Placement Brochure

Post Graduate Programmes
Internships 2023-2024

NATIONAL INSTITUTE OF TECHNOLOGY CALICUT

CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

CENTRE FOR CAREER DEVELOPMENT

तमसो मा ज्योतिर्गमय

NATIONAL INSTITUTE OF TECHNOLOGY CALICUT

INDIA RANKING 2023

nirf
NATIONAL INSTITUTIONAL RANKING FRAMEWORK

शिक्षा मंत्रालय
MINISTRY OF EDUCATION

2nd

DEPARTMENT OF ARCHITECTURE & PLANNING

तमसो मा ज्योतिर्गमय

NATIONAL INSTITUTE OF TECHNOLOGY CALICUT

INDIA RANKING 2023

nirf
NATIONAL INSTITUTIONAL RANKING FRAMEWORK

शिक्षा मंत्रालय
MINISTRY OF EDUCATION

8th

INNOVATION

तमसो मा ज्योतिर्गमय

NATIONAL INSTITUTE OF TECHNOLOGY CALICUT

INDIA RANKING 2023

nirf
NATIONAL INSTITUTIONAL RANKING FRAMEWORK

शिक्षा मंत्रालय
MINISTRY OF EDUCATION

23rd

ENGINEERING

POWER ELECTRONICS

Department of Electrical Engineering

Emphasis is given on power processor with recent and emerging power switching devices, electrical machines and their control, measurement and processing of signals, signal processors, control systems and digital system design required to build any power electronic equipment with necessary controllers.

The programme offers electives for the students to enhance the knowledge of emerging machines, area of power electronics applications and techniques to optimise the designs.

The one year design project requires the students work on specific areas involving design, simulation, fabrication, analysis and testing of any power electronics system having research/industrial application values.

Image Credits : https://www.rohde-schwarz.com

About

The Masters Degree in Power Electronics offered by the Electrical Engineering Department gives the graduate students a thorough understanding of the theoretical and practical aspects of power electronics engineering. The post graduate programme includes the following core and elective courses as part of their curriculum.

Core Courses

- Mathematics for Power Engineering
- Dynamics of Electrical Machines
- Power Electronics Circuits
- Advanced Power Electronic Circuits
- Switched Mode and Resonant Converters
- Modern Digital Signal Processors
- Seminar
- Mini Project Work
- Project Work

Elective Courses

- Advanced Microprocessor Based Systems
- Internet of Things and Applications
- SCADA Systems and Applications
- Linear and Digital Electronics
- Hybrid Electric Vehicles
- FACTS and Custom Power

Power Electronics Laboratory

- Study of static and dynamic characteristics of power electronic switches.
- Design and implementation of uncontrolled rectifiers with L,C and LC filters.
- Design and implementation of controlled rectifiers with L,C and LC filters where the triggering circuit of the switches are designed in analog domain.
- DC-DC boot converter with IC-555 timer-based control circuit.

https://www.nitc.ac.in/electrical/pow_elec/pe_poc.html

When

Internship duration availability

15th May 2023 to 15 April 2024

Graduation

July 2024

Contact

Ph. +91 9188096125

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

02/23

POWER SYSTEMS

Department of Electrical Engineering

Image Credits : https://www.manchester.ac.uk/study/online

About

The power system group offers a vibrant environment for post-graduate education and research programmes to develop expert power system engineering leaders. We promote interdisciplinary research both within the department and other streams to develop cross-domain expertise leading to successful product development.

Course Highlights

The goal of the programme is to transform engineering graduates to expert power engineers so that they could comprehend, analyse, design and create novel products and strategic solutions to real life problems in the areas of power systems that are technically sound, economically feasible and socially acceptable.

Labs and Research

The laboratories and research facilities in the Department are well maintained and regularly updated. Members of the faculty are actively involved in sponsored research and consultancy works. The R&D projects undertaken by the faculty have been sponsored by the various government agencies like Defence Research & Development Organisation (DRDO), Department of Science & Technology (DST), All India Council for Technical Education (AICTE), Kerala State Council for Science, Technology and Environment (KSCSTE) and few industries such as FACT Engineering & Development Organisation. Department has also completed few Consultancy and Testing assignments from organisations like CWRDM, KSEB and other Industries. A number of R&D projects and testing assignments are in progress.

When

Internship duration availability

15th May 2023 to 15 April 2024

Graduation

July 2024

Contact

Ph. +91 9188096125

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

03/23

INDUSTRIAL POWER AND AUTOMATION (IPA)

Department of Electrical Engineering

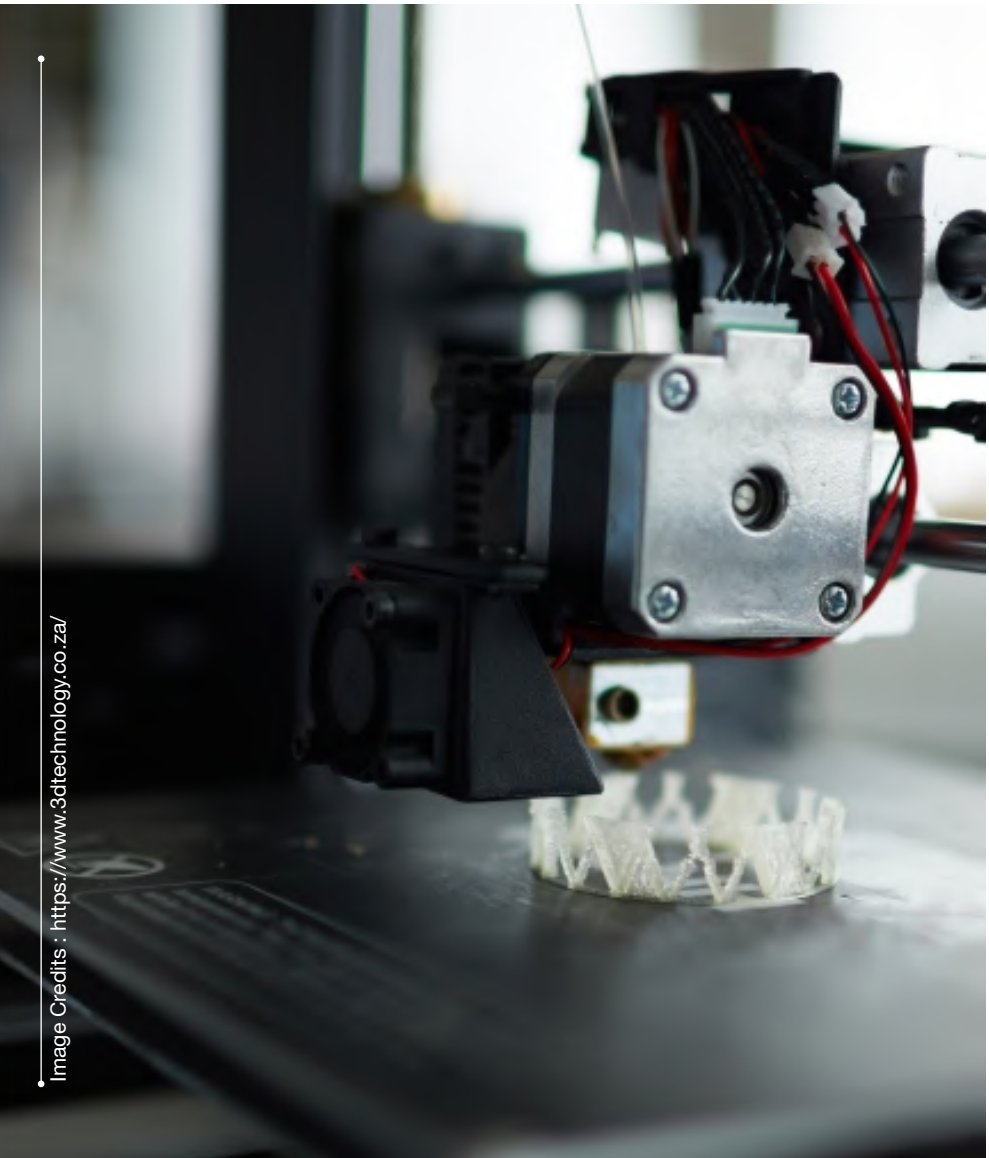
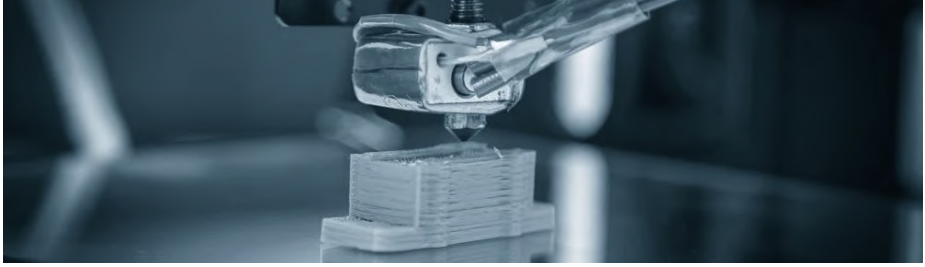


Image Credits : https://www.3dtechnology.co.za/



About

Upon considering future demand Department of Electrical Engineering at National Institute of Technology, Calicut started a Masters course on Industrial Power And Automation (IPA), previously known as Computer Controlled Industrial Power (CCIP), which provides sufficient theoretical and field experience on the above systems to the electrical engineers. Various research activities and consultancy projects are also under taken by the Industrial Power group.

