </ul> </li> </ul> |
|--|---|---|

## Professions and applied sciences

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## Agriculture

- Agroecology
- Agronomy
- Animal husbandry (Animal science)
  - Beekeeping (Apiculture)
- Agrology
- Entomology
- Agricultural economics
- Agricultural engineering
  - Biological systems engineering
  - Food engineering
- Aquaculture
- Enology
- Food science
- Horticulture
- Hydrology (outline)
- Pedology (soil study)
- Plant science (outline)
  - Pomology
- Viticulture

## Architecture and design

- Architecture (outline)
  - Interior architecture
  - Landscape architecture
- Architectural analytics
- Historic preservation
- Interior design (interior architecture)
- Landscape architecture (landscape planning)
- Landscape design
- Urban planning (urban design)
- Visual communication
  - Graphic design
    - Type design
  - Technical drawing
- Industrial design (product design)
  - Ergonomics (outline)
  - Game design
  - Toy and amusement design
- User experience design
  - Interaction design
  - Information architecture
  - User interface design
  - User experience evaluation
- Fashion design
- Textile design

## Business

- Accounting scholarship
- Business administration
- Business analysis
- Information systems (Business informatics)
  - Management information systems

- Business ethics
- Business law
- E-Business
- Entrepreneurship
- Finance (outline)
- Industrial and labor relations
  - Collective bargaining
  - Human resources
  - Organizational studies
  - Labor economics
  - Labor history
- Health informatics
- Information technology (outline)
- International trade
- Management (outline)
- Marketing (outline)
- Operations management
- Purchasing
- Risk management and insurance
- Systems science

## Divinity

- Canon law
- Church history
- Field ministry
  - Pastoral counseling
  - Pastoral theology
  - Religious education techniques
  - Homiletics
  - Liturgy
  - Sacred music
  - Missiology
- Hermeneutics
- Scriptural study and languages
  - Biblical Hebrew
  - Biblical studies/Sacred scripture
  - New Testament Greek
  - Latin
  - Old Church Slavonic
- Theology (outline)
  - Dogmatic theology
  - Ecclesiology
  - Sacramental theology
  - Systematic theology
  - Christian ethics
  - Moral theology
  - Historical theology

## Education

- Comparative education
- Critical pedagogy
- Curriculum and instruction

- Alternative education
- Early childhood education
- Elementary education
- Secondary education
- Higher education
- Mastery learning
- Cooperative learning
- Agricultural education
- Art education
- Bilingual education
- Chemistry education
- Counselor education
- Language education
- Legal education
- Mathematics education
- Medical education
- Military education and training
- Music education
- Nursing education
- Peace education
- Physical education/Sports coaching
- Physics education
- Reading education
- Religious education
- Science education
- Special education
- Sex education
- Sociology of education
- Technology education
- Vocational education
- Educational leadership
- Educational philosophy
- Educational psychology
- Educational technology
- Distance education

# Engineering and technology

## Chemical Engineering

- Bioengineering
  - Biochemical engineering
  - Biomolecular engineering
- Catalysis
- Materials engineering
- Molecular engineering
- Nanotechnology
- Polymer engineering
- Process design
  - Petroleum engineering
  - Nuclear engineering
  - Food engineering
- Process engineering
- Reaction engineering
- Thermodynamics
- Transport phenomena

## Civil Engineering

- Coastal engineering
- Earthquake engineering
- Ecological engineering
- Environmental engineering
- Geotechnical engineering
  - Engineering geology
- Hydraulic engineering
- Mining engineering
- Transportation engineering
  - Highway engineering
- Structural engineering
  - Architectural engineering
- Structural mechanics

## Materials Science and Engineering

- Biomaterials
- Ceramic engineering
- Crystallography
- Nanomaterials
- Photonics
- Physical Metallurgy
- Polymer engineering
- Polymer science
- Semiconductors

## Mechanical Engineering

- Aerospace engineering
  - Aeronautics
  - Astronautics
- Acoustical engineering
- Automotive engineering
- Biomedical engineering
  - Biomechanical engineering
- Continuum mechanics
- Fluid mechanics
- Heat transfer
- Industrial engineering
- Manufacturing engineering
- Marine engineering
- Mass transfer
- Mechatronics
- Nanoengineering
- Ocean engineering
- Optical engineering
- Robotics
- Thermodynamics
- Vehicle engineering

