INFORMATION BROCHURE
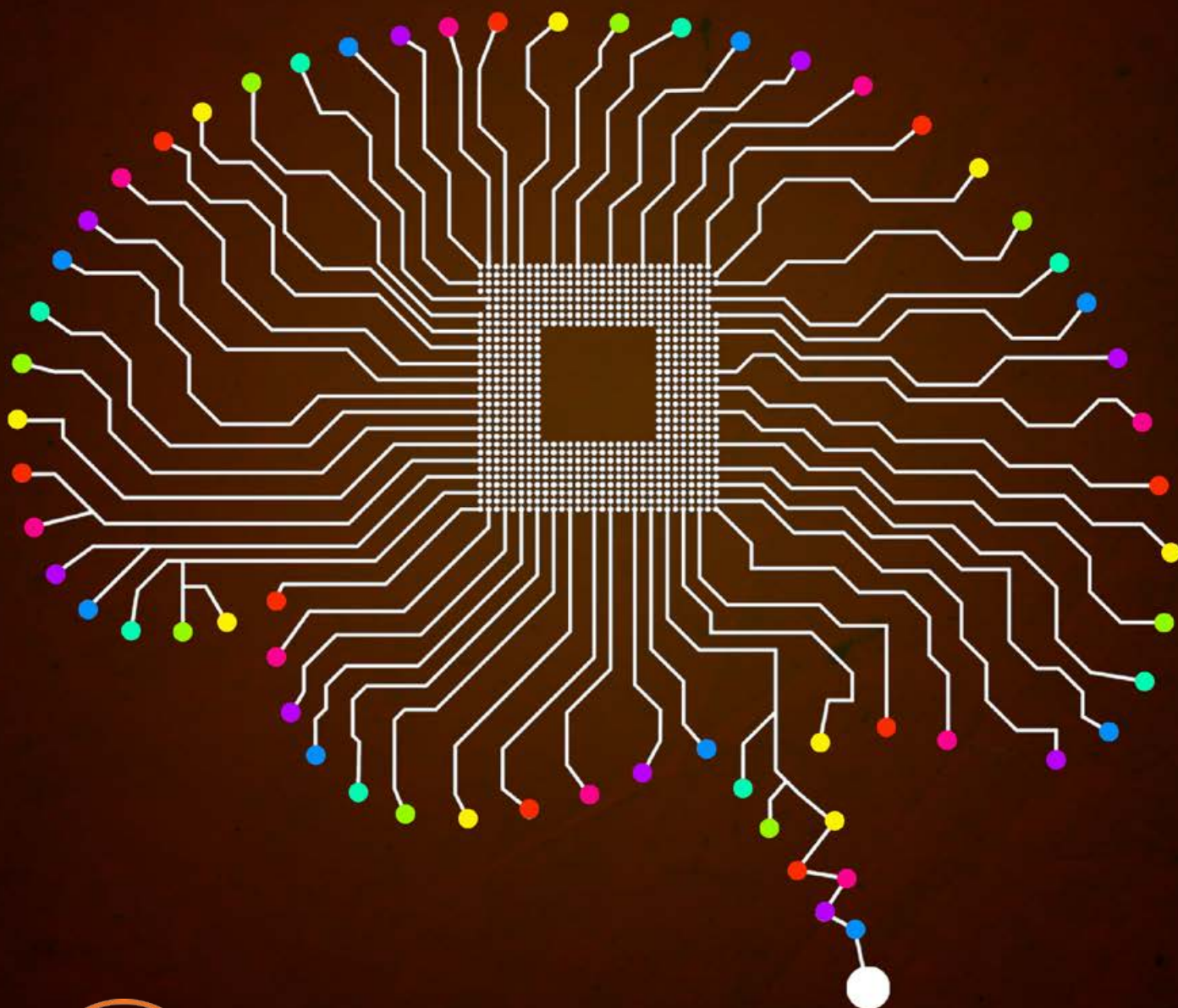# 2018

IIIT BHUBANESWAR
A University Established by Government of Odisha

Contents

DIRECTOR'S MESSAGE

Eleven years ago, the then President of India Dr.A.P.J Abdul Kalam laid the foundation stone of the Institute .After taking baby steps, the Institutes is about to enter its teens.

In the first decade of its existence, the Institute had some enviable achievements. The construction of the campus, building academic infrastructure, recruiting a bunch of young and talented faculty are some of these achievements.

The Institute aims to be a technology playground. This implies fun in learning, developing of competitive spirit, developing a sense of independence and interdependence. The Institute's curriculum, education delivery methods, evaluation standards are being constantly fine-tuned to achieve the objective of being a technology playground.

In the campus, you will encounter restless students aspiring for more energetic faculty driving the students hard and an environment which encourages learning celebrates achievements and cultivates humanity and good citizenship.

I invite you to visit our campus and engage with students who can be your future hirees and faculty who can show what technology will be like in future.

ABOUT THE Institute

Owing to the initiative of the Government of Odisha, IIIT Bhubaneswar was able to see the light of the day. It is a result of the desire of the Government to establish a world-class Institute of Information Technology in the state. The Institute has been registered as a society in Nov 2006. In January 2014, the Institute is conferred with University Status by the Government of Odisha.

The Governance structure of the Institute is in the hands of Board of Governors consisting of members from Odisha Legislative Assembly, Government of Odisha, Leaders from the IT industry and eminent educationists. Currently, the Chairman of the Institute is the Chief Secretary of the Government of Odisha.

The Institute has its focus on quality and rigorous education, quality resource, academic infrastructure, technology and innovation. These initiatives have helped IIIT-Bhubaneswar achieve pre-eminence in India and beyond.

The Institute cultivates values of Honesty and transparency, Respect for the Individual, Commitment to quality and high standards, passion for performance and sensitivity to social and ethical issues.

> " The Institute has its focus on quality and rigorous education, quality resource, academic infrastructure, technology and innovation "

THE Institute CAMPUS

The Campus

The campus of the Institute is located in Gothapatna in the outskirts of Bhubaneswar. It is a compact 23 acres campus, which houses classrooms, laboratories, library, hostel, faculty-living quarters, sports facilities, auditorium and more. The Institute shares its neighbourhood with educational Institutes such as BIMTECH, IMI and research organizations such as Nalco Research Centre & STPI. The campus is designed to be environmentally sensitive to be learner friendly to foster communities.

Classrooms

There are more than 30 classrooms in multiple formats to accommodate variety of needs of the programmes. The class rooms have state-of-the-art features:

- Classrooms to accommodate student strength ranging from 25 to 180
- There is a mix of galleried and flat-floor class rooms
- Classrooms have Network and Internet access, Multimedia Projectors and Audio systems etc.