Core Courses

- Artificial Intelligence and Machine Learning
- Neural Network and Pattern Recognition
- Hybrid and Electric Vehicles
- Data Analytics
- Internet of Things and Applications

Notable Alumni

- Dr. Jeevanand S., Assistant Professor, IIT Roorkee
- Mr. Rama Krishna Mayiri, Chief Engineer, WAPCOS Limited, Power Sector Project, Yemen.
- Mr. Prasanth P., Team Lead, Robert Bosch GmbH, Germany.

When

Internship duration availability

15th May 2023 to 15 April 2024

Graduation

July 2024

Contact

Ph. +91 9188096125

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

04/23

HIGH VOLTAGE ENGINEERING

Department of Electrical Engineering

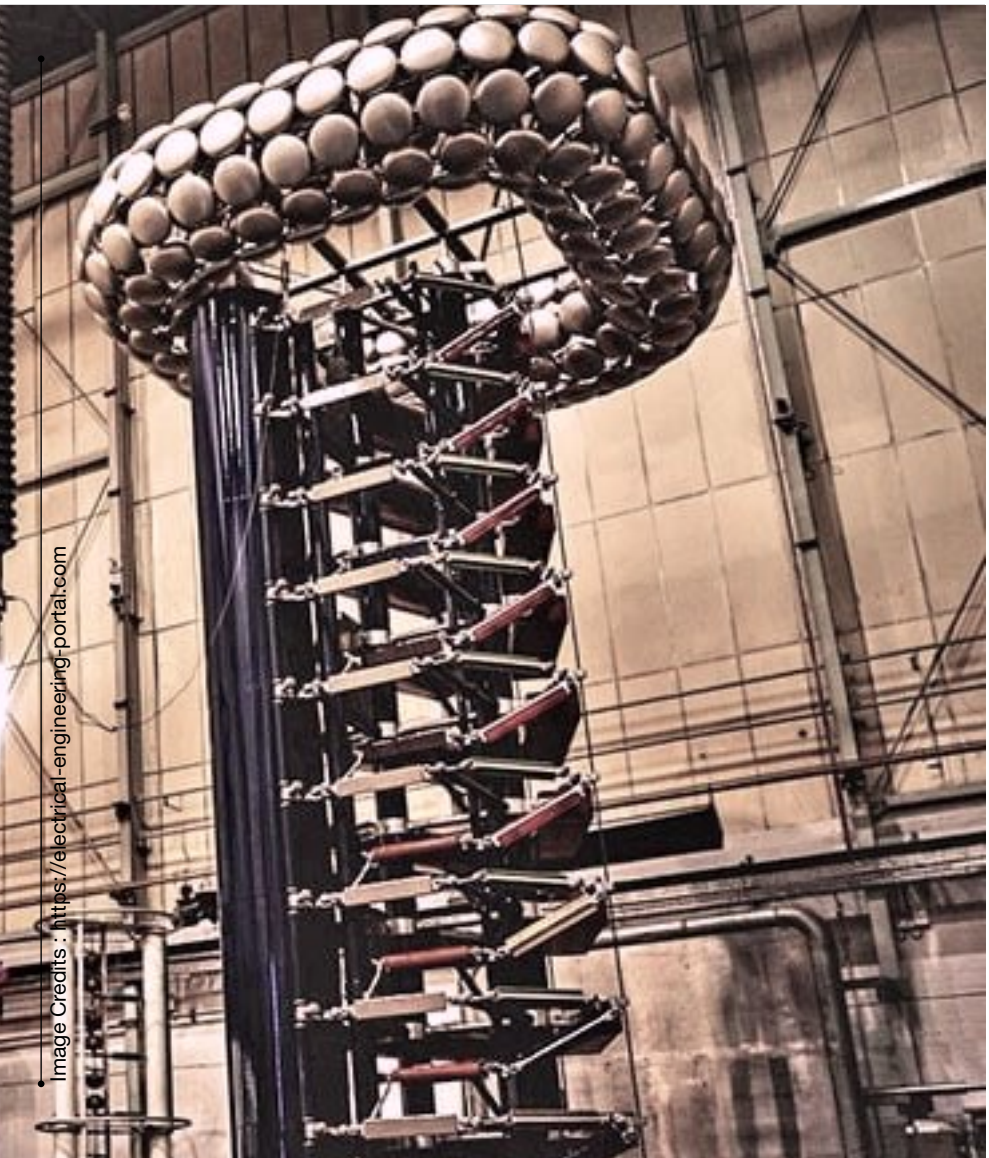


Image Credits : https://electrical-engineering-portal.com

About

High voltage engineering is a part of electrical engineering that pertains to very high voltages and it encompasses the study and application of different electrical phenomena occurring in various media at high voltages. The Master's course primarily aims to impart the students a deeper physical understanding of high voltage technologies.

Course Highlights

The course connects to different areas of current research interest, such as polymeric outdoor insulation, advanced measuring techniques and diagnostics etc. The goal of the program is to equip the students to apply the enhanced knowledge in advanced technologies for modelling, analysing and solving contemporary issues related to high voltage engineering with a global prospective.

Practical Approach

- 100kV AC/DC IMPULSE High Voltage test setup
- Capacitance-Loss tanget Measurement system
- Impedance Analyser
- Partial discharge detector HFCT sensors and acoustic sensors
- Electrovoltmeter

Lab Facilities

- Machine Learning
- PYTHON
- Embedded C
- PSpice
- PSCAD
- EMTP
- COMSOL
- ANSYS

Areas of Research

- Diagnosis of faults and partial discharge using machine learning.
- Computational Electro magnetics (FEM, FAM, FDM and CSM)
- Applications of non-thermal plasma.
- Dielectrics and Insulators
- GIS and GIL
- HVDC, Power electronic drives and Electric vehicles.

When

Internship duration availability

15th May 2023 to 15 April 2024

Graduation

July 2024

Contact

Ph. +91 9188096125

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

05/23

INSTRUMENTATION & CONTROL SYSTEMS (ICS)

Department of Electrical Engineering

Image Credits : https://mnes-us.com

About

The post graduate programme in Instrumentation & Control Systems of the National Institute of Technology Calicut is a flagship programme of the Department of Electrical Engineering and was started in the early 1970's.

Objective

To transform engineering graduates to expert engineers so that they could comprehend, analyse, design and create novel products and solutions to problems in the areas of Control Systems and Instrumentation that are technically sound, economically feasible and socially acceptable.

Course Highlights

The course provides the foundations for research and life-long learning. Department also host research leading to Ph.D in the areas of control theory, instrumentation, biomedical engineering, rehabilitation, robotics, while rendering guidance for the research in machines & drives, power systems, and industrial automation. Consultancy is available for development of controllers using DSP and embedded systems, modeling and control designs, biomedical engineering and so on.