- Surveying

## **Electrical Engineering**

- Applied physics
- Computer engineering (outline)
- Computer science
- Control systems engineering
  - Control theory
- Electronic engineering
  - Instrumentation engineering
- Engineering physics
  - Photonics
- Information theory
- Mechatronics
- Power engineering
- Robotics (outline)
- Semiconductors
- Telecommunications engineering
- Quantum computing

## **Environmental studies and forestry**

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>▪ <u>Environmental management</u> <ul style="list-style-type: none"> <li>▪ <u>Coastal management</u></li> <li>▪ <u>Fisheries management</u></li> <li>▪ <u>Land management</u></li> <li>▪ <u>Natural resource management</u></li> <li>▪ <u>Wildlife management</u></li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>▪ <u>Environmental policy</u></li> <li>▪ <u>Recreation ecology</u></li> <li>▪ <u>Silviculture</u></li> <li>▪ <u>Sustainability studies</u> <ul style="list-style-type: none"> <li>▪ <u>Sustainable development</u></li> </ul> </li> <li>▪ <u>Toxicology</u></li> <li>▪ <u>Ecology</u></li> </ul> |
|---|---|

## **Family and consumer science**

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>▪ <u>Consumer education</u></li> <li>▪ <u>Housing</u></li> <li>▪ <u>Interior design</u></li> </ul> | <ul style="list-style-type: none"> <li>▪ <u>Nutrition (outline)</u> <ul style="list-style-type: none"> <li>▪ <u>Foodservice management</u></li> </ul> </li> <li>▪ <u>Textiles</u></li> </ul> |
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## Human physical performance and recreation

- Biomechanics / Sports biomechanics
- Sports coaching
- Dance (outline)
- Ergonomics
- Physical fitness
  - Group Fitness / aerobics
  - Personal trainer / Personal fitness training
- Game design
- Exercise physiology
- Kinesiology / Exercise science / Human performance
- Leisure studies
- Physical education / Pedagogy
- Sociology of sport
- Sexology
- Sports journalism / sportscasting
- Sport management
  - Athletic director
- Sport psychology
- Sports medicine
  - Athletic training
- Toy and amusement design

## Journalism, media studies and communication

- Journalism (outline)
  - Broadcast journalism
  - Digital journalism
  - Literary journalism
  - New media journalism
  - Print journalism
  - Sports journalism / sportscasting
- Media studies (Mass media)
  - Newspaper
  - Magazine
  - Radio (outline)
  - Television (outline)
    - Television studies
  - Film (outline)
    - Film studies
  - Internet (outline)
- Communication studies
  - Advertising
  - Animal communication
  - Communication design
  - Environmental communication
  - Information theory
  - Intercultural communication
  - Marketing (outline)
  - Mass communication
  - Nonverbal communication
  - Organizational communication
  - Popular culture studies
  - Propaganda
  - Public relations (outline)
  - Speech communication
  - Technical writing
  - Translation

## Law



- Legal management
  - Corporate law
  - Mercantile law
  - Business law
- Administrative law
- Canon law
- Comparative law
- Constitutional law
- Competition law
- Criminal law
  - Criminal procedure
  - Criminal justice (outline)
    - Police science
    - Forensic science (outline)
- Islamic law
- Jewish law (outline)
- Jurisprudence (Philosophy of Law)

- Civil law
  - Admiralty law
  - Animal law/Animal rights
  - Common law
  - Corporations
  - Civil procedure
  - Contract law
  - Environmental law
  - Family law
  - Federal law
  - International law
    - Public international law
    - Supranational law
  - Labor law
  - Paralegal studies
  - Property law
  - Tax law
  - Tort law (outline)
- Procedural law
- Substantive law

## Library and museum studies

- Archival science
- Bibliometrics
  - Citation analysis
- Conservation science
- Informatics
- Information architecture
- Information science (outline)
- Museology
  - Museum administration

