



# PLACEMENT BROCHURE 2014-2015

NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA



**NATIONAL INSTITUTE OF TECHNOLOGY  
ROURKELA**

## PLEASE MAIL YOUR QUERIES TO

### Dr. B. B. Biswal

Professor & Head, Training and Placement Centre  
National Institute of Technology Rourkela  
Rourkela - 769008, Odisha  
E-mail: tpc.nitr@gmail.com, bbbiswal@nitrkl.ac.in  
Phone: +91 0661 2474840, 2462181  
Fax: +91 0661 2474840

### R. K. Sinha

Administrative Officer, Training and Placement Centre  
National Institute of Technology Rourkela  
Rourkela - 769008, Odisha  
E-mail: rksinha@nitrkl.ac.in  
Phone: +91 0661 2462182  
Mobile: +91 9437139254

## STUDENT COORDINATORS

### Secretary

**Ayush Singh**  
Contact: +91 7381831307  
Email: ayushsingh1492@gmail.com

### Joint Secretary

**Shantanu Kumar**  
Contact: +91 9583422033  
E-mail: shan.inbox24@gmail.com

### Joint Secretary

**Smriti Singh**  
Contact: +91 7894123101  
E-mail: smritisinh22@gmail.com

### Joint Secretary (Higher Studies and Internship)

**Chandra Prakash**  
Contact: +91 7735980382  
E-mail: cprakash4639@gmail.com

### Joint Secretary (Interface)

**Kartik Varwade**  
Contact: +91 9178612888  
E-mail: kartikvarwade@gmail.com

### Joint Secretary (Interface)

**D Yogendra Rao**  
Contact: +91 7205208155  
E-mail: dyogendrarao@gmail.com



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## ABOUT NIT ROURKELA

Since 1961, NIT Rourkela has worked towards becoming one of the most renowned technological institutions in the country. Since its birth, the institute has attracted many of the brightest minds in India. 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 education in the country. Today, the institution is recognized as an institute of national importance along with the IITs and IIMs by the NIT Act. The cumulative accomplishments of its highly talented and widespread alumni is 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 would serve as a source of knowledge and experience for the society and be a preferred destination for under-graduate and graduate studies.

## MISSION

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

## GUIDING 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 team spirit.



**Prof. Sunil K. Sarangi**  
Director  
NIT Rourkela

## MESSAGE FROM THE DIRECTOR

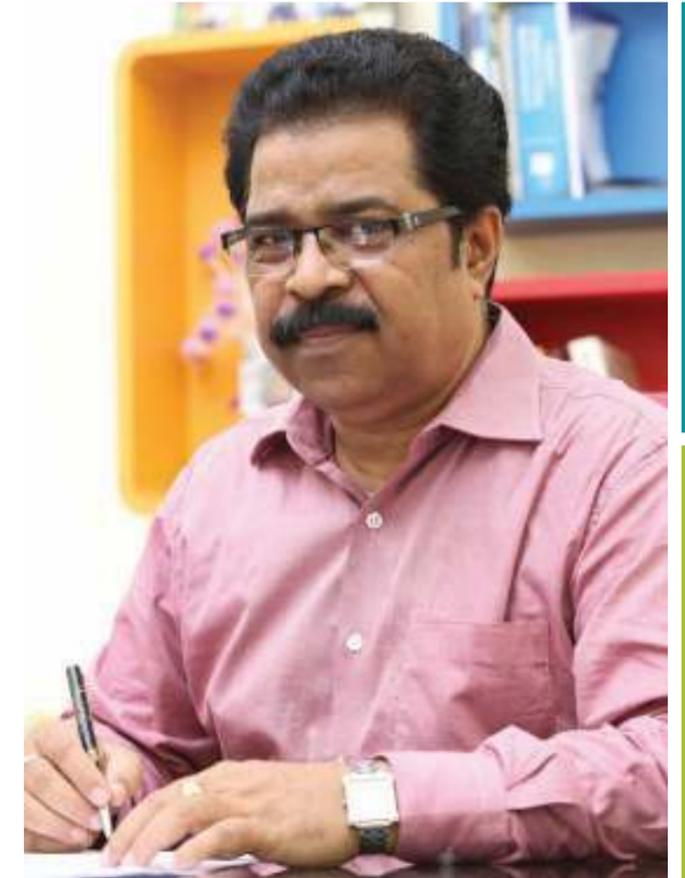
On behalf of National Institute of Technology, Rourkela it is my pleasure to welcome you to this beautiful campus. This institute has been known for its hospitality for more than four decades, and we strive hard to keep up the tradition. In case we have inadvertently slipped somewhere, I offer my sincere apologies. Our academic programme is amongst the best in the country. It provides an optimum mix of theory and practical, with strong bias on industrial & managerial applications. In more recent years, introduction of modern computational tools and digital equipment have further improved the programme. While the depth of training in engineering & management subjects are 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 degrees in engineering, science and management, we are one of the most diversified institutions. Whether you are young or old as a company, 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 engineer and manager for you. We give you freedom and extend to you all physical facilities to carry out your own recruitment process on our campus. In case you have a time constraints or other inconvenience, we shall only be too glad to meet your selection team in another city. Whether you have regularly recruited our graduates and post graduates, or you are visiting us for the first time, I am sure you will find our students very competent and you will visit us again, year after year. We look forward to a warm and enduring relationship.

## FROM THE HEAD PLACEMENT CENTRE

On behalf of National Institute of Technology, Rourkela, it is my pleasure to invite you to our beautiful academic campus for conducting campus selection programmes 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 over the globe. The students of this institute are occupying enviable positions in various organisations at home and abroad. Many of them have been the driving force behind the industrial landscape of our nation. Our Institute enjoys the status of Institute of National Importance.

Presently a massive developmental work has been completed under the World Bank funded Government of India's TEQIP scheme for all the Departments. The Institute has earned fame not only for its excellent academic and extracurricular activities but also for its research, consultancy and development activities with this brief background I am furnishing in the pages to follow all pertinent information about us.

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.



**Prof. B. B. Biswal**  
Professor & Head  
Training & Placement Centre

# WHY RECRUIT @ NIT ROURKELA

## AN 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 importantly better citizens suffuses through the teaching pedagogy of the curriculum.

## AN INSTITUTE OF EXCELLENCE

The constant endeavor to achieve excellence in all fields is one of the prime virtues that set this institute apart. Since its very foundation, the institute has set many benchmarks in the field of research the pursuit for quality has become a never ending journey.

## CHOICES IN CURRICULUM

NIT Rourkela offers a plethora of choices to its students in the field of engineering and sciences. The 19 departments offer a wide range of courses which are designed to meet the 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, research, events 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 engineer.

