





20
Departments

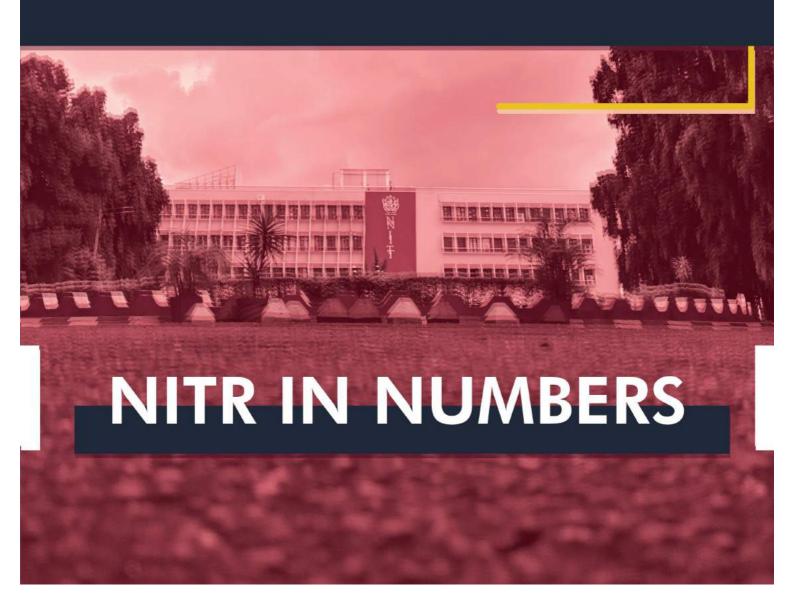
9

Courses

1200

Students each year

**Premier Institute For Placements** 



# From the Director's Desk

- Prof. Animesh Biswas



On behalf of National Institute of Technology, Rourkela, it is my pleasure to 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. It provides an optimum blend of theory and practical, with a strong bias on industrial and managerial applications. In more recent years, an introduction of modern computational tools and digital equipment have further improved the programme. While the depth of training in engineering & management 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 mix of technology and management skills that a NITRian possesses makes him an invaluable asset to any organization he works for.

With seventeen departments awarding undergraduate and postgraduate degrees in engineering, science, and management, we are one of the most diversified institutions in the nation. Whether you an established company or a young and budding startup, whether your business is in coal mining or in data mining, whether the job you are offering is in the shop floor or in R&D, we have the right candidate for you. We give you the freedom and extend to you all physical facilities to carry out your own recruitment process on our campus. In case you have a time constraint or any other inconvenience, our students will have no problem meeting your selection team in another city. 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 enduring relationship between our two great institutions.



#### From the

### Head, Placement Centre

- Prof. Umesh Chandra Pati

On behalf of National Institute of Technology, Rourkela, it is my pleasure to invite you to our beautiful academic campus for conducting campus selection programme for our students. It is my privilege to mention that this institute was established in 1961 and over the years it has earned recognition not only in India but all around the globe.

Our Institute enjoys the status of Institute of National Importance. NIT Rourkela has a rich tradition of pursuing excellence and has continually re-invented itself in terms of academic programmes and research infrastructure. Students are exposed to challenging research based academics and a host of sports, cultural and organizational activities on its vibrant campus. The presence of world class facilities, vigorous institute-industry collaborations, interdisciplinary research collaborations and industrial training opportunities help students of NIT Rourkela to excel and be ahead in the competitive professional environment. In the last fifty years, our Institute has produced many illustrious alumni, whose contributions at national and international levels have been significant. The alumni of our Institute are often sought after for coveted positions in the realm of business, academics and research. We consistently maintain an exemplary recruitment record. Our graduates and postgraduates have been selected by leading national and multinational corporations and research institutes.

I would request you to kindly visit our campus for selecting candidates of your choice on any date convenient to both of us. Expecting our interaction to grow over the years to come.

# From the Prof. In Charge, Placement Centre

- Prof. Pankaj Kumar Sa



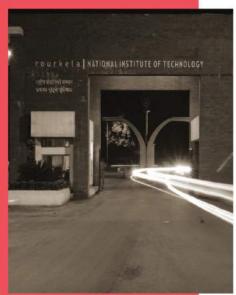
On behalf of The Training and Placement Cell, I invite you to our sprawling campus. NIT Rourkela has been known for its hospitality and as an ardent promoter of industrial relations since many decades now. As campus placements form one of the most important and memorable events for any student's career path and is most definitely the backbone of any institute's legacy, we, at T&P Cell leave no stone unturned in facilitating Placement activities all round the year for all the students. Training and Placement Centre, NIT Rourkela is well equipped with the facilities required for smooth conduct of recruitment activities. 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 2019-20, and also that your expectations are met at every level.

The institute has maintained its spirit of culture and legacy of over five 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.

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Since its inception in 1961, NIT Rourkela has worked towards becoming one of the most renowned technological institutions in the country. The institute has attracted many of the brightest minds in the country. Located at the vibrant conjunction of Rourkela's industrial landscape and civilization, NIT Rourkela has grown to be one of the most respected names in the field of technical, scientific and management education in the country. Today, NIT Rourkela is not only recognized as an institute of national importance along with the IITs and IIMs, but also fares brilliantly as the 2nd best NIT since the past three years as ranked by NIRF-MHRD. The cumulative accomplishments of its highly talented and widespread alumni are in a large measure responsible for the ever-growing tradition and reputation of NIT Rourkela as one of the best engineering and research institutions in the country.