## Medicine

- Alternative medicine

- Clinical laboratory sciences/Clinical pathology/Laboratory medicine
  - Clinical biochemistry
  - Cytogenetics
  - Cytohematology
  - Cytology (outline)
  - Haemostasiology
  - Histology
  - Clinical immunology
  - Clinical microbiology
  - Molecular genetics
  - Parasitology
- Clinical physiology
- Dentistry (outline)
  - Dental hygiene and epidemiology
  - Dental surgery
  - Endodontics
  - Orthodontics
  - Oral and maxillofacial surgery
  - Periodontics
  - Prosthodontics
  - Implantology
- Dermatology
- Emergency medicine (outline)
- Health informatics/Clinical informatics
- Music therapy
- Nursing
- Nutrition (outline) and dietetics
- Optometry
- Orthoptics
- Physiotherapy
- Occupational therapy
- Speech and language pathology

- Internal medicine
  - Preventive medicine
  - Cardiology
    - Cardiac electrophysiology
  - Dermatology
  - Pulmonology
    - Medical toxicology
  - Endocrinology
  - Gastroenterology
    - Hepatology
  - Oncology
  - Geriatrics
  - Gynaecology
  - Hematology
  - Infectious disease
  - Nephrology
  - Neurology
  - Neurosurgery
  - Obstetrics (outline)
  - Ophthalmology
    - Neuro-ophthalmology
  - Orthopedic surgery
  - Otolaryngology
  - Pathology
  - Pediatrics
- Pharmacy
- Pharmaceutical sciences
- Physical fitness
  - Group Fitness / aerobics
  - Personal fitness training
  - Kinesiology / Exercise science / Human performance
- Physical therapy
- Podiatry
- Primary care
  - General practice
- Psychiatry (outline)
- Psychology (outline)
- Public health
- Radiology
- Recreation therapy
- Rehabilitation medicine

- Respiratory medicine
  - Pulmonology
  - Sleep medicine
- Respiratory therapy
- Rheumatology
- Sports medicine
- Surgery
  - Bariatric surgery
  - Cardiothoracic surgery
  - Neurosurgery
  - Plastic surgery
  - Trauma surgery
  - Traumatology
- Urology
  - Andrology
- Veterinary medicine

## **Military sciences**

- Amphibious warfare
- Artillery
- Battlespace
  - Air
  - Information
  - Land
  - Sea
  - Space
- Campaigning
- Military engineering
- Doctrine
- Game theory
- Grand strategy
  - Containment
  - Limited war
  - Military science (outline)
  - Philosophy of war
  - Strategic studies
  - Total war
- Strategy
  - Attrition
  - Deception
  - Defensive
  - Offensive
  - Counter-offensive
  - Goal
  - Naval
- Tactics
  - Aerial
  - Battle
  - Cavalry
  - Charge
  - Cover
  - Counter-attack
  - Counter-insurgency
  - Foxhole
  - Guerrilla warfare
  - Morale

- Leadership
- Logistics
  - Materiel
  - Supply chain management
- Military history
  - Prehistoric
  - Ancient
  - Medieval
  - Early modern
  - Industrial
  - Modern
  - Fourth-generation warfare
- Military intelligence
- Military law
- Military medicine
- Naval science
  - Naval engineering
  - Naval tactics
  - Naval architecture
- Organization
  - Command and control
  - Doctrine
  - Education and training
  - Engineers
  - Intelligence
  - Ranks
  - Staff
  - Technology and equipment
  - Military sports
- Naval tactics
- Siege
- Tactical objective
- Trench warfare
- Military weapons
  - Armor
  - Artillery
  - Biological
  - Cavalry
  - Conventional
  - Chemical
  - Cyber
  - Economic
  - Electronic
  - Infantry
  - Nuclear
  - Psychological
  - Unconventional
- Other Military
  - Asymmetric warfare
  - Cold war (general term)
  - Mercenary
  - Military campaign
  - Military operation
  - Network-centric warfare
  - Principles of war
  - Proxy war
  - Religious war
  - Theater (warfare)
  - War crimes

