

# **INFORMATION BULLETIN**

**M. Tech./ M. Plan. REGULAR ADMISSIONS**

**2024-2025**



**National Institute of Technology Calicut**  
**(An Institute of National Importance)**  
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## Part-I PROFILE OF THE INSTITUTE

### 1. Introduction

National Institute of Technology Calicut (NITC) is one of the premier national institutions for technical education in India. This was originally established in September 1961 as “Calicut Regional Engineering College (CREC)”, jointly by the Government of India and the Government of Kerala. The Ministry of Education (Formerly Ministry of HRD), Government of India elevated CREC to a Deemed University and renamed CREC as National Institute of Technology Calicut in June 2002. NIT Calicut is an academically autonomous Institute of national importance fully funded by the Government of India and is administered by the National Institutes of Technology Act, 2007. The President of India is the visitor to the institute under the Act. The governance structure includes the national council for NITs as the apex policy making body, while the institute’s governance is vested with a Board of Governors. Institute’s senate is the apex authority in academic matters. Chairman of the Board of Governors is nominated by the visitor. NIT Calicut offers academic programmes leading to B.Tech., B.Arch., M. Tech., M. Plan., M.Sc., MBA and Ph.D. degrees in various disciplines. NITC is a recognized Quality Improvement Programme (QIP) Centre for offering M. Tech. and Ph.D. programmes for faculty members of Engineering Colleges & Polytechnics. The institute is a recognized research institution for pursuing research work leading to Ph.D. degree under the National Doctoral Fellowship scheme. NITC has well qualified faculty and dedicated supporting staff. Apart from teaching, NITC is engaged in a wide spectrum of activities covering research and development, industrial consultancy, continuing education to faculty/staff, and community development.

### 2. Location

Set in a picturesque landscape at the foothills of the western ghats, NIT Calicut is located about 22kilometers north-east of Kozhikode city in the state of Kerala, India. Calicut, also known as Kozhikode, located in the Malabar region of Kerala State, found a place in the world history with the discovery of a sea route to India in 1498 by the Portuguese navigator Vasco Da Gama. Basking in the idyllic setting of the Arabian sea on the west and the proud peaks of the Wayanad hills on the east, Calicut is known for its serene beaches, lush green countryside, historic sites, calm backwaters, wildlife sanctuaries, rivers and waterfalls. The campus of NIT Calicut stretches over a length of about 1.5 km along the Calicut-Mukkam Road, extending over an area of approximately 120 hectares. NITC is connected with Calicut city by KSRTC buses (towards Mukkam) starting from KSRTC central bus station and by private buses starting from Corporation bus station, Palayam (near Calicut Railway Station). Taxi and auto-rickshaws are available from Calicut railway/bus station to NITC. The nearest airport is at Karipur, which is 45 kms from the Institute. Kozhikode railway station is 23 kilometers away from the NITC campus.

### 3. Computing Facilities and Campus Network

Central Computer Centre (CCC) is the central facility in NIT Calicut which caters for the computing requirements of the whole community of the institute. The center has state-of-the art infrastructure with four fully operational terminal rooms spanning over three floors of the building. Decision Support System (DSS) of the institute also operates from the Centre building. The Centre has 250+ client machines and has a capacity to include 400+ machines. Client systems are of both desktop and workstation genre. Desktops contain DELL OPTIPLEX 7010, DELL Precision T3610, HP 406 Micro tower and HP Prodesk series which are of adequate performance and workstations contain Fujitsu Celsius W570 power series machines which are capable of more than handling high-end production and design level applications. CCC hosts some of the

high-end servers and a parallel processing cluster machine. Servers include DELL PowerEdge T620 which has a dual Hexa-core processor, Lenovo ThinkSystem SR650 with 32GB Nvidia V100 card and HP ProLiant Rackserver which has a dual quad-core processor. A state of the art HPC system with 25 Tera FLOPS computing power meets the research needs of the institute. The facility can be accessed by all the departments and schools anywhere in the campus through networking. Computers in the CCC are loaded with Windows and Linux operating systems for convenience and centralized authentication is provided. Students are mandated to follow strict classroom discipline inside the Centre. Centre is fully air-conditioned and has UPS power backup for the whole setup. The Centre works 16 hours a day (8 am – 12 midnight), 7 days a week, except national holidays, unless instructed otherwise.

