



PLACEMENT BROCHURE

2024-25

NATIONAL INSTITUTE OF TECHNOLOGY
ROURKELA



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NIT Rourkela-769008
Odisha



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NITR IN NUMBERS

20

Departments

09

Courses

1500

Students each year



From the
**DIRECTOR'S
DESK**

**PROF.
K. UMAMAHESWAR RAO**



On behalf of the National Institute of Technology, Rourkela, I welcome you to this beautiful campus. This institute has been known for its hospitality for more than four decades, and we strive hard to keep up our tradition. Our academic programme is amongst the best in the country as it provides an optimum blend of theory and practical, with a strong bias on industrial and managerial applications. While the depth of training in engineering, science and subjects is unquestioned, the span of our curriculum is often overlooked.

The NITR student learns subjects across departmental boundaries and excels in extracurricular activities. The blend of technology and management skills makes a NITRian a valuable asset to any organisation. With twenty-one departments awarding undergraduate, postgraduate and doctoral degrees in engineering, science, and management, we are one of the most diversified institutions in the nation. Our students are highly competent to work in diversified fields such as coal mining, data mining, artificial intelligence, or R&D. We, therefore, look forward to making a cordial and enduring relationship that will strengthen our ties with other organisations. Whether you have regularly recruited our students or planning to visit us for the first time, I am sure you will find our students highly competent, and you will visit us again, year after year. We look forward to a warm and continuing relationship between our two great institutions.

Words from
HEAD OF CENTRE



**PROF.
BIBHUTI B. NAYAK**

National Institute of Technology Rourkela, an Institute of National Importance, has a rich tradition of pursuing excellence in the fields of Engineering, Science and Technology for the last six decades. During their stay, in addition to a globally recognized curriculum, our students are exposed to subjects beyond departmental boundaries and extracurricular activities. The blending of academically acclaimed courses, institute-industry collaboration, interdisciplinary research, industrial training, and management skills that a NITR student possesses makes her/him an invaluable asset to any company /research organization she/he works for.

NITR alumni have excelled in the industry, academia, research, and social and public life while using their expertise, and NITR faculty members are the best talents taking the name of the institute beyond the border of the nation with their academic and research activities. The Career Development Centre of NITR takes various initiatives towards shaping the students' careers and aims to groom them towards personality development, skill development, and internship, and imbibes them with qualities of becoming responsible and ethical citizens of this country. NIT Rourkela records its appreciation for the trust that industry/academia has bestowed upon it. With this, we also welcome all our new partners/recruiters for a long and healthy relationship.

We look forward to an everlasting relationship with our Institute!

Words from
PIC

**PROF.
LAKSHI PROSAD ROY**



Career Development Centre (CDC) NIT Rourkela is ardently inspired in making a fruitful relationship with industries and is utmost careful in extending the hospitality. We believe that one of the most important and memorable events for any student's career path is campus placements and it brings immense pleasure and satisfaction to any Institute. Therefore, facilitating placement activities all around the year for all the students is the primary activity of CDC. We nurture all our students, the potential talents at NIT Rourkela by sharing knowledge not only in teaching courses, executing projects and research works, but also with various professional activities for preparing them to become bright future professionals with high morality and ethics. Hence, I earnestly hope that our students find the right opportunity for their life & livelihood amidst your kind presence at NIT Rourkela in the placement session 2023-24, and also that your expectations are met at every level. Our institute has maintained its spirit of culture and legacy of over six decades of innovative growth and excellence. Having stamped its class in academic and corporate circles, the alumni of NIT Rourkela today enjoy some of the most reputed and challenging roles in the industry both in India and abroad. This is a testimony to the work done for and by this great institute and the trust the industry has consistently showered us with for many years. The enlightenment of the students would not be possible but for the strong bond that NIT Rourkela cherishes with the industrial world. Going forward, we hope we are able to forge new bonds and strengthen the existing bonds of cooperation in the time to come.

ABOUT NIT ROURKELA

With 20 academic departments offering specialized courses at the undergraduate, graduate, and doctorate levels of study, NIT Rourkela boasts a diverse academic curriculum. The Institute currently provides postgraduate degrees in a variety of research areas as well as 21 undergraduate programs in the major disciplines of engineering, architecture, science, humanities, and management. To fulfil the needs of the modern world, the institute provides unique programs such as the Bachelor of Architecture, Biotechnology and Medical Engineering, Ceramic Engineering, and B. Tech in Food Process Engineering. Although NIT Rourkela's academic programs adhere to the National Education Policy, the quality of education is consistently improved by periodic syllabus revisions that take industry and academic demands into account. Through many inclusive initiatives and the implementation of a standardized education policy, alumni of the Institute have demonstrated exceptional performance in both domestic and international professional arenas over time. NITians have contributed greatly to our nation with their emphasis on teaching and learning beyond departmental boundaries, combination of technology, and managerial abilities.

As a highly esteemed institution today, NIT Rourkela is known for its excellence in research, consulting, and doctorate, postgraduate, and undergraduate education. It is fervently dedicated to instilling this devotion in all its students and elevating our nation to the forefront of science and technology. Our goal is to become globally recognized for our exceptional academic standards and to be regarded as one of India's top technology institutes in terms of innovation, entrepreneurship, and intellectual property production.

Vision

To become an internationally acclaimed institution of higher learning that will serve as a source of knowledge and expertise for the society and be a preferred destination for undergraduate and graduate studies.

Mission

To advance and spread knowledge in the area of science and technology leading to creation of wealth and welfare of humanity.

WHY RECRUIT AT NITR ?



Multi Disciplinary Curriculum

NIT Rourkela, through its Vision, Mission, and Core Values, establishes itself as a world-class institution. It nurtures a global community of talented students, dedicated teachers, and diligent researchers, combining research and education to improve society.

Offering diverse courses in engineering, architecture, science, development studies, and management, NIT Rourkela meets both academic and industry demands.



Comprehensive Growth

In addition to teaching engineering, science, and technology, the institution instills values and competencies for positively impacting the future. The curriculum encourages students to apply theoretical knowledge to practical situations through case studies, research and development, and real-world projects. Student-led activities focus on holistic growth, aiming to develop better individuals, not just good students.



A Thriving Culture

In line with the proverb that there is a world to be discovered with a spirited heart, NIT Rourkela has upheld its ethos for over 70 years, instilling this in its students. The Student Activity Centre hosts over 60 diverse clubs. NIT Rourkela forges new paths,

choosing less-travelled routes and pioneering solutions to meet the needs of the populace and the country.



Diversity in NIT Rourkela

Our campus is a vibrant and diverse community, with students from all over India bringing together a rich mix of cultures, languages, and perspectives. We also maintain a good male-to-female ratio, ensuring an inclusive and balanced atmosphere

where everyone has the opportunity to thrive. Our strong focus on research and innovation further enhances the learning experience.

