

IIT Roorkee

Indian Institute of Technology Roorkee (abbreviated IIT Roorkee) is a technical university located in Roorkee, Uttarakhand, India. It is the second oldest engineering institution in India, and was founded as the College of Civil Engineering in North-Western Provinces in 1847 by the Lieutenant-Governor, James Thomason, in order to train officers and surveyors employed in the construction of the Ganges Canal. In 1854, after the completion of the canal and Thomason's death, it was renamed the Thomason College of Civil Engineering by Proby Cautley, the designer and projector of the canal. It was renamed University of Roorkee in 1949, and again renamed IIT Roorkee in 2001. The institution has 22 academic departments covering Engineering, Applied Sciences, Humanities & Social Sciences and Management programs with an emphasis on scientific and technological education and research.

History



The Thomason College of Engineering was founded in 1847 to help train engineers for the construction of the <u>Ganges Canal</u>. The Canal Engineer's Bungalow lies within the campus of IIT Roorkee.

The institution was founded in 1847 by James Thomason, the Lieutenantthe North-Western Governor of Provinces (in which Roorkee then lay) to aid engineers and surveyors at work in the construction of the Ganges Canal. It offered instruction catered to a variety of students; this included an engineering class for the domicil-British and some Indians; an upp subordinates class for Briti noncommissioned officers; and a low subordinates class for Indian surveyor By the mid-1880s, "the school has hundred students, substant

buildings, and a reputation as an important center for the study hydraulic engineering."[4][3][6]

An Electrical Engineering department was added in 1897. Tarchitecture department instituted a master's degree course in Architectu (M. Arch.) in 1969–70. [9]

In 1978, the Institute of Paper Technology, Saharanpur was merged wi the then University of Roorkee. The Institute of Paper Technology w established as School of Paper Technology by the Government of India 1964, with an aid from the Royal Swedish Government. The school w renamed as the Institute of Paper Technology in July 1968 at subsequently Department of Paper Technology in July 1992. [10]

The first edition of <u>Thomso</u>, the institute's annual cultural festival was held in 1982. In 1997 the government of India released a stamp dedicated to 150th anniversary of university of Roorkee.

Indian Institute of Technology Roorkee



श्रमं विना न किमपि साध्यम

A corporate promoter is a firm or person who does the preliminary work related to the formation of a company, including its promotion, incorporation, and flotation, and solicits people to invest money in the company, usually when it is being formed. An investment banker, an underwriter, or a stock promoter may, wholly or in part, perform the role of a promoter. Promoters generally owe a duty of utmost good faith, so as to not mislead any potential investors, and disclose all material facts about the company's business. An earlier term for such a person is **projector**.

Motto

	77°53′47″E
Campus	<u>Urban</u> 365 acres (1.48 km²)
Language	English, Hindi

On 21 September 2001, an <u>ordinance</u> issued by the <u>Government of India</u> declared it as the nation's seventh Indian Institute of Technology, renaming it to the current name, Indian Institute of Technology Roorkee. The ordinance was converted into an act by the <u>Parliament</u> to make IIT Roorkee an "Institution of National Importance". [11]

To mark the institute's 175th anniversary in 2022, the central government issued a Rs 175 coin as a gesture of commemoration. [12]

Campus

The main campus in Roorkee has an area of 365 acres (1,480,000 m²). [13]

IIT Roorkee has a separate campus of 25 acres (100,000 m²) in Saharanpur which offers courses in Polymer Science, Process Engineering, Paper Technology & Packaging Technology, Applied Mathematics and Scientific Computing. [13] In addition to this, a new ten-acre campus has been established in Greater Noida, Knowledge Park II, which was inaugurated on 4 April 2011. The Noida extension centre has 16 lecture rooms, software laboratories, faculty offices, a library and a computer center. [14]





St. John's Church, Roorkee Campus

Most students live in the hostels, where extracurricular activities complement the academic routine. The campus has 16 hostels, of which two (Sarojini, Kasturba)

are occupied by girls. [15] The campus has a new co-ed hostel, Vigyan Kunj. [16] A new hostel for female students, the Himalaya Bhawan, was recently constructed. Hostels may accommodate undergraduate and graduate students along with doctoral students. Students are assigned to hostels by the school administration after their freshmen year. There are nine hostels for married students, doctoral students and foreign students. Each bhawan has a mess. Mess administration consists of a staff advisor, a chief advisor, and a student mess secretary.