#### **VISION**

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

#### **MISSION**

To advance and spread knowledge in the area of science & technology, so that mankind achieves its true potential.

#### **PRINCIPLE**

Every faculty, staff, and student of NIT Rourkela is passionately committed to the mission of making India a world leader in technology and science and nurtures this commitment with honesty, hard work and passion.

#### WHY RECRUIT AT NITR



#### INSTITUTE OF NATIONAL IMPORTANCE

NIT Rourkela distinguishes itself not only as another institute which encompasses engineering courses, but as one of national importance, by virtue of an act of parliament (NIT act - 2007), which is here to serve a larger purpose where getting a degree is not the primary focus. The idea of creating better technologists, better leaders, and most importantly better citizens suffuses through the teaching pedagogy of the curriculum. As a result, NIT Rourkela has consistently won top awards and has always been ranked among the top Technical Institutes of the country. It has been ranked 2nd among all NITs and 16th among all technical institutes in India by MHRD. NIT Rourkela was ranked 17th "Best Tech School" by DQ-CMR Survey 2013-14. ABP News awarded the institute with the "Outstanding Engineering Institute of Eastern India Award" in the year 2014, 2013 and 2012 with our ex-Director Prof. S.K. Sarangi, awarded with "Education Leadership Award" in 2013.

NIT Rourkela offers a plethora of choices to its students in the field of engineering, architecture, sciences, development studies, and management. The departments offer a wide range of courses which are designed to meet current requirements of the industry and the academia. The curriculum encourages students to apply theoretical learning to real-life scenarios in the form of case studies, R&D, and live projects. The key principle behind all of the activities taken up by the students is aimed at their holistic development to build a better individual and a better personality as a whole and not merely a good student.

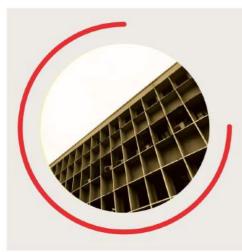
DIVERSITY IN CURRICULUM

#### A VIBRANT CULTURE

It goes with the saying that as long as there is a spirit within, there is a world waiting to be explored. It has been more than 50 years since the establishment of NIT Rourkela, and it is the spirit of this institute that has remained intact, which NITRians imbibe and carry forward wherever they go. The hallmark of this spirit has been not to walk on the path that has already been taken but to establish new routes; to take the less trodden path and be the first to respond to the needs of the people and the nation.



#### INFRASTRUCTURE



With a gigantic 647 acres area, covered by lavish greenery, the campus of NIT Rourkela is situated right at the Junction of hills of Rourkela. The campus is embellished with numerous and rapid development happening in all nook and corners of the institute making it more enhancive. It has been well rendered with all the modern amenities. The entire campus is connected by a state of the art network with 5000 nodes. Every student and faculty member has a networked personal computer at his/her disposal. With an internet bandwidth of 180Mbps and 850 Mbps intranet bandwidth, NIT Rourkela hosts one of the most advanced networks in the country. Furthermore, the institute has well-maintained seminar halls as well as facilities for video conferencing. The institute also has Wi-Fi connectivity and e-classrooms available for online lectures.

#### CENTRAL LIBRARY

Named after the former Chief Minister of Odisha, it serves as the powerhouse for research and studies for the entire institution. Spread over three floors, the library is an invaluable resource with 61,800 books and 20,000 back volumes of periodicals. It is automated with an integrated library software package called Libsys – LSmart and modernized with latest Radio Frequency Identification (RFID) based automation system. The online repository hosted by the library also hosts ever paper, dissertation and thesis published by the students and faculty.





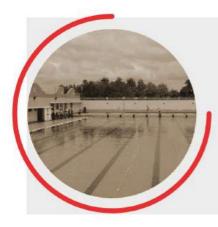
#### **COMPUTER CENTRE**

The Central Computer Centre offers round the clock services with an uninterrupted power supply to students on the campus with the latest infrastructure supporting research and studies at the campus. The computer centre hosts the latest IBM servers with a storage capacity of up to 100TB. In a huge boost to the already advanced computing capacity, a 2 teraflops High Performance Computing (HPC) System has been installed. An L-2 Datacentre is also being installed.

#### **AUDITORIUM & LECTURE HALLS**

The campus hosts a centralised air conditioned auditorium, The Bhubaneswar Behera Auditorium, with a seating capacity of over 1000. The campus also has a Lecture Gallery Complex with different galleries having seating capacities of 60, 120 and 240 along with 12 other conference rooms and the Pranakrushna Parija Auditorium with a seating capacity of 300, all of which are adequately equipped with uninterrupted power supply, air conditioners and LCD projectors. Facilities, round the clock are available to conduct tests online.





#### SPORTS FACILITIES

All work and no play make Jack a dull boy indeed. At NITR, games and sports receive equal attention as any other academic activity. The sporting infrastructure, one of the best among NITs, consists of the Aquatic Sports Facility, The Dilip Tirkey Hockey Stadium, The P. T. Usha Sports Complex and The Sachin Tendulkar Cricket Stadium, all replete with floodlights, wherever necessary. A separate body for Games and Sports regulates, manages and organizes sporting events like the Annual Athletic Meet, Inter and Intra-Hall sports activities and various cricket and football leagues.