Laboratories

There are numerous Laboratories as required by the curriculum. In addition, the Institute has built research oriented laboratories with own funding. Some of these labs are:

- High Performance Computing Lab
- IOS and OSX Lab with Apple Computers
- Data Centre Lab,Information Security Lab
- ISEA Lab and many more

There are also labs funded by Central Government agencies:

- CLIA Lab funded by Department of IT
- ISEA Lab funded by Ministry of Electronics & IT
- Bioinformatics Lab funded by Department of Science and Technology

The Institute has developed Virtual Labs and Cloud based Labs for many IT oriented subjects.

Central Library

The Central Library is a key academic infrastructure of the Institute. It is a bookworm's paradise with large and diverse collection of books. The Library is distinguished by large collection of Titles and Journals, e-Books, Multimedia content and a Text Book library with 24*7 access.

IT Infrastructure

The Institute has a state-of-the-art IT infrastructure on the campus. The IT infrastructure is Service oriented. The features of the IT infrastructure include: Campus network touching every corner of the campus; Fast Internet access; Servers to support variety of services; large software library of development tools, analytical software, simulation software, etc.; PCs and Notebooks with everyone including faculty, students and staff members.

Mandaar-our e-governance platform

The Institute runs on self-developed Academic ERP solution which includes administration of academics, library, HR, Accounting, Payroll, procurement and stores functions.

Hostel

The Institute has two Hostels. These hostels accommodate more than 1600 students. The hostels have a combination of single, double and triple bedded rooms. Facilities of the Hostels include rooms with modern design, washing machines, geysers, gym, common room equipped with HD LCD TV, TT, carom, music system, modern and hygienic mess. Being a residential Institute, the Institute also has Faculty quarters, which can accommodate 42 families.

Auditorium

The Institute has four mini auditoria to facilitate guest lectures, interaction meetings, technical events, industry interactions and seminars. These auditoria have of seating capacity ranging from 150 to 300 and they are equipped with modern audio and visual presentation equipments. The Institute has an open air theatre to host large scale events with audience exceeding 5000 in numbers.

Sports facilities

The Institute provides adequate outdoor playing facilities for students. These include Tennis courts, Basketball courts, Volleyball courts, cricket and football fields. The campus is identified by several artefacts such as the Infinite Pond, the Courtyard, the Tranquillity Centre, the Nature's arc, the Scholar's arc, the Medicinal Lane, the Orchard Lane, the Celebration Plaza, etc.

RESEARCH LAB

Virtual Instrumentation Lab

This lab uses some special tools such as Lab view and Xilinx mentor graphics. The main focus of this lab is to model simulation of virtual real time systems. It also focuses on Real Time Speech Processing and Real Time Image Processing.

Big Data Labs

The big data lab uses open source tools such as Hadoop, Hbase, Hive, Zookeeper, Flume and Pig. This lab is used mainly for research work, student projects and consultations. It focuses on analysing large-scale data streams such as news, blogs, sensor data and social media. It is also used in the application of machine learning for cyber security.

Mobile App Development

The Institute has to its credits in establishing labs to train students in mobile development techniques. This facility can be entertained to develop apps in IOS, windows and android.

Bioinformatics lab

A bioinformatics lab in the department of CS & E granted by the department of science and technology, government of India has been setup. The DST had identified CS&E department for support in level 1 category on the recommendation of fist advisory board. A sum of rupees fifty lakhs has been allocated for the purpose under FIST-DST_2013 GRANT. The lab focuses in developing big bio-data mining and systems bioinformatics technologies to undercover hidden but essential rules behind various bio-medical phenomena.

Cross-Lingual-Information-Access (CLIA) Lab

Sandhan (Indian language Search Engine) is a mission mode project funded by TDIL, Ministry of Communication and Information Technology, and Government of India. The main objective of this research lab is to develop a mono lingual search system for tourism domain in nine Indian languages including Odiya. It is a consortium mode project consisting of various Institutes like: IITs, IIITs and other Institutes. The Sandhan system enable us to search the contents in Indian languages thus address the gap that exists in fulfilling the information need of the huge Indian population not conversant with English.

CAMPUS LIFE

The Institute offers an extraordinary environment for its students. Staff, faculty and students share an intimate relationship. The diversity and rich mix of experience, background and culture, coupled with shared traits of talent and high aspiration, produces an inspirational vitality and enriches learning inside and outside the classroom.

The students have organized numerous clubs and societies to give vent to their creative energy. The IEEE and ACM student chapters conduct workshops, seminars and boot camps on emerging technologies. The Tech Society conducts coding competitions on popular and emerging languages and frameworks, organized peer learning sessions and tech talks by industry leaders.

The students of our Institute have also developed an app called Canopy which is the easy –to-use app that comprises of the notice board, attendance status of the students, grades, MOOCS and various other utilities.

The objective of Cult Society is to discover and promote innate talent among the students. There are a number of clubs under the Society with specific focus to promote values and interests of an individual. These clubs are Art & Craft Club, Film and Theatre Society and Photo-geeks (the Photography club). The Cultural Society organizes competitions and events like VIBES, ACOUSTICA (singing competition), ROCKATHON (rock band competition) and Photography Competitions. Our students are regular participants in Rahagiri events in Bhubaneswar.

The Sports Society promotes the sporting spirit among the students by Society conducts training camps and competitions in Cricket, Basketball, Football, Lawn Tennis and Volleyball. The Institute teams regularly participate in Inter-college competitions and have won many tournaments. The Society also organizes indoor events such as carom board, chess and table tennis tournaments.

The News and Publications Society presents the students with an opportunity to hone their writing skills and oratory proficiency. The NAPS organizes its Inter-college Annual literature festival, Ingenium where students from various colleges across the country turn up. The Society also organizes theme based Quizzing competitions as well as debate sessions.

The objective of the E-cell is to encourage the entrepreneurial spirit of the students, educate them about the major challenges faced in any entrepreneurial scenario and help them adapt to the diversities of the cutthroat environment. The Cell conducts workshops, speaker sessions, innovative games, and debates to encourage aspiring entrepreneurs. The Cell is a part of National Entrepreneurship Network (NEN). This society conducts B-plan competitions in order to help aspiring entrepreneurs to become successful start-up entrepreneurs.

Analytics Lab

The analytics labs are dedicated towards the developing tools and techniques for analysing large data. Our specific emphasis is laid upon to develop parallel algorithms to address analytics in big-data.

Characterization Lab

The proposed Characterization lab would be the first of its kind in the eastern region of the nation. The laboratory once established, can provide facilities for chip testing. Although the chip designing has reached an appreciable stage in the State, the chip testing facility is not available. The Characterization Laboratory will also provide a common facility to local IT entrepreneurs, students and research scholars as well, and such a facility will attract more IT investors to the State.