Organization and administration

Governance

All IITs follow the same organization structure which has <u>President of India</u> as visitor at the top of the hierarchy. Directly under the president is the IIT Council. Under the IIT Council is the board of governors of each IIT. Under the board of governors is the director, who is the chief academic and executive officer of the IIT. Under the director, in the organizational structure, comes the deputy director. Under the director and the deputy director, come the <u>deans</u>, heads of departments, registrar. [17]



View of IIT Roorkee Admin Building.

Departments and Centers

IIT ROORKEE in the country having the largest number of academic units. It has 21 academic departments covering engineering, applied sciences, humanities & social sciences, and management programmes, 1 academic center, 3 centers of excellence, 5 academic service centers and 3 supporting units. [18]

Departments

- Engineering and Applied Sciences
 - Architecture and Planning
 - Applied Science and Engineering
 - Biosciences and Bioengineering
 - Chemical Engineering
 - Chemistry

- Civil Engineering^[19]
- Computer Science and Engineering
- Earthquake Engineering
- Earth Sciences
- Electrical Engineering
- Electronics and Communication Engineering
- Humanities and Social Sciences
- Hydrology
- Hydro and Renewable Energy
- Management Studies
- Mathematics
- Mechanical and Industrial Engineering
- Metallurgical and Materials Engineering
- Paper Technology
- Polymer and Process Engineering
- Physics
- Water Resources Development and Management

Sciences

- Physics
- Chemistry
- Mathematics

Business

- Management Studies
- Humanities
 - Humanities and Social Sciences

Centers

- Centre of Excellence
 - Centre of Nanotechnology
 - Centre for Transportation Systems (CTRANS)
 - Centre of Excellence in Disaster Mitigation & Management (CoEDMM)

Academic Service centers

- Mahatma Gandhi Central Library
- Centre of Nanotechnology
- Centre for Transportation Systems
- Centre of Excellence in Disaster Mitigation & Management
- Continuing Education Centre
- Institute Computer Centre
- Institute Instrumentation Centre
- Intellectual Property Rights Cell
- Quality Improvement Programme

Supporting Service Centers

- Educational Technology Cell
- Institute Hospital

Academics



Department of Architecture & Planning



Inner courtyard of Department of Architecture & Planning



Computer Centre

IIT Roorkee offers academic programmes in Engineering, Technology, Applied Sciences, and Management. It runs eleven undergraduate (UG), one integrated dual degree, sixty one postgraduate (PG) and several doctoral programmes. [20]

The institute admits students to B.Tech., B.Arch. and integrated M.Sc. integrated M.Tech courses through the Joint Entrance Examination (JEE) conducted at centers all over India. Before being converted into an IIT, the university selected students through the Roorkee Entrance Exam (REE) conducted on an All-India level. The selectivity of REE was close to 0.25%. After IIT-JEE, it was considered to be the second toughest engineering entrance examination in India. [21] Admission to PG programmes in engineering and architecture is on the basis of GATE score and/or a written test and interview. For PG programmes in fundamental sciences admission is based on the Joint Admission Test (JAM). [22]

Along with the engineering courses, the institute offers a two-year residential MBA program for which the admissions, starting from 2011, will be done on the basis of Common Admission Test, thus replacing Joint Management Entrance Test (JMET) previously conducted by the IITs. 123 The institute also offered an interdisciplinary program in computer applications leading to a degree in Master of computer applications (MCA). The MCA program was a three-year course and admission for the course was through JAM. This programme has been discontinued.