When

Internship duration availability

15th May 2023 to 15 April 2024

Graduation

July 2024

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

Contact

Ph. +91 9188096125

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

06/23

ELECTRONICS DESIGN AND TECHNOLOGY

Department of Electronics and Communication Engineering

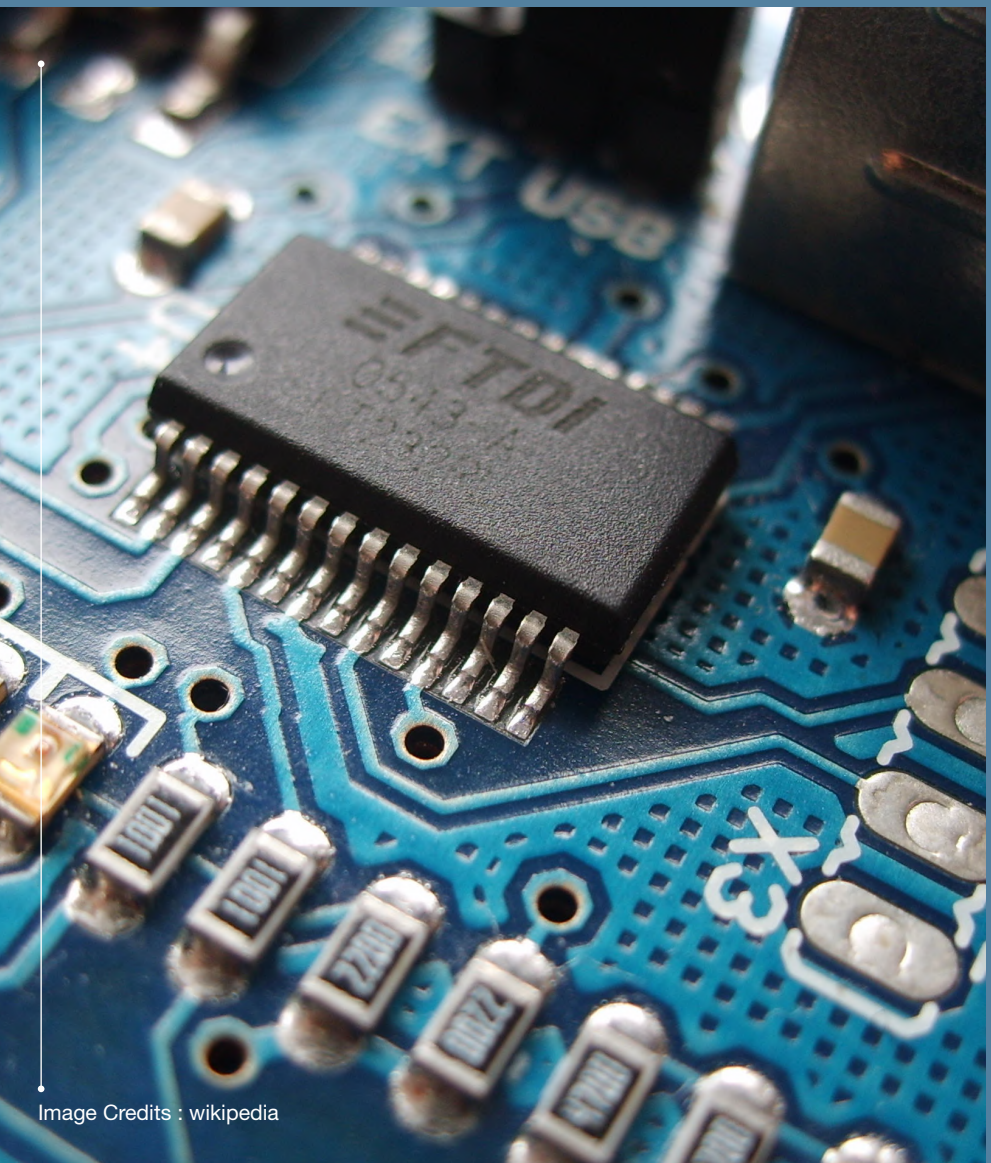


Image Credits : wikipedia

Course Highlights

- Aims to educate engineers as creative designers of electronic systems.
- The programme is designed with the belief that any engineer concerned with the development of new electronic product needs to integrate the functional design, industrial design, equipment packaging and manufacturing.

Skill sets

- Verilog, System Verilog
- FPGA based system design
- Micro controller based system design
- Digital IC Design
- Static Timing Analysis
- Embedded C
- Physical Design
- ASIC Design Flow

Lab Facilities

- Cadence Virtuoso, Genus and Innovus.
- Xilinx Vivado
- Keil uVision
- COMSOL Multi Physics
- Cadence Arcade Spice
- Orcad

Areas of Research

- Embedded System Design for biomedical/Industrial applications
- VLSI architectures for Signal Processing
- Power Management IC Design
- Implementation of Neutral Network models
- Semiconductor Device Modelling

When

Internship duration availability

Jan 2024 to June 2024

July 2023 to Dec 2023

Graduation

July 2024

Contact

Ph. +91 9188096125

PLACEMENT BROCHURE

CENTRE FOR CAREER DEVELOPMENT

National Institute of Technology Calicut

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

07/23

TELECOMMUNICATION

Department of Electronics & Communication Engineering

About

The curriculum of the programme is designed so as to make the students knowledgeable in the fundamental concepts involved, trained in the basic skill sets required, familiar with the latest technological advances made and sensitive to the social and ethical issues' entailed in the very important subject.

Course Highlights

- Ability to learn the latest technologies and products in area of communication and networking.
- Competence in using modern tools (software and hardware) for the design and analysis of system based on communications technology and information networking.

Skill sets

- Verilog coding and FPGA
- Wireless communication
- Estimation and Detection theory
- Information Theory
- Digital Communication techniques

Areas of Research

- Modern Communication
- Advanced wireless technologies
- MIMO Systems
- Communication networks
- Orthogonal Time Frequency and Space (OTFS) MODULATION
- RF and Microwaves

Lab Facilities

- Laboratory courses dealing with wireless communication using python
- Random process using Matlab
- DSD using HDL
- Communication Networks in python/C++

When

Internship duration availability

Jan 2024 to June 2024

July 2023 to Dec 2023

Graduation

July 2024

Contact

Ph. +91 9188096125

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

08/23

MICROELECTRONICS AND VLSI DESIGN

Department of Electronics and Communication Engineering

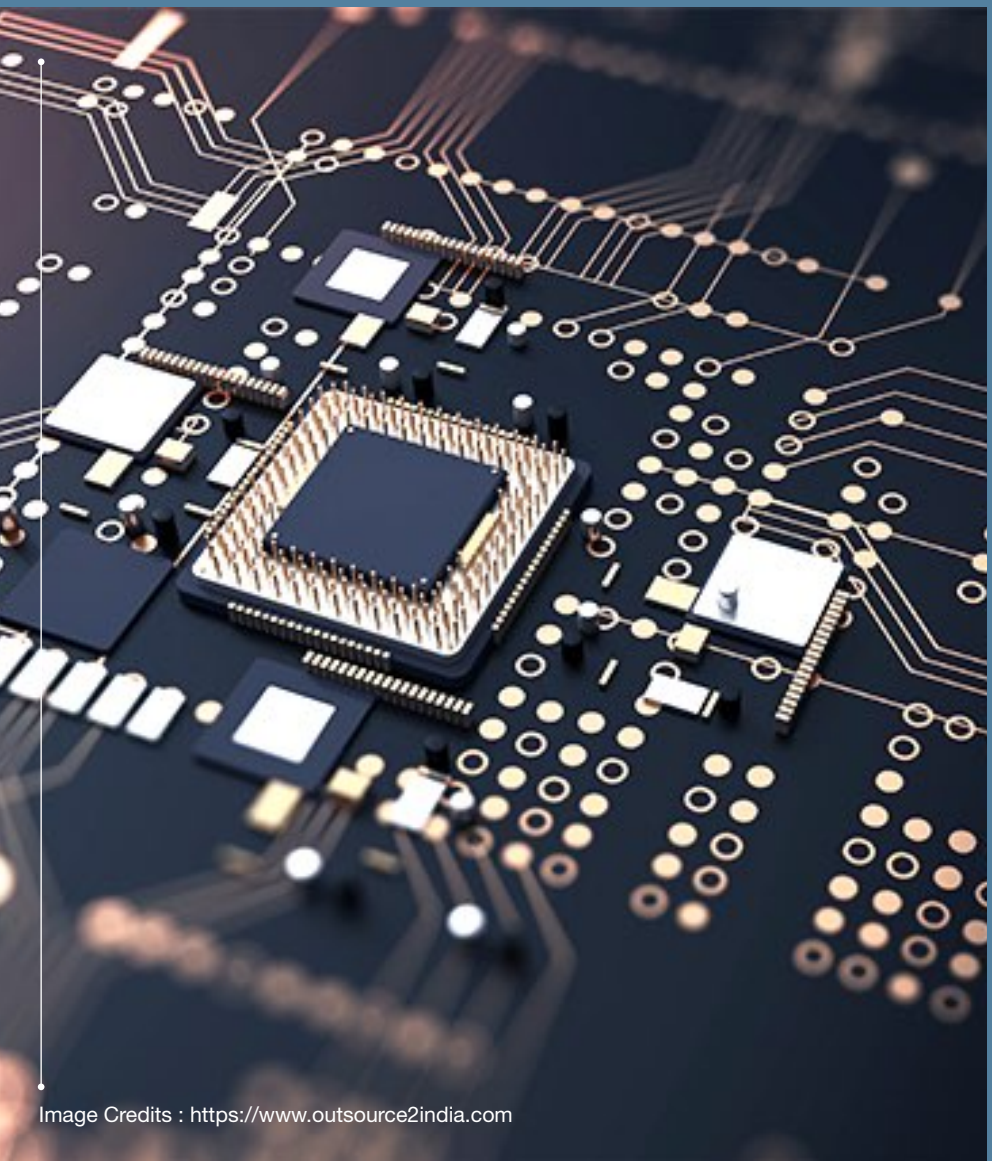


Image Credits : https://www.outsource2india.com

About

Micro Electronics is the driving force behind a large number of technical and commercial innovations in the present world scenario. There is a need for good amount of educated / trained manpower in Micro Electronics and VLSI Design related areas in the coming years to raise India's share in the global VLSI Market. This is one of the thrust areas of ministry of Information Technology, Govt. of India and is possible only through a specialised programme in Micro Electronics and VLSI Design. The course is well suited for the current academic and industrial needs of the country.

Course Highlights

- Started in 2006
- Deep and flexible curriculum
- Aims to educate engineers as creative designers of Electric products and Integrated Chips.
- The program is designed so that any engineer concerned with the development of new electronic by product needs to integrate packaging, floor planning, placement and manufacturing.