## A CULTURE WORTH PRESERVING

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 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 already 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.

## NITR HAS BEEN OCCUPYING TOP RANKS CONSISTENTLY

NIT Rourkela has consistently won top awards and has always been ranked among the top Technical Institutes of the country, including IITs and NITs. Recently it was ranked the 11th "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 .

ET NOW conferred our Director Prof. S.K. Sarangi, Director with "Education Leadership Award" in 2013. He has has been awarded the prestigious Rajiv Gandhi Education Excellence Award by the Indian Solidarity Council and International Institute of Education and management.



# AWARDS & ACCOLADES

The excellence of NIT, Rourkela has been recognized by various reputed agencies. In 2011 and 2014, 'ABP News' awarded NIT Rourkela with the "Outstanding Engineering Institute of Eastern India Award". In a recent survey by Careers 360, NIT-Rourkela was ranked 2nd among all NITs and 13th overall amongst a number of reputed technical institutes from all over India including the IITs. Our Director Prof. S.K. Sarangi has been awarded the prestigious Rajiv Gandhi Education Excellence Award by the Indian Solidarity Council and International Institute of Education and management.

- Think Odisha Leadership Award – The Times of India in 2009
- "Outstanding Engineering Institute of Eastern India" – Star-News in 2011
- "Best Government Engineering College" – Star-News in 2011
- Ranked 18 – DQ CMR T-School Survey 2011
- Ranked 12th overall and 8th for academic – Data Quest Survey 2011

- 2nd prize in design category at the formula SAE-India Design Challenge – Society of Automotive Engineers (SAE-India)
- Ranked 1 by World Bank amongst all technical institutes of the country for project implementation.
- "Outstanding Engineering Institute"(East) – ABP News in 2012
- "Best Government Engineering College" – ABP News in 2012
- Ranked 19 by Outlook-MDRA Engineering Colleges Survey – 2012.

- Ranked 15 by DQ CMR T-School Survey 2012.
- "Outstanding Contribution to Education" to Prof. S.K.Sarangi, Director -The World Education Congress in 2012
- Ranked 5th among the best universities of the country and 1067th position among World Universities by Cyber metrics survey in 2012 – a Spain based research group.
- "Education Leadership Award" to Prof. S.K. Sarangi, Director – ET NOW in 2013
- Ranked 1 among NITs and ranked 7th among all India Technical Institutions in Academic Environment.
- "Outstanding Engineering Institute (East)" – ABP News in 2013

- "Best Government Engineering College" – ABP News in 2013
- Ranked 11 by DQ-CRM Best Tech. School Survey – 2013-14
- Ranked 07 by Global Human Resource Development Centre – CSR Engineering Institute Survey 2014
- "Outstanding Engineering Institute(East)" – ABB News in 2014

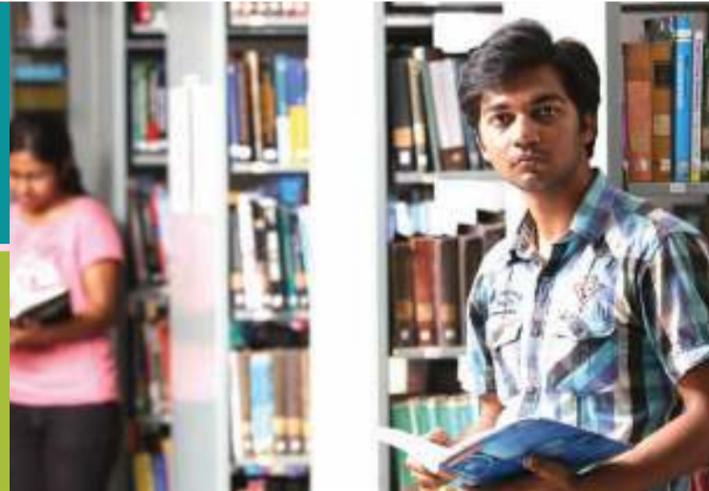
# INFRASTRUCTURE

Spread across a mammoth 647 acres carpeted by a lush green cover, the campus of NITR is situated right at the conjugation of the hills of Rourkela. The campus is characterized by aesthetically pleasing buildings which have inspired generations of students to strive for excellence. The campus is a mini township in itself with all the modern amenities. The entire campus is connected by a state-of-the-art network with almost 5000 nodes. Every student and

faculty member has a networked personal computer at his/her disposal. With an internet bandwidth of 180 Mbps and 850 Mbps intranet bandwidth, NIT Rourkela hosts one of the most advanced computer networks in the country.

Moreover this institute has well maintained seminar halls as well as facilities for video conferencing. The Training and Placement Committee has 26 Student Placement Coordinators which will be available at all times to facilitate the personnels of the company.

The institute also have Wi-Fi connectivity and e-classrooms available for online lectures.



## THE BIJUPATNAIK CENTRAL LIBRARY

The BijuPatnaik Central library, named after the former Chief Minister of Odisha, 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 every 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 Datacenter is also being installed.

## 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 DilipTirkey Hockey Stadium, The P. T. Usha Sports Complex and the newly built 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. There are separate squads for all the games that represent the institute at Inter-NIT Sporting events.



## AUDITORIUM, LECTURE HALLS & CONFERENCE ROOMS

The campus hosts a newly renovated centralised air conditioned auditorium, The Bhubaneswar Behera Auditorium, with a seating capacity of over 1000. The campus also has a newly constructed Lecture Gallery Complex with different galleries having seating capacities of 60, 120 and 240 along with 12 other conference rooms and the PranakrushnaParija 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.

## FACILITIES FOR RECRUITERS

- Well-furnished auditoriums for conducting pre-placement talks and analytical tests.
- The Institute Guest House has conference rooms as well as facilities for Group Discussions and Personal Interviews.
- Students volunteer for all possible arrangements.
- Video conferencing facilities are available for conducting one-to-one interviews.



# DEPARTMENT OF BIOTECHNOLOGY AND MEDICAL ENGINEERING

ESTD 2007

## ABOUT THE DEPARTMENT

The department has a robust infrastructure and sophisticated laboratories to carry out research. Our faculty expertise in cell and molecular, bioprocess and biomechanics and bio transport engineering.

## RESEARCH AND PROJECTS

The department is the first among all the NITs to have a program support in Tissue Engineering (from the Department of Biotechnology). The department has expertise in various areas such as Image Processing, Signal Processing, Instrumentation, Nano-biotechnology, Protein engineering, Environment biotechnology, Cryosurgery, Biomaterials, Regenerative medicine, Stem cell engineering, Cancer Therapy, Biomechanics, Controlled Drug delivery, Protein Stability etc.