NITR IN RANKINGS

NIRF Ranking - 2024



19
Engineering

09
Architecture

30
Research

34
Overall

QS World University Ranking - 2024



291-300
ASIA University

67
Southern Asia University

NITR IN RANKINGS

QS World University Sustainability Ranking - 2024



676
Overall Category

177
Asia Region

21
Country/Territory
(India)

TIMES Higher Education Ranking - 2024



189
Asia University
Ranking

601-800
World University
Ranking

601-800
Engineering and
Technology (by
Subject)

ADMISSION PROCEDURE

JEE MAIN

- B.Tech/B.Arch, Int. MSc, Dual degree admissions based on JEE Main exam performance.
- Followed by Joint Seat Allocation Authority (JoSAA) counselling.

GATE

- MTech admissions based on GATE exam scores.
- Followed by CCMT counselling.

JAM

- 2-year MSc programme admissions based on IIT JAM.
- Followed by CCMN counselling.



NIT
ROURKELA

PROGRAMME FOR FOREIGN STUDENTS

- DASA (Direct Admission of Students from Abroad)
- ICCR (Indian Council for Cultural Relations)
- MEA (Ministry of External Affairs)

CAT

Two-year MBA and three-year Executive MBA admissions based on CAT or other national-level management entrance exams.

PROGRAMME FOR PHD SCHOLARS

- PhD admissions based on NIT Rourkela selection procedure.
- Applicants must hold relevant ME/MTech/MSc Engineering/MPharm/MPlan/MArch/MDes degrees.

COURSES

B.Tech

- NIT Rourkela offers 15 different B.Tech specializations, the highest and most diverse range among all NITs.
- This allows students to explore interdisciplinary learning, connect with industry, and gain practical experience.

M.Tech

- The M.Tech courses emphasize advanced technical expertise, research-driven projects, and industry collaborations, preparing students for leadership roles in technology and engineering sectors.

Int M.Sc

- The five-year Integrated M.Sc. combines rigorous theoretical learning with practical applications, equipping students for both industry roles and academic research.

M.Sc

- NIT Rourkela's M.Sc. programs are research-oriented, offering deep specialization and hands-on exposure to cutting-edge scientific advancements.

MBA

- NIT Rourkela's MBA program blends business theory with practical case studies, providing a dynamic environment for developing future business leaders with a strong technical perspective.

B.Arch

- The Bachelor of Architecture at NIT Rourkela combines creativity with technical knowledge, focusing on sustainable design and innovation in the built environment.

Dual Degree

- This integrated program blends undergraduate and postgraduate studies, offering a comprehensive education with a focus on research, saving time and providing a competitive edge.

PhD

- The PhD programs promote groundbreaking research across disciplines, supported by state-of-the-art facilities and guidance from esteemed faculty, fostering academic excellence.

M.A

- The MA program focuses on the intersection of humanities and social sciences, offering research-driven curricula and fostering critical thinking and global awareness.

DEPARTMENTS



BIOTECHNOLOGY & BIOMEDICAL ENGINEERING

With robust architecture, sophisticated instruments, high-quality research topics, and published articles, the Department of Biotechnology and Biomedical Engineering is one its kind with several students pursuing research internships abroad each year. The students of our department are trained with high end equipments and softwares like FACS machines, UTM, DSC, spectrofluorometer, FTIR, Bioreactors, and Confocal microscope.

Theory: Genetic Engineering, Bioinformatics, Industrial Biotechnology, Artificial Intelligence and Machine Learning, Medical Embedded Systems, Medical Sciences, Biomedical Instrumentation

Practical: Tissue Engineering Lab, Soft Computing Lab, Biomechanics Lab, Drug design lab, Bioinformatics lab, Biomedical Instrumentation

CIVIL ENGINEERING



Civil Engineering was one of the first departments to be established, in tandem with the birth of the Institute itself in 1961. The Department is known for its Industry-Academia collaborations providing technical solutions to engineering problems to various agencies like NTPC, Nalco, Rourkela Steel Plant and NBCC.

Theory: Mechanics of Solid, Structural Analysis, Soil Mechanics, Advance Transportation Engineering, Advance Foundation Engineering, Finite Element Analysis, Numerical Analysis, Fluid Mechanics, Surveying, Environmental Engineering

Practical: Surveying Lab, Structural Analysis Lab, Geotechnical Lab, Highway Engineering Lab, Fluid Mechanics Lab, Environmental Engineering Lab



CHEMICAL ENGINEERING

The Department of Chemical Engineering was established in the year 1963 with an undergraduate program and initiated a post-graduate program in Coal, Chemicals, and Fertilizers in the year 1981. Above and beyond the classes, our students carry out independent researchers through project and thesis work which often get published in journals of national and international repute.

Theory: Mass and Heat Transfer Operations, Thermodynamics, Reaction Engineering, Fluid Dynamics, Plant Design & Simulation, Instrumentation & Process Control, Process Equipment Design, Nano Science and Technology

Practical: Fuels & Combustion Lab, Fluid Dynamics Lab, CAD Lab, Process Equipment Design Lab, Process Dynamics and Control Lab, Chemical Reaction Engineering Lab

DEPARTMENTS



CERAMIC ENGINEERING

Established in 1994, India's only integrated program in Ceramic Engineering among all NITs. The presence of equipment such as a dilatometer, DSC/TG, UV Visible Spectrometer, BET machine and FESEM enable enhanced material characterisation and testing. Mritika, a confluence conducted by the Indian Ceramic Society, which involves various sessions on several fields of ceramics.

Theory: Materials Thermodynamics, Process Ceramics, Physical Ceramics, Refractory Technology, Glass Technology, Metallurgical Processes

Practical: Chemical Analysis Lab, Mechanical Testing Lab, Whiteware Technology Lab, Electro-ceramics Lab

COMPUTER SCIENCE & ENGINEERING



It is one of the most coveted branches in NITR. Established in 1987 it has State of the art laboratories that cater to both the training & research needs of the students. One of its kind MHRD sponsored research projects currently going on: Digitisation & modelling of steel microstructure, Blind Digital Forensics for Cyber Forgery Detection.

Theory: Data Structures and Algorithms, Computer Organisation and Architecture, Database Engineering, Operating Systems, Advanced Computer Networks, Distributed Systems

Practical: Microprocessor Lab, Computer Graphics, Machine Learning, Software Engineering Lab, Artificial Intelligence, Cloud Computing

ELECTRONICS AND COMMUNICATIONS ENGINEERING



The Electronics and Communications Engineering Department is envisioned to be a nationally acclaimed destination for undergraduate and post-graduate studies and serves as a knowledge hub and expertise for society. The collaborations of the department include projects sponsored by prestigious establishments like SERB, DRDO, ISRO, IMPRINT INDIA, Deity.