Skill sets

- Digital IC Design
- Analog IC Design
- Device Modelling
- Verilog, System Verilog
- Physical Design
- FPGA Implementation
- Sensor and semiconductor development

Lab Facilities

- Xilinx Vivado
- Cadence Virtuoso, Genus and Innovus
- MATLAB
- TCAD Silvaco
- Thinfilm coating and etching, Probe station

Areas of Research

- Power Management IC Design
- Analog & Mixed-signal IC Design
- VLSI architecture for Signal Processing
- Semiconductor Device modelling

When

Internship duration availability

Jan 2024 to June 2024

July 2023 to Dec 2023

Graduation

July 2024

Contact

Ph. +91 9188096125

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

09/23

SIGNAL PROCESSING

Department of Electronics & Communication Engineering

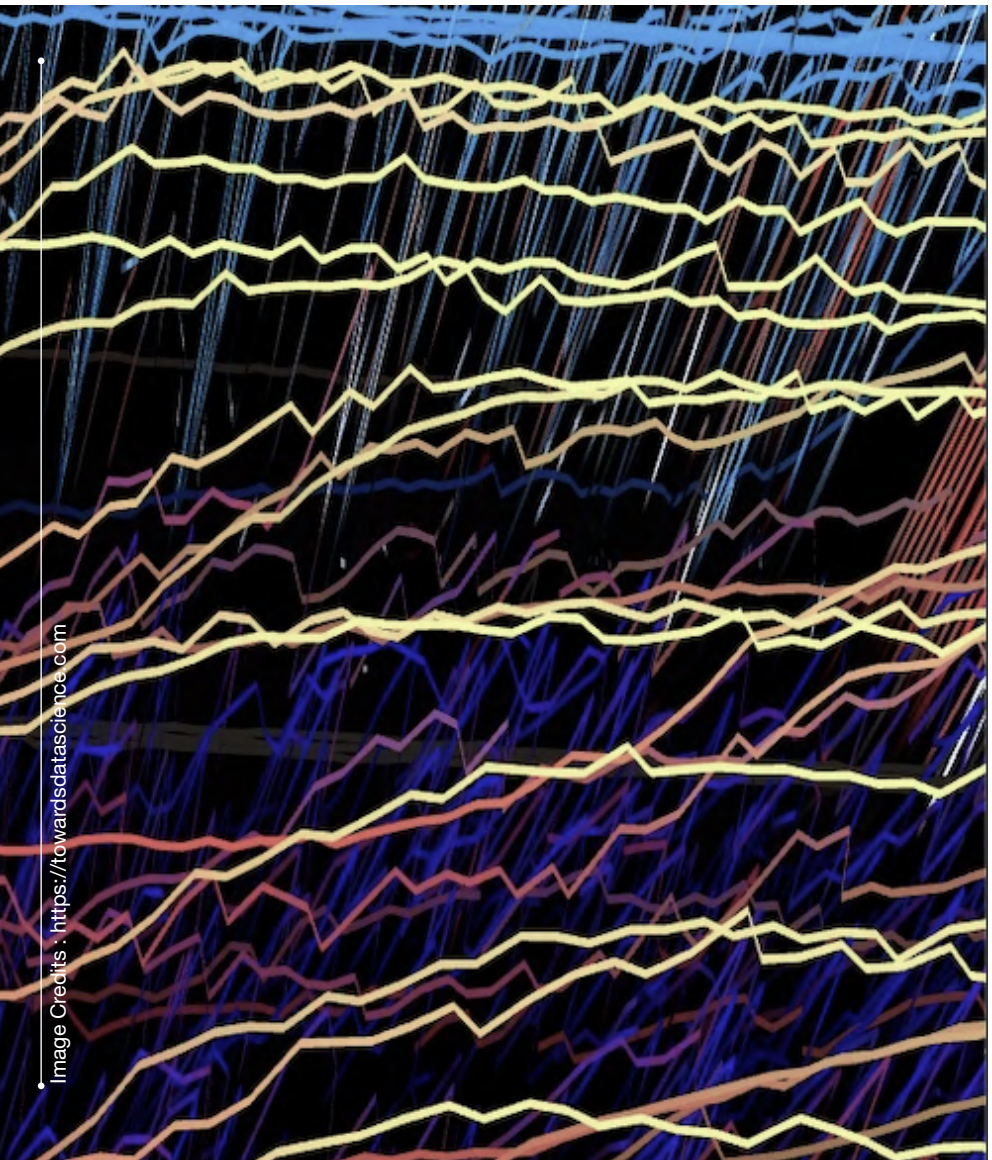


Image Credits : https://towardsdatascience.com

About

The graduates will gain strong theoretical foundation, expertise in application development and research skills to identify, analyse and solve multi-disciplinary problems pertaining to design, development and deployment of algorithms and system level VLSI design for signal processing systems which make them suitable for Industry.

Course Highlights

Engineers are trained in creative design and development of multidisciplinary signal processing systems. They are familiarised in Linear Algebra, Random Process, Statistical Signal Processing, DSP Algorithms and Data Compression Techniques, specialised in Artificial Intelligence, Pattern Recognition and Machine Learning, Computer Vision, Deep learning, Digital system design, DSP System design, Testing and Verification of VLSI systems and Physical Design Automation. Students develop expertise in programming in VERILOG, C/C++, Python, MATLAB, Simulink, and libraries like OpenCV and DL libraries.

Skill sets

- Digital Image Processing using Python/ C++
- Machine learning with pattern recognition and neural networks.
- MATLAB and SIMULINK
- Verilog coding and FPGA basics with verilog
- Verification of VLSI systems.

Lab Facilities

ML/DL algorithm development in RTX and DGX machines, DSP algorithm develoment using MATLAB and SIMULINK, DSD using HDL, Statistical Signal Processing, Random Process and Computer Vision, Speech capture booth.

Areas of Research

- Machine Learning and Deep Learning
- Speech/Audio/Image/Video Processing
- Computer Vision
- VLSI architectures of Signal Processing
- Signal Theory
- Compressive Sensing/Sparse Signal Processing
- Biomedical Signal Processing and Filter banks.
- Biomedical database development and analysis

When

Internship duration availability

Jan 2024 to June 2024

July 2023 to Dec 2023

Graduation

July 2024

Contact

Ph. +91 9188096125

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

10/23

ENVIRONMENTAL GEOTECHNOLOGY

Department of Civil Engineering

Image Credits : Dr. Prateek Negi, NITC

About

The course offers a comprehensive exploration of Geotechnical Engineering, emphasizing advanced foundation techniques, landfill design, ground pollution, soil dynamics, ground improvement methods, and finite element modelling. It has a distinct emphasis on sustainable Geo-Environmental Engineering, aligning with industry demands.

Course Highlights

- The program started in 2006 with a current batch strength of 25.
- An interdisciplinary curriculum that focusses on sustainable Geo-Environmental engineering.
- Students are trained in line with the industrial requirements. where Geotech and Environmental aspects are inseparable.
- State-of-the-art Geotechnical and Environmental research labs.
- Students proficient in applying geotechnical principles to real-world engineering projects.

Skill sets

- Geotechnical analysis and design.
- Geotechnical investigation report
- Numerical tools such as PLAXIS, ABAQUS, ANSYS
- EIA report preparation
- Geographic position modelling ArcGIS

Areas of Research

- Soil-Structure Interaction
- Soil Dynamics
- Ground Improvement
- Machine Foundations
- Landslide Mitigation
- Rock Mechanics and Tunnelling
- Finite Element Modelling and Simulation of Geotechnical Engineering Structures

Lab Facilities

- Soil testing and investigation
- Geophysical instruments
- Geotechnical Studio: PLAXIS
- Water quality analysis for various purposes
- Effluent characteristic analysis
- Pollution monitoring
- Remediation recommendations
- Environmental forensic investigations
- Automatic cyclic triaxial
- Earthquake liquefaction test
- Testing on geo-synthetics

When

Internship duration availability

15th May 2023 to 15 April 2024

Graduation

July 2024

Contact

Ph. +91 9188096125

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

11/23

STRUCTURAL ENGINEERING

Department of Civil Engineering

Image Credits : Dr. Prateek Negi, NITC

About

The program provides a thorough training in design principles and structural action as related to components and systems over a broad range of application areas. It also provides thorough training in the methods of analysis, including problem formulation and the use of current mathematical and computational tools.

Course Highlights

- The program was started in 1971. Currently there are 25 seats in the program.
- Covers specialised topics in Theory of Elasticity, Structural Dynamics, Advanced Design of Concrete Structures, Finite Element Analysis, Plates and Shells, Advanced Metal Structures.
- Also offers a wide variety of elective courses like Earthquake Resistant Structures, Structural Optimisation, Stability of Structures, Structural Health Monitoring etc.

Areas of Research

- Finite Element Analysis
- and Geopolymer Concrete
- Retrofitting of the Structures
- Sustainable Materials
- Fire Resistance
- Structural Health Monitoring
- Bio Mechanics
- Seismic Analysis
- Blast Resistant Design
- Corrosion Resistance
- Wind Engineering
- Reliability Analysis
- Cold formed steel structures
- Non-Linear Analysis

Lab Facilities

- Loading frames 40T and 100T capacities
- Shake table facility
- Load Cells and Load Indicator, 10 channels
- Digital Strain Indicator, 10 channels, displacement Indicators and Sensors
- Hydraulic Jacks with digital Indicators
- Proving Rings, LVDT and Demec gauges
- Prestressing Jacks
- Steam curing chamber
- Profometer (rebar locator)
- Pundit Pulse Echo Transducer- 2 No.
- Silver Schmidt Concrete Test Hammer (Digital)
- Original Schmidt Concrete Test Hammer
- Core case 105
- Crack detection Microscope
- Hydraulic Puller
- Windsor Probe Test system
- Bremort Test kit

When

Internship duration availability

15th May 2023 to 15 April 2024

Graduation

July 2024

Contact

Ph. +91 9188096125

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

12/23

TRAFFIC AND TRANSPORTATION PLANNING

Department of Civil Engineering

Image Credits : https://www.pexels.com/photo/architecture-auto-automobiles-bridge-210182/

About

The program focuses on planning, design, construction, operation and maintenance of safe, cost-effective and sustainable transportation systems in the context of environmental, economic, and social requirements.