## PROGRAMMES OFFERED

### B.TECH (4 YEARS)

- B.Tech in Biotechnology Engineering
- B.Tech in Biomedical Engineering

### M.TECH (2 YEARS)

- M.Tech in Biotechnology Engineering
- M.Tech in Biomedical Engineering



# DEPARTMENT OF CIVIL ENGINEERING

ESTD 1961

## ABOUT THE DEPARTMENT

The Department besides having a host of highly qualified faculties is well equipped with state-of-the-art laboratories on structural, geotechnical, aggregate and bitumen testing, hydraulics and environment engineering, managed by professors and competent technicians. The instruments installed in these laboratories are sophisticated, Numero Uno in their own fields and some of them being only of its kind in the country. Faculties are expertise in structural mechanics, concrete materials and structural integrity, geotechnical engineering, environmental engineering.

## RESEARCH AND PROJECTS

The department has a very strong industrial interface with the faculty being constantly approached for industrial consultancy and Industry Sponsored Research Projects. The research projects taken up are relevant to modern day scenarios. Both students and faculty publish a large number of papers in renowned scientific journals. An Excellence Centre for Environment Quality Management has been proposed. Along with conducting various International Conferences at our campus the faculties have participated in a host of such seminars at various prestigious institutes.

## PROGRAMMES OFFERED

### B.TECH (4 YEARS)

### M.TECH DUAL DEGREE (5 YEARS)

- B.Tech in Civil Engineering and M.Tech in Structural Engineering
- B.Tech in Civil Engineering and M.Tech in Geotechnical Engineering

### M.TECH (2 YEARS)

- M.Tech in Geotechnical Engineering
- M.Tech in Structural Engineering
- M.Tech in Transportation Engineering
- M.Tech in Water Resources Engineering



# DEPARTMENT OF CHEMICAL ENGINEERING

ESTD 1963

## ABOUT THE DEPARTMENT

With the completion of 52 years of its existence, the Department boasts of a diversified alumni group serving in recognized organizations within the country and abroad. The Department provides exposure to the various aspects of chemical engineering through events like National Conference 2012. The laboratories have prototypes of real time Industrial devices like Distillation Column to keep the students up-to-date with the latest technology. Faculties with expertise in fuels and combustion, modelling simulation and control, transport processes, separation and purification, phase transfer catalysis.

## RESEARCH AND PROJECTS

Various sophisticated instruments such as HPLC, Gas Chromatograph, Nanoparticle size and Zeta potential analyzer, UV-Vis-NIR Spectrophotometer, Fluorescence Spectrometer, BET surface area analyzer, Surface tensiometer, Video based contact angle meter, Viscometer, TOC analyzer, TGA-DTA aid the students in their research activities. The Department, at its appraisal is having a number of R&D and consultancy projects funded by various government as well as non-government organizations like MoEF, DST, CSIR and MoNRE. Research papers published by the faculty and the students of the department make it to some of the reputed national as well as international journals every year.

## PROGRAMMES OFFERED

B.TECH (4 YEARS)

MTECH DUAL DEGREE (5 YEARS)

- B.Tech in Chemical Engineering and M.Tech in Chemical Engineering.

MTECH (2 YEARS)

- M.Tech in Chemical Engineering



# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ESTD 1987

## ABOUT THE DEPARTMENT

The Department boasts of possessing highly experienced and renowned professors. Sophisticated laboratories on database engineering, parallel algorithms, artificial intelligence, soft computing, software engineering, computer networks & image, Distributed Object System processing provide a sound base for research activities. The faculties expertise in majors such as Network and secured computing, intelligent computing and computer vision, computer hardware, software engineering.

## RESEARCH AND PROJECTS

Multiple research papers are published every year and some of the R&D projects currently undertaken by the department are being sponsored by high-profile organizations like Indian Space Research Organization (ISRO), University Grant Commission (UGC), Department of Science and Technology (DST), Department of Information Technology (DIT), MHRD, DRDO etc. The Department has active collaboration with various leading MNCs like Microsoft, Sun Microsystems, Accenture, TCS, IBM, etc.

## PROGRAMMES OFFERED

B.TECH (4 YEARS)

M.TECH DUAL DEGREE (5 YEARS)

- B.Tech in Computer Science and Engineering and M.Tech in Computer Science and Engineering
- B.Tech in Computer Science and Engineering and M.Tech in Information Security.

M.TECH (2 YEARS)

- M.Tech in Computer Science
- M.Tech in Information Security
- M.Tech in Software Engineering



# DEPARTMENT OF CERAMIC ENGINEERING

ESTD 1994

## ABOUT THE DEPARTMENT

The Department has been recognised as a Centre of Relevance and Excellence (CORE) in the field of Ceramics by MHRD and is a Centre-of-Excellence (CoE) for Nanomaterials. The Department has a current generation X-ray Diffractometer and an advanced microscope (SEM) having bright field, dark field, polarization and interference mode and an advanced facility for Electronic ceramics. Our able faculties expertise in fields such as structural and advanced ceramics, electro-ceramics, industrial ceramics, nano and bio ceramics.

## RESEARCH AND PROJECTS

The Department is committed to a high quality research programme in a wide spectrum of areas like nanoceramics, structural ceramics, industrial ceramics, Advanced & Bio Ceramics, Electro-ceramics. Numerous projects have been granted by MHRD and are sponsored by institutions & government organizations like Board of Research in Fusion Science and Technology (BRFST), DST, BARC, RDCIS, SAIL, DAE (Department of Atomic Energy) and CGCRI, Kolkata. The department has also collaborated with TRL Krosaki Refractories Limited for research and technical consultancy.

## PROGRAMMES OFFERED

B.TECH (4 YEARS)

M.TECH DUAL DEGREE (5 YEARS)

- B.Tech in Ceramic Engineering and M.Tech in Industrial Ceramics & Ceramic Engineering

M.TECH (2 YEARS)

- M.Tech in Industrial Ceramics



# DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ESTD 1987

## ABOUT THE DEPARTMENT

The Department draws upon some of the brightest minds of the nation as the faculty who work towards building a scientific temper among its equally brilliant students. Well-equipped state of the art laboratories cater to all kinds of training and research needs of the students, and the courses are specifically devised to suit upcoming developments in technology to provide the required orientation and experience. The department has focused on latest technological facility for nano-integrated circuits and embedded system design for diverse applications of communication, microelectronics, computer vision, intelligent instrumentation and advanced signal processing, training students for global careers in challenging environments.