Theory: Digital Electronics, Analog Electronics, Signals and Systems, Electronic Instrumentation, Principle of Communication Systems, Embedded Systems, VLSI, Semiconductor Devices, Network Theory, Digital Image Processing

Practical: VLSI Design Lab, Communication Engineering Lab, Embedded Systems Design Lab, Digital Electronics and HDL Lab, Product Development Lab, Circuit Simulation Lab, Analog Electronics Lab

DEPARTMENTS



DEPARTMENT OF ELECTRICAL ENGINEERING

The Department of Electrical Engineering holds a prominent position at NIT Rourkela, being among the first disciplines established. It has been a cornerstone of the institute's engineering community, fostering academic excellence and research development. The department actively engages faculty and students, driving enthusiastic participation and contributing to a culture of excellence. Notably, it hosts Centers of Excellence in Industrial Electronics & Robotics and Renewable Energy Systems, collaborating with faculties from diverse departments to enhance interdisciplinary research endeavors.

Theory: Control System, Power System, Electrical Machines, Communication System, Analog and Digital Electronics, Embedded Systems

Practical: Electrical Network Simulation, Power Electronics Lab, Electronics Circuits Laboratory, Machine Design Lab

INDUSTRIAL DESIGN



Established in 2010, NIT Rourkela takes pride in being the only institute in India to offer BTech in Industrial Design. The technical aspect combined with a holistic design environment has made this department an integral part of NITR.

Theory: Design Thinking, Interaction Design, Product Design, Communication Design, Visual Design , Geometric and solid modeling, Industrial Robotics

Practical: Product Design and Development Lab, Simulation Lab, Ergonomics Lab, Design Workshop



MECHANICAL ENGINEERING

Since its inception in 1961, the department has focused on nurturing talent through courses aligned with recent technological advancements. It boasts specialized labs and benefits from mentorship by highly qualified faculty. Maintaining close scientific and technical relationships with industrial majors such as SAIL, OCL, L&T, TATA Steel, and TATA Refractories Limited, among others, it actively engages in collaborative efforts. Additionally, the department participates in emerging fields such as automotive and renewable energy, contributing to national and international competitions.

Theory: Strength of Materials, Theory of Machines, Heat Transfer, Fluid Mechanics, Fluid Dynamics and Hydrolic Machinery, Design of Machine Elements, Production and Operations Management, Decision Modeling, IC Engine, Thermodynamics

Practical: Machine Drawing & Solid Modelling, Advanced Manufacturing Practices, IC Engine Laboratory, Fluid Dynamics & Hydraulic Machinery Laboratory, Prouduction Engineering Project, Product Development Laboratory

DEPARTMENTS

METALLURGICAL AND MATERIALS ENGINEERING



Metallurgical and Materials Engineering, established in 1963 stand firm in its commitment to producing the finest metallurgical engineers in the country and industrial collaborations for multiple research projects with companies like Tata Steel, Dalmia, and Hindalco..

Theory: Phase transformation, Mechanical Metallurgy, Physical Metallurgy, Extractive Metallurgy, Iron and steel making, Metallurgical thermodynamics and kinetics

Practical: Characterization of Materials Lab, Heat treatment Lab, Polymer and Composite Lab, Mechanical testing Lab

MINING ENGINEERING



The Department of Mining Engineering boasts modern and sophisticated equipment for physical experimentation. The department also provides consultancy services to Singareni Coalfield Collieries Limited, SAIL RMD, JSPL, Nalco, Shapoorji Pallonji and Co. Ltd, Manganese Ore of India Ltd, Hindustan Zinc Ltd, and Coal India Ltd..

Theory: Mine Development, Mine Surveying, Rock Mechanics, Mining Machinery, Underground Coal Mining, Mining Legislation and Safety, Mine Ventilation, Business Research Methodology

Practical: Geomechanics Lab, Coal Characterisation Lab, Mine System Lab, Coal and Mineral Processing Lab



DEPARTMENT OF FOOD PROCESS ENGINEERING

The Department of Food Process Engineering at our institute provides comprehensive training in engineering, science, and management related to food processing and product development. Students gain expertise in areas such as food process and machine design, packaging and storage engineering, and food quality control and safety. Our program aims to equip students to become future entrepreneurs and valuable human resources for the food processing industry in the country.

Theory: Food Grain Processing Engineering, Horticultural Product Processing Technology, Dairy and Livestock Processing, Food Process and Equipment Design Engineering, Food Product Development, Food Quality Control and Safety, Food Packaging and Storage Technology, Food Refrigeration and Cold Chain Technology

Practical: Dairy Process Engineering Lab, Food Quality and Safety Lab, Food Refrigeration and Cold Chain Lab, Food Properties lab, Equipment Design Lab, Food Process Modelling and Simulation Lab, Food Packaging and Storage Lab

DEPARTMENTS



DEPARTMENT OF CHEMISTRY

Courses offered: M.Sc., Int M.Sc. and PhD

It has well-sophisticated laboratories: organic, inorganic, and physical chemistry. It has a special emphasis on heterogeneous/homogeneous catalysis, electro-chemicals, nanoparticles, etc. 16 sponsored research projects are currently being worked upon by the faculties and research scholars.

Funding agencies: DST, CSIR, DRDO, FIST(CST), DBT, BRNS, etc.

Theory: Thermodynamics and Phase Equilibrium, Polymer Chemistry, Nano Chemistry, Organic Synthesis, Environmental Chemistry, Solid State Chemistry and Surface Analysis

Practical: Spectroscopy lab (NMR FT-IR), Material Synthesis lab, Chemical Biology lab, Qualitative and Quantitative Analysis lab

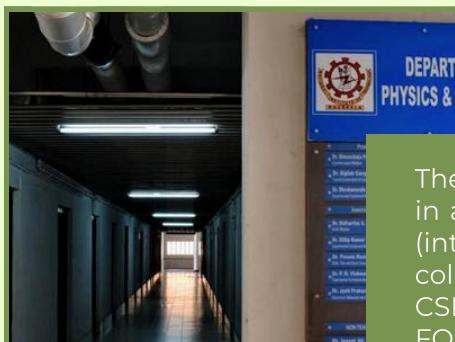
DEPARTMENT OF MATHEMATICS



The Department of Mathematics offers 5-year integrated and 2-year Post Graduate M.Sc. courses and doctoral research programs which contain pure, applied and computational aspects of mathematics. The students get admission by scoring high ranks in JEE mains and JAM. Most students also do their summer internships and final year projects in the field of analytics and ML.