Information Security and Forensic Lab

This lab supports capacity building in the area of Information Security. The primary areas of focus include Generation of core research manpower to undertake basic/fundamental/applied research in information security, introduction of Information Security to the curriculum of formal courses, Technology Forecast & Assessment, and creation of a National Repository of courses. This Lab is sponsored by Department of Electronics and Information Technology, Government of India.

High Performance Computing (HPC) Lab

The HPC in the Institute has one master node, 12 compute nodes and a GPU node. The HPC has 256 compute cores and a GPU processor. The HPC has the following software: Cluster management, Intel cluster studio, PBS pro software or equivalent, PGI toolkit with CUDA programming toolkit on Linux (for GPU node), support PGI C++/ FORTRAN. The HPC runs in Redhat Linux. The system is primarily used for research and consulting. The parallel programming courses in M.TECH uses this system

ACADEMICS

The curriculum is designed to develop a student in the following ways:

- Develop scientific temper: The curriculum attempts to questioning, observing, testing, hypothesizing, analysing, and communicating skills necessary in scientific temper. The students are encouraged to develop healthy scepticism, universalism, freedom from prejudice or bias, objectivity, open mindedness and humility, willingness to suspend judgment without sufficient evidence, rationality, perseverance and positive approach to failure.

- Cultivate Engineering and Technology Mind-set: The curriculum attempts to instil analysis and synthesis skills among the students. These skills are necessary for problem solving, design products and solutions with consideration for simplicity, usability, timely delivery and cost considerations.

- Understand the application environment: The curriculum helps the students to appreciate the environment in which they will apply their skills. The students learn to appreciate the protocols, challenges and merits of organizational, societal, economic and political environments.

- Become a professional: The curriculum and the campus life helps students in becoming professionals by developing high degree of Integrity, positive Self Awareness, being committed, learning to engage in a positive debate, asking questions, being intent listeners, being transparent and being articulate.

- Develop multiples intelligence: The curriculum and the campus life helps students in developing multiples intelligence such as literary, musical, kinaesthetic, interpersonal and intrapersonal abilities.

- Be sensitive to society and environment: While the students are guided towards higher aspirations for a corporate career or an entrepreneur, they are also made sensitive to the society and the environment.

The Institute has adopted innovations in pedagogy. Flipped classroom is being practiced in many courses where the lectures are delivered offline and in the class the students engage in questioning, presenting, and problem solving. Many courses practice project based learning where the students are encouraged to design a project or a solution for a practical problem.

The Curriculum is designed to deliver Common Courses, Compulsory Disciplinary Courses, Elective courses and Internships.

In the First Year, Students are introduced to a wide range of common courses that set the foundation for the more branch-intensive courses to come.

The second and third years are academically the most concentrated and rigorous years of the curriculum. Students are taught their compulsory disciplinary courses which go in depth and explore the finer points of the branch of their choice. Laboratory courses are more intensive than ever with numerous evaluation components to complement the lecture classes. Projects and design assignments test the application skills of each student. The students take up discipline electives as well as humanities and open electives which give them an all-round and holistic development.

In the first semester of the fourth year, more electives are offered to the students and the students spend the final semester as an intern in an organization.

An integral part of academics is Practice school or internship. The program is spread five & half months and consists of the most extensive exposure in an industrial environment.

In lieu of the Practice School, students can also opt for the Thesis Programme (Dissertation for higher degree). The thesis programme is an integral part of our academic structure and gives students a chance to understand the challenges of working in a research setting.

The curriculum provides an opportunity for students to pursue six month industrial internship in final year. This helps them to get an exposure ad day to day real challenges that they would be facing while working in the industry.

Bachelor of Technology in Computer Science and Engineering

The curriculum of Information Technology is a combination of three categories of courses. These are Foundation courses, Departmental courses and Elective courses. The Foundation courses are common to all disciplines and aim at strengthening the scientific and mathematical foundation of a student. To provide an extended view of engineering we have included courses from a broad range of engineering disciplines in the Foundation Courses. The departmental course includes the core subjects in computer science and IT. The electives offer opportunity to an individual to explore his/her interests in broader directions. Increasing the effectiveness of the learning procedure has always been one of our goals. For a better learning experience, our faculty members constantly strive to update the curriculum and delivery methods.

Bachelor of Technology in Computer Science

Theory Courses

- Mathematics
- Chemistry
- Basic Electronics Engineering
- Basic Thermal Engineering
- Programming in C
- Oral Business Communications
- Mathematics-II
- Physics
- Basic Electrical Technology
- Engineering Mechanics
- Data Structure using C
- Written Business Communications
- Mathematics III
- Network Theory
- Physics of Semiconductor devices
- Object Oriented Programming using C++
- Analogue Electronics Circuit
- Engineering Economics & Costing
- Discrete Mathematics
- System Programming
- Theory of Computation

- Design and Analysis of Algorithm
- Digital Electronics Circuit
- Organizational Behaviour
- Computer Organization
- Java Programming
- Compiler Design
- Relational Database Management System
- Environmental Engineering
- Microprocessor & Microcontrollers
- Operating System
- Data Communication and Computer Network
- Optimization in Engineering
- Computer Graphics
- Principles and Practices in Software Engineering

Laboratory Courses

- Chemistry Laboratory
- Workshop Practice
- C Programming Laboratory
- Business Communicative English Lab

- Basic Electronics Laboratory
- Physics Laboratory
- Engineering Drawing
- Data Structure using "C" Laboratory
- Basic Electrical Laboratory
- Analogue Electronics Lab
- Object Oriented Programming Lab using C++
- Critical Reading
- Digital Electronics Circuit Lab
- Design and Analysis of Algorithm Lab
- Computer Organisation
- Relational Database Management System Lab
- Java Programming Lab
- Compiler Design Lab
- Microprocessor & Microcontroller Lab
- Operating System Lab
- Data Communication and Computer Network Lab
- Software Engineering Lab

Bachelor of Technology in Electronics and Telecommunication Engineering

The curriculum of Electronics and Telecommunication Engineering is a combination of three categories of courses. These are

- Foundation courses
- Departmental courses
- Elective courses

The Foundation courses are common to all disciplines and aims at strengthening the scientific and mathematical foundation of a student. To provide an extended view of engineering we have included courses from a broad range of engineering disciplines. The Departmental courses include the core subjects in Electronics and Telecomm engineering. The electives offer opportunity to an individual to explore his/her interests in broader directions.