According to statistics published by institute in 2007–08 4137 students were enrolled in the institute across all programs. The student-to-academic-staff ratio was 2.6:1 and that of UG/PG students was 1.4:1. $\frac{[24]}{}$

Rankings

Internationally, IIT Roorkee was ranked 369 in the *QS World University Rankings* of 2023^[26] and 114 in Asia. ^[27] It was ranked 701–800 in the *Academic Ranking of World Universities* of 2022. ^[25]

IIT Roorkee ranked first, with a score of 83.21 among the Indian Architecture colleges according to NIRF 2023. It ranked fifth among engineering colleges with a score of 75.64 by the *National Institutional Ranking Framework* in 2023 and eighth overall with a score of 71.66. $\boxed{34}$

The Department of Management Studies ranked 19th with a score of 61.76 among management schools in India by the *National Institutional Ranking Framework* in 2022. [32]

Library

An ISO 9001:2008 certified academic service centre in 2015, The Mahatma Gandhi Central Library finds a unique place in the academic spectrum of the institute. Started in 1848 with a few hundred donated books, its collection has grown to more than 3,50,000 documents in all media. The library contains rare manuscripts including a 1623 edition of William Shakespeare's complete works. [35][36] Providing information through e-resources is the main focus of the Library. It has around 90,000 sq ft of fully air-conditioned space. It can accommodate more than 500 readers at any point of time. The library building is WiFi enabled and contains a total 75 user terminals, dedicated for readers. It also contains an 80-seater open reading room. [37]

Research

University and college rankings General – international		
QS (World) (2023) ^[26]	369	
QS (Asia) (2023) ^[27]	114	
General – India		
NIRF (Overall) (2022)[28]	7	
NIRF (Research) (2022)[29]	8	
Engineering – India		
NIRF (2022) ^[30]	6	
NIRF (2023)[31]	5	
Business/Management – India		
NIRF (2022) ^[32]	19	
Architecture - India		
NIRF (2022) ^[33]	1	

University and college rankings		
General – international		
ARWU (2022)[25]	701-800	
QS (World) (2023)[26]	369	
QS (Asia) (2023) ^[27]	114	
General – India		
NIRF (Overall) (2022)[28]	7	

Research activities at the institute are conducted at either the department level or under the central office of Sponsored Research and Industrial Consultancy (SRIC). [38] Major research funding was awarded by several ministries and departments of the Government of India, including the Ministry of Communications and Information Technology (India), Ministry of New and Renewable Energy and others. Apart from these, a number of major research organizations who have awarded projects to IIT Roorkee include the Council of Scientific and Industrial Research, Indian Space Research Organisation and others. [39] The State Emergency Operation Centre(SEOC) in Dehradun is planning to soon link data centre of an earthquake early warning system developed by IIT Roorkee with the State Emergency Operation Centre (SEOC) in Dehradun which would come as a great recognition for the establishment. [40]

NIRF (Research) (2022)[29]	8	
Engineering – India		
NIRF (2022) ^[30]	6	
NIRF (2023)[31]	5	
Business/Management – India		
NIRF (2022)[32]	19	
Architecture – India		
NIRF (2022)[33]	1	



Mahatma Gandhi Central Library

Academic collaboration

IIT Roorkee's contribution towards the international community in science and technology include the courses and training programs run for developing countries. Every year students from more than 50 countries join IIT Roorkee for full-time or short-term training courses. In 1955 the department of Water Resources Development and Management (WRDM) was established as an Asian African Centre to honour India's commitment at the Asian African Conference

held in Bandung. [41] WRDM and the Department of Hydrology run special postgraduate programmes for students of the Afro Asian region. The department has so far trained over 2469 in service engineers and agricultural scientists from 48 countries including India. [41] The courses offered by the Department of Hydrology are presently sponsored by the Government of India and the UNESCO. [42] In 2008 IIT Roorkee tied up with Google for academic collaboration and curriculum development on emerging technologies and digital landscape led by Siddhartha Paul Tiwari. [43]

Research organizations in India which have a MOU with IIT Roorkee include <u>Indian Institute of Petroleum</u>, Dehradun; <u>Department of Atomic Engineering (DAE)</u>, Mumbai; <u>Intel Technology India Pvt. Ltd.</u>; <u>Aryabhatta</u> Research Institute of Observational Sciences (ARIES), Nainital among others. [44]

Scholarships and Prizes^[45]

Types of Awards and Scholarships

- 1. Non-Convocation Awards/Scholarship: These awards and scholarship are given to current students of various classes. Mostly these awards are based on criteria decided by donors.
- Type A1 Based on Academic Performance.
- Type A2 Based on Various Other Achievements.
- **2. Convocation Awards/Scholarship**: These awards and scholarship are distributed during convocation ceremony to the graduating students. Some of these awards are given on the basis of academic performance while many are given on different criteria proposed by donors.
- Type A1 Based on Academic Performance.
- Type A2 Based on Academic Performance and other various activities.