## RESEARCH AND PROJECTS

The department's industry-institute relations are strengthened by the various research and consultancy projects handled for wide range of requirements of the industries by the esteemed faculties. The various collaborating organizations are DRDO, DST, BRFST, ISRO, British Council, ALTERA Semiconductor and the like. Besides this, the young minds get continuous scope for enhancement of technical knowledge with innovative skills through invited talks, seminars, conferences and workshops organized regularly by the Department.

## PROGRAMMES OFFERED

B.TECH (4 YEARS)

- Electronics and Communication
- Electronics and Instrumentation

M. TECH DUAL DEGREE (5 YEARS)

- B.Tech in Electronics and Communications Engineering and M. Tech in Communication & Signal Processing
- B.Tech in Electronics and Instrumentation Engineering and M. Tech in VLSI & Embedded Systems

M.TECH (2 YEARS)

- M.Tech in VLSI & Embedded Systems
- M.Tech in Electronics and Instrumentation Engineering
- M.Tech in Signal & Image Processing
- M.Tech in Communication & Networks



# DEPARTMENT OF ELECTRICAL ENGINEERING

ESTD 1961

## ABOUT THE DEPARTMENT

Spanning over 13000 meter squares the Department houses state of the art laboratories supervised by highly trained professionals. The Department has recently procured a 10 kW Solar PV module with power storage capability which is installed in the Centre for Excellence in Industrial Electronics and Robotics with the help of MNRE, Govt. of India, to promote research in Renewable Energy. Our able faculties expertise in the majors such as power system, control and automation, power electronics and machine drives, electronics and communications.

## RESEARCH AND PROJECTS

The Department actively invites industrial experts from many nearby industries such as Rourkela Steel Plant (RSP), OCL and L&T to strengthen its research work. Numerous sponsored projects from agencies like DST, TEQIP, DRDO and ISRO are being pursued by the newly set up Centre for Excellence in Industrial Electronics and Robotics. There have been multiple transactions published in IEEE and in IET from the Department last year. The Department has also developed a prototype model for wind power generation and control using DC machines, to enhance research capabilities in cutting edge sustainable technology. Several notable research projects are being carried out in the newly built research modules.

## PROGRAMMES OFFERED

B.TECH (4 YEARS)

M.TECH DUAL DEGREE (5 YEARS)

- B. Tech in Electrical Engineering and M. Tech in Control and Automation
- B. Tech in Electrical Engineering and M. Tech in Electronics System and Communication
- B. Tech in Electrical Engineering and M. Tech in Power Electronics and Drives

M.TECH (2 YEARS)

- M.Tech in Power Electronics and Drives
- M.Tech in Electronics System and Communication
- M.Tech in Control and Automation



# DEPARTMENT OF INDUSTRIAL DESIGN

ESTD 2010

## ABOUT THE DEPARTMENT

The Department of Industrial Design was established in 2010 in NIT, Rourkela. It encourages its students to be knowledgeable of various design topics and also provides facilities to enable them to develop their designing skills by every conceivable means. The department is equipped with all the latest technological machinery and also the latest software. The various labs include the Art and Aesthetic Lab, the CAD Lab, the Product Design and Development Lab and the Creative Automation Lab and is equipped with FARO Arm, 3D Printer, SCARA robot and many other advanced machines. Our able faculties expertise in majors such as product modelling, design and analysis, innovative product design, industrial automation, rapid product development and reverse engineering.

## RESEARCH AND PROJECTS

The department is well equipped with all kinds of sophisticated machines for supporting any kind of research projects. The projects are also sponsored by organizations like DST and many other renowned institutes and companies. The on-going projects in the department are mainly based on the optimization of material for the 3D printer and to achieve the automation of various available equipment. The institute is also striving continuously for improving the research standards by being in contact with other institutes offering this course.

## PROGRAMMES OFFERED

B.TECH (4 YEARS)



# DEPARTMENT OF MECHANICAL ENGINEERING

ESTD 1961

## ABOUT THE DEPARTMENT

The Department, in its prolonged years of academic services has been nurturing its talent through its courses complying with the recent technological developments and specialized labs. This department has well-renowned faculty who have dedicated themselves towards education and upliftment of student's standards through rigorous training and assessment. The faculties have extensive experience in the design and production and thermal technology and are uniquely positioned to train and develop tomorrow's industrial leaders.

## RESEARCH AND PROJECTS

The main foci of research are on mechanical vibration, robotics, CAD/CAM, precision engineering, CFD, Industrial refrigeration and Cryogenics, metal machining, non-conventional machining and metal forming. Many Research and Development projects being pursued by the faculty are sponsored by Government agencies and private industries like MHRD, DAE, BARC, DRDO, BRNS, DST, ARDB, HBL Power Systems and Lechier India Private Limited. The department has acquired consultation projects from companies like Lechler India Pvt.Ltd.and HBL Power systems Ltd. The Department has close scientific & technical relationships with industrial majors like SAIL, OCL, L&T, TATA Steel, TATA Refractories Limited, BOCL, NALCO, etc.

## PROGRAMMES OFFERED

B.TECH (4 YEARS)

M.TECH DUAL DEGREE (5 YEARS)

- B. Tech in Mechanical Engineering and M. Tech in Mechatronics and Automation

M.TECH (2 YEARS)

- M.Tech in Mechanical Design & Analysis
- M.Tech in Production Engineering
- M.Tech in Thermal Engineering
- M.Tech in Cryogenics and Vacuum Technology



# DEPARTMENT OF METALLURGICAL AND MATERIALS ENGINEERING

ESTD 1963

## ABOUT THE DEPARTMENT

Established in 1963, The Department of Metallurgical and Materials Engineering stands firm in its commitment to producing the finest metallurgical engineers in the country. Equipped with sophisticated instruments in the Process Metallurgy, Physical Metallurgy and Advanced Materials Laboratories, it also boasts of other high quality machineries have been added to carry out research.

## RESEARCH AND PROJECTS

The Department has been carrying out research and innovative technological development in core areas of material science. The Department is actively pursuing research by inviting a number of industries; the likes of Rourkela Steel Plant (RSP), Tata Steel, Dalmia Research Institute and Orissa Cement Limited. Faculty members and students often publish high impact factor articles in various journals of international repute.

## PROGRAMMES OFFERED

B.TECH (4 YEARS)

M.TECH DUAL DEGREE (5 YEARS)

- B.Tech in Metallurgical and Materials Engineering and M.Tech in Metallurgical and Materials Engineering

M.TECH (2 YEARS)

- M.Tech in Metallurgical and Materials Engineering
- M.Tech in Steel Technology



# DEPARTMENT OF MINING ENGINEERING

ESTD 1979

## ABOUT THE DEPARTMENT

The Department of Mining Engineering boasts the modern and sophisticated equipments 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.