Integrating industry relevant tools and techniques has always been one of our goals. The faculty in ETC department constantly strive towards the industry orientation of the curriculum. Newer labs integrating software tools, hardware tools are an effort in this direction.

ETC

Theory Courses
- Mathematics
- Chemistry
- Basic Electronics Engineering
- Basic Thermal Engineering
- Programming in C
- Oral Business Communications
- Mathematics-II
- Physics
- Basic Electrical Technology
- Engineering Mechanics
- Data Structure using C
- Written Business Communications
- Mathematics III
- Materials Science & Engineering
- Network Theory
- Electrical & Electronics Measurement
- Organizational Behaviour
- Analogue Electronics Circuit
- Electromagnetic Fields & Waves
- Object Oriented Programming Using C++

- Analogue Communication Techniques
- Digital Electronics Circuit
- Engineering Economics and Costing
- Physics of Semiconductor Devices
- Control Systems Engineering 3
- Digital Communication Techniques
- Microprocessor and Microcontroller
- Environmental Engineering & Safety
- VLSI Design
- Digital Signal Processing
- Optimization in Engineering
- Microwave Engineering
- Fundamentals of Image Processing
- Mobile Communication

Laboratory Courses
- Chemistry Laboratory
- Workshop Practice
- C Programming Laboratory
- Business Communicative English Lab

- Basic Electronics Laboratory
- Analogue Communication Lab
- Digital Electronics Circuit Lab
- Object Oriented Programming Using C++ Lab
- Critical Reading
- Physics Laboratory
- Engineering Drawing
- D.S. using "C" Laboratory
- Basic Electrical Laboratory
- Network & Devices Lab.
- Analogue Electronics Circuit Lab
- Introductory Simulation Lab for MATLAB & LABVIEW
- Control & Instrumentation Lab.
- Microprocessors Lab.
- Digital Communication Lab
- VLSI Design Lab
- Digital Signal Processing Lab.
- Microwave Engineering Lab
- Image Processing Lab
- Communication System Lab

Bachelor of Technology in Electrical and Electronics Engineering

Information Technology is a combination of three categories of courses. These are

- Foundation courses
- Departmental courses
- Elective courses

The foundation courses which are common to all departments strengthen the scientific, mathematical foundation and programming fundamentals. They also include the courses from a broad range of engineering disciplines to provide an extended view of the engineering discipline. The departmental courses include core subjects in Electrical and Electronics Engineering. The electives offer an opportunity to explore ones interest in broader directions.

The faculty in EEE department constantly strive to industry orientation of the curriculum by integration of Industry relevant tools and techniques. Newer labs, integrating software tools, hardware tools are an effort in this direction.

EEE

Theory Courses
- Mathematics
- Chemistry
- Basic Electronics Engineering
- Basic Thermal Engineering
- Programming in C
- Oral Business Communications
- Mathematics-II
- Physics
- Basic Electrical Technology
- Engineering Mechanics
- Data Structure using c
- Written Business Communications
- Mathematics
- Materials Science & Engineering
- Network Theory
- Object Oriented Programming Using C++
- Organizational Behaviour
- Analogue Electronics Circuit
- Electromagnetic Fields & Waves
- Electrical Machines-I
- Electrical & Electronics Measurement

- Digital Electronics Circuit
- Engineering Economics and Costing
- Physics of Semiconductor Devices
- Control Systems Engineering
- Environmental Engineering & Safety
- Electrical Machines-II
- Power Electronics
- Microprocessor & Microcontrollers
- Digital Signal Processing
- Optimization in Engineering
- Electrical Power Transmission and Distribution
- Power System Protection
- Power System Operation and Control
- Communication Engineering

Lab Courses
- Chemistry Laboratory
- Workshop Practice
- C Programming Laboratory
- Business Communicative English Lab

- Basic Electronics Laboratory
- Physics Laboratory
- Engineering Drawing
- D.S. using C Laboratory
- Basic Electrical Laboratory Network & Devices Lab.
- Analogue Electronics Circuit Lab
- Object Oriented Programming Using C++ Lab
- Electrical Machines Lab-I
- Digital Electronics Circuit Lab
- Electrical & Electronics Measurement Lab
- Critical Reading
- Control & Instrumentation Lab.
- Electrical Machines Lab-II
- Power Electronics Lab.
- Digital Signal Processing Lab.
- Microprocessor & Microcontrollers Lab
- Design and Simulation Lab.
- Power System Lab
- Communication Engineering Lab

Bachelor of Technology in Information Technology

Information Technology is a combination of three categories of courses. These are

- Foundation courses
- Departmental courses
- Elective courses

The curriculum of Information Technology is a combination of three categories of courses. These are Foundation courses, Departmental courses and Elective courses. The Foundation courses are common to all disciplines and aim at strengthening the scientific and mathematical foundation of a student. To provide an extended view of engineering we have included courses from a broad range of engineering disciplines in the Foundation Courses. The departmental course includes the core subjects in computer science and IT. The electives offer opportunity to an individual to explore his/her interests in broader directions. Increasing the effectiveness of the learning procedure has always been one of our goals. For a better learning experience, our faculty members constantly strive to update the curriculum and delivery methods.

Theory Courses

- Mathematics
- Chemistry
- Basic Electronics Engineering
- Basic Thermal Engineering
- Programming in C
- Oral Business Communications
- Mathematics-II
- Physics
- Basic Electrical Technology
- Engineering Mechanics
- Data Structure using
- Written Business Communications
- Mathematics III
- Network Theory
- Physics of Semiconductor devices
- Object Oriented Programming using C++
- Analogue Electronics Circuit
- Engineering Economics & Costing
- Discrete Mathematics
- System Programming
- Theory of Computation

- Design and Analysis of Algorithm
- Digital Electronics Circuit
- Organizational Behaviour
- Computer Organization
- Java Programming
- Compiler Design
- Relational Database Management System
- Environmental Engineering
- Microprocessor & Microcontrollers
- Operating System
- Data Communication and Computer Network
- Optimization in Engineering
- Principles of Soft Computing
- Principles and Practices in Software Engineering

Laboratory Courses

- Chemistry Laboratory
- Workshop Practice
- "C" Programming Laboratory
- Business Communicative English Lab

- Basic Electronics Laboratory
- Physics Laboratory
  Engineering Drawing
  D.S. using "C" Laboratory
- Basic Electrical Laboratory
- Analogue Electronics Lab
  Object Oriented Programming Lab using C++
- Critical Reading
- Digital Electronics Circuit Lab
- Design and Analysis of Algorithm Lab
- Computer Organisation
- Relational Database Management System Lab
  Java Programming Lab
- Compiler Design Lab
- Microprocessor & Microcontroller Lab
- Operating System Lab
- Data Communication and Computer Network Lab
- Software Engineering Lab