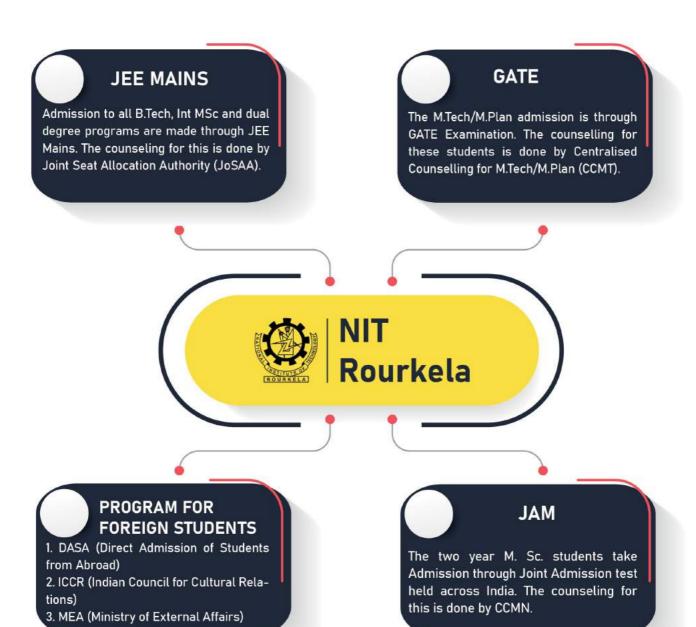


PPA is another auditorium in NITRKL apart from BBA to organise seminar and workshop.



Vikram Sarabhai Hostel is acclaimed as one of the largest hostel in India.

#### **ADMISSION PROCEDURE**



#### **DEPARTMENTS**



#### BIOTECHNOLOGY AND BIOMEDICAL ENGINEERING

Established in 2007, the Biotechnology and Biomedical Engineering Department thrives to produce quality engineers and technologists in the sector of biomedical engineering.

- With robust architecture, sophisticated instruments, high-quality research topics, and published articles department of Biotechnology and Biomedical Engineering is one it's kind with several students pursuing research internships abroad each year.
- The department is equipped with high-end instruments like FACS machines, UTMs, DSC, spectrofluorometer, FTIR, Bioreactors, and confocal microscope.

#### 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.
- Equipped with laboratories like Geotechnical, Structural, Highway Engineering, Hydraulic Machines, and Environmental Engineering managed by respected professors and trained technicians. The curriculum includes modern-day technology relevant courses like Finite Element Method, Computational Fluid Dynamics, and Remote Sensing
- NITR's Civil Engineering Department is one of the front-runners when it comes to publishing papers for the betterment of society owing to its meticulous students and excellent faculties.





#### 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 Fertilisers in the year 1981.

- Above and beyond the classes, our students carry out independent researches through project and thesis work which often get published in various journals of national and international repute.
- The department's laboratories facilities familiarize the students with Modern-day industrial processes namely, Mass Transfer, Heat Transfer, Biochemical Engineering, Fuels and Combustion, Fluidisation boasts of high-quality sophisticated types of equipment like the GCMS Apparatus (Gas Chromatography Mass Spectroscopy), a miniature distillation column and several others.

#### **CERAMIC ENGINEERING**

Established in 1994, India's only integrated program in Ceramic Engineering among all NITs

- Department has state of the art laboratories with modern equipment for chemical analysis, fuel testing, workshops well-stocked with high temperature furnaces and facilities dedicated to work on refractories, cement, glass, bioceramics and whiteware.
- Presence of equipment such as 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. It witnesses big shots like TRL Krosaki, Kerneos aluminate, Aditya Birla Insulators, Tata steel, NALCO, CGCRI making it a common platform for students, scientists and industrialists.





#### COMPUTER SCIENCE AND ENGINEERING

- One of the most coveted branches in NITR. Established in 1987.
- State of the art laboratories caters to both training & research needs of the students.
- Guided by highly qualified and energetic faculty members with diverse research interests
- Sophisticated laboratories on Artificial Intelligence, Soft Computing, Information Security, Parallel Algorithm, Computer Networks and Cloud Infrastructure provides an excellent base for research activities.
- One of its kind MHRD sponsored research projects currently going on: Digitisation & modelling of steel microstructure, Blind Digital Forensics for Cyber Forgery Detection.

#### **ELECTRONICS AND COMMUNICATION ENGINEERING**

The Electronics and Communications Engineering Department is envisioned to be a nationally acclaimed destination for undergraduate and post-graduate studies and serve as a knowledge hub and expertise for society.

- The curriculum of department at the institute covers subjects inclusive of electronic circuits, microprocessors, digital signal processing, image processing and computer vision, soft computing, analog communication, digital communication, mobile communication, VLSI, Embedded Systems, electronic, analytical instrumentation, and several others.
- The collaborations of the department include projects sponsored by prestigious establishments like SERB, ER & IPR DRDO, ISRO, IMPRINT INDIA, Deity and consultancy services to firms like IMMT Odisha, Sankalp Semiconductors, Jindal Steel and Mines.
- The department hosts state-of-art laboratories in the fields of IoT, VLSI, Communication, Signal Processing, Ground Penetrating Radar Systems, Microwave, and Machine Learning.