The campus Networking Centre (CNC) is the central facility providing the software, hardware and networking support to the entire student and staff community of NITC campus. CNC manages internet connectivity (both wired and wireless), Institute website and IP phones within the campus. The campus is interconnected with about 30 kms of fiber optic backbone network with 80 routed internal networks, managed by the Unified Threat Management System. The centre is equipped with Firewall, Routers, Domain Name Server, Web Server, Proxy Servers and IP phone server, etc. Presently the network is served by 2 Gbps of Internet connectivity provided by BSNL (1 Gbps under NKN scheme of MoE). CNC functions on a 24x7 basis, 365 days without any holidays. IP phones are installed in all academic and administrative sections. The IP phones and IP phone server are also implemented, configured and managed by CNC.

#### **4. Library Facilities**

The Central Library of NIT Calicut is one of the best technical libraries in South India. It came into being with the establishment of the college in 1961. The library has a very good collection of more than one lakh technical/scientific books. Central Library offers its services to more than 8,000 users comprising of undergraduate, postgraduate students, research scholars, faculty and employees from various Departments/Schools/Centres/Sections of the Institute. The services of the Central Library are fully automated using KOHA, and the entire collection is accessible throughout the campus. Using KOHA OPAC, users can search the online library catalogue by Author, Title, Subject and Keywords. The library management software along with the existing campus-wide intranet imparts the following features: Automated front-desk operations, Campus-wide online access, catalogue access and RFID-based automated collection/bar-coded user identification. Central Library subscribes to reputed International Journals and Indian Journals in online and print forms. The Digital Library, 'NALANDA' provides online access to more than 6000 electronic journals in various Engineering and Science disciplines. NALANDA hosts many electronics databases in its servers. As a member of the Shodh Sindhu Consortium under the Ministry of Education, GOI, NALANDA promotes the use of e-journals and e-books for advanced research and learning in Engineering and Science Education. Major online resources are journal/magazine/ conference records/standards of IEE, IEEE, Springer, ASME, ASCE, and ACM Digital Library core packages. Online access to study materials is available through a local copy of NPTEL. Resources like CMIE, ACE Analyzer, Eikon, Grammarly, Knimbus, Emerald, J Gate, Scopus, and Web of Science are available to the NITC community through the digital library. Library also subscribes to a plagiarism checker - Turnitin. The digital library is developing the NITC resources by collecting and indexing the students' project reports/theses through an ETD run with DSpace, which also houses the national and international standards. Eduserver - running in the Digital Library - hosts the Moodle platform for online course management. E-books from Wiley, Springer and Pearson are also made available.

## **5. Centre for Career Development**

Centre for Career Development envisages to inculcate a career-oriented campus culture that moulds the undergraduate, postgraduate and doctoral research students of the Institute to pursue their academic and professional goals. Formerly this centre was known as the Centre for Training and Placement which was formed in 1988. Understanding the need for a broader role to be taken for our students, the Centre for Career Development has been formed with effect from March 2022. This Centre is functioning with the following Objectives:

- Connect the students with placement and internship opportunities;
- Educate the students on knowledge of the self, career options and resources available;
- Empower the students with skill sets required in their careers.

## **6. Programmes of Study**

NITC offers undergraduate programmes leading to B. Tech. degree in 10 disciplines and post-graduate programmes leading to M. Tech./M. Plan degrees in various specialized streams. In addition to this, the institute offers MSc degree programmes in three streams and an MBA programme (2 years - 4 semesters). The Institute also offers facilities for research leading to Ph.D. degrees in various branches of Engineering, Science and Management. The details of B. Tech, M. Tech./M. Plan. and M. Sc. programmes are as given below:

### **Under graduate Level - B. Tech. Programmes (4 years - 8 semesters)**

- Biotechnology (BT)
- Chemical Engineering (CH)
- Civil Engineering (CE)
- Computer Science and Engineering (CS)
- Electrical & Electronics Engineering (EE)
- Electronics & Communication Engineering (EC)
- Engineering Physics (EP)
- Materials Science and Engineering (MT)
- Mechanical Engineering (ME)
- Production Engineering (PE)