Course Highlights

- Started in the year 2006.
- The Program runs under the Centre for Transportation Research (CTR), which is a Centre of Excellence funded by the Ministry of Human Resource Development .
- There are only 50 such Centre of Excellence pan India
- Students go through courses such as transportation panning, traffic engineering,

Skill sets

- ArcGIS and QGIS
- SPSS
- Matlab and R
- PTV VISUM and VISSIM
- Autocad Civil3D
- CUBE
- MX Road
- AMOS
- NLOGIT

Areas of Research

- Road safety analysis and evaluation
- Capacity and LOS analysis of rural and urban roads
- Performance evaluation of intersections
- Freight management studies in urban regions
- Urban mobility
- Multimodal integration
- Non-motorised transportation
- Modified bituminous mixture
- Col bituminous mix technology
- Public transportation planning

Lab Facilities

- Radar Speed Gun
- Video Camera & Recorders
- Infrared Traffic Data Logger
- Marshall Stability Test
- Repeated Load Test
- Asphalt Content Gauge (Ignition)
- Rotational Viscometer
- Kinematic Viscometer
- Rotating Thin Film Oven
- Pressure Ageing Vessel
- Wheel Tracker
- Portable Falling Weight Deflectometer
- Benkelman Beam
- MERLIN
- Portable Skid Resistance Tester
- Dynamic shear rheometer
- Moisture Induced Susceptability Tester
- Superpave Gyratory Compactor
- Roller Compactor
- Field CBR test apparatus
- IDT Test setup
- Benkelman Beam Test

When

Internship duration availability

15th May 2023 to 15 April 2024

Graduation

July 2024

Contact

Ph. +91 9188096125

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

13/23

OFFSHORE STRUCTURES

Department of Civil Engineering

Image Credits : https://www.rohde-schwarz.com

About

The goal of the programme is to prepare graduate students in Civil Engineering for the offshore profession having application to the challenging conditions encountered in the marine environment.

Course Highlights

The offshore structure course has been programmed to expose the student to various dimensions of offshore engineering field. The course structure has been designed in a manner that student gets enough theory background related to offshore structures design including stochastic approaches for design. A research orientation and self learning is promoted through seminars and project works.

Skill sets

- Ability to determine complex wave characteristics and loads using sophisticated tools and methods.
- Designing complex offshore structures using modern analysis techniques such as FEA with the help of softwares like ANSYS, ABAQUS etc.
- Stability analysis of floating structures
- Mooring line analysis using OrcaFlex
- Dynamic analysis using Deterministic and Stochastic Analysis
- Research ability and problem skills.

Lab Facilities

Offshore lab consists of

- wave flume cum towing tank, 110m x 4m x 4m
- Wave Flume (40m x 2m x 2m)
- wave measuring instruments like wave transducer,
- pressure gauge,
- accelerometer,
- EMCON laboratory software for data processing and transmitting etc.
- Computer lab with softwares like ANSYS, MATLAB,
- OrcaFlex, SAACS,
- Plane wave maker

Areas of Research

- Ship propeller design
- Coastal vegetation
- Coastal projection
- Wave energy/renewable energy
- Vertex induced vibrations in floating bodies
- Response reduction of offshore structures dampers
- Fatigue analysis and retro fitting methods

When

Internship duration availability

15th May 2023 to 15 April 2024

Contact

Ph. +91 9188096125

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

14/23

WATER RESOURCE AND ENGINEERING

Department of Civil Engineering

Image Credits: https://www.trahot.com/tour/idukki-arch-dam-idukki-kerala/

Course Highlights

The course offers a range of subjects covering surface water hydrology, advanced fluid mechanics, and water resource system analysis and design. Students learn about watershed management, applied hydraulic modelling, water quality modelling, urban hydrology and remote sensing and GIS applications for water resource analysis. Overall, these courses equip students with the knowledge and skills to ensure the sustainable and efficient use of water resources.

Skill sets

- Statistical analysis in hydrology
- Proficiency in using computer-based models and simulations to assess water availability, water demand, and water allocation.
- GIS application for water resource engineering
- QGIS and ARC GIS
- Digital image analysis
- EPA NET
- Hydraulic and hydrologic modelling HEC-RAS and HEC-HMS
- MATLAB, PYTHON, R STUDIO

Areas of Research

- Soil moisture mapping
- River routing
- Flood modelling and estimation
- Pipeline systems
- Dam break analysis
- Groundwater modelling
- Hydraulic computation and modelling
- Time-series analysis of rainfall data
- Salt water intrusion

Lab Facilities

The water resource and engineering laboratory provides computational facilities to undergo their research projects and practicing soft computing skills to ace in the industry.

- High computational facility
- ARC GIS and Q-GIS
- PCSWMM
- Bench scale membrane filtration cell
- Motorised film applicator
- pH meter
- Fluoride electrode
- Rotary flask shaker
- Research centrifuge
- Ultrasonic bath
- Digital conductivity meter with cell
- Experimental flume – 0.30m x 0.45m, 7.5m long
- Basic hydrology apparatus
- Vectrino Profiler 3D Profiling Velocimeter
- Pressure plate apparatus

When

Internship duration availability

15th May 2023 to 15 April 2024

Graduation

July 2024

Contact

Ph. +91 9188096125

CENTRE FOR CAREER DEVELOPMENT

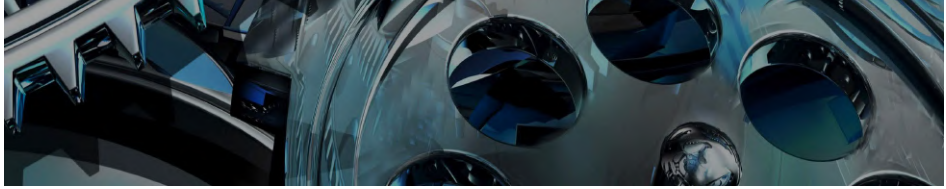
PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

15/23

MACHINE DESIGN

Department of Mechanical Engineering

Image Credits : https://www.precise.co.za



Course Highlights

This course trains students with in-depth and advanced knowledge to become highly-skilled professionals in machine design and allied fields like solid mechanics and dynamics, capable of analysing and solving complex engineering problems. This enable graduates to carry out innovative and independent research work in academia/industry to enhance the solid mechanics and dynamics knowledge base and to disseminate the knowledge. And this prepares the students to exhibit a high level of professionalism, integrity, social responsibility and life long independent learning ability.

Skill sets

- Design Thinking
- Product Design
- Project management
- CAD
- FEA
- Design for manufacturing
- Communication skills

Software skills

- Solid works
- Catia
- ANSYS Structural and Thermal
- ABAQUS
- ADAMS
- MATLAB

Lab Facilities

- CAD Lab
- Robotics Lab
- Tribology Lab
- Vibration Lab
- Workshop

Major Areas of Research

- Advanced Mechanics of Solids
- Vibration
- FEA
- Tribology
- Material selection of design optimisation

When

Internship duration availability

15th May 2023 to 15 April 2024

Contact

Ph. +91 9188096125

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

16/23

ENERGY ENGINEERING & MANAGEMENT

Department of Mechanical Engineering

Image Credits : wikipedia

Course Objectives

- To train graduates with in-depth and advanced knowledge to become professionals in the areas of energy engineering and related fields capable of identifying, analysing and solving practical engineering problems.
- To enable graduates to carry out innovative and independent research work in academia/industry to develop energy efficient systems and processes and to disseminate the knowledge
- To prepare the graduates to exhibit a high level of professionalism, integrity, environmental and social responsibility, and life-long independent learning ability.

Advanced Topics

- Design and analysis of energy systems
- Fluid flow and heat transfer in energy systems
- Energy conservation in thermal and electrical systems
- Renewable energy utilisation
- Mathematical methods
- Computational fluid flow and heat transfer
- Heat exchanger design

Students Skills and Competencies

- Up to date technical knowledge
- Professionalism in Communication
- Leadership
- Interpersonal
- Critical Reasoning
- Creativity and innovation
- Enthusiasm
- Attention to Detail
- Resilience

Areas of Research

- Alternative Fuels
- Solar energy utilisation
- Biomass gasification
- Energy systems modelling and optimisation
- Computational fluid flow and heat transfer applied to energy systems.