#### **ELECTRONICS AND INSTRUMENTATION ENGINEERING**

Electronics and Instrumentation branch is the Sister branch of Electronics and communication. The department has laboratories catering to all the subjects of this stream. The department also ensures that the students are taken for industrial visits to oil, petroleum, petrochemical, steel and defence manufacturers.

- The curriculum of this branch hosts subjects like digital VLSI design, analog and mixed signals VLSI circuits, advanced instrumentation and signal conditioning, advanced process control, testing and verification of VLSI circuits, IoT and application, low power VLSI design, RF and microwave integrated circuits.
- Current and past Industrial sponsored projects by some of the prestigious establishment are DRDO, ISRO, EP&IR, IMPRINT INDIA, SERB, SANKALP SEMICONDUCTOR, NALCO, and JSPL.
- The curriculum exposes the students to software such as Node-RED, HTML, Python, MATLAB, Assembly Language and higher-level languages to coding on various microcontrollers and microprocessors.

#### **ELECTRICAL ENGINEERING**

The Department of Electrical Engineering has been one of the first disciplines to be taught at NIT Rourkela and has been a pillar of strength in the engineering community of the institute. With the enthusiastic participation of faculty and students, it has been a centre of excellence in academics and research development.

- The department hosts Centers of Excellence in Industrial Electronics & Robotics and Renewable Energy Systems with participating faculties from various other departments to boost interdisciplinary research.
- It covers some emerging and challenging topics such as Artificial Neural Networks and Soft-Computing in EE, Nonlinear Control and Modelling of Power Converters, Wireless Technologies, Robotics, and Computer Vision.
- It facilitates the students to hands knowledge on modern-day relevant technologies with well-equipped labs such as Soft Computing Lab, Control and Robotics Lab, High Voltage Lab, Power Electronics Lab, and Embedded Systems Lab.





#### FOOD PROCESSING ENGINEERING

The Department of Food Process Engineering started with an aim to training individuals to attain prowess in the technical as well as industrial aspects of the food domain. The branch strives to match with the research standards at NIT Rourkela keeping in mind the prerequisite industrial requirements.

- Labs like Food Chemistry Lab, Dairy processing lab, Air conditioning and refrigeration lab, fluid dynamics lab, unit operations lab among several others expose students to Modern-day Industry relevant technologies.
- The labs are equipped with myriad equipment like Infrared dryer, Texture analyzer, Colorimeter, Hammer mill, Soxhlet extractor facilitate the students to gain experience in Industrial Processes.
- Several seminars and talks are organised on Transport process and kinetics, Food Nanotechnology, Product development, Ingredients innovation, and Computer aided design.

#### INDUTRIAL 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.

- The Department offers facilities for design, including a CAD, featuring 3D design software like Solid Works 2075, CATIA V6R2074 and MasterCam, Analysis lab with ANSYS 75.0, an Art and Aesthetics lab housing traditional photo editors, CINTIQ 24 WACOM touch tablet and content creators Corel Draw, Adobe Photoshop CS6, and Adobe.
- Product design and Creative automation lab equipped with-end technological machines and devices like FaroArm Fusion 7-axis, RP System Dimension 3D printer SST7200es, Arista 6XT 6 axes articulated robot and SCARA.





#### **MECHANICAL ENGINEERING**

Since its inception in 1961, the department has been nurturing its talent through its courses complying with the recent technological developments and specialized labs and being mentored by the nation's uniquely qualified faculties.

- The department is equipped with laboratory facilities like CAD/CAM, Mechanical Vibrations, CFD, Precision Engineering, Industrial Refrigeration and Cryogenics, Hydraulic Machines, Heat Transfer, Automobile Combustion Engines, Polymer and Composites, Metal Machining, Non-conventional Machining, and Metal Forming.
- The department has close scientific and technical relationships with industrial majors like SAIL, OCL, L&T, TATA Steel, TATA Refractories Limited, BOCL, NALCO, etc.
- Besides this, the department also has clubs which work in the emerging fields of automotive and utilisation of renewable energy and participate in national and international level competitions.

#### METALLURGICAL AND MATERIALS ENGINEERING

Metallurgical and Materials Engineering, established in 1963 stands firm in its commitment to producing the finest metallurgical engineers in the country.

- Industrial collaborations for multiple research projects with companies like Tata Steel, Dalmia, and Hindalco.
- Equipped with sophisticated instruments in the Process Metallurgy, Physical Metallurgy, and Advanced Material Laboratories. It also boasts of several high-quality pieces of machinery to further facilitate industrial research
- Implements research and innovative technology development for undergraduates by installing and improving Metallography, Nano-materials facilities, and Computational Metallurgy.





#### MINING ENGINEERING

The Department of Mining Engineering boasts the modern and sophisticated equipment for physical experimentation viz. DTA, AAS, Computer Controlled Compression Testing Machine, Digital Bomb Calorimeter, UV-visible Spectrophotometer, GPS, Total Station etc.

- It also has the latest computing facilities with state-of-the-art software like Surpac, Flac 2D & 3D, Udec, Galena, Labview, Ventsim, Petrasim, Whittle, ArcGIS etc.
- It houses state of the art laboratories on Rock Mechanics and Ground Control, Geo-Mechanics, Mining Geology, Mine Surveying, Mine Environment and Safety, Mineral Processing and Solid Fuel. With diversified research interests, the department undertakes a number of MHRD, NIRM, CSIR and DST sponsored projects every year.
- 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.