## RESEARCH AND PROJECTS

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, Jindal Steel and Power Ltd., NALCO, ShapoorjiPallonji and Co. Ltd, Manganese Ore of India Ltd., Hindustan Zinc Ltd. and Coal India Limited.

## PROGRAMMES OFFERED

B.TECH (4 YEARS)

M.TECH DUAL DEGREE (5 YEARS)

- B.Tech in Mining Engineering and M. Tech in Mining Engineering

MTECH (2 YEARS)

- M.Tech in Mining Engineering



# SCHOOL OF MANAGEMENT

ESTD 2010

## ABOUT THE DEPARTMENT

The newly established School of Management is the latest jewel added to NITR's crown of departments. Its objective is to develop managerial innovation and leadership talent of the students and to build a system driven approach on management techniques and prepare students for business challenges. The school offers a two year post-graduate program in Business Administration (MBA) and subsequent research activities. The department focuses on value based teaching, learning environment, action-oriented research and consulting industries by developing a strong academic-industry interface. In addition to professional expertise, the department gives more emphasis on training students for collaboration and teamwork through the development of human relations skills.



## PROGRAMMES OFFERED

### AREAS OF SPECIALIZATION

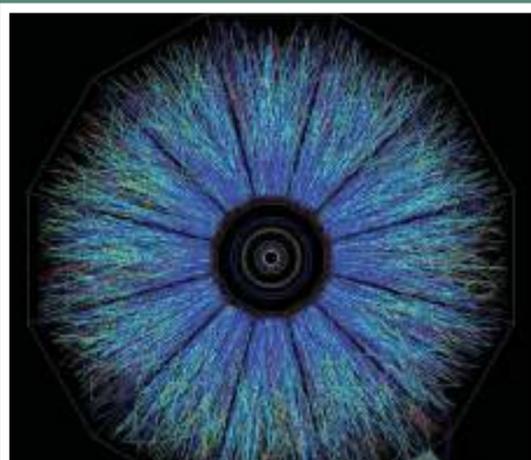
- Marketing
- Finance
- Human Resource
- Operations
- Systems & IT



# THE DEPARTMENT OF PHYSICS

## ABOUT THE DEPARTMENT

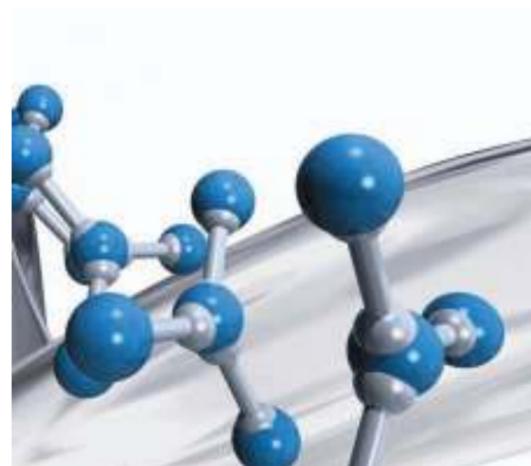
The department provides excellent opportunities for education & research in a wide spectrum of areas in Physics through its well-received under-graduate engineering, Master's (integrated 5-year & 2-year) & Doctorate program. The department has well equipped laboratories such as X-Ray Lab, Soft Condensed Matter Lab, Thin Film Lab, Electro Ceramic Lab, Cryomagnetic Lab, Spectroscopy lab, Composite Lab and Computational Physics Lab. The department has also 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 DELHI-STIO with Penn State, USA for research. Last year the department organized a national seminar on condensed matter physics with great success.



# THE DEPARTMENT OF CHEMISTRY

## ABOUT THE DEPARTMENT

The Department of Chemistry offers a 5-year integrated M.Sc., 2-year M.Sc. in chemistry courses, and doctoral research programs leading to Ph.D. degree. The Department has well equipped laboratories in the fields of Inorganic, Organic, and Physical chemistry with special emphasis on heterogeneous/ homogeneous catalysis, Environmental Pollution Control, adsorption studies, organic synthesis, electrochemistry, Nanomaterials, surface chemistry, photochemistry, solid state and structural chemistry and optoelectronics. Presently, sixteen sponsored research projects are being carried out by the faculty members of the department which are funded by various funding agencies such as DST, CSIR, DRDO, FIST (DST), DBT, BRNS, etc. The department has state-of-the-art laboratories as well as analytical equipment such as NMR, ESI-MS, Cyclic voltametry, Surface area analyzer, UV-Vis, FTIR, and CHNS analyzer which are used for research purpose.

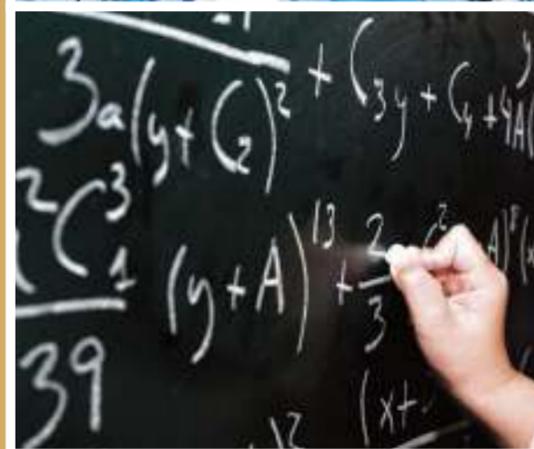
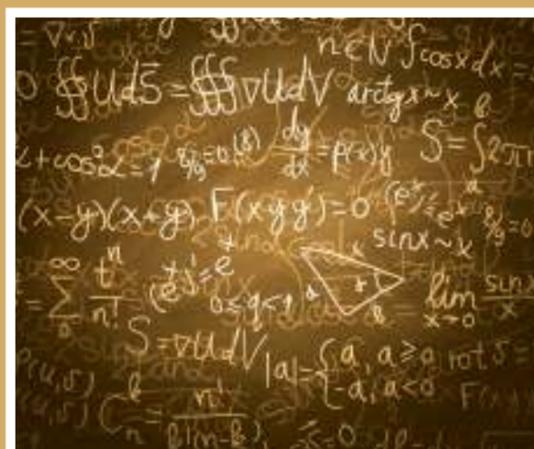


# THE DEPARTMENT OF MATHEMATICS

ESTD 1965

## ABOUT THE DEPARTMENT

The department of Mathematics came into existence in 1965 and has been offering 5-year integrated and 2-year Post Graduate M. Sc. courses and doctoral research program which contain both core and applied aspects of mathematics. The department also has its own library and students can avail different books. The highly qualified faculties and talented students publish a good number of research papers over a wide area of applied mathematics. Research includes various inter-related areas like algebraic topology, boundary value problem, operations research number and computational mathematics.