Theory: Statistics, Database Engineering, Linear Programming, Discrete Mathematics, Graph Theory, Number Theory

Practical: Computing Lab, Statistics Lab, Advanced Numerical Methods Lab in MATLAB and Python



DEPARTMENT OF PHYSICS

The department provides excellent opportunities for education & research in a wide spectrum of areas in Physics through its well-received Master's (integrated 5-year & 2-year) & Doctorate program. The department has collaborated with DRDO, UGC-DAE, DST-FIST, CSR, DPT, NCC, UGC-DAE-CSR (Kolkata), UGC-DAE (IUAC-NewDelhi), MINISTRY OF ENVIRONMENT & FOREST, and NEW DELHISTIO with Penn State, the USA for research.

Theory: Linear Programming, Electrodynamics, Statistics, Analog and Digital Electronics, Business Research Methodology, Quantum Mechanics

Practical: Computer Programming Lab, Advanced Language Lab, Computational Physics Lab, Computational Astrophysics Lab

DEPARTMENTS



DEPARTMENT OF LIFE SCIENCE

Established in 2009, the Department of Life Sciences focuses on human science development and imparts a critical role in science, technology, and the economy.

Theory: Bioanalytical Techniques, Bioinformatics, Food Science, Enzymology & Metabolism, Immunotechniques ,Bioinstrumentation

Practical: Bioanalytical Techniques Laboratory, Immunology laboratory, Cell biology laboratory , Biochemistry & Molecular biology laboratory

DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES



Established in 1961, the department stands as one of the oldest within the institute, adding a humane outlook to the technical institution's ethos. It offers a full-time MA Programme in Development Studies and hosts PhD Programmes in Anthropology, English, Psychology, Economics, Sociology, and Sanskrit. In addition to regular academic activities, the department houses two Centers of Excellence for research: 'Tribal Development', sponsored by the Ministry of Tribal Affairs, Government of India, and 'Public Health and Nutrition', sponsored by UNICEF.

Theory: Development Theories and Practices, Research Methodology in social sciences, Gender and Development, Development Theories and Practices, Rural Development, CSR - Corporate Social Responsibility, Contemporary policy issues and Development, Urban Governance and Development.

Practical: Advance language Lab, Statistical Lab, Rural Engagement Lab



DEPARTMENT OF EARTH AND ATMOSPHERIC SCIENCES

NIT Rourkela is the first NIT in India to offer a Master's Programme in Earth and Atmospheric Sciences. With diversified research interests, the department undertakes a number of MHRD, NIRM, CSIR and DST sponsored projects every year.

Theory: Dynamics of Atmosphere,Physical oceanography,Physics of atmosphere, Boundary Layer Meteorology, Dynamics of Ocean, Satellite Meteorology and oceanography, Weather Forecasting and Analysis,Numerical Weather Prediction

Practical: Instrumentation Laboratory, Programming Laboratory(MATLAB), Remote Sensing and GIS lab, QGIS, ARCGIS, PYTHON, ERDAS, Numerical simulation laboratory

DEPARTMENTS



SCHOOL OF MANAGEMENT

The School of Management at NIT Rourkela was founded in 2010 with the aim of fostering managerial innovation and nurturing leadership talent among students. It offers a comprehensive two-year Master's in Business Administration (MBA) program along with doctoral programs specializing in Finance, HR, Marketing, and Operations. Admissions are based on national-level entrance tests such as CAT, MAT, XAT, and CMAT, followed by Group Discussion (GD) and Personal Interview (PI) rounds to ensure the selection of candidates with the requisite skills and aptitude for management roles.

DEPARTMENT OF PLANNING AND ARCHITECTURE



The Department of Planning and Architecture was established in 2013 at NIT Rourkela with a mission to blend aesthetics and technology into artistic solutions. Its goal is to address societal needs for shelter and infrastructure while also addressing energy and environmental concerns. Rather than viewing architects as sole creators, the department emphasizes collaboration in shaping the physical environment. Its curriculum includes progressively complex studios, forming the foundation of architecture and planning education.

Theory: Theory, Building Services, Evolution of Architecture, Building Construction, Building Materials, Acoustics and Illumination, Theory of Design

Practical: Labs, Architectural Design, Visual Arts, Working Drawing, CAD BIM and Rendering



COURSES & PROGRAMMES

AT NIT ROURKELA

CIVIL

B.Tech, M. Tech, PhD

B.Tech

Civil Engineering

M.Tech

Geotechnical Engineering
Structural Engineering
Transport Engineering
Water Resources Engineering
Environmental Engineering

B.Tech

Food Process
Engineering

M.Tech

Food Process
Engineering

FOOD PROCESS

B.Tech, M. Tech, PhD

INDUSTRIAL DESIGN

B.Tech, M. Tech, PhD

B.Tech

Industrial Desgin

M.Tech

Industrial Design

M.Tech

Atmosphere and Ocean Science

EARTH AND ATMOSPHERIC SCIENCES

M. Tech, PhD

METALLURGICAL AND MATERIALS

B.Tech, M. Tech, Dual
Degree, PhD

B.Tech

Metallurgical and
Materials Engineering

Dual Degree

Metallurgical and
Materials Engineering

M.Tech

Metallurgical and
Materials Engineering

COURSES & PROGRAMMES

AT NIT ROURKELA

ELECTRICAL

B.Tech, M. Tech, PhD

B.Tech

Electrical Engineering

M.Tech

Electronics system and communication
Power Electronics and Drives
Power System
Control and automation

B.Tech

Computer Science and Engineering
Artificial Intelligence

M.Tech

Computer Science
Information Security
Software Engineering

COMPUTER SCIENCE

B.Tech, M. Tech, PhD

ELECTRONICS AND COMMUNICATION

B.Tech, M. Tech, PhD

B.Tech

Electronics and Communication

M.Tech

RF and Microwave Systems
Signal and Image Processing
Communication and Networks
Electronics and Instrumentation
Microwave and Radar Engineering
VLSI Design and Embedded Systems

B.Tech

Mechanical

M.Tech

Machine Design Analysis
Production Engineering
Thermal Engineering
Cryogenics and Vacuum Technology

MECHANICAL

B.Tech, M. Tech, PhD

CHEMICAL

B.Tech, M. Tech, Dual Degree, PhD

B.Tech

Chemical

Dual Degree

Chemical

M.Tech

Chemical Engineering
Energy and Environmental Engineering

COURSES & PROGRAMMES

AT NIT ROURKELA

CHEMISTRY

Int. M. Sc, M. Sc, PhD

Int. M. Sc

Chemistry

M. Sc

Chemistry

Int. M. Sc

Life Sciences

M. Sc

Life Sciences

LIFE SCIENCE

Int. M. Sc, M. Sc, PhD

PLANNING AND ARCHITECTURE

B. Arch, PhD

B.Arch

Architecture

Int. M. Sc

Mathematics

M. Sc

Mathematics
Computational Mathematics
and Data Science

MATHEMATICS

Int. M. Sc, M. Sc, PhD

SCHOOL OF MANAGEMENT

MBA, Executive MBA

M.B.A.