The Sullivan Memorial Silver Medal, weight around 100 g: Awarded to Sri Jaoi Rai in 1920 for best student in mechanics in the lower subordinate class.

3. Merit-cum-Means Scholarship: MCM scholarship is given to those students who are meritorious but financially constraint.

Student life

Cultural festivals

Students conduct four fests every year: Cognizance [46] (technical festival), Thomso (cultural festival), Sangram (sports festival) and National Social Summit [47] (social festival).

Student groups and clubs

Student groups on the campus include STIFKI (Student Teacher Interaction Forum for Knowledge and Innovation), IMG (Information Management Group), SDSLabs (Software Development Section Labs), GIL^[48] (Group for Interactive Learning), EDC (Entrepreneurship Development Cell), HEC (Himalayan Explorers' Club), Literary Society (Active involvement in debating and quizzing), a local chapter of ShARE, Spic Macay in addition to student chapters of technical societies such as AAPG, SEG, SPG, ASME (American Society of Mechanical Engineers, IIT Roorkee Student Section), SAE, IEEE, IIChE (Indian Institute of Chemical Engineers), etc. The Cultural Society (dramatics, music, choreography, cinematic, literary, IIT Heartbeat(Official inter-IIT magazine)^[49]), audio, lights, Programme management, Kshitij, Geek Gazette(technical magazine of IIT Roorkee)^[50] Watch Out (the Official News Magazine of IIT Roorkee)^[51] takes all initiative related to cultural activities in the institute. It organizes music concerts, dance shows, dramas and quiz competitions. ^[52] National Service Scheme at IIT Roorkee is headed by Dean of Students Welfare, IIT Roorkee. As of 2014, NSS, IIT Roorkee has over 700 active members from different disciplines, participating and organizing various community and social service activities. ^[53]

IIT Roorkee has a hobbies club, one of its kind among IITs. It aims at facilitating activities like photography, philately, astronomy, fine arts, gardening, web design, etc. It is headed by a chief advisor, who is supported by two deputy chief advisors and a council secretary. It hosts SRISHTI, an annual techno-hobby exhibition. [54]

Team Robocon, is the official undergraduate student competitive robotics team of IIT Roorkee. It was founded in 2009 by some robotic enthusiasts alumni. This team annually participates in <u>ABU Robocon Competition</u>. The team has won multiple awards in the past like the "Best Innovative Design Award" in 2018 and the "Judges Special Award" in 2019. The team has achieved AIR-5 in 2016, AIR-7 in 2018, and AIR-6 in 2019. Their aim is to win the <u>national</u> competition by making the best robot and represent India in the corresponding international event.

IIT Roorkee Motorsports is the official Formula Student team of IIT Roorkee. It was founded in August 2010. The team designed and developed a formula style race car and represented India in the international competition Formula SAE Australasia in December 2011, held in Melbourne, Australia. This was the first Indian team to finish the endurance event of the competition and also finished first in fuel efficiency. The team also enjoys the rare feat of displaying their student-made race car at Auto Expo 2012. After a successful international debut, the team has plans to develop a series hybrid vehicle and participate in the Formula Student UK 2013.

The institute hosted the inception of <u>SPIC MACAY</u> Winter Convention. A cultural and classical program in which students from school and colleges from all over the country collaborated which was held from 13 to 16 December 2015. Aman Jakar was the overall convener of the event.

Commemoration

The 150th anniversary of the institution was commemorated in a stamp issued by the Government of India in 1997. In 2022, its 175th anniversary was commemorated by a coin.

Alumni



A 1997 stamp dedicated to the 150th anniversary of the University of Roorkee.



A 2022 coin dedicated to the 175th anniversary of IIT Roorkee.