# THE DEPARTMENT OF LIFE SCIENCE

ESTD 2009

## ABOUT THE DEPARTMENT

The Department of Life Science was established in year 2009 with a new dimension of human science development and its implications on Scientific, Technical and Economic infrastructure of the country. It has got robust infrastructure consisting of sophisticated laboratories of 'Biochemistry and epigenetic, microbiology, cell and cancer biology, protein biotechnology, RNAi and bioinformatics, food microbiology and immunology with well-equipped instruments to carry out research work.

## RESEARCH AND PROJECTS

Department is first among all the NITs to run projects on understanding bio-film formation quorum sensing during bioremediation. It recently got a DBT sponsored project. Other research areas being covered are cancer biology, epigenetic, Lipid as a signaling molecule, biochemistry tissue engineering, drug/vaccine delivery, biotechnology, aquatic biotechnology, ecology, biodiversity, biomedical engineering. The department has published papers in reputed journals.



# DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES

ESTD 1961

## ABOUT THE DEPARTMENT

Established in 1961, Humanities and Social Sciences is a multidisciplinary teaching and research Department dedicated to advancing knowledge with regard to society, culture, language, literature, human psychology and economic development. With the conviction that the perspectives in humanities and social sciences provide purpose and direction to both education and life, the thrust of the department is on the four basic disciplines of English, Psychology, Sociology and Economics.

## COURSES

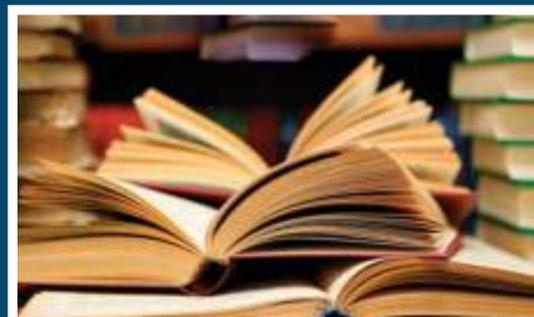
The courses offered by the Department are interdisciplinary and applied in nature. NIT Rourkela is the first and only NIT in India to offer a Master's Programme in Development Studies. This programme has been operational from the academic session 2010-11. The Department also offers open elective courses to the engineering students of the institute.

## M.A. IN DEVELOPMENT STUDIES

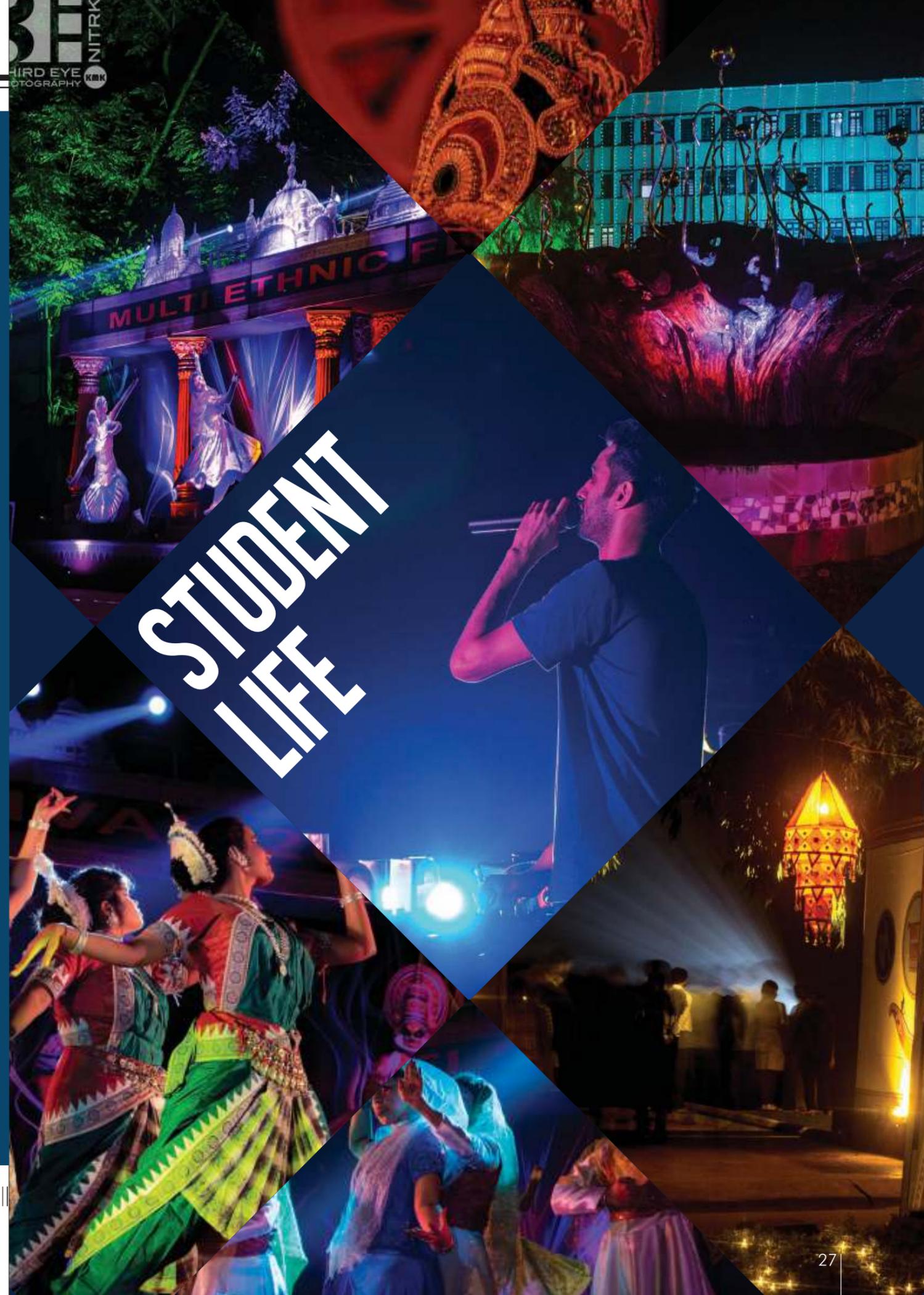
The M.A. in Development studies programme is a 2-year interdisciplinary course that focuses on the socio-economic, anthropological, political, psychological and cultural perspectives of development in general and gender, environment, natural resource management, global issues, poverty and inequality issues as well as planning and policy issues at the national and international level in particular.

## FACILITIES

A state-of-the art Multimedia Digital Language Laboratory with Computer Assisted Language Learning (CALL) facilities has been set up in the Department to develop the English language proficiency of students and to meet the growing market demand of a smart and articulate workforce. Online access to e-journals and periodicals is provided for faculty and students. Provisions for Psychological Assessment and Counselling are also included.