#### DEPARTMENT OF CHEMISTRY

- Courses offered: M.Sc., Int M.Sc. and PhD
- Well sophisticated laboratories: organic, inorganic, and physical chemistry. Special emphasis on heterogeneous/ homogeneous catalysis, environmental pollution control, adsorption studies, organic synthesis, electro-chemicals, nanoparticles, etc.
- 16 sponsored research projects currently being worked upon by the faculties and research scholars.
- Funding agencies: DST, CSIR, DRDO, FIST(CST), DBT, BRNS, etc.
- State-of-art laboratories and some notable equipment like NMR, ESI-MS, Cyclic voltammetry, Surface area analyzer, UV-vis, CHNS and FTIR spectroscope.





#### **DEPARTMENT OF MATHEMATICS**

The Department of Mathematics offers 5-year integrated and 2-year Post Graduate M.Sc. courses and doctoral research program which contain pure, applied and computational aspects of mathematics.

- The students get admission by scoring high ranks in JEE mains and JAM.
- Apart from sharing programming and algorithm courses with their B.Tech counterparts, they have multiple dedicated labs in each semester to solve mathematical and statistical problems using Matlab and R.
- With the addition of more applied mathematics subjects like statistics, statistical and predictive modelling, discrete mathematics and soft computing, the students have been faring very well in those areas.
- $\bullet$  Most students also do their summer internships and final year projects in the field of analytics and ML.

#### DEPARTMENT OF PHYSICS AND ASTRONOMY

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 well-equipped laboratories such as X-Ray Lab, Soft Condensed Matter Lab, Thin Film Lab, Electro Ceramic Lab, Cryomagnetic Lab, Spectroscopy lab, Composite Lab and Computational Physics Lab.
- The department has collaborated with DRDO, UGC-DAE, DST-FIST, CSR, DPT, NGC, UGC-DAE-CSR (Kolkata), UGC-DAE (IUAC-New Delhi), MINISTRY OF ENVIRONMENT & FOREST, and NEW DELHISTIO with Penn State, the USA for research.





#### LIFE SCIENCES

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

- Extensive infrastructure has sophisticated and well-equipped laboratories.
- Laboratories Biochemistry and epigenetics, cancer and cell biology, microbiology, protein biotechnology, RNAi and bioinformatics, Immunotechniques, food processing.
- Research areas Biofilm and quorum sensing in bioremediation(1st of its kind among all NITs), epigenetics, biotechnology, lipids as signalling molecules, tissue engineering, biofilm, drug, vaccines, and cancer.

#### **HUMANITIES AND SOCIAL SCIENCES**

One of the oldest departments of the institute that adds a humane outlook to this technical institute established in 1961. The Department offers a full-time MA Programme in Development Studies and also offers PhD Programme in the disciplines of Anthropology, English, Psychology, Economics, Sociology, and Sanskrit.

- Apart from the regular academic activities, the department also houses two Centers of Excellence(CoE) for research in the areas of 'Tribal Development' sponsored by Ministry of Tribal Affairs, Govt of India and 'Public Health and Nutrition' sponsored by UNICEF.
- Students also acquire some basic theoretical & technical skills of Data Analytics and get training of statistical software packages like SPSS, STATA, MS Excel e.t.c.
- Students undergo mandatory Internship/Project-work to get industry/ research exposure. Including internships in ground-level NGOs, Corporate Sectors (CSR), Research Consultancy firms, Think Tank, Academic and Research Institution (e.g. IITs, IISc, IIMs), Government Departments like Ministry of Tribal Affairs, NITI AAYOG, Ministry of Labour & Employment and UNICEF & UNDP.





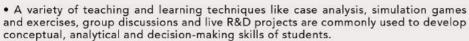
#### EARTH AND ATMOSPHERIC SCIENCES

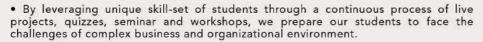
- NIT Rourkela is the first and only NIT in India to offer a Master's Programme in Development Studies.
- This program has been operational from the academic session 2010-11.
- The Department also offers open elective courses to the engineering students of the institute.
- With diversified research interests, the department undertakes a number of MHRD, NIRM, CSIR and DST sponsored projects every year.

#### SCHOOL OF MANAGEMENT

The School of Management, NIT Rourkela was established in the year 2010 with an objective to develop managerial innovation and leadership talent of the students. The department offers two years of Masters in Business Administration (MBA) and Doctoral program in the specializations of Finance, HR, Marketing and Operations.











#### PLANNING AND ARCHITECTURE

The Department of Planning and Architecture started its journey at NIT Rourkela in the year 2013 with the objective of amalgamating the aesthetics and technology together into a piece of art, in a creative way, not only to fulfil the societal need of shelter and to solve the infrastructure problem but also to take care of the emerging concern of energy and environmental issues.

- The department sees the architect less as a sole creator of an autonomous building than as a collaborator in shaping the physical environment. Studios of increasing complexity form the base of architecture and planning curriculum.
- Faculty members have diverse research interests and they conduct basic and applied research in the area of sustainable architecture, energy-efficient architecture, green architecture, acoustics, illumination, landscape architecture, interior design, urban planning, transportation planning, infrastructure planning, environmental planning and housing.