ELECTIVES OFFERED

Electives offered by Computer Science

- Internet & Web Technology
- Principles of Programming Languages
- Cryptography & Network Security
- Algorithms for Bio-Informatics
- Mobile Computing
- Pattern Recognition
- Artificial Intelligence
- Wireless Sensor Network
- Functional Programming
- Software Testing
- Advanced Computer Architecture
- Principles of Soft Computing 3
- Digital Image Processing
- Data and Web Mining
- Human Computer Interaction
- Biometrics Security
- Information Theory and Coding
- Information Retrieval
- Computer System Architecture
- Principles of Mobile computing
- Embedded Systems
- Data Base Management Systems
- Natural Language Processing
- Parallel & Distributed Computing

- Software Project Management
- Computer Organization
- Java Programming

Electives offered by Electronics and Telecomm Engineering

- Signals & Systems
- Sensors and Transducer
- Introduction to DSP
- Fibre Optics & Optoelectronics Devices
- Advanced Electronics Circuits
- Information Theory and Coding
- Communication Engineering
- Industrial Instrumentation
- Analogue VLSI Design
- Microcontroller Embedded System
- Adaptive Signal Processing
- Radar & Satellite Communication
- Digital Speech Processing
- VLSI for Signal Processing
- Antennas and Wave Propagation
- Analogue Signal Processing
- Analogue Communication Techniques
- Digital Communication Techniques
- Mobile Communication

Electives offered by Electrical and Electronics Engineering

- Renewable Energy System
- High Voltage DC Transmission
- Electric Drives
- Advanced Power Electronics
- Biomedical Instrumentation
- High Voltage Engineering
- Production & Operation Management
- Advanced Control System
- Flexible AC Transmission System
- AI applications in Electrical Engineering 3
- Robotics & Robot Applications
- Electrical Power Quality
- Industrial Automation & Control
- Mechatronics
- Power System Optimization
- Microcontroller & Applications 3
- Power Station Engineering and Economy
- Control System Engineering

Electives offered by Basic Science & Humanities

- Numerical Methods
- Principles of Management

MASTER OF TECHNOLOGY IN ELECTRONICS AND COMMUNICATION ENGINEERING (ECE)

This programme emphasizes on both the areas of Communication Engineering and Signal processing.

The Institute has been offering M.Tech programme in Communication Engineering and Signal Processing from the year 2015. This programme emphasizes on both the areas of Communication Engineering as well as Signal processing.

Communication Engineering and Signal Processing applications have been rapidly growing and evolving over the past few years. Both Signal Processing and Communication techniques are widely used in many electronics equipment such as cellular telephones, mobile applications, satellites televisions etc. This course will enable the students in development and deployment of various signal processing related techniques in the latest 3G and 4G communication systems and architectures. Apart from the theoretical knowledge, students will have exposure to work in individual project which will help them to model, optimize and integrate a system. This course will also work as a stepping stone to pursue their higher studies in the related domain.

Subjects:
- Mathematics for communication engineering
- Microwave integrated circuits
- Advanced digital signal processing
- Estimation and detection
- Optical communication
- Web course(information theory and coding)
- Advanced wireless communication
- DSP algorithms and architectures
- Master research project phase

Electives List:

Group-1(signal processing)
- Image and video processing
- Adaptive signal processing
- Antenna analysis and synthesis
- Radar system engineering
- EMI/EMC techniques
- Information theory and coding
- Machine learning
- Advanced electromagnetic

Group-2(VLSI & Embedded)
- Advanced digital system design
- VLSI for signal processing
- Analogue IC design
- System design using embedded processors
- Low power VLSI design

MASTER OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING (CSE)

The Institute has been offering M.Tech program in Computer Science and Engineering since 2007.

The main objective of this program is to develop professionals who address the knowledge intensive needs of the industry and academia.

The M.Tech program is designed in such a way that its curriculum are more focused and oriented towards research. The curriculum explores emerging areas in Computer Science and related fields. The Seminars and Projects require the students to explore academic literature and write academic article and thesis worthy of publication in serious academic journals. The Institute recognizes and incentivizes quality publications of masters' programme.

It is expected that the students graduating from masters' programmes will seek a career in research and academics.

Subjects:
- Design and analysis of algorithm(DAA)
- Mathematical foundation of computer science(MFCS)
- Enterprise resource planning(ERP)
- Web course (software engineering)

Electives List:
- Information theory and coding
- Machine learning
- Image and video processing
- Computer vision
- Advanced data mining
- Bioinformatics and computer biology
- Information retrieval
- NLP
- Mobile Ad Hoc network
- Mobile computing
- Cloud computing
- Information security
- Mathematical foundation of information security
- Digital forensic
- IOT security
- Human computer interaction
- Graph theory
- Parallel computing

MASTER OF TECHNOLOGY IN ELECTRICAL ENGINEERING

The Institute has been offering M.Tech Electrical Engineering program in since 2016. The vision of the program is to provide the leadership to enable India's excellence in the field of Electrical Engineering. The department is committed to advancement of the frontiers of knowledge in Electrical Engineering and to provide the students with a stimulating and rewarding learning experience.

This two years M.Tech program is divided into two half yearly semesters each and is designed in such a way that its curriculum are more focused and oriented towards research. The curriculum explores emerging areas in Electrical Engineering and related fields like Communication Systems, Power Systems, Power Electronics, VLSI design, Control and Instrumentation. The students generally publish their work in peer-reviewed conferences and/or journals, and obtain research experience that is valuable both in the industry as well as for continuing on to pursue a Doctorate Programme. The Institute recognizes and incentivizes quality publications of masters' programme.

It is expected that the students graduating from masters' programmes will seek a career in research and academics.

Subjects:
- Power system operation & analysis
- EHV/UHV AC transmission
- Advanced EPQ analysis
- Advanced power electronics
- Renewable & distributed energy
- Power system reliability
- Power system optimization
- Plug-in electric vehicle
- Advanced control system
- Advanced power electronics
- Smart grid technology
- Grid integration of distributed energy resources
- Energy audit & management
- Soft computing applications in power system
- Power distribution system analysis
- Signal processing applications in power system
- Nanotechnology

Electives List:
- HDVC
- Advanced electrical power quality
- Renewable & distributed energy sources
- Power system transients

PH.D. PROGRAMME

The Institute has been offering doctoral programmes from the year 2015. The objective of this program is to develop the professionals for Academics as well as Research.

Research fields under Computer Science & Engineering:
- Information Security.
- Image and video processing.
- Data mining.
- Information retrieval.
- Mobile computing.
- Big data.
- ERP.
- Bio informatics.