Management

Executive M.B.A.

Management

COURSES & PROGRAMMES

AT NIT ROURKELA

BIOTECHNOLOGY AND MEDICAL

B.Tech, M. Tech, PhD

B.Tech
Biotechnology
Biomedical

M.Tech
Biotechnology
Biomedical

B.Tech
Mining Engineering
Dual Degree
Mining Engineering

M.Tech
Mining Engineering

MINING

B.Tech, M. Tech, Dual,
PhD

CERAMICS

B.Tech, M. Tech, Dual,
PhD

B.Tech
Ceramic Engineering
Dual Degree
Industrial Ceramics

M.Tech
Industrial Ceramics

Int M.Sc
Physics

M.Sc
Physics

PHYSICS AND ASTRONOMY

Int. M.Sc, M.Sc, PhD

HUMANITIES AND SOCIAL SCIENCES

M.A.

M.A.
Development Studies

ACHIEVEMENTS



NIT Rourkela proved its mettle once again by securing the prestigious tag of 3rd Best NIT as per MHRD's NIRF 2023 Rankings.

In 2023, four NIT Rourkela students achieved remarkable ranks in the UPSC CSE, securing AIR-2, AIR-176, AIR-343, and AIR-426. Along with this one student achieved AIR-18 in UPSC ESE-2023

The 25th of May, 2018 shall go down in history as NIT Rourkela and Tata Steel Limited (TSL) have inked a Memorandum of Agreement (MoA) on integrating academia, industry, and other stakeholders in the field of scientific and industrial research for technology development with special emphasis on Fiber-Reinforced Polymer (FRP) Composites.



NIT Rourkela's BAJA SAE team, Black Mamba Racing, debuted in the eBAJA SAE India 2024, facing off against colleges across India. They impressed in the design stages (AIR 1 in validation, AIR 3 overall design), even achieving the highest marks for their offline presentation. The competition had 3 phases: a virtual vehicle design presentation, a detailed design breakdown including sales, CAE, and cost considerations, and finally, a race with a manufactured vehicle. Their creation passed the strict brake test on the first try.

Students of NITR have successfully won the GE Healthcare challenge, Juspay Hackathon, Polygon Labs DevXGlobal, Walmart SparkTech, Dr Reddy Digital Health Hackathon, ETHIndia, Maruti Suzuki Hackathon, HackRx 4.0 and have bagged numerous accolades in other renowned hackathons.



ACHIEVEMENTS



The NIT Rourkela chapter of the American Society Of Mechanical Engineers (ASME), has bagged the title of Best Demonstration of Module Knowledge at ASME XRC 2024.

Team Tiburon, the autonomous underwater vehicle team, bagged the First runner's Up position at SAUVC competition organized by the IEEE-OES Singapore Chapter in the year 2 018 and emerged as Semifinalists at Robosub Competition held at San Diego in 2019.

Students of NITR have successfully bagged the first runner up position in the Open Fintech Hackathon organized by NITI Aayog.

IDFC FIRST Bank in collaboration with Unstop held Fame 2.0: Two students from NITR, have both secured Runner up and Fifth position and successfully bagged PPOs(Pre-placement offers) at the same.



Coratia Technologies, a startup founded by NIT Rourkela students, featured on Shark Tank India Season 3 and has now secured investment from Ritesh Agarwal.

NOTABLE ALUMNI



C.P. GURNANI

Co-Founder AlonOS and the former CEO & Managing Director of Tech Mahindra. In 2018, he was the highest-paid executive in India according to Fortune magazine with an annual package of 2150 Crores. He has been chosen as the Ernst and Young Entrepreneur of the Year [Manager], CNBC Asia's 'India Business Leader of the Year' and Dataquest 'IT person' of the Year - for the year 2013. In 2018, Gurnani was named one of the "Best CEOs In The World" by the CEOWORLD magazine.

SHRUTI H RAMESH

American Express Engineering Vice President Shruti H Ramesh. She was in Symphony Services' 2005 Hall of Fame and SAP's 2009, 2011, and 2013 Top Talent. She is a development manager with 15 years of software industry experience and extensive knowledge of projects, supply chain management, project resource management, SAP NW Process Orchestration, and agile testing.



PRATIVA MOHAPATRA

A class of 1992 alumna is currently the Vice President & Managing Director of Adobe India. After completion of her MBA from XIMB in 1994, she worked with PwC till 2002, then she joined IBM. In September 2021, she joined Adobe India. She is also the Evangelist of Cognitive Solutions and AI Technology.

PRANAV KHAITAN

Led the Innovation Advisory Council of the World Food Programme (WFP), the recipient of the Nobel Peace Prize 2020. He is currently working as the Director of Engineering and Principal Engineer at Google. He is an alumnus of Stanford University's of class 2011 and has prior experience working with Facebook and Microsoft.



NOTABLE ALUMNI



SHRIKANT VAIDYA

Since July 2020, Shrikant Vaidya chairs Indian Oil Corporation Limited. Mr. Vaidya, a 1985 Chemical Engineering graduate, led IOCL's 9 refineries as Director (Refineries). Shri Vaidya has over 30 years of experience in all aspects of refinery and petrochemical operations, including commissioning India's largest cracker plant, Panipat Naphtha Cracker Complex. He's a tech-savvy businessman and people's leader.

RAHUL SHRIVASTAVA

Currently serves as the Joint Secretary in the Ministry of External Affairs, India. After completing his Masters in Computer Applications in 1999, Mr Shrivastava joined the Indian Foreign Service in September 1999. Thereafter he served in various prestigious positions in Russia, UK and Kazakhstan. At the age of 40, he became India's 4 youngest ever appointed Ambassador and served in the Indian Embassy in Venezuela as the ambassador from July 2015 to March 2018.



SOMA MANDAL

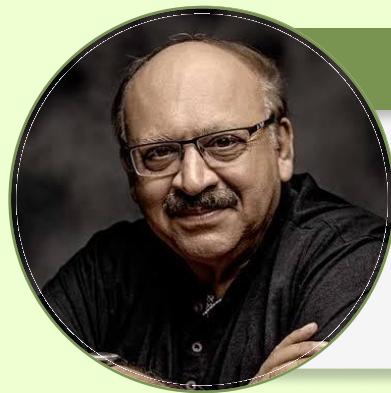
Soma Mondal, the former CEO of Steel Authority of India (SAIL), shattered glass ceilings as the first woman to hold both Chairperson and Functional Director roles. Nicknamed "Queen of Steel", her leadership in metals earned her recognition on Forbes' most powerful women list in 2022 and 2023.

ATANU BHOWMIK

Atanu Bhowmik, a 1988 Metallurgical and Materials Engineering graduate currently works as Director in charge, SAIL-RSP has received IIM-TSL New Millennium Award from Indian Institute of Metals. In October, 2019, he was elevated to Executive Director (Works) in Bokaro Steel Plant.