#### INSTITUTE INDUSTRY RELATION

#### Technology Innovation and Industry Relations Center (TIIRC):

Technology Innovation and Industry Relations Center (TIRC) aims to facilitate incubation of small start-ups from students of NIT Rourkela and corporate agencies to organize research work along with providing the students of NITR a golden prospect to get exposed to real-world applications of their research. The companies registered at TIRC would provide an opportunity for students as well as professors to work in a collaborative environment to carry out R&D and translate laboratory experiments to marketable products. Limited manufacturing and marketing is also a prospect before moving the production to a largescale factory.

Also housing the Training & Placement Centre, it has office spaces, a computer lab and various other facilities for carrying out training and recruitment activities. TIIRC has registered many startups by NITR students in recent years. Some of them have been mentioned below.

#### PHOENIX ROBOTIX

Founded by Amiya Kumar Samantaray, is the first Electronics/Electrical Manufacturing startup of NITR. Phoenix Robotix has a very dedicated group of people who recently added a silver feather to their cap by being the finalists of Digital India Campaign and presenting their work in front of the President of India. Although it deals mainly in the field of robotics and automation, it has also





#### **ESTINNO**

Estinno is a start-up by 3 Undergraduate students of NIT Rourkela. They are a product development team that primarily deals manufacturing of smart LED bulbs, tube lights, etc. They are a team that is thriving diligently to deliver products that at par with the international standards. This group of students developed VORTEX: the world's smallest washing machine and got significant recognition for their work.

#### **FASTECH FASHIONS**

Fastech Fashions is one of the most successful startups to have been incubated at TIIRC. Fastech Fashions is a clothing label that satiates demands of clothing of various genre. Basking on grabbing the rare opportunity to witness a video conference with the Honourable Prime Minister of India, in the wake of being a part of the Make in India programme, Team Ovotees have ventured on a path to become the role model for many people and startups to bud and grow, especially in Odisha.



#### **NOTABLE ALUMNI**

C. P. Gurnani is the CEO & Managing Director of Tech Mahindra. In 2018, he was the highest-paid executive in India according to the Fortune magazine with an annual package of ₹150 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.





Nalini Ranjan Mohanty is an Indian bureaucrat and former Chairman & Managing Director of the Hindustan Aeronautics Limited (HAL). A Fellow of the ASI and the Institution of Engineers (India), Mohanty received the Ruchi Prativa Samman in 2003. The Government of India awarded him the fourth highest civilian honour of the Padma Shri, in 2004, for his contributions to Indian industrial sector.

**Sandip Das** is an Indian corporate executive in the telecom business. He serves as a senior advisor at Analysys Mason and a member of the advisory board of Sterlite Technologies. He has served as Deputy Managing Director of Hutchison Essar (now Vodafone India), Executive Director and Chief Executive Officer of Maxis Communications, and headed Reliance Jio Infocomm.





**Ajit Andhare** is an Indian business leader, entrepreneur, currently Chief Operating Officer at Viacom 18 Motion Pictures, the motion pictures business of Viacom 18 Media Pvt Ltd. An alumnus of Indian School of Business, he has worked at HUL & BBLIL, Brooke Bond Lipton, Hindustan Lever & founded Raghav Bhal's Capital 18 funded Colosceum Media.

**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 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 youngest ever appointed Ambassador and served in the Indian Embassy in Venezuela as the ambassador from July 2015 to March 2018.





**Shrikant Vaidya** serves as the Chairman of Indian Oil Corporation Limited since July 2020. A Chemical Engineering graduate of Batch of 1985, Mr Vaidya, prior to his elevation was heading as Director (Refineries) of IOCL, responsible for spearheading the operation of the 9 refineries of IOCL. Shri Vaidya has over 3 decades of extensive experience in all the facets of refinery and petrochemicals operations, which includes the commissioning of the largest Cracker Plant in India viz. Panipat Naphtha Cracker Complex. He is well recognized as a people's leader with strong technological prowess and business acumen.

#### **ACHIEVEMENTS OF NITR**

- NIT Rourkela proves its mettle by securing the prestigious tag of 2nd Best NIT since 2017 as per MHRD's NIRF Rankings.
- 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 stake holders in the field of scientific and industrial research for technology development with special emphasis on Fiber-Reinforced Polymer (FRP) Composites.
- The leading NIT in number of consultancy projects and sponsored research project.
- Radon Transport Mechanism in Soil may Predict Earthquake Reveals NIT Rourkela Researcher. Funded by BRNS (Board of Research in Nuclear Sciences), Dept. of Atomic Energy, Mumbai
- 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 2018 and emerged as Semifinalists at Robosub Competiton held at San Deigo in 2019.
- AICHE Chapter of NIT Rourkela bagged the Second Runners up in the AIChE ChemE Jeopardy Competition and the Undergraduate Student Video Competition (GUSVC) at the AIChE Annual Student Conference 2019 held at Orlando, Florida, USA.
- NIT Rourkela has been investing in projects like Organic framing and set up a solar voltaic plant contributing to sustainable development.

#### Student's Life

Life at NITR goes way beyond classrooms and laboratories. The institute offers excellent opportunities to the students to participate in co-curricular and extra-curricular activities through its Students' Activity Centre (SAC), which intends to serve as the nerve center of all student activities in the campus. 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 satellite clubs comprising of students across all spheres of NITR carry out activities in affiliation with the SAC, the major activities being the Annual Technical and Cultural festivals. 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.