When

Internship duration availability

15th May 2023 to 15 April 2024

Contact

Ph. +91 9188096125

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

17/23

MATERIAL SCIENCE & TECHNOLOGY

Department of Mechanical Engineering

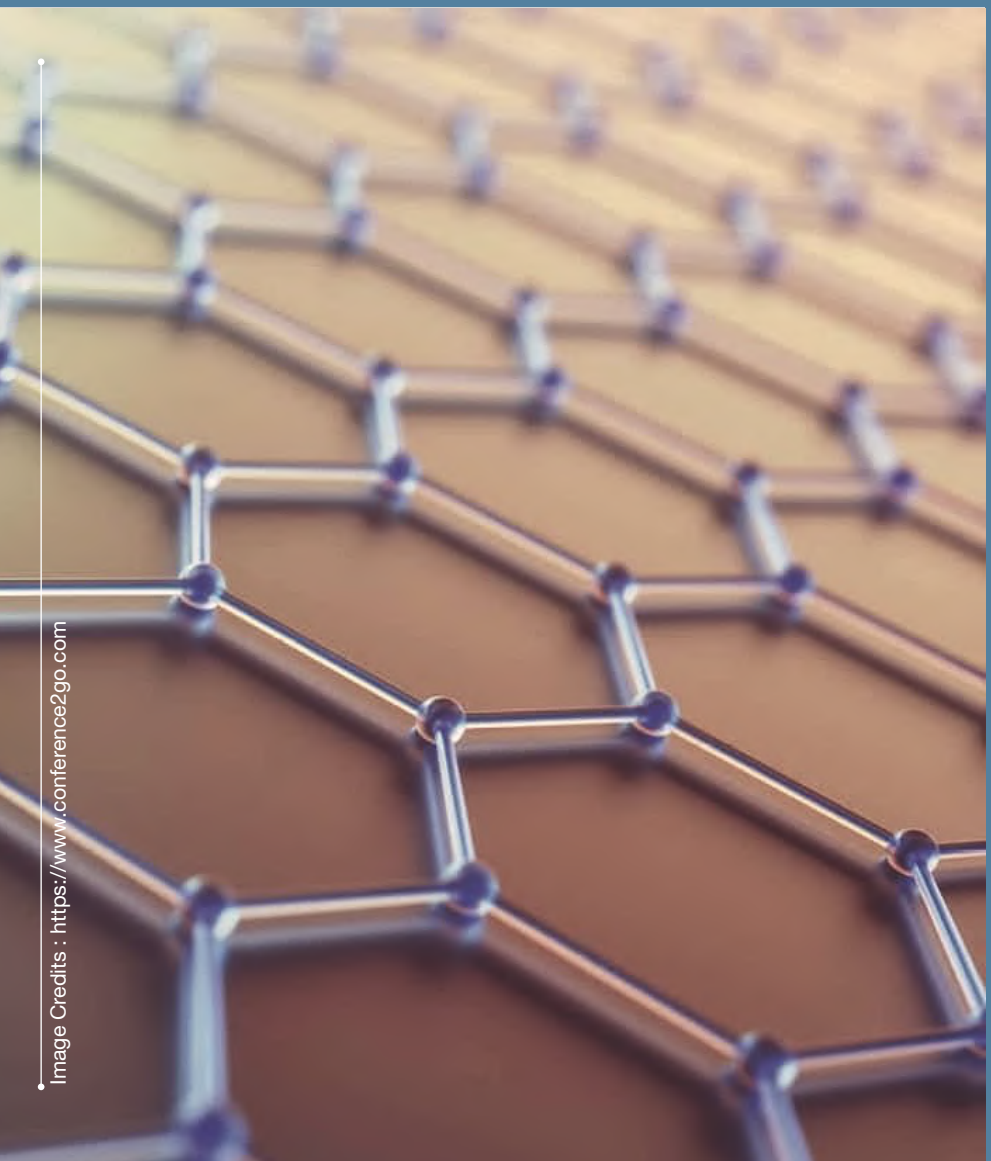
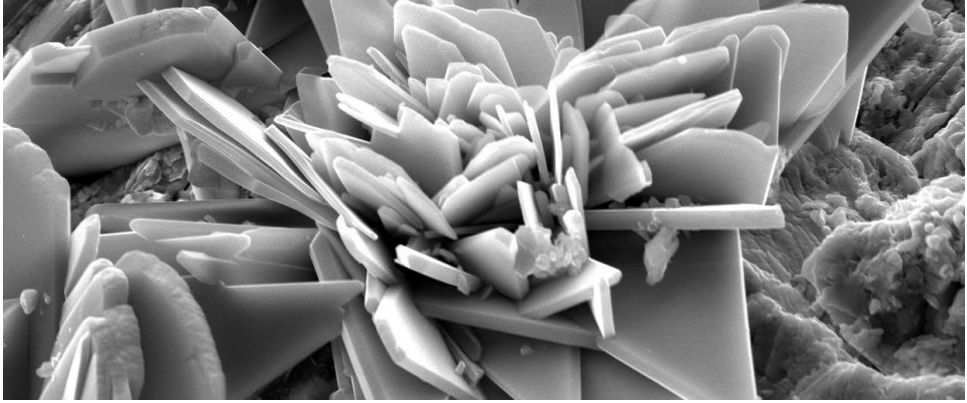


Image Credits : https://www.conference2go.com



Course Highlights

- Highly motivated students who have a vast range of experience in technical and interpersonal skills.
- Curriculum consists of theory and practical from conventional to contemporary aspects of material science and manufacturing including softwares such as ANSYS and ABACUS

Areas of Research

- Ferrous and Non Ferrous Metallurgy
- Material Characterisation
- Mechanical Behaviour and Mechanics
- Composite Materials and Mechanics
- Ceramic Science and Technology
- Metal Casting and Joining Technology
- Powder Metallurgy and Sintering

When

Internship duration availability

15th May 2023 to 15 April 2024

Contact

Ph. +91 9188096125

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

18/23

INDUSTRIAL ENGINEERING & MANAGEMENT

Department of Mechanical Engineering

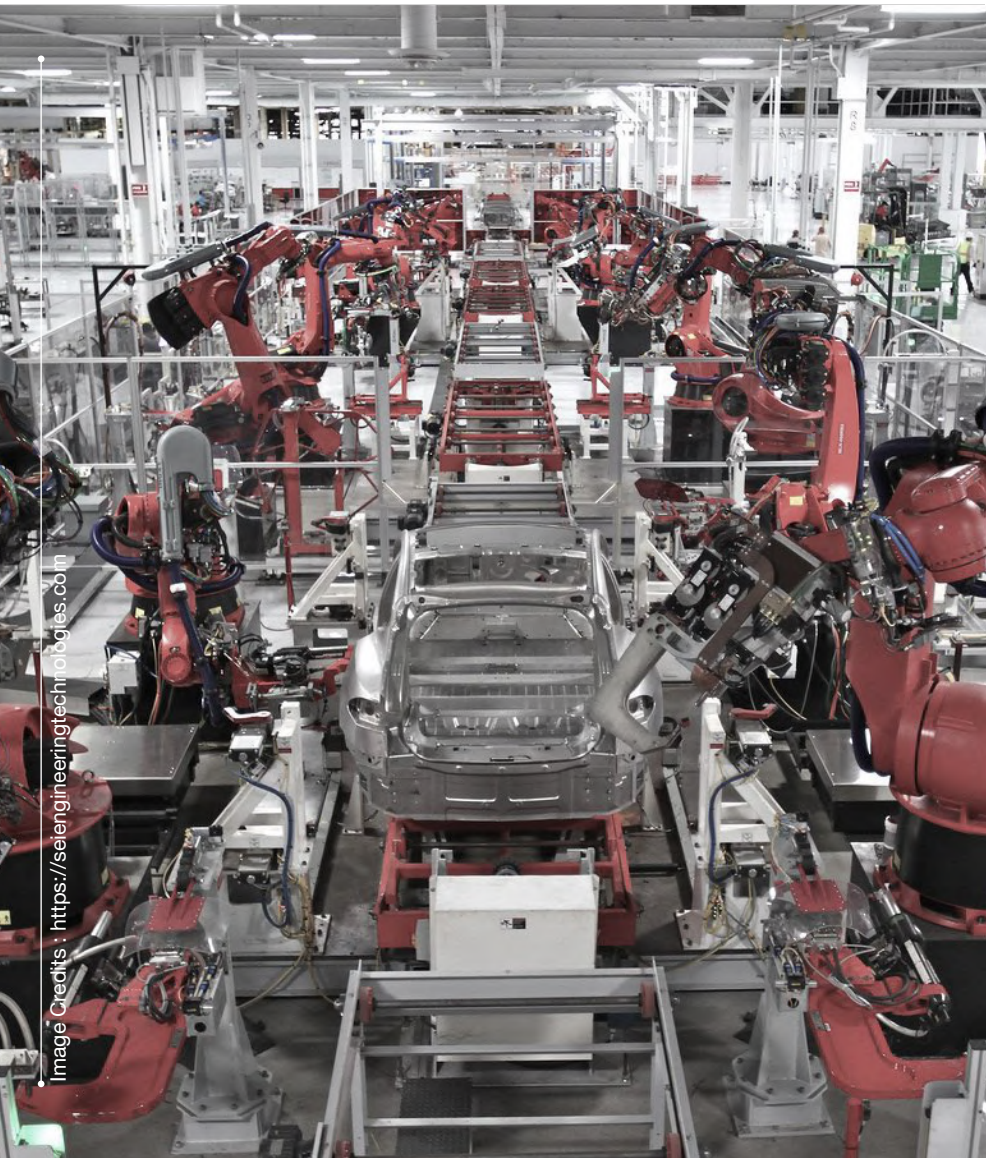


Image Credits : https://seiengineeringtechnologies.com

Course Highlights

- Established in 1984, one of the oldest at NIT Calicut
- IEM : Integrating People, Materials, Equipment and Energy
- Transforming Organisations with Analysis and Redesign
- Empowering Data-Driven Decisions for Success
- Constantly evolving field requiring continuous learning

What we do

- Optimise Complex Problems
- Connecting Various Disciplines
- Analyse Data for Fruitful Results
- Simulate Real World Issues
- Effective Management Solutions

What we learn

- Business Statistics
- Data Analytics
- Data Science for Management
- Operations Research
- Accounting and Finance
- Strategic Marketing
- Machine Learning & AI
- Product Management and endlessly more