NOTABLE ALUMNI

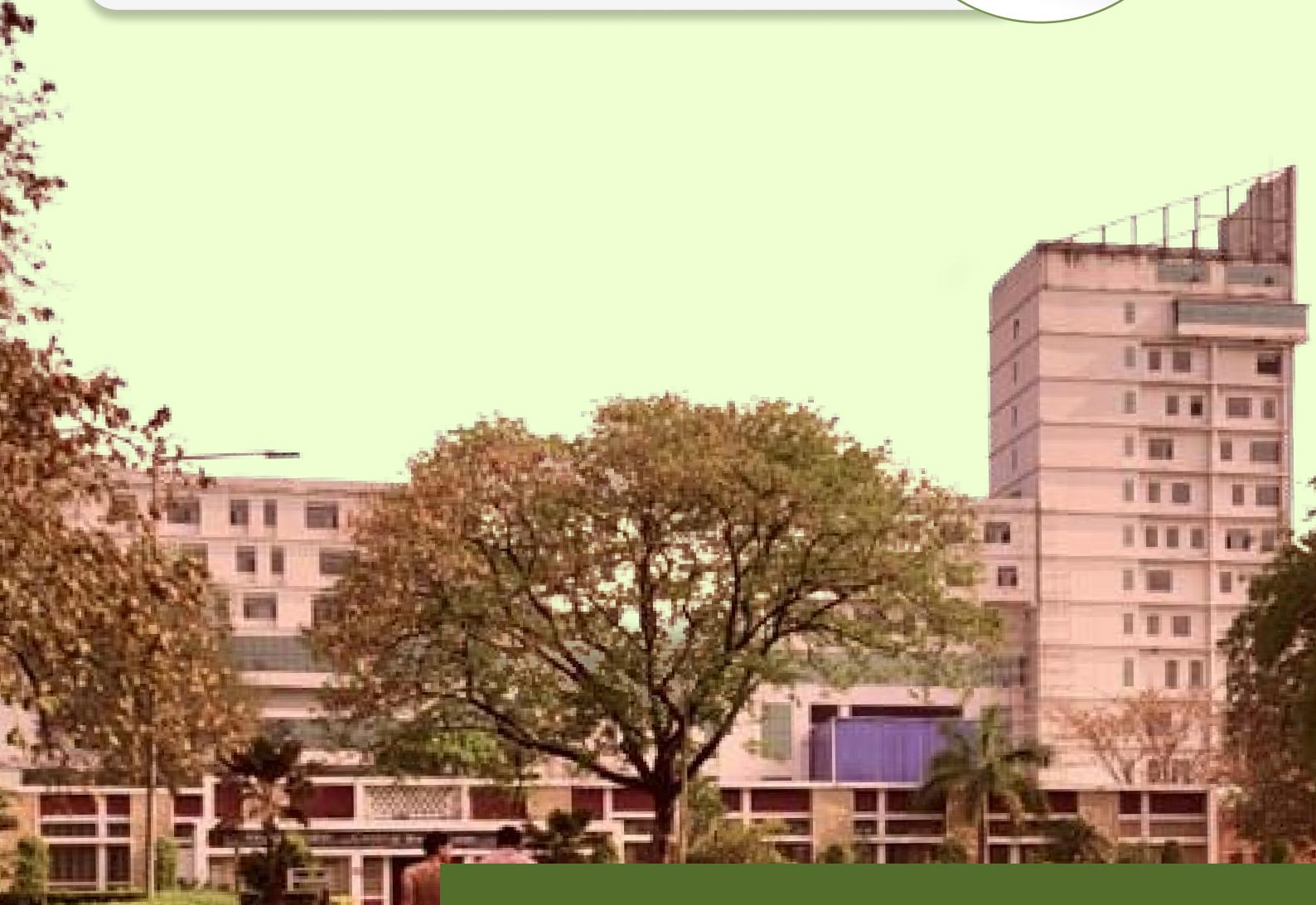


AKASH KHURANA

Akash Khurana, graduated as a mechanical engineer from the National Institute of Technology, Rourkela. He then earned an MBA from XLRI – Xavier School of Management , followed by an M.Phil. and a Ph.D. in Social Sciences from the Tata Institute of Social Sciences, where he has been a visiting faculty member since 1995. Recently in 2022, he received Asian Literature Award for "Mentormorphosis"

ALUMNI AT ISRO

Sharat Kumar Dash, Nildari Bihari Guru, Soumit Biswal, Sailesh Prasad, Mahendra Behera, Suraj Kumar Dash, Aditya N Malla, Bikkina Vikas, Sibashish Prusty and Amarkanth are some of our alumni at ISRO who have woven a tapestry of brilliance and dedication.



INFRASTRUCTURE

NIT Rourkela's 647-acre campus, nestled among Rourkela's hills, is lush with greenery and rapidly developing. It boasts modern amenities, including a state-of-the-art network with 5000 nodes, providing each student and faculty member with a networked computer. With 180Mbps internet and 850Mbps intranet bandwidth, it has one of the country's most advanced networks. The institute features well-maintained seminar halls, video conferencing facilities, Wi-Fi connectivity, and e-classrooms for online lectures.

AUDITORIUM & LECTURE HALL COMPLEXES



NIT Rourkela boasts a centralized air-conditioned auditorium, the Bhubaneswar Behera Auditorium, seating over 1000. Additionally, it features a Lecture Gallery Complex with various capacities and the Pranakrushna Parija Auditorium seating 300, all equipped with uninterrupted power supply, air conditioning, and LCD projectors. The campus offers round-the-clock facilities for online testing.

CENTRAL LIBRARY

NIT Rourkela's library, named after the former Odisha Chief Minister, is a vital research hub. With 61,800 books and 20,000 periodical volumes, it's equipped with modern RFID-based automation and integrated Libsys - LSmart software. The online repository hosts student and faculty publications.



COMPUTER CENTRE



NIT Rourkela's Central Computer Centre offers 24/7 services with uninterrupted power supply. It features the latest IBM servers with 100TB storage capacity and a 2 teraflops HPC System, with an L2 Datacentre underway for further advancements.

SPORTS FACILITIES

At NITR, sports are as integral as academics, with top-notch facilities like the Aquatic Sports Facility, Dilip Tirkey Hockey Stadium, P. T. Usha Sports Complex, and Sachin Tendulkar Cricket Stadium. Managed by a dedicated body, regular sporting events and leagues are organized, with separate squads representing the institute at Inter-NIT events. Additionally, NIT Rourkela's cutting-edge indoor sports complex offers various activities like badminton, basketball, and volleyball, promoting a vibrant sporting culture and sustainability in education.