#### **IN**NOVISON



The annual techno-management festival of NIT Rourkela, Innovision is a summit of the theoretical and practical aspects of engineering along with management with an exposure on the latest trends and innovations. Attracting participants from all over the country, it hosts workshops, guest lectures conducted by the best in the industry and academia, robotics events, paper presentations, and various other events, all aimed at testing and enhancing the technical acumen of the students. From Pro shows to workshops, Innovision makes sure that the technical festival of NITR is the biggest Techno-management festival of eastern India.







**NITRUTSAV** 

The Cultural Festival of the institute, NITRUTSAV has been a perennial feature of the city of Rourkela poised in its own unique way between the pedestals of industry and civilization. It's a celebration of the human spirit, thoughts, and ideas. The thousands of people that are drawn in by some of the biggest celebrities and crowd pullers make Nitrutsav one of the biggest cultural events in the eastern region. Celebrities invited include singers Pritam and his Metro Band, Kailash Kher, Kunal Ganjawala, KK, Sonu Nigam, Pakistani band Jal, Indo-Fusion Band Euphoria, Indipop band Aryans and a number of other Rock bands such as Pentagram, Underground Authority.







SUNDUM

#### **CLUB CULTURE**

#### CIRCUITAL



There are many clubs in NITR to cater to the needs of budding minds of computer science, electrical and electronics sectors like Cyborg, Spawn, Microsoft Campus Club, Plugged In, Team Tiburon and CodeHub. The Club for Automation and Robotic Control (Cyborg) is an independent entity to serve the interest of students of the institute in the field of automation design and robotic control. The Microsoft Club established by the Campus Connect Program of Microsoft India is a unique initiative to build better industry-student interface. Similarly, the clubs Spawn and CodeHub looks to improve the coding culture in Institute.

#### **CREATIVES**

It's often said that most creative minds are found in engineering colleges and for that, we have clubs like Third Eye for Photography, Cinematics for film-making, Chitraang and Aakriti for Painting, and Design Tab for design. Third Eye is a Photography Club aimed at nurturing talent and setting standards in the art of photography. It is aimed at introducing the fundamental skills in photography mechanics. Chitraang brings together the best of artists of the institute to decorate the campus. Their works include wall paintings in SAC and various other hostels and eateries of the campus.



#### NOTAN HIP HOP

#### DANCE, MUSIC AND DRAMA

The interests, hobbies, and passions of the students are catered to by SAC. Aspiring musicians are provided with ample scope and musical instruments and music rooms for practice. The student bands at NITR like Euphony and Heartbeats light up the stage during various events and functions. Synergy and Mavericks are the two dance groups, which set the stage at NITR on fire. Together they formed SnM Crew which won the silver medal at Indian Hip Hop Championship in 2017. The performing-arts group 'Ritvic' and 'Pantomime' conducts various street plays and productions to entertain the NITR crowd.

#### LITERARY AND DEBATING

Degree 361 is the official magazine of NITR, which lets students showcase their writing, drawing, designing and photography skills. The magazine is curated, edited and designed by a group of students and a printed copy of 48 paged magazine is distributed to all students and faculties. On the other hand, Clarion, the debating society of NITR organizes debates for the NITR populace and takes part in various MUNs and debating competitions in India.



#### **ENTREPRENEURSHIP**

E-CELL (Entrepreneurship Cell) works to promote entrepreneurship in the region and also to provide incubation and funding through a venture capitalist to nurture budding ideas and aspiring entrepreneurs. The club organizes workshops, awareness camps etc. apart from its flagship event NES, National Entrepreneur Summit conducted annually.



#### **CAMPUS JOURNALISM**



Published every Monday, Monday Morning is the official institute weekly e-newsletter/media body which brings in the latest news, views and happenings from around the campus. It provides the perfect platform for interaction between the administration and the students, with regular interviews of Director, Deans and even the student representatives. Featured by Careers360 magazine, published by Outlook under the article 'Campus Journalism in India' and garnering more than 1.5 lakh unique visits from across the world in the academic year 2011-12, it moreover helps the alumni stay in touch with the latest happenings.

#### QUIZZING

Inspired by Mastermind India and Bournvita Quiz Contest shows, the quizzing club Inquizzitive conducts regular quizzing sessions for interested and aspiring quizzers. Quizzers from NITR have won in national level quizzing events at IIT Kharagpur, Symbiosys Institute of Business Management, Tata Crucible, Mettle Quiz, and Mahindra Auto-Quotient. They also organise an annual open quiz of NITR, Qurios.



#### **SOCIAL SERVICE**



To give is to receive. NITR makes it a point to give back to the needy and less privileged. AASRA is a non-profit organization with the sole objective of spreading smiles in the faces of poor children. The group members visit underprivileged social communities like orphanages, leprosy colonies, and special care homes and carry out various humanitarian works. The Rotaract and Leo clubs are youth wings of Rotary and Lions Club International respectively, with a noble vision of universal service. These clubs work with a number of NGOs helping them out on fund-raising issues, in working effectively and in promoting the idea of humanitarian relief.