When

Internship duration availability

15th May 2023 to 15 April 2024

Contact

Ph. +91 9188096125

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

CENTRE FOR CAREER DEVELOPMENT

19/23

THERMAL SCIENCES

Department of Mechanical Engineering

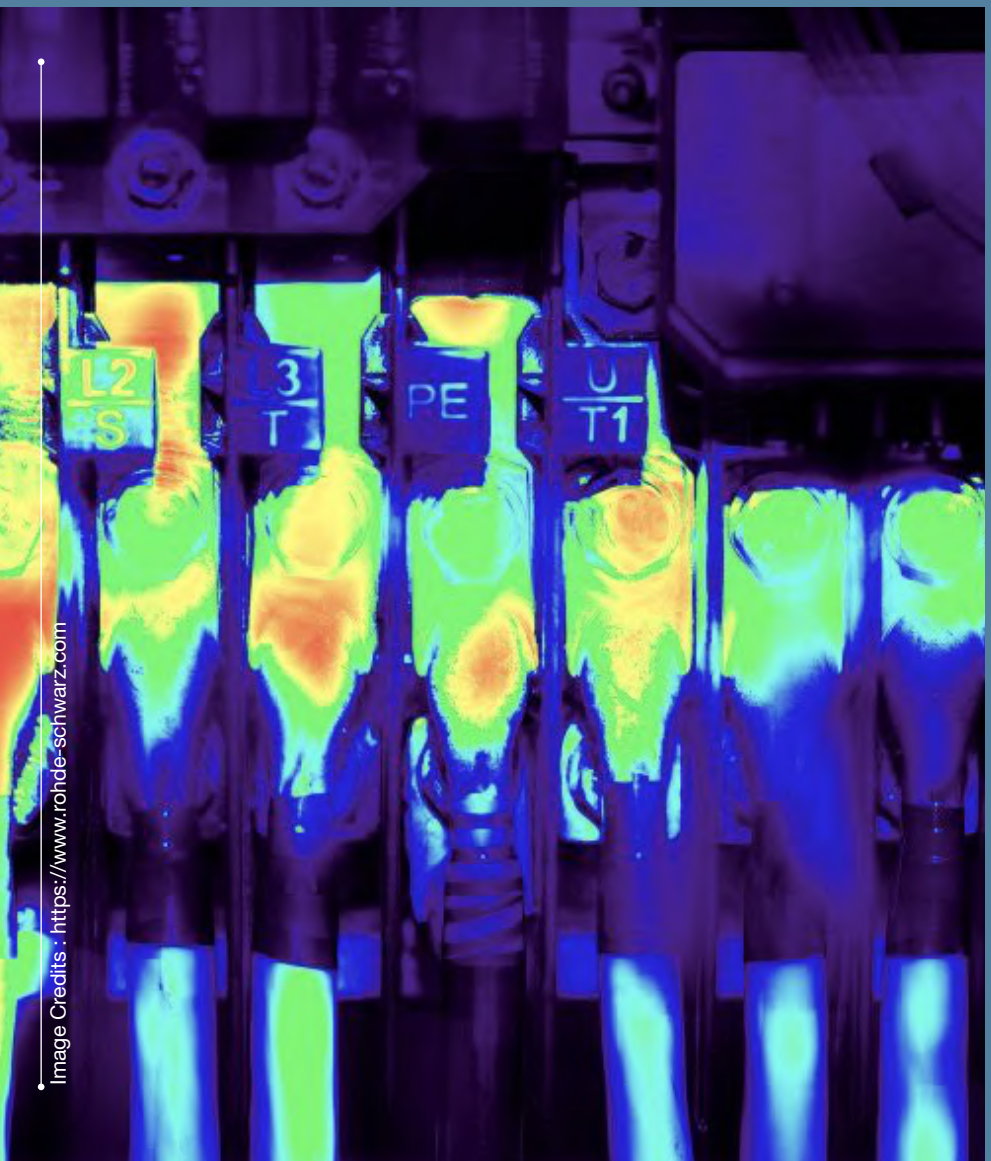


Image Credits : https://www.rohde-schwarz.com

Course Objectives

- To train graduates with in-depth and advanced knowledge to become professionals in the areas of energy engineering and related fields capable of identifying, analysing and solving practical engineering problems.
- To enable graduates to carry out innovative and independent research work in academia/industry to develop energy efficient systems and processes and to disseminate the knowledge
- To prepare the graduates to exhibit a high level of professionalism, integrity, environmental and social responsibility, and life-long independent learning ability.

Course Highlights

- Computational Fluid Dynamics
- Heating Ventilation & Air conditioning
- Thermal Power plants
- Propulsion Systems
- Cryogenic Engineering
- Internal Combustion Engines

On-Going Areas of Research

- Thermal Management Systems
- Solar Energy Utilisation
- Internal combustion Engines
- Hydrogen Fuel cells
- Biomass Gasification

Skill sets

- Programming
- Computer Aided Design & Analysis
- Data Visualisation Tools

When

Internship duration availability

15th May 2023 to 15 April 2024

Contact

Ph. +91 9188096125

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

20/23

MANUFACTURING TECHNOLOGY

Department of Mechanical Engineering

Image Credits: https://www.rohde-schwarz.com

About

M Tech in Manufacturing Technology since 1989. To equip students with the in-depth and cutting-edge knowledge they need to become highly skilled professional in manufacturing and allied industries. They enable graduates to conduct original, independent research in academia or industry to expand manufacturing knowledge and disseminate it.

Major Courses Offered

- Advanced & Modern Machining Sciences
- Metrology
- Robotics & Automation
- Additive Manufacturing
- Quality Management
- Six Sigma
- Machine Tools

Advanced Manufacturing Centre

- Micromachining Centre
- Sophisticated Instruments
- CNC Center
- Additive Manufacturing Center
- DST FIST Center

Skill Development Activities

- Industrial Orientations
- Seminars and projects
- Technical talks
- C A D / C A M / F E A training

Fundings

- MHRD
- DST FIST
- TEQIP

Areas of Research

- 3d Prototyping - Metal and PLA
- Retrofitting old machinery with Industry 4.0 kits
- Micromachining
- EDM
- Minimum Quantity Lubrication

When

Internship duration availability

15th May 2023 to 15 April 2024

Contact

Ph. +91 9188096125

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

21/23

MATERIAL SCIENCE & ENGINEERING (NANO TECHNOLOGY)

School of Material Science and Engineering (SMSE)

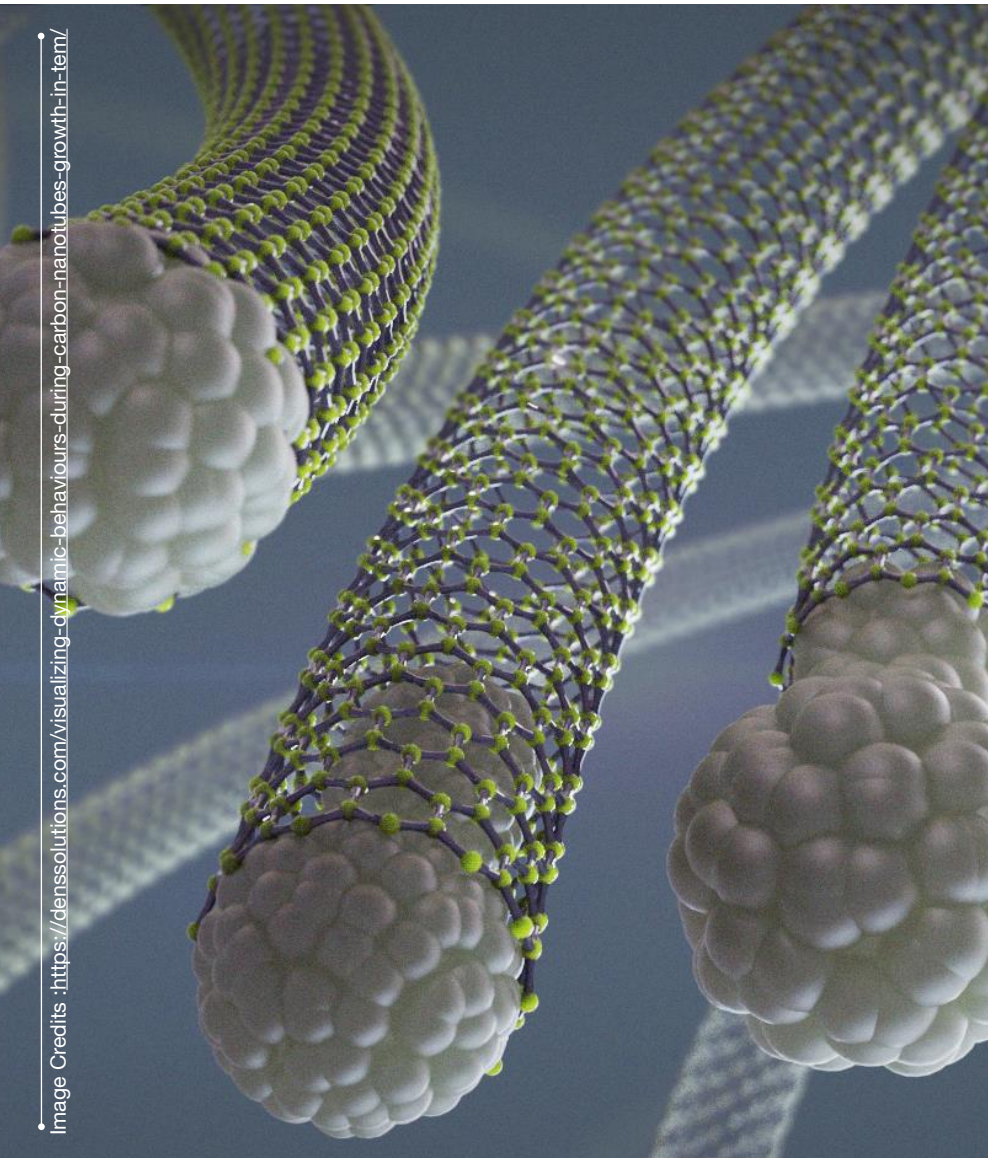


Image Credits :https://denssolutions.com/visualizing-dynamic-behaviours-during-carbon-nanotubes-growth-in-tem/

About

The Master of Technology (M.Tech.) program in Material Science and Engineering (Nanotechnology) is designed to impart state-of-the-art knowledge. The specialisation in Material Science and Nanotechnology holds a very high potential for employment in R&D, academics and industries, as well as provides a gate way to the extremely challenging field, which is expected to have a profound impact on the future of all streams of science and technology.