CAMPUS GUEST HOUSES



NIT Rourkela's gifted campus offers state-of-the-art hospitality to guests and invitees. Having hosted national and international conferences, events, fests, placement drives, and tournaments, the primary two fully furnished guest houses of the campus offer a pleasant stay to esteemed personnel.

ABOUT

CAREER DEVELOPMENT CENTRE

- **NIT Rourkela's CDC:** Cornerstone of Professional Growth: Led by faculty, student coordinators, and staff. Seamlessly manages placements, internships, and training programs
- **Collaborates with industry partners for diverse opportunities:** Core industries, software development, analytics
- **Placement Team:** Industry Interface, organizes and supports campus placements, provides tools and support for successful careers
- **Training Committee:** Empowering Students, offers comprehensive career counselling sessions, helps students define career goals and aspirations
- **NITR CDC:** Beacon of Opportunity: Guides students towards bright and fulfilling futures

FACILITIES

- **State-of-the-Art Infrastructure:** Fully-computerized, air-conditioned office, well-equipped auditoriums, lecture halls with latest tech, soundproof rooms, and conference halls.
- **Dedicated Recruitment Facilities:** Exclusive spaces for smooth group discussions and interviews.
- **Guest Accommodation and Support:** Subsidized on-campus housing for recruiters with pick-up/drop-off and campus tours.
- **Streamlined Process:** Student coordinators provide complete assistance throughout the placement process.



PLACEMENT PROCEDURE

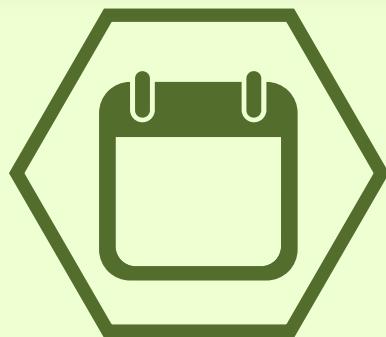


INVITATION

The **Career Development Centre** sends an invitation to companies and organizations providing comprehensive information about the institute and its departments. Upon receipt, companies fill out the Job Notification Form.

SLOT ALLOCATION

The CDC and companies coordinate to fix a convenient date for recruitment procedures i.e. tests and interviews, after considering factors like student preference, job profiles etc.



PRE-PLACEMENT TALK

The Company may organize a Pre-Placement Talk for interested and eligible students appearing for the recruitment process to give them an insight into the company and specific job profiles.

TEST & INTERVIEW

Candidates undergo an online test followed by interviews conducted by the company's recruiting panel. The structure and duration of interview rounds may vary.



RESULT DECLARATION

Upon completion of the recruitment process, the Company/Organization submits the final list of selected students.

INTERNSHIP AND TRAINING

NIT Rourkela offers ample opportunities for budding engineers, fostering excellence in industries and research organizations globally. The Career Development Centre facilitates student-industry interaction, providing avenues for interviews, lectures, and exposure to cutting-edge technologies in R&D.

A 2-month summer internship program immerses students in real-world industrial environments, offering vital insights into corporate culture and early professional experiences.

With a provision for a 6-month internship, NIT Rourkela offers enhanced opportunities for students to expand their horizons and gain valuable work experience before entering the workforce. In their final year, students can undertake a 6-month internship, constituting a full semester which will give them enough exposure to make them industry ready before taking up jobs.

RESEARCH INTERNSHIPS

Our students actively pursue research internships, securing prestigious international scholarships such as MITACS, DAAD, S N Bose Fellowship, GSOC, Charpak France, MLH, and others. Additionally, they gain valuable research exposure at renowned national and international universities, including premier institutions such as IISc Bangalore, ISI Kolkata, TIFR BARC, DRDO, and various top IITs.



STUDENT ACTIVITY CENTRE

Life at NITR goes way beyond classrooms and laboratories. The institute offers excellent opportunities to the students to participate in co-curricular and extracurricular activities through its Students' Activity Centre (SAC), which intends to serve as the center of all student activities on campus.

These flagship events attract participants from all over the country. NIT Rourkela is also involved in the overall organization of the Inter-NIT competitions, thus spreading the idea of cooperation and mutual harmony.

It aims to foster a well-balanced development of its members through excellence in extra-curricular activities along with their academic achievements. A number of clubs comprising students across all spheres of NITR carry out activities in affiliation with the SAC, the major activities being the Annual Technical, Sports and Cultural festivals.

All the SAC Activities are clubbed into 4 societies namely

1. Technical Society
2. Film and Music Society
3. Literary Society
4. Games and Sports Society

CLUB CULTURE

TECHNICAL CLUBS

NITR boasts of several clubs catering to the needs of the budding minds in the domain of computer science, electronics and electrical. While the club for Automation and Robotic Control (Cyborg) serves the interests of the students in the field of automation design and robotic control, clubs like GDSC, APS, OpenCode, ML4E, Game To Aim power the culture of different domains of Modern day Technology in the campus.