STUDENT LIFE



THIRD EYE PHOTOGRAPHY



Life at NITR goes way beyond the rudimentary concepts taught in classrooms and laboratories. The institute offers excellent opportunities to the students to participate in recreational and creative activities through its Students' Activity Centre (SAC), which intends to serve as the nerve centre 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 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. O-INSA or Organization for Inter-NIT Student Activities represents the teamwork of all the 20 NITs towards the growth of cultural, technical, sports and other organs. It is involved in the overall organization of the Inter-NIT competitions, thus spreading the idea of cooperation and mutual harmony.

## 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, KailashKher, KunalGanjawala, KK, Sonu Nigam, Pakistani band Jal, Indo-Fusion Band Euphoria, Indipop band Aryans and a number of other Rock bands such as Pentagram.

## INNOVISION

The annual techno-management festival of NIT Rourkela, Innovision is a summit of the theoretical and practical aspects of engineering 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 the technical acumen of the students.

## INTERNATIONAL STUDENT MEET

The student meet is aimed at providing a platform for the students to develop inter personal relations with students on a global basis. The event plays host to a number of technical, cultural and sporting events that attracted huge participation from many foreign countries.

# CLUBS

## UDAAN

Udaan, the aero-modelling club, was formed and is managed wholly by the students. It conducts numerous workshops, takes up projects, and carries out activities in aero modelling, robotics and other related areas and is a good learning platform for students who are fascinated by the wonders of flying.

## CYBORG

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. Over the years, Cyborg has evolved from conducting workshops, to contrive as well as participate in a myriad of robotics contests on the national and international levels.

## IEEE STUDENT CHAPTER

IEEE (Institute of Electrical and Electronics Engineers, Inc.) is the world's leading professional association for the advancement of technology. The IEEE student chapter at NITR has conducted a number of workshops on diverse fields like VLSI, GSM Technology, MATLAB software and FLASH animation.



## SOCIETY OF AUTOMOTIVE ENGINEERING (SAE)

The SAE collegiate club at NIT Rourkela, a student branch of SAE International, is the first of its kind in Odisha promising to combine research, development, design, manufacture and utilization of vehicles which operate on land, water, air and space. The members indigenously design an All-Terrain Vehicle (ATV) and Formula Type Racing Vehicle annually and compete in BAJA SAE and Supra SAE respectively, both national level competitions along with conducting various workshops and design competitions.

## ENTREPRENEURSHIP CELL

E-CELL (Entrepreneurship Cell) of NIT Rourkela is the only e-cell working in the state in order 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 'Arthayan' conducted annually during Innovision.

## ASTRO NITR

With a vision to promote astronomy and other pure-sciences, Astro-NITR, the astronomy club of NIT Rourkela functions with two telescopes with fortnight long night sky watch happening every semester. Besides organising "Orion", a star-hunt event annually, the club conducts awareness programs not only students of NIT Rourkela but also for the school going astronomy enthusiasts who dream of stars.



## MICROSOFT CAMPUS CLUB

The Microsoft Club established by the Campus Connect Program of Microsoft India is a unique initiative to build better industry-student interface. It is run by the MSPs (Microsoft Student Partner), who are selected by Microsoft India under a rigorous process. The activities of the club aim to increase the awareness of the latest developments in the technological field.



## CII YOUNG INDIANS

YI (in association with the Confederation of Indian Industries, CII) is a group comprising aspiring young Indian entrepreneurs, businessmen and professionals who unite under one roof with the objective of creating a better future for the Indian youth and to bridge the gap between the different sections of society.

## OTHER SOCIETIES

The three other societies bring together to provide the necessary platform for the all-round holistic development of the students.



## AASRA, LEO AND ROTARACT (SOCIAL SERVICE)

AASRA is a social service club of NIT Rourkela, run autonomously by the students. An absolutely nonprofit 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 immediate extrapolations of the parent organizations, 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.



## CLARION

The Literary and Debating Club of NIT, Rourkela, Clarion conducts events, competitions and workshops related to public speaking and writing along with organizing Mock debates and other elocution competitions. It organized the First NITR Parliamentary Debate and its members have represented the Institute at various national level events.



## DANCE, DRAMA AND MUSIC

Various student interests, hobbies and passions of the students are catered to by SAC. Aspiring musicians are provided with ample scope and musical instruments. Various student bands at NITR like Euphony, Heartbeats, Almost Honest and Holocaust 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. Pantomime, the performing-arts group conduct various street plays and productions to entertain the NITR crowd.

## MONDAY MORNING

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 including LIVE placement updates and news. 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 at their alma mater.



## QUIZZING CULTURE

Inspired by Mastermind India and Bournvita Quiz Contest shows, Inquizzitive and Episteme are the two quiz clubs which conduct regular quizzing sessions for interested and aspiring quizzers. Quizzers from NITR have won in national-level quizzing events at IIT Kharagpur, Symbiosis Institute of Business Management and Mahindra Auto-Quotient.

## D361

Published biannually, D361 is the student magazine established and managed wholly by the student community of NIT Rourkela. It provides a perfect breeding ground for students to not just exhibit their literary talents but also to speak out on a variety of issues. The magazine invites stalwarts from various positions to contribute write-ups on a plethora of topics. Contributors include the popular TOI columnist Jug Suraiya and resident editor of The Economic Times, T.K. Arun.



## SPIC MACAY

The Society for the Promotion of Indian Classical Music and Culture Amongst Youth (SPIC MACAY) is a voluntary youth movement promoting Indian classical music, Indian classical dance, and other aspects of Indian culture.

SPICMACAY NITR chapter played host to several eminent performers like Pandit Vijay Ghate, Padma ShriVikkuVinayakram, Padma Shri Geeta Chandran and many more.



## ASME

ASME NIT Rourkela's HPVC Team, Blue Streak participated in the inaugural HPVC India, held earlier this year at IIT Delhi, and also proved its mettle the HPVC East, 2014, held in Florida, USA. ASME NIT Rourkela Chapter is also one of the most respected student sections in ASME SDOB India.



## THIRD EYE

Third Eye is an amateur level 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 while exploring the possibility of photographs as a visual language. The club's ethos is all about having fun with photography and to provide an association of like-minded people to enjoy, share and advance their photographic skills.

## MINING ENGINEERING SOCIETY

MES organises Minare, the annual geo-mining fest of NIT Rourkela and the Annual Alumni Meet of the Mining Department. The other activities, which include workshops on mining softwares and other, have helped develop the skills of the students.