### **Under graduate Level - B. Arch. Programme (5 years - 10 semesters)**

**Post graduate Level - M.Tech./M.Plan. Programmes (2 years - 4 semesters)**

<b>Department/ School</b>	<b>Programme</b>	<b>Programme Code</b>
Architecture & Planning	Urban Planning	AR61
Civil Engineering	Structural Engineering	CE61
	Traffic & Transportation Planning	CE62
	Offshore Structures	CE63
	Geotechnical Engineering	CE64
	Water Resources Engineering	CE65
	Environmental Engineering	CE66
Chemical Engineering	Chemical Engineering	CH61
Computer Science & Engineering	Computer Science & Engineering	CS61
	Computer Science & Engineering (Information Security)	CS62
Electronics & Communication Engineering	Electronics Design & Technology	EC61
	Microelectronics & VLSI Design	EC62
	Telecommunication	EC63
	Signal Processing	EC64
Electrical Engineering	Instrumentation & Control Systems	EE61
	Power Systems	EE62
	Power Electronics	EE63
	Industrial Power and Automation	EE64
	High Voltage Engineering	EE65
Mechanical Engineering	Industrial Engineering and Management	ME61
	Thermal Sciences	ME62
	Manufacturing Technology	ME63
	Energy Engineering and Management	ME64
	Materials Science and Technology	ME65
	Machine Design	ME66
Materials Science and Engineering	Nanotechnology	MT61

**M.Sc. Programmes (2 years - 4 semesters)**

<b>Department</b>	<b>M. Sc. Programme</b>	<b>Programme Code</b>
Mathematics	Mathematics	MA62
Physics	Physics	PH62
Chemistry	Chemistry	CY62

## 7. Major Areas of Research and Consultancy

The major areas of research and consultancy of various departments/schools are as follows:

### ARCHITECTURE AND PLANNING

- Urban and Regional Planning
  - Transportation
  - Infrastructure
  - Housing
  - Environmental Planning
  - Planning Informatics
  - Disaster Management & Climate Change
  - Smart Cities planning
  - Energy & Sustainability studies
- Architecture
  - Urban Design
  - Landscape
  - Conservation
  - Architectural Theory
  - Architectural Visualization & Product Design
  - Pedagogy
  - Sustainable Architecture
- Landscape Planning and Design
  - Landscape Urbanism
  - Wetland Studies
  - Ecological Assessments
  - Human Ecology
  - Environmental History
  - Cultural Landscape
- Building Technology & Management
  - Building Services
  - Energy Modelling
  - Building Information & Modelling
  - Alternate Building Materials
  - Construction Management
  - Modern Methods of Construction
  - Change Management
- Structural Engineering
  - Masonry Structure,
  - Seismic Safety of Structures
  - Sustainable Strengthening Techniques,
  - Structural Dynamics & Earthquake Engineering,

- Sustainable Concrete
- Reinforced concrete structure
- Bio concrete
- Computational Mechanics

### **BIOSCIENCE AND ENGINEERING**

- Biomaterials Design & Applications
- Tissue Engineering and Regenerative Medicine
- Stem Cell Technology
- Bio signals and Bioimaging
- Diagnostics and Therapeutics
- Biomedical Nanotechnology
- Microfluidics And Nanofluidics
- Drug Design & Development
- Molecular and Cell Bioengineering
- Biomedical Device Design
- Additive Manufacturing Technologies

### **CHEMICAL ENGINEERING**

- Reaction and Bioprocess engineering
  - Bio-materials
  - Biofuels
  - Catalysts
  - Fermentation Technology
  - Bioreactors
- Energy and Electrochemical Engineering
  - Electrochemical systems
  - Fuel Cells
  - Phase Change Heat transfer
- Materials Science and Engineering
  - Carbon-based materials
  - Nano -composites
  - Polymers and polymer Composites
  - Soft Matter
- Process Control, Optimization and systems Engineering
  - Flow Assurance in Oil and Gas Pipelines
  - Process Intensification
  - Rheology
  - Optimization under uncertainty
  - Supply chain optimization
- Process Modelling, Simulation, CFD and Theoretical computation
  - Machine Learning
  - Molecular Simulations
  - Multiphase Flow Modelling
  - Non-Newtonian Fluid Dynamics
  - Thermodynamic Modelling
- Environmental Engineering
  - Carbon Capture and Storage
  - Desalination



- Membrane Separation
- Microfluidics
- Wastewater Treatment

## **CHEMISTRY**

- Bioinorganic Chemistry
- Bioinspired Catalysis
- Biomimetic Inorganic Chemistry
- Energetic Materials/ High Energy Materials
- Heterocyclic Chemistry
- Main Group Organometallic Materials and Supramolecular Chemistry
- Materials Chemistry & Technology (Polymers, Biomacromolecules, Blends, Composites, Membranes)
- Medicinal Chemistry
- Organic & Bio-organic Chemistry
- Organic Synthesis and Catalysis
- Porphyrins and Metalloporphyrins
- Soft Materials
- Theoretical and Computational Chemistry
- Thermoelectric Materials
- Waste Management