Course Highlights

The course work emphasises on the fundamentals and applications of material science. Subjects include thermodynamic of Nano materials and systems, Microscale and Nanoscale heat transfer, Nanosized structures, Experimental Techniques in Nanotechnology and X-Ray Diffraction. The course includes elective subjects ranging from Computational Nanotechnology to Composite Materials

Skill sets

- Microscopic characterisation - SEM, TEM, AFM
- Spectroscopic characterisation - XRD, Raman, IR, XPS, UV visible spectroscopy
- Electrochemical characterisation -CV, EIS, GCD, Tafel plot
- Thermo chemical characterisation - TGA, DSC, DTA

Lab Facilities

Laboratory courses dealing with production and applications of nanoparticles, nanofluids and nanocomposits as well as giving exposure to discrete computational analysis of nanoscale phenomena and systems are also offered as part of the curriculum.

Areas of Research

- Photocatalysis/Water splitting
- Biomaterials
- Corrosion and wear resistant coating
- Perovskite solar cells
- Phase change memory devices
- Materials Characterisation
- Desalination/Solar-Thermal systems
- Materials/Systems for Thermal Management
- Nanocarbon Materials and Nanofluids
- Nanocomposites and Nanosensors

When

Internship duration availability

15th May 2023 to 15 April 2024

Contact

Ph. +91 9188096125

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

22/23

MASTERS IN URBAN PLANNING

Department of Architecture and Planning

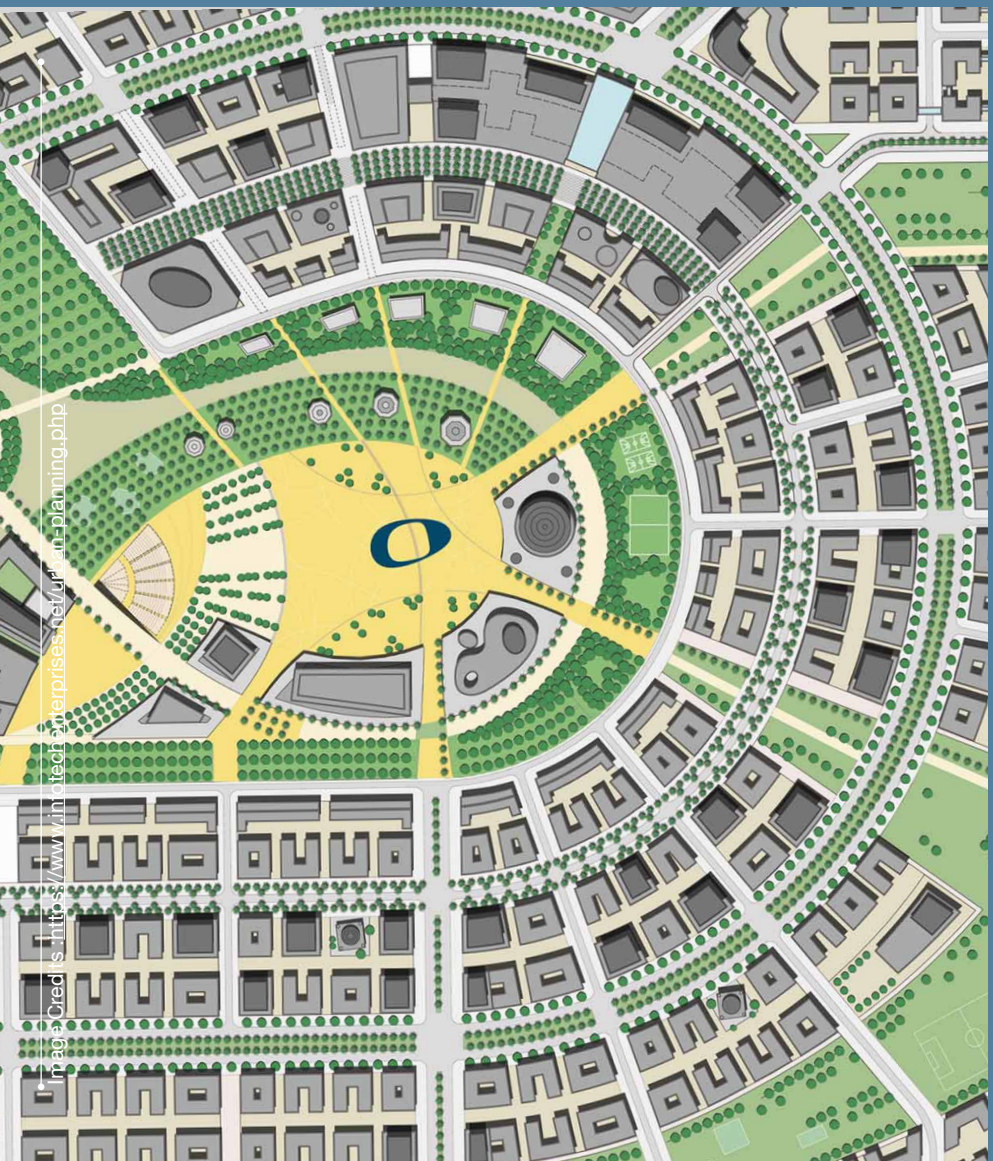


Image Credits : https://www.mintech.org/enterprises-detail/urban-planning.php

About

NIT Calicut's Department of Architecture and Planning offers a 5-year B.Arch. degree, a 2-year M. Plan degree, and a doctoral program. Their focus is on producing adaptable professionals through workshops, programs, and training modules with renowned architects and designers.

Course Highlights

The M.Plan program at NITC focuses on national and international best practices in urban planning and prepares students with the diverse talent and skill sets required for a successful career in the field. With a solid understanding of planning concepts, relevant legislation, environmental and transportation planning regimes, and smart technologies, the curriculum is meant to enable students to examine the physical, social, cultural, economic, and ecological components of urban settlement.

Skill sets

- Best-practice exposure
- GIS and Remote Sensing
- Advanced modelling
- Smart city planning
- Multidimensional analysis
- Planning principles
- Environmental planning
- Transportation planning
- Smart technologies

Software Skills

- Ruby
- SketchUp
- ArcGIS
- QGIS
- SAGA
- Python
- MS-Office
- IT-Office
- AutoCAD
- R-Studio
- Adobe Photoshop
- Adobe Illustrator
- Adobe Indesign

Lab Facilities

- Interactive Media Design Laboratory
- Computer Aided Architectural Design Laboratory
- Geoinformatics Laboratory

Areas of Research

Urban Mobility and Smart Transportation Planning, Sustainable Resilient Inclusive City Planning, Watershed and River Infrastructure Management, Land Value Capture Mechanisms, War Resilient Cities, Neuro-urbanism, Disaster Resilience Planning, Big Data application in Smart City Planning & Management.

When

Internship duration availability

01st June 2024 to 30 July 2024

Contact

Ph. +91 9188096125

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

23/23

MASTER OF COMPUTER APPLICATIONS

Department of Computer Science and Engineering

Image Credits : https://denssolutions.com/

About

The MCA program is a three-year course with a dedicated semester for project work, combining core computer science courses with subjects from Mathematics, Management, and Humanities. Elective courses in emerging areas keep students updated with technology. Emphasis is placed on software principles and practices, and the individual project offers hands-on experience in problem-solving and project management.

Course Highlights

- Data Structures and Algorithms
- Database Management Systems
- Software Engineering
- Computer Networks
- Operating Systems
- Object Oriented Systems
- Computer Organization/Logic Design
- Statistical Methods
- Optimisation techniques
- Principles of management

Electives

- Design Analysis & Algorithm
- AI/ML / Image processing/DS
- Number theory & Cryptography
- Cloud Computing
- Embedded System
- Coding theory

Lab Facilities

- DSA Lab
- DBMS Lab
- OOPS Lab
- Software Engineering Lab
- Machine Learning Lab

Tech Stacks

- C/C++, Java, Python
- Git/Git-Bash/Gt hub
- JavaScript, HTML, CSS, PHP
- Bootstrap, Flask
- MERN Stack
- MySQL, PostgreSQL, FireBase
- Android Studio/flutter
- C#, asp.NET, blazer.
- VS code

Skill sets

- Data Structure and Algorithms
- Database (SQL, MongoDB)
- Software Engineering
- Development (Web and App)
- AI/ML
- Networking
- Information Security
- Product Management

When

Internship duration availability

15th May 2023 to 15 April 2024

Contact

Ph. +91 9188096125

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

CENTRE FOR CAREER DEVELOPMENT

PLACEMENT BROCHURE
CENTRE FOR CAREER DEVELOPMENT
National Institute of Technology Calicut

https://www.placement.nitc.ac.in/

placement@nitc.ac.in