Research fields under Basic Sciences and Humanities:
- Asian Shakespeare Studies.
- Translation Studies.
- Optimisational Technique.
- Numerical Analysis.
- Quantum Computation.
- Organic Polymer.
- Fluid Dynamics
- Synthesis and Luminescence Characterization Of Phosphorus.

Research fields under Mechanical Engineering:
- Triple fluid heat exchanger.
- Combustion and emissions analysis of HCCI engines.
- Non-linear dynamics, bifurcation and chaos.
- Linear & Non-Linear analysis of Functionally Graded Materials (FGM) under Hygro-Thermal environment.

Research fields under Electrical Engineering:
- Smart Grid Technologies.
- Power System Optimization.
- Grid Integration of Renewable Energy Sources.
- Adaptive Power Quality & Estimation.

Research fields under Electronics and Telecommunication Engineering:
- VLSI Architecture design, FPGA, Signal and Image Processing
- Fibre optic communication, non-linear optics, free space optics
- Antenna Design, Planar RF & Microwave Circuits and System Design, Microwave remote sensing & Sensors
- Array Signal Processing
- Wireless Communication, Image Processing
- VLSI Design, Network on Chips, Multi-core SoC Architectures
- Ground penetrating RADAR, Meta materials, Electromagnetic measurements

FACULTY & STAFFS

The faculties are responsible for the excellence of our programme. In the class room, you encounter researchers, scholars, consultants, and above all, gifted and dedicated teachers. These are individuals who love teaching and do it extremely well. They make themselves available for after-class discussion and devote long hours as advisors and guides to student teams. These are also the people who work at the intersection of the Institute and the Industry. Whatever may be your particular area of interest, you will be learning from the finest minds of that field. Young, qualified and dedicated, their contribution to the development of the students and the Institute is significant.

The staffs at IIIT-Bhubaneswar are the key contributors for the smooth running of the Institute's operational activities. As we are a technical educational institution, the Institute makes sure that its staffs are better equipped with the latest technological advancements so that tasks are completed in an accurate and timely manner. They work as a team to achieve organization's goal.

STUDENTS

The Institute offers an extraordinary environment for its students. Staff, faculty and students share an intimate relationship. The diversity and rich mix of experience, background and culture, coupled with shared traits of talent and high aspiration, produces an inspirational vitality and enriches learning inside and outside the classroom.

A high level of interaction among the students, faculty and corporate visitors is a way of life here in the Institute. Classroom learning combined with an exposure to the industry practices ensures that the students are well prepared for their life after graduating from the Institute.

Being a residential campus, the Institute offers multiple avenues for learning. The students learn in class room and beyond the class room, from the curriculum and beyond the curriculum, from teachers and also from peers. The learning is not limited to skills and knowledge. Students are encouraged to develop competencies, professionalism, sensitivity to society and environment.

The Institute encourages students to aspire, perspire and inspire. Having higher aspiration helps them to setting a professional and life goals and begin their journey towards realising their aspirations. The students are also taught the merits of hard work, which helps them to realise their dreams. The students are taught to be inspired by and be inspiring to others.

The students forge deep and lasting friendships during their stay in the Institute. In the company of other bright, young, aspiring minds, the quality of life as well as learning is enhanced. As members of this vibrant community, the students evolve into bright, well-groomed professional who aim to make the world a better and more comfortable place to live in.

STUDENTS SOCIETY

NAP Society

The News and Publications Society, IIIT Bhubaneswar reports all the events conducted throughout an academic year and is a forum for students to enhance their literary skills. The NAPS, as they are known, organizes various debates, quizzes and speeches throughout the year. Inculcated in it is a Debate Society, also known as DEBSOC, which regularly conducts debates. Till date, this society has been successfully conducting many debates and quizzes every semester, which have always been attended by many students. It also has organized MUNs (Model United Nations) in the past and has successfully organized the first ever Literary Fest of IIIT Bhubaneswar, and is planning to conduct the 2nd edition of the Literary Fest of IIIT Bhubaneswar. Ingenium'18, as it is being called, comprised of an events like - Mood Court, Mock CID, Courtroom Trial, Puzzle Room, Debates and various other events including an extensive workshop by the

famous social media organization "The Scribbled Stories". The News and Publications Society thus provides students with a platform to enhance themselves and inspire them to become better debaters, writers and orators.

The Cultural Society

The objective of Cultural Society is to discover and promote innate talent among the students. There are a number of clubs under the Society with specific focus to promote values and interests of an individual. These include Art & Movie Club, Aakanksh (the Dramatics club), Photo-geeks (the Photography club) and the DEBSOC (Debating Club). The cultural society organizes various competitions and events like VIBES, OCTAVES, singing competitions, dancing competitions, Rockathon, photography competitions, fashion shows including the fresher's welcome party "Nebulae" and several festive nights.

Advaita

ADVAITA is the Institute's annual techno-cult fest which brings in students from all over India. The four-day grand event consists of broad range of technical competitions, rock bands events (ROCKATHON) from various colleges, literary events, cultural performances and many other buster events. The technical horde consists of the much awaited Technova, Dirt Rush, Online Coding contests among the students from many reputed colleges while the Cultural events boast of debating competitions, literary quizzing and much more. Other events include LA-MODE which is another much anticipated fashion event in the Institute, the energetic dance competition FOOTLOOSE. Celebrity Night is the biggest attraction of ADVAITA where a famed star performs among a huge crowd. Advaita had celebrities like Lost Stories and Band Lagoori, which attracted a lot of footfalls in its last edition.

Photogeeks (Photography society)

Basically we are the team who work for the common purpose that is, covering the events through Photography and Videography. Not only in college but we have also made reach outside college to shoot the after movies and video coverage including NGOs. Society activities in college /outside college- Already mention above. Events or competition organized in last two semesters were photography competitions during World Photography Day and 'Imagen' the official intercollege event.

Sports

Being one of the most active societies of the Institute, the sports society invokes the enthusiasm of the hidden sportsperson in the individuals unleashing their true potential in various indoor and outdoor sporting activities. The training classes organized in Basketball, lawn tennis, volleyball, football, cricket is the prominent features of this society. Each coming year brings myriad sporting events and inter-branch competitions wherein an excellent performance rate is manifested by the students as we all as the Institute itself. The Society also organizes indoor events like chess, carom and table tennis tournaments. The Institute teams regularly participate in Inter-College competitions and have won many competitions.

Tech Society

The objective of the Tech Society is to promote and encourage technical innovation. The Society provides the platform for the students to learn beyond the classroom periphery. The society regularly conducts model workshops, technical seminars, training courses and competitions. The Society conducts Leadership Seminars which are addressed by the leaders from the Industry. The Society has conducted Ethical Hacking and ARM processor workshops in the past year, having a successful participation of over 200 students. Technotronics, a satellite club of the society has actively conducted workshops on HTML-5, Arduino, Microcontroller, Ruby on rails, underwater robotics etc. in past and is still persistent in its endeavours.