IIT Roorkee has produced many alumni who played important roles in the technological development of India and made significant impact on corporate world. According to IIT Roorkee's website, ten alumni have won Padma awards and 25 have been Shanti Swarup Bhatnagar Prize for Science and Technology awardees. The institute has produced seven chairmen of the Indian Railway Board, chairman of the Telecom Regulatory Authority of India, chief of Delhi Metro Rail Corporation, more than a hundred secretary-level officers in the Government of India, two presidents of the Confederation of Indian Industry, six directors of IITs, and presidents of bodies related to engineers and scientists like the Indian Institution of Engineers, the Indian National Science Academy and the Indian National Academy of Engineering. [55]

Notable alumni

Alumni association

The IIT Roorkee Alumni Association was established and registered in 1940 as a society under the Society Registration Act. The association has 31 local chapters in the country and three chapters abroad. [55] The association encourages the alumni to take interest in the activities of the alma mater and promotes relations between alumni.

Every year the association hosts Diamond, Golden and Silver jubilee functions, where alumni graduating 60, 50 and 25 years earlier are invited. Since 2005 the association has also been awarding a Distinguished Alumni Award to alumni who have made immense contributions in the fields of Academic/Research, Social Sciences, Engineering & Public Administration, Corporate Development/Entrepreneurship and Service to the Society. [56]

The Student Alumni Mentorship Programme has been initiated by the association to help young students in achieving their career aspirations. The alumni visit the institute to interact with the students and staff and share their suggestions.

See also

- Indian Institutes of Technology
- National Institutes of Technology
- Indian Institutes of Information Technology

Notes

References

- Luthra, Swati (17 February 2023). "CWC signs MoA with IIT-Roorkee to develop International Centre of Excellence" (https://www.livemint.com/news/india/cwc-signs-moa-with-iit-roorkee-to-develop-international-centre-of-excellence-for-11676609989142.html). mint. Retrieved 10 March 2023.
- 2. "NIRF 2023" (https://www.nirfindia.org/nirfpdfcdn/2023/pdf/Overall/IR-O-U-0560.pdf) (PDF). NIRF.
- 3. Subramanian, Ajantha (2019), *The Caste of Merit: Engineering Education in India*, Cambridge, MA and London: Harvard University Press, pp. 30–31, ISBN 978-0-674-98788-3, "Before the 1854 despatch, there was already one engineering college in operation: the Thomason College of Civil Engineering at Roorkee. The college was founded in 1847 and was affiliated to the University of Calcutta, in response to the demand for civil engineers to aid the construction of the Ganges Canal in the North-west Provinces."