CORE CLUBS

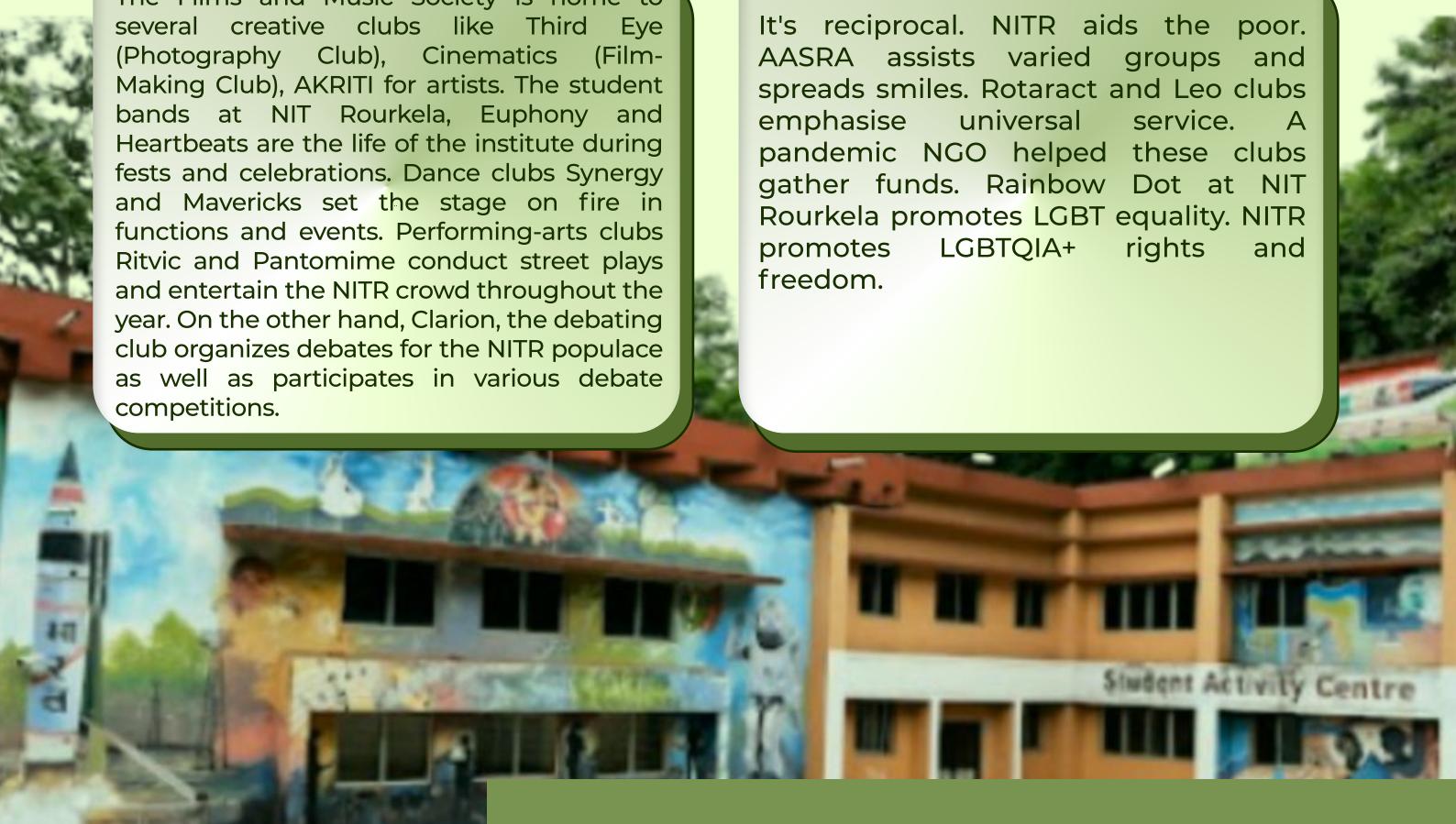
NIT Rourkela boasts prestigious engineering teams. Black Mamba Racing, the ATV team, aced eBAJA SAE 2024 with top rankings in validation, design, and presentation. Similarly, Formula Student's RoadRunner team excels in Formula Bharat, renowned for crafting efficient racing cars. In Chemical Engineering, the AIChE chapter maintains global prominence, securing international titles like Chem-e-Jeopardy champion. Clubs like Steellun, CEST, InCers, and IICHE actively bridge the gap between students and industry professionals in metallurgy, civil, and chemical engineering through events and interactive sessions.

Creatives Cultural & Literary Clubs

The Films and Music Society is home to several creative clubs like Third Eye (Photography Club), Cinematics (Film-Making Club), AKRITI for artists. The student bands at NIT Rourkela, Euphony and Heartbeats are the life of the institute during fests and celebrations. Dance clubs Synergy and Mavericks set the stage on fire in functions and events. Performing-arts clubs Ritvic and Pantomime conduct street plays and entertain the NITR crowd throughout the year. On the other hand, Clarion, the debating club organizes debates for the NITR populace as well as participates in various debate competitions.

Social Service and Gender Inclusivity

It's reciprocal. NITR aids the poor. AASRA assists varied groups and spreads smiles. Rotaract and Leo clubs emphasise universal service. A pandemic NGO helped these clubs gather funds. Rainbow Dot at NIT Rourkela promotes LGBT equality. NITR promotes LGBTQIA+ rights and freedom.



FESTS



INNOVISION

Innovision, NITR's annual techno-management festival, is a summit showcasing theoretical and practical aspects of engineering and management, exposing participants to latest trends and innovations. It attracts participants nationwide, hosting guest lectures by industry and academic experts, robotics events, and various technical events testing and enhancing students' technical skills. With pro shows and workshops, Innovision aims to be eastern India's biggest techno-management festival.



COSMOPOLITAN

The Cosmopolitan festival at NIT Rourkela celebrates cultural diversity through folklore, dance, drama, music acts by students from across India, reflecting their rich heritage. The campus transforms into a melting pot of customs, rhythms, cuisines. It's an immersive experience unveiling new dimensions of human expression, with food stalls offering a culinary journey through the country.



NITRUTSAV

NITRUTSAV, the cultural festival of NIT Rourkela, is a celebration of the human spirit, attracting thousands with performances by renowned celebrities and crowd-pullers, making it one of the biggest cultural events in eastern India. Major artists like singers Pritam, Kailash Kher, Indo-Fusion band Euphoria, and rock bands like Pentagram and Underground Authority have graced the festival.



VRIDDHI

VRIDDHI, NIT Rourkela's annual sports fest, epitomizes sporting excellence. Attracting athletes and gamers institute-wide, it fuses physical prowess, mental acuity and enthusiasm. Beyond competitions, VRIDDHI offers insightful guest lectures and workshops. This holistic festival fosters a vibrant community pursuing excellence beyond academics.

OUR RECRUITERS



OUR RECRUITERS



OUR RECRUITERS



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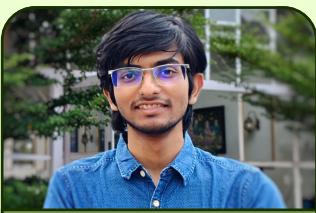


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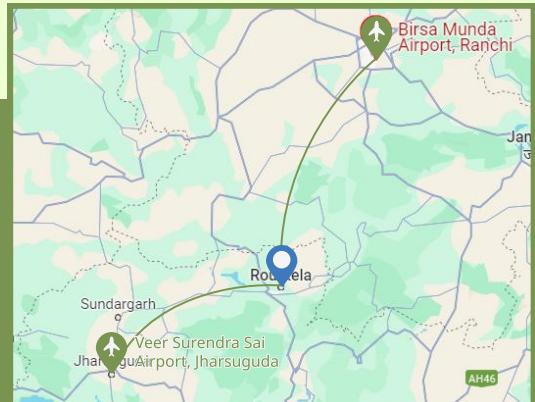
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REACH US

BY AIR

Located 120 km away is the Jharsuguda Airport, whose flights connect major cities like Delhi, Bengaluru, Kolkata.

The nearest International airport is the Biju Patnaik International Airport, Bhubaneswar.



BY RAIL

The Rourkela Railway Station, located just 5 kilometers from the campus, is a key transportation hub with extensive connectivity to major cities like Delhi, Mumbai, and Kolkata.

Renowned as one of the region's primary stations, it accommodates numerous express and superfast trains, facilitating convenient travel for passengers.

BY ROAD

Rourkela boasts highly developed road infrastructure.

Smooth connectivity with cities like Bhubaneswar, Ranchi, Kolkata etc. is ensured.

Efficient inter-city and intra-city bus services cater to commuters' needs.

National Highway 143 and State Highway 10 pass through the city.



Location

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