IEEE and ACM Chapters

The IEEE chapter of the Institute conducts seminars, workshops under the aegis of IEEE. Also, it has been providing students with an opportunity to present their research papers and get them published. The ACM student chapter, nominated as the second-best student chapter of the country is also one of the most active chapters of the college. The ACM chapter has successfully conducted Code Battle, Py-Session and Introduction to Machine learning, Linux Installation Fest and many more events. It is one of the active societies of the Institute. Working on the ideology of "beyond the curriculum", ACM has been actively organizing lectures in form of boot camps over different aspects of computer science.

Film and Theatre Society

The society consists of budding actors, script writers, dramatists, producers and directors who love to reel the real. It hosts several fun events like dumb charades, Bollywood quizzes and antaksharis which create a perfect blend with the competitive coding culture of the campus.

The theatre group Aakanksh staged its famous act on terrorism, and domestic abuse on 'Raahgiri' which raised awareness and received much appreciation among the masses.

STUDENT ACHIEVEMENTS

UnitedbyHCL Hackathon

UNITEDBYHCL Hackathon was organised by HCL Technologies and Manchester United Football Club. It was held at Old Trafford, Manchester, UK. HCL, the official Digital Transformation Partner for Manchester United, had partnered with DHL, Ubisoft, Formula-e and many more partners to invite developers to solve some real world problems. Team named "PLUTOAR", from IIIT BHUBANESWAR, consisting of Shourya Pratap Singh, Ankit Kumar Panda, Susobhit Panigrahi and Ajaya Kumar Dash participated. They won the first prize among 13,000 participants across the world. They were awarded a cash prize of 5,000 USD.

Google Summer Code 2017

Shibasis Patel worked with Tammo Jan Dijkema, Gijs Molenaar under the project "Python-Casacore (Open Astronomy)". The project was about improving the python-Casacore code-base, making it more robust and write mox tat and porting its python bindings from using: python to pybind11.

ACM ICPC Amritapuri Regional 2017

Two teams qualified for the regionals of ACM ICPC Regional Round 2017, held at Amritapuri and Kolkata region.

1. Team "tillwecollpse" with its members Prateek Pattnaik ,Bibhu Prasad Pala and Naweed Imroze have participated and recognized.

2. Another team,"Pseudo_algos" with its members Shubham Rath, Aman Gupta and Shivank Tripathy have participated and recognized.

GDG Bhubaneswar 2017

Three teams qualified for the grand finale of GDG Bhubaneswar Hackathon 2017. Sai Saswat Sahu and Avijit Nanda won the 2nd position. They won a cash prize of ₹5000.
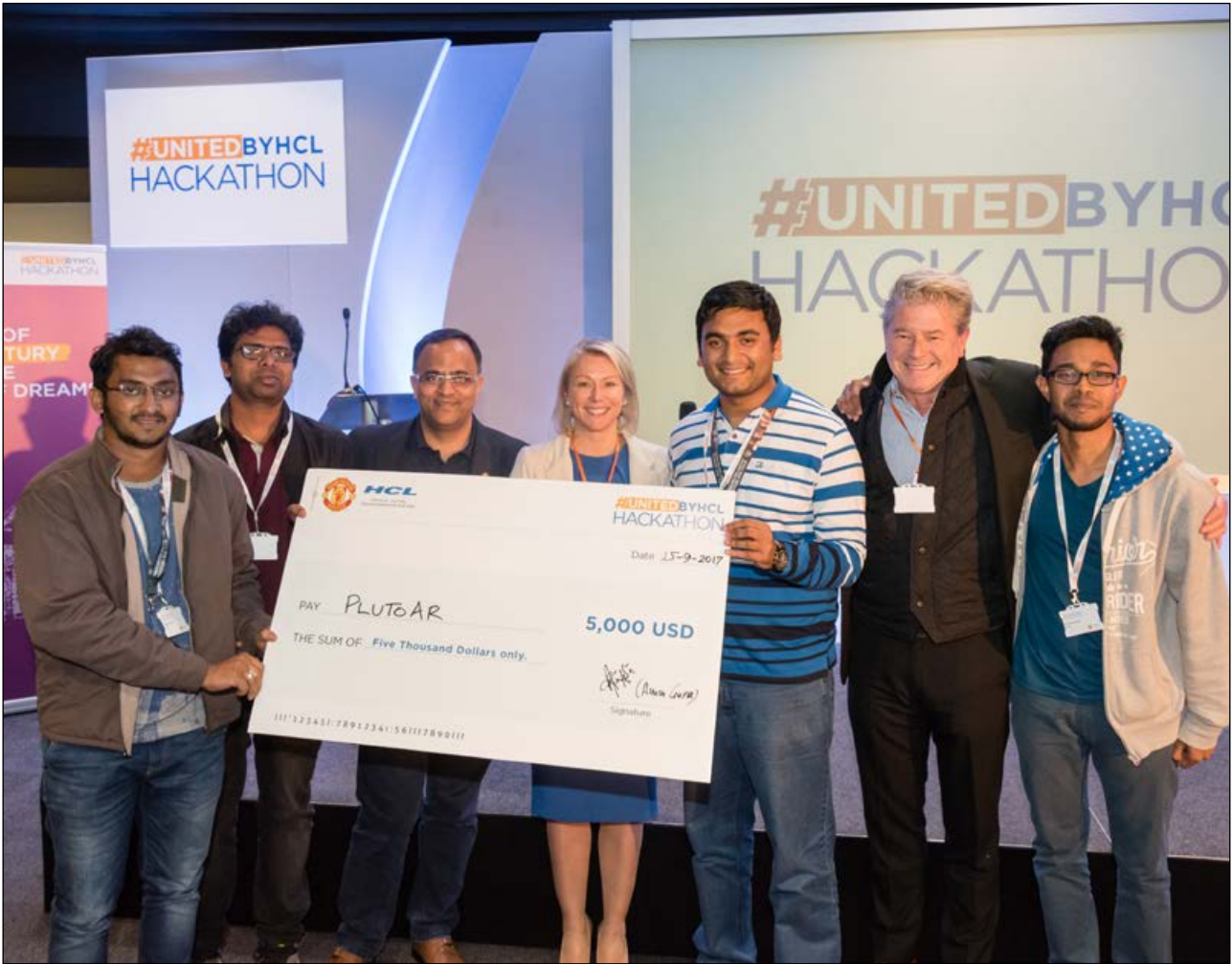
PLACEMENT PROCEDURE FOR COMPANIES

1. The Placement Office sends invitations to companies/organizations along with relevant information.

2. The Company/ Organization sends in a JAF (Job Announcement Form) containing details of the job offer (pay package, place of posting, allowances and other bonuses). JAFs can be sent either by post or email to Placement Cell (placement@iiit-bh.ac.in).