- 4. Headrick, Daniel R. (1988), The Tentacles of Progress: Technology Transfer in the Age of Imperialism, 1850–1940, New York: Oxford University Press, p. 317, ISBN 0-19-505115-7, "The first engineering college was an outgrowth of the Ganges Canal. Named after the lieutenant governor of the North-Western Provinces who founded it in 1847, the Thomason Engineering College at Roorkee trained employees for the irrigation branch of the Public Works Department. It offered different curricula for different types of students: an engineering class for domiciled Europeans and a few Indians, an upper subordinates class to train British noncommissioned officers as construction foremen, and a lower subordinates class to train Indian surveyors. By the mid-1880s, the school has a hundred students, substantial buildings, and a reputation as an important center for the study of hydraulic engineering."
- Brown, Joyce (1980), "A Memoir of Colonel Sir Proby Cautley, F.R.S., 1802–1871, Engineer and Palaeontologist", Notes and Records of the Royal Society of London, 34 (2): 185–225, doi:10.1098/rsnr.1980.0008 (https://doi.org/10.1098%2Frsnr.1980.0008), JSTOR 531808 (https://www.jstor.org/stable/531808), S2CID 145414793 (https://api.semanticscholar.org/CorpusID:145414793)
- 6. Derr, Jennifer L. (2019), Lived Nile: Environment, Disease, and Material Colonial Economy in Egypt, Stanford University Press, p. 44 (digital), ISBN 9781503609662, "—... the British government established the College of Civil Engineering, later renamed the Thomason College of Civil Engineering, in the town of Roorkee in northern India. ... Engineers at Thomason assisted with the construction of northern India's largest canal, the Ganges Canal, begun in 1842 and completed in 1854. ... Little existed in Britain itself in the nineteenth century that would approach the standard of formalized civil engineering training in India."
- 7. "Departments, Indian Institute of Technology Roorkee" (https://web.archive.org/web/20120124014200/http://www.iitr.ac.in/Main/pages/departments.html). iitr.ac.in. Archived from the original (http://www.iitr.ac.in/Main/pages/departments.html) on 24 January 2012. Retrieved 5 June 2011. "technical institutions in the country having the largest number of academic units"
- 8. "Department of Electrical Engineering" (http://www.iitr.ac.in/departments/EE/pages/About_Us+History.html). IIT Roorkee. Retrieved 14 July 2013.
- 9. "Department of Architecture and Planning" (http://www.iitr.ac.in/departments/AR/pages/About_Us+History.html). IIT Roorkee. Retrieved 14 July 2013.
- 10. "Department of Pulp and Paper Technology" (http://www.iitr.ac.in/departments/DPT/pages/About_Us+History.htm I). IIT Roorkee Website. IIT Roorkee. Retrieved 14 July 2013.
- 11. "About the Institute, Indian Institute of Technology Roorkee" (https://web.archive.org/web/20120421024426/http://www.iitr.ac.in/institute/pages/About_the_Institute.html). litr.ac.in. Archived from the original (http://www.iitr.ac.in/institute/pages/About_the_Institute.html) on 21 April 2012. Retrieved 19 April 2012.
- 12. Susheel, Tapan (15 July 2022). "Union govt to issue Rs 175 coin to commemorate establishment of IIT-Roorkee" (https://timesofindia.indiatimes.com/education/exams/engineering/union-govt-to-issue-rs-175-coin-to-commemora te-establishment-of-iit-roorkee/articleshow/92894382.cms). The Times of India. Retrieved 11 December 2022.
- 13. "Geography" (http://www.iitr.ac.in/institute/pages/Geography.html). Retrieved 21 August 2011.
- 14. "IIT-Roorkee campus inaugurated in Greater Noida" (http://www.indianexpress.com/news/iitroorkee-campus-inaugurated-in-greater-noida/771434/). The Indian Express. 4 April 2011. Retrieved 19 April 2012.
- 15. "IIT Roorkee Hostels" (http://www.iitr.ac.in/campus_life/pages/Hostels.html).
- 16. "Hostels, Indian Institute of Technology Roorkee" (https://www.iitr.ac.in/campus_life/pages/Hostels.html). //TR. Retrieved 19 June 2020.
- 17. "Organizational Structure" (https://web.archive.org/web/20070922000243/http://iitkgp.ac.in/rti/stru1.html). Indian Institute of Technology, Kharagpur. 3 March 2006. Archived from the original (http://iitkgp.ac.in/rti/stru1.html) on 22 September 2007. Retrieved 14 May 2006.
- 18. "Departments and Centers, Indian Institute of Technology Roorkee" (https://web.archive.org/web/2012012401420 0/http://www.iitr.ac.in/Main/pages/departments.html). Archived from the original (http://www.iitr.ac.in/Main/pages/departments.html) on 24 January 2012. Retrieved 12 December 2011.
- 19. "Civil Engineering" (http://www.iitr.ac.in/departments/CE/pages/index.html). Departments. IIT Roorkee. Retrieved 22 January 2013.
- 20. "Academics" (http://www.iitr.ernet.in/academics/pages/index.html). litr.ernet.in. 10 March 2012. Retrieved 19 April 2012
- 21. "Roorkee Entrance Examination, IIT Roorkee" (http://www.roorkee.org/town/education/iit-roorkee). iitr.ac.in. Retrieved 5 June 2011.
- 22. "Postgraduate" (http://www.iitr.ac.in/admissions/pages/Postgraduate.html). //T Roorkee. Retrieved 10 March 2015.