## **Public administration**

- Corrections
- Conservation biology

- Criminal justice (outline)
- Emergency management
- Fire safety (Structural fire protection)
- Fire ecology (Wildland fire management)
- Governmental affairs
- International affairs
- Peace and conflict studies
- Police science
- Policy studies
  - Policy analysis
- Public administration
  - Nonprofit administration
  - Non-governmental organization (NGO) administration
  - Public policy doctrine
  - Public policy school
  - Regulation

## **Public policy**

- Agricultural policy
- Commercial policy
- Cultural policy
- Domestic policy
- Drug policy
  - Drug policy reform
- Economic policy
  - Fiscal policy
  - Incomes policy
  - Industrial policy
  - Investment policy
  - Monetary policy
  - Tax policy
- Education policy
- Energy policy
  - Nuclear energy policy
  - Renewable energy policy
- Environmental policy
- Food policy
- Foreign policy

- Health policy
  - Pharmaceutical policy
  - Vaccination policy
- Housing policy
- Immigration policy
- Knowledge policy
- Language policy
- Military policy
- Science policy
  - Climate change policy
  - Stem cell research policy
  - Space policy
  - Technology policy
- Social policy
- Public policy by country

## **Social work**

- Child welfare
- Community practice
  - Community organizing
  - Social policy
- Human Services
- Corrections
- Gerontology
- Medical social work
- Mental health
- School social work

## **Transportation**

- Highway safety
- Infographics
- Intermodal transportation studies
- Marine transportation
  - Port management
- Operations research
- Mass transit

## See also

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- [Academia \(outline\)](#)
- [Academic genealogy](#)
- [Curriculum](#)
- [Interdisciplinarity](#)
- [Transdisciplinarity](#)
- [Classification of Instructional Programs](#)
- [Joint Academic Coding System](#)
- [List of fields of doctoral studies in the United States](#)
- [Outline of academic disciplines](#)

## Notes

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## References

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- Abbott, Andrew (2001). *Chaos of Disciplines*. University of Chicago Press. ISBN 978-0-226-00101-2.
- Oleson, Alexandra; Voss, John (1979). *The Organization of knowledge in modern America, 1860-1920*. ISBN 0-8018-2108-8.
- US Department of Education Institute of Education Sciences. *Classification of Instructional Programs* (CIP) (<http://nces.ed.gov/ipeds/cipcode/default.aspx?y=55>). National Center for Education Statistics.

## External links

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- [Classification of Instructional Programs \(CIP 2000\)](http://nces.ed.gov/pubs2002/cip2000/) (<http://nces.ed.gov/pubs2002/cip2000/>): Developed by the U.S. Department of Education's National Center for Education Statistics to provide a taxonomic scheme that will support the accurate tracking, assessment, and reporting of fields of study and program completions activity.
- [Complete JACS](http://www.hesa.ac.uk/jacs/completeclassification.htm) (<http://www.hesa.ac.uk/jacs/completeclassification.htm>) (Joint Academic Classification of Subjects) from [Higher Education Statistics Agency](#) (HESA) in the [United Kingdom](#)
- [Australian and New Zealand Standard Research Classification \(ANZSRC 2008\)](https://web.archive.org/web/20090913104221/http://www.arc.gov.au/pdf/ANZSRC_FOR_codes.pdf) ([https://web.archive.org/web/20090913104221/http://www.arc.gov.au/pdf/ANZSRC\\_FOR\\_codes.pdf](https://web.archive.org/web/20090913104221/http://www.arc.gov.au/pdf/ANZSRC_FOR_codes.pdf)) (web-page (<http://www.abs.gov.au/AUSSTATS/abs@.nsf/Latestproducts/1297.0Contents12008?opendocument&tabname=Summary&prodno=1297.0&issue=2008&num=&view=>)) Chapter 3 and Appendix 1: Fields of research classification.
- [Fields of Knowledge](http://www.thingsmadethinkable.com/item/fields_of_knowledge.php) ([http://www.thingsmadethinkable.com/item/fields\\_of\\_knowledge.php](http://www.thingsmadethinkable.com/item/fields_of_knowledge.php)), a zoomable map allowing the academic disciplines and sub-disciplines in this article be visualised.
- [Online reference materials](http://essayacademia.com) (<http://essayacademia.com>) for any kind of specific academic disciplines.

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