3. If the company/ organization wish to conduct a Pre-Placement Talk (PPT) they can send a request along with the preferred dates.

4. The JAF is made available online to the students, along with any other information furnished by company organization.

5. Placement Office allots dates to companies for campus interviews based on various details given by companies. The company/ organization confirms the dates with the Placement Office.

6. Interested students show their willingness to appear for the recruitment process of a company by signing its JAF.

7. Companies can view resumes of interested and shortlisted students.

8. Companies come down to the campus on the allotted date/s and conduct tests and/or interviews according to their recruitment process.

9. The company/ organization is required to furnish the final list of students preferably on the date of interview.

Note: The placement office records jobs corresponding to the students selected. Students once placed may not be allowed to appear for other interviews as per the Institute placement policy.

* The Job Announcement Form provides the primary basis of communicating the details of the positions offered to the candidates. It is therefore, highly desirable that the Form is completed in all respects and it would be advantageous if it were accompanied by relevant company literature with more details about the company.

OUR PAST RECRUITER

Bhubaneswar

Bhubaneswar is the capital of Odisha and is located on the eastern coast. The city is known for innumerable Temples, Buddhist caves, Handloom and Handicrafts and has rich diverse heritage. It is a modern and well planned city which has been growing rapidly due to growth of IT, Mining and the establishment of Institutes imparting professional education.

Leading IT majors like Infosys, Tech Mahindra, TCS, Wipro, Mindtree have development centres in Bhubaneswar. The city hosts smaller IT companies such as NetHawk, EXILANT, ESS, and Aabsys. Many more reputed IT companies are in the process of setting up of their units.

Reaching Bhubaneswar

Bhubaneswar is well connected through Rail, Road and Air Networks.

Air-ways: Bhubaneswar is well linked by airways to important cities of the country. IndiGo, GoAir, Air India and Vistara are the domestic airline carriers providing services to Bangalore, Chennai, Delhi, Kolkata, Mumbai, and Visakhapatnam. The airport is about 14kms from the Institute.

Rail-ways: Trains connect Bhubaneswar with other major cities of India. A major railhead on the East Coast (E Co) Railway, it has fast and superfast train links to important centres of the country as well as within the state. The station is located in the centre of town which is about 15 kms from the Institute.

Road-ways: Bhubaneswar is well linked to the rest of the country by the national highways. The New Bus Stand in Bhubaneswar is on NH5, at Baramunda, about 8km from the Institute.

Stay: There is a wide range of accommodation and stay options available at Bhubaneswar ranging from economy and budget lodgings to the luxury ones, that are located at the most convenient and easily accessible places in and around the city.

Feel free to get in touch with us in case of any further queries regarding the same. We, Placement Cell, would be more than happy to assist you over a call or e-mail.

Our Hospitality: The Institute takes care in providing accommodation required for the corporate officials who come for the placement drive. The companies can prefer to stay in a hotel in the city proper, or in the guest room available in the Institute. As per the requirement, the Institute shall arrange for the stay and travel of the company officials.
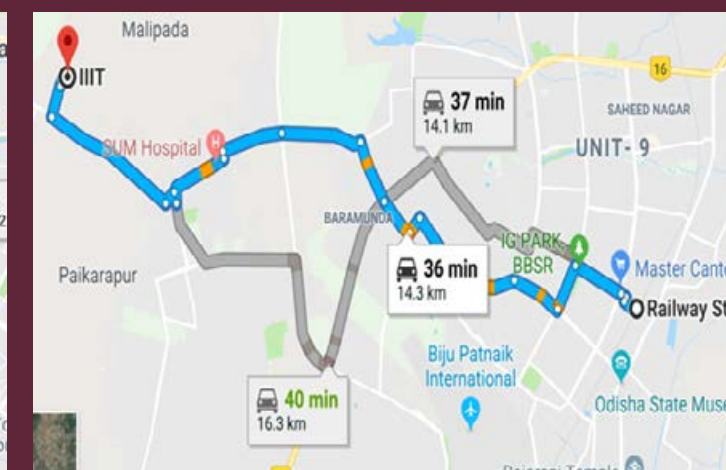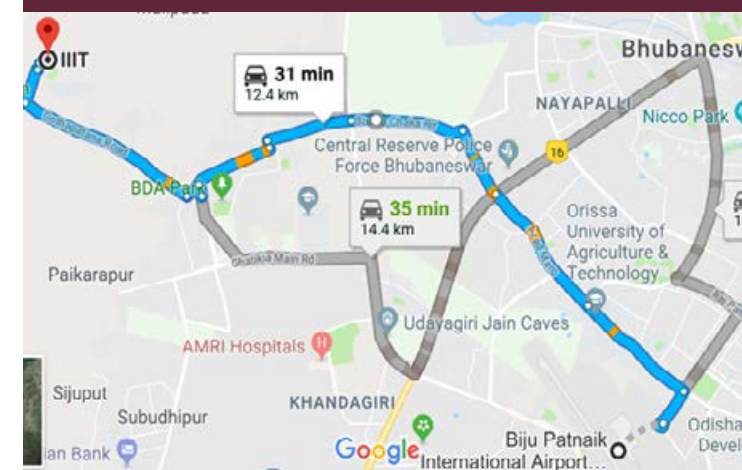
CONTACT:

Dr. Debasish Jena
Dean Training & Placement
Training & Placement Cell,
IIIT Bhubaneswar
Ph: 06743060519/88
Mail: debasish@iiit-bh.ac.in

Sanat Kumar Swain
Assistant Placement Officer,
Training & Placement Cell,
IIIT Bhubaneswar
Ph: +91 8093030329
Mail: sanat@iiit-bh.ac.in

Navanita Nayak
Assistant Placement Officer,
Training & Placement Cell,
IIIT Bhubaneswar
Ph: +91 8093030324
Mail: navanita@iiit-bh.ac.in

Rajashree Mohanty
Assistant Placement Officer,
Training & Placement Cell,
IIIT Bhubaneswar
Ph: +91 8093030326
Mail: rajashree@iiit-bh.ac.in

IIIT BHUBANESWAR
A University Established by Government of Odisha

PO: Malipada, Gothapatna,
Bhubaneswar 751003, Odisha
Tel: 0674-3060510
Mail: placement@iiit-bh.ac.in