## **CIVIL ENGINEERING**

- Structural Engineering
- Offshore Structures
- Traffic and Transportation Planning
- Geotechnical Engineering
- Water Resources Engineering
- Environmental Engineering
- Environmental Geotechnology
- Building Technology and Construction Management
- Town Planning
- Geomatics Engineering
- Applied Geology

## **COMPUTER SCIENCE & ENGINEERING**

- Algorithms and complexity
- Bioinformatics
- Cloud Computing
- Compilers and Programming Languages
- Computer Architecture
- Database Management Systems
- Distributed Computing
- Image Processing
- Information Security
- Networks
- Operating Systems

- Software Engineering
- Artificial Intelligence/Machine Learning

### **ELECTRICAL ENGINEERING**

- Instrumentation and Control Systems.
- Power and Energy Systems.
- Power Electronics & Machines.
- Industrial Power & Automation.
- Biomedical Signal Processing and Instrumentation.
- High Voltage Engineering
- Electric Vehicle Engineering

### **ELECTRONICS & COMMUNICATION ENGINEERING**

- Electronics Design and Technology
  - Embedded System Design
  - EMI/ EMC, Control System Design
  - Biomedical System Design
  - System Design for Signal Processing and Communication
  - Biomedical Imaging System Design
- Microelectronics and VLSI Design
  - Power Management in IC Design
  - Analog & Mixed-signal IC design
  - Semiconductor Device modelling
  - Micro fabrication Technology, Micro/Nano Electro Mechanical System MEMS/NEMS
  - VLSI architectures for Signal Processing and Communication
  - Photovoltaics Devices for Energy Harvesting
  - Fabrication and Modelling of Photovoltaics Devices
  - CMOS Image Sensors
  - Semiconductor Memory Devices
  - Photonic Integrated Circuits
- Telecommunication
  - Wireless Communications and Networks
  - OFDM/MIMO and Massive MIMO
  - 5G & Beyond 5G Wireless Communications
  - Cryptography and Secure Communication
  - RF & Microwave Engineering
  - Coding Theory and Applications
  - Distributed Computing and Content Delivery
  - Optical Communication and Optical Wireless Communication
- Signal Processing
  - Speech/ Audio / Image / Video Processing
  - Signal Theory
  - Compressed Sensing/ Sparse Signal Processing,
  - Multi-rate Signal Processing
  - Biomedical Signal Processing
  - Radar/Array Signal Processing
  - Machine Learning, Computer Vision

- Deep Learning
- Statistical Signal Processing and Bayesian Machine Learning
- Reinforcement Learning
- VLSI Architectures for Signal Processing & Deep Learning
- Biomedical Imaging
- AI for Biomedical Imaging and Signal Processing

## MATHEMATICS

- Stochastic Modelling and Applied Statistics
- Numerical Analysis and Scientific Computing
- Mathematical Analysis
- Nonlinear Dynamics
- Operations Research
- Complex Analysis
- Fractional Calculus
- Differential Equations
- Number Theory
- Reliability of systems
- Combinatorics & Graph Theory
- Special Function and Function Spaces
- Wave Structure Interactions
- Functional Analysis
- Lie Algebra/Superalgebra
- Wavelets Theory
- Commutative Algebra
- Topology
- Fractal Geometry
- Spectral Graph Theory
- Operator Theory
- Time Series Analysis
- Computational Finance
- Actuarial Science
- Differential Geometry
- Category theory
- Banach Algebras
- Game Theory
- Optimization
- Algebraic Topology
- Theory of Rings and Modules
- Topological Data Analysis
- Set Generalizations
- Fuzzy Logic
- Fuzzy Graph Theory
- Matrix Theory
- Numerics of Singularly Perturbed Differential Equations
- Linear algebra
- Spectral Graph Theory

- Partition Theory
- Modular Forms
- Variational Analysis
- Nonlinear Elliptic and Subelliptic PDEs
- Algebraic Function Theory
- Geometric Functions Theory
- Several Complex Variable
- Numerical Analysis of Differential Equations

## **MECHANICAL ENGINEERING**

- Industrial Engineering and Management
  - Ergonomics and Product Design
  - Supply Chain Management
  - Marketing Management
  - Human Resource Management
  - Data Science Applications in Operations Management
- Machine Design
  - Computational Mechanics
  - Robotics
  - Tribology
  - Machine Dynamics and Vibrations
  - Nano- and Micro-mechanics
  - Product Design
  - Biomechanics
  - Nonlinear dynamics
  - Nonlinear Solid Mechanics
  