## 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. It consists of twenty-six members of which twelve representatives from B.Tech, seven from Dual Degree, four from M.Tech, one from MBA and one each from M.Sc. and Humanities.



## PRE-PLACEMENT TALKS

It's a tradition here that the recruiting organizations visiting the institute carry out pre-placement talks which are presentations organized by the company itself before the students. These talks allow students to learn more about the companies. Audio-Visual rooms and auditoriums are well equipped for the PPT with proper arrangement of microphone and sound system. The students can also learn about the opportunities for growth, advancement and learning that your company offers. In addition to this the students can also have a first-hand impression of the company before taking an informed decision to apply for placement. The PPT can take place on any mutually convenient day. If the company wishes to display some promotional material, then the final form of the material can be sent to the Training & Placement office which will arrange for its display.

## HOSPITALITY

NIT Rourkela is well known for its hospitality for more than four decades and we strive hard to maintain the tradition. Transportation arrangement, air-conditioned suits with high speed internet facilities are provided in the Institute guest house for the recruiters. Proper arrangement for touring the institute can also be arranged when asked by the recruiters.

## 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. Some of the Institutes of international repute are University of Ottawa, Delft University of Technology, RWTH Aachen University, Chulalongkorn University, Clarkson University, New York, Ruprecht-Karls- University of Heidelberg, Carnegie Mellon University, Bergische Universität Wuppertal, Idaho State University, USA, Federal University of Rio Grande, Brazil, NUS, Singapore, University of Illinois, University of Wisconsin-Madison, University of Kassel, Germany, Carl Von Ossietzky University, Germany, CSIRO, Australia, KFUPM, Saudi Arabia, Ngee Ann, Singapore, Technical University of Munich, Germany. Many other students did their internships in major technological Institutes of India like IISC, Bangalore, ISI Kolkata, TIFR, BARC and various IITs. Students have also bagged internships at major industries like Microsoft, Tata Steel, ARM Embedded Systems, Ericsson, MECON, DRDO, Tata Motors, TCS, M&M, GE, SISC, HAL, Goldman Sachs, RVNL, ABB, Ariva to name a few.

# OUR RECRUITERS



# HOW TO REACH ROURKELA

Rourkela is located in the northwestern tip of the Indian state of Odisha at the heart of a rich mineral belt. It is surrounded by a range of hills and encircled by rivers. One of the largest steel plants of the Steel Authority of India Limited is situated here. It also has one of the National Institutes of Technology of the country. The name "Rourkela" means "Our Village" derived from Rour which means "our" and kela means "village" in the local language Sadri spoken by the Raulia tribe living there.

**Rail:** It is situated on the Kolkata-Mumbai South Eastern railway line which is a major route connecting the two metros of India. Rourkela is directly connected to Ahmedabad ([www.orissa-ahm.org](http://www.orissa-ahm.org)), Bangalore, Bhubaneswar, Chennai, Cuttack, Delhi, Bilaspur, Mumbai, Nagpur, Pune, Puri, Patna, Kolkata, Raipur, Ranchi, Sambalpur, Vishakhapatnam and many more cities of India. And a GaribRath Express is plying between Ranchi and Bhubaneswar via Rourkela.

**Road:** Rourkela is connected to various towns of the state by State Highway 10 and National Highway 23. National Highway 23 connects it to the nearby city of Ranchi which is the capital of Jharkhand state. Interstate buses ply between Rourkela, Ranchi, Bhilai, and Jamshedpur. Several buses ply between the major cities and towns of the state.

**Air:** Though the city of Rourkela does not have any airport, but it is extremely well connected to the cities of Kolkata, Bhubaneswar and Ranchi which have functional domestic and International Airports for flights to all corners of the country on a daily basis.

**Accommodation:** Apart from the various star hotels located in the city, NIT Rourkela has a couple of guest houses within the campus with state-of-the-art facilities for a comfortable stay.



# STUDENT COORDINATORS

## B.TECH STUDENT COORDINATORS

Name	Department	Contact Number	Mail ID
Samyak Mohanty	Biotechnology and BioMedical Engineering	8895613701	samyak.mohanti@gmail.com
Satyajit Parida	Civil Engineering	9938257842	satyajitparida92@gmail.com
Sujit Ku. Mohanty	Chemical Engineering	8280242899	msujitkumar123@gmail.com
D Yogendra Rao	Computer Science and Engineering	7205208155	dyogendrarao@gmail.com
Vishal Mishra	Electronics and Communication Engineering	9439035135	vsmishra1992@gmail.com
Harshit Ranjan	Electronics and Instrumentation Engineering	7894398657	harshit2607@gmail.com
K.Tejeswar Rao	Industrial Design	9658675498	tejeswarrao1992@gmail.com
Chandra Prakash	Mechanical Engineering	7735980382	cprakash4639@gmail.com
Mani Bhushan	Metallurgical and Materials Engineering	8984136045	bhushan.mani1992@gmail.com
Shantanu Kumar	Mining Engineering	9583422033	shan.inbox24@gmail.com
Ayush Singh	Electrical Engineering	7381831307	ayushsingh1492@gmail.com
Nitesh Kumar Agrawal	Ceramic Engineering	8895357977	niteshagrawalnit8893@gmail.com

## DUAL DEGREE COORDINATORS

Name	Department	Contact Number	Mail ID
Smriti Singh	Computer Science and Engineering	7894123101	smritisingh22@gmail.com
Navin Kumar	Mechanical Engineering	9438501930	navinkumar9866@gmail.com
Kartik Varwade	Mining Engineering	9178612888	kartikvarwade@gmail.com
Shakti Badajena	Electrical Engineering	8763185373	shakti.thespb@gmail.com
Ankit Anand	Civil Engineering	8658198664	anand.nitr@gmail.com
Chitra Das	Chemical Engineering	9090487578	chitradas63@gmail.com
Shalabh Gupta	Metallurgy and Materials Engineering	8763519939	shalabh247@gmail.com
Biswabandhu Nayak	Electrical Engineering	9437158476	bisw157@gmail.com

## M.TECH COORDINATORS

Name	Department	Contact Number	Mail ID
Aswini Kumar	Computer Science and Engineering	9090452905	aswini.sahoo.silicon@gmail.com
Ranjit Kumar Sahoo	Civil Engineering	9438849613	Ranjit_kumar_sahoo@hotmail.com
Satish Bhati	Electronics and Communication Engineering	8596955305	bhatisatish4045@gmail.com

## MBA, M.SC AND MA COORDINATORS

Name	Department	Contact Number	Mail ID
Olivia Dey	Msc. Physics	7873175888	andromedanolivia@gmail.com
Disha Ranjana	MA. Humanities	9776525851	disha.ranjana@gmail.com