- 23. "JMET is dead, long live CAT" (https://archive.today/20120908113013/http://www.hindustantimes.com/JMET-is-dead-long-live-CAT/Article1-739508.aspx). *Hindustan Times*. 30 August 2011. Archived from the original (http://www.hindustantimes.com/JMET-is-dead-long-live-CAT/Article1-739508.aspx) on 8 September 2012. Retrieved 13 September 2011.
- 24. "Academic Statistics 2007–2008" (https://web.archive.org/web/20100221230333/http://www.iitr.ac.in/academics/pages/Academic_Statistics.html). *IIT Roorkee*. Archived from the original (http://www.iitr.ac.in/academics/pages/Academic_Statistics.html) on 21 February 2010. Retrieved 5 June 2011.
- 25. "2022 Academic Ranking of World Universities" (http://www.shanghairanking.com/rankings/arwu/2022). Institute of Higher Education, Shanghai Jiao Tong University. 2022.
- 26. "QS World University Rankings 2023" (https://www.topuniversities.com/university-rankings/world-university-rankings/2023). QS Quacquarelli Symonds Limited. 8 June 2022.
- 27. "QS Asia University Rankings 2023" (https://www.topuniversities.com/university-rankings/asia-university-ranking s/2023). QS Quacquarelli Symonds Limited. 8 November 2022.
- 28. "National Institutional Ranking Framework 2022 (Overall)" (https://www.nirfindia.org/2022/OverallRanking.html). *National Institutional Ranking Framework*. Ministry of Education. 15 July 2022.
- 29. "National Institutional Ranking Framework 2022 (Research)" (https://www.nirfindia.org/2022/ResearchRanking.html). *National Institutional Ranking Framework*. Ministry of Education. 15 July 2022.
- 30. "National Institutional Ranking Framework 2022 (Engineering)" (https://www.nirfindia.org/2022/EngineeringRanking.html). *National Institutional Ranking Framework*. Ministry of Education. 15 July 2022.
- 31. "National Institutional Ranking Framework 2023 (Engineering)" (https://www.nirfindia.org/2023/EngineeringRanking.html). *National Institutional Ranking Framework*. Ministry of Education. 5 June 2023.
- 32. "National Institutional Ranking Framework 2022 (Management)" (https://www.nirfindia.org/2022/ManagementRanking.html). *National Institutional Ranking Framework*. Ministry of Education. 15 July 2022.
- 33. "National Institutional Ranking Framework 2022 (Architecture)" (https://www.nirfindia.org/2022/ArchitectureRanking.html). *National Institutional Ranking Framework*. Ministry of Education. 15 July 2022.
- 34. "MoE, National Institute Ranking Framework (NIRF)" (https://www.nirfindia.org/2023/Ranking.html). www.nirfindia.org. Retrieved 7 August 2023.
- 35. "Shakespeare's works, rare pictures await proper care at IIT-Roorkee" (https://www.thehindu.com/news/national/s hakespeares-works-rare-pictures-await-proper-care-at-iit-roorkee/article26181028.ece). *The Hindu*. PTI. 5 February 2019. ISSN 0971-751X (https://www.worldcat.org/issn/0971-751X). Archived (https://web.archive.org/web/20190827135536/https://www.thehindu.com/news/national/shakespeares-works-rare-pictures-await-proper-care-at-iit-roorkee/article26181028.ece) from the original on 27 August 2019. Retrieved 27 August 2019.
- 36. "Original 1623 edition of Bard's First Folio found at IIT Roorkee" (https://timesofindia.indiatimes.com/city/dehradu_n/original-1623-edition-of-bards-first-folio-found-at-iit-roorkee/articleshow/67843976.cms). The Times of India. 5 February 2019. Archived (https://web.archive.org/web/20190424134502/http://timesofindia.indiatimes.com/city/dehradun/original-1623-edition-of-bards-first-folio-found-at-iit-roorkee/articleshow/67843976.cms) from the original on 24 April 2019. Retrieved 27 August 2019.
- 37. "IIT Roorkee Library" (http://mgcl.iitr.ac.in/). iitr.ac.in. Retrieved 25 September 2012.
- 38. "Research, Indian Institute of Technology Roorkee" (http://www.iitr.ac.in/research/pages/index.html). iitr.ac.in. Retrieved 10 June 2011.
- 39. "SRIC, Research, Indian Institute of Technology Roorkee" (http://www.iitr.ac.in/research/pages/SRIC.html). iitr.ac.in. Retrieved 10 June 2011.
- 40. "State emergency centre to be linked with IIT Roorkee's quake warning system" (http://timesofindia.indiatimes.com/city/dehradun/State-emergency-centre-to-be-linked-with-IIT-Roorkees-quake-warning-system/articleshow/4982 0911.cms). The Times of India. 17 November 2015.
- 41. "Water Resources Development & Management, Indian Institute of Technology Roorkee" (http://www.iitr.ac.in/departments/WRT/pages/index.html). litr.ac.in. 23 September 2010. Retrieved 19 April 2012.
- 42. "Department of Hydrology, Indian Institute of Technology Roorkee" (http://www.iitr.ac.in/departments/HY/pages/in dex.html). litr.ac.in. Retrieved 19 April 2012.
- 43. "2008 Google Research" (https://research.google/people/SiddharthaPaulTiwari/). Google Research.
- 44. "Memoranda of Understanding and collaborative programmes, Academics, Indian Institute of Technology Roorkee" (https://web.archive.org/web/20120425004008/http://www.iitr.ac.in/academics/pages/MOU_and_Collaboration.html). litr.ac.in. 5 October 2011. Archived from the original (http://www.iitr.ac.in/academics/pages/MOU_and_Collaboration.html) on 25 April 2012. Retrieved 19 April 2012.
- 45. "Home" (https://scsp.iitr.ac.in/). IIT Roorkee. Retrieved 20 March 2023.
- 46. "Official Website" (https://web.archive.org/web/20030305171427/http://www.cognizance.org.in/). Archived from the original (https://www.cognizance.org.in) on 5 March 2003. Retrieved 4 April 2013.