ASME NIT Rourkela's HPVC Team, Blue Streak participated in the augural HPVC India, held earlier this year at IIT Delhi, and also proved its mettle at the HPVC East, 2014, held in Florida, USA. Civil Engineering Students' Technical Team (CEST) works to sustain and nurture the enthusiasm of students of NIT Rourkela about Civil Engineering and facilitate their professional growth through interesting activities. The members of SAE collegiate club at NIT Rourkela, a student branch of SAE International, have combined research, development, design, manufacture and utilization of vehicles which operate on land, water, air, and space and indigenously design an All-Terrain Vehicle(ATV) and Formula Type Racing Vehicle annually and compete in Baja SAE and Supra SAE respectively. AIChE- American Institute of Chemical Engineers NIT Rourkela Student Chapter is one of the most successful Chapters of AIChE and clubs of NIT Rourkela, have won an international award and also a national championship in 2018. The NIT Rourkela chapter of Indian Ceramic Society organizes various workshops, conferences which involve various sessions on several fields of ceramics usually witnessed by big shots like TRL Krosaki, Kerneos aluminate, Aditya Birla Insulators, Tata Steel and many more.



#### LGBTQIA+

To support LGBTQIA+ rights and empower the queer community, NIT Rourkela promotes inclusivity through the club, Rainbow Dot which spreads the message of equality of genders and to increase the awareness of the NIT Rourkela junta regarding LGBTQIA+ rights. NIT Rourkela is one of the few institutes of India to have a club as such that promotes safe space for the community.

# STUDENT ACTIVITY CENTRE



# GALLERY

#### TRAINING AND PLACEMENT CENTRE



Training and Placement Centre (TnP) of the institute promises smooth and progressive conduction of placements, internships and training at NIT Rourkela. With a dedicate team of professors, student coordinators and staff members, the TnP centre handles the placement/internship procedures. This includes communicating with the companies, scheduling and executing the placement procedures along with carrying out all official communication with recruiters and students. Over the years, Training and Placement Cell has proved its efficiency in meeting the expectations of both the recruiters and the students.

Under the roof of the Training and Placement Centre, a dedicated team mentors and grooms the aspiring students with the skill set demanded by the industry. With regular sessions, tests, soft-skill development programs, mock interviews and coding tests, the Training Committee makes the students of NIT Rourkela an asset for the recruiters.

#### **FACILITIES**

- · Fully computerized and air-conditioned office.
- Well-furnished auditorium for conducting pre-placement talks and analytical tests.
- Well-furnished and soundproof rooms exclusively to conduct GDs and Pls.
- The Institute Guest House for the accommodation of the employees at a subsidized tariff with pick and drop facilities inside Rourkela.
- Video conferencing facilities are available for conducting online processes.





#### PLACEMENT COMMITTEE

The Training and Placement Department of National Institute of Technology, Rourkela, headed by a senior faculty member, manages placement activities and keeps liaison with various industrial groups and research organizations. The department works in close coordination with a student placement committee comprising students chosen from various departments.

#### PLACEMENT PROCEDURE

#### INVITATION

The Training and Placement Centre sends invitation to companies and organisations along with relevant information who are subsequently asked to fill the Job Notification Form (JNF)







STEP 02

#### SLOT ALLOCATION

Placement Centre and Companies coordinate to fix a convinient date for recruitment procedure viz. tests and/or interviews after considering factors like student preference, job profiles, etc.

#### PRE PLACEMENT TALK

The company may organize a Pre-Placement Talk (PPT) for interested and eligible (as per criteria specified by the company/organisation) students appearing for the recruitment process







STEP 04

#### **RESULT DECLARATION**

The Company/Organisation is required to furnish the final list of selected students at the end of the assigned interview slot.

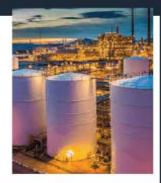
#### INTERNSHIPS & TRAINING

- It is quite remarkable that National Institute of Technology, Rourkela has seen its budding engineers fare exceptionally well not only in Indian Universities but in Foreign Institutions as well to gain cutting edge experience vital for today's generation of R&D.
- The Training and Placement Centre gives exposure and opportunity to the companies and the students by assisting them to conduct lecture talks, tests, competitions, and interviews.
- It notifies students about excellent internship and research opportunities in India and abroad.
- Many of the industries also provide Pre-Placement Offers (PPOs) based on the performance of the students during the period of internship.
- In the placement season of 2018-19, one-year internship opportunities for the M.Tech 2nd-year students were created for the first time in which a handful of major companies offered internships to quite a few students.



#### MAJOR SECTORS

- R&D Organizations
- Trading
- FMCG
- Web Development
- Banking, Financial Services and Insurance
- Core Engineering firms
- Analytics and Consulting firms
- IT Services
- Sales and Marketing





#### **RESEARCH INTERNSHIPS**

When it comes to research internships, our students not only bag international scholarships including MITACS, DAAD, SN Bose Fellowship, GSOC, Charpak France, etc. and get research experiences from universities of International repute, but also many other students do their internships in major technological Institutes of India like IISC Bangalore, ISI Kolkata, TIFR, BARC, and various top IITs.

#### **OUR ESTEEMED INTERNSHIP RECRUITERS**



















































#### **OUR ESTEEMED RECRUITERS**









amazon

















































































#### **OUR ESTEEMED RECRUITERS**



























































































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MOBILE NO.

E-MAIL

DEPT



#### STUDENT SECRETARIES