- 47. National Social Summit (https://socialsummit.iitr.ac.in/), Official Website.
- 48. "Team Gil litr" (https://sites.google.com/site/teamgiliitr/). Retrieved 19 April 2012.
- 49. "IIT Heartbeat" (https://web.archive.org/web/20140904234522/http://www.iitheartbeat.org/). Archived from the original (http://www.iitheartbeat.org/) on 4 September 2014.
- 50. "Geek Gazette" (http://www.iitr.ac.in/campus_life/pages/Groups_and_Societies+Geek_Gazette.html). IIT Roorkee.
- 51. "Home WONA" (http://wona.co.in/). Watch Out! News Agency.
- 52. "Groups and Societies, Indian Institute of Technology Roorkee" (http://www.iitr.ac.in/campus_life/pages/Groups_a nd Societies.html). litr.ac.in. 15 March 2012. Retrieved 19 April 2012.
- 53. "National Service Scheme" (http://www.iitr.ac.in/campus_life/pages/Groups_and_Societies+National_Service_Scheme.html). //T Roorkee. Retrieved 3 August 2014.
- 54. "IIT Roorkee Hobbies Club" (https://web.archive.org/web/20120316020231/http://www.iitr.ac.in/campus_life/page s/Clubs+Hobbies_Club.html). litr.ac.in. 6 November 2007. Archived from the original (http://www.iitr.ac.in/campus life/pages/Clubs+Hobbies_Club.html) on 16 March 2012. Retrieved 19 April 2012.
- 55. "Alumni Portal IIT Roorkee" (http://alumni.iitr.ernet.in/). Alumni.iitr.ernet.in. Retrieved 19 April 2012.
- 56. "Distinguished Alumni Award" (https://archive.today/20120707071018/http://alumni.iitr.ernet.in/Home/DistinguishedAlumniAward/tabid/79/Default.aspx). Sampark. ITT Roorkee. Archived from the original (http://alumni.iitr.ernet.in/Home/DistinguishedAlumniAward/tabid/79/Default.aspx) on 7 July 2012.

Further reading

Account of Roorkee College (Thomson Civil Engineering College) (https://archive.org/stream/accountofroorkee00 agrarich#page/n5/mode/2up). Agra, Secundra Orphan Press. 1851.

External links

■ Official website (http://www.iitr.ac.in/) <

Retrieved from "https://en.wikipedia.org/w/index.php?title=IIT Roorkee&oldid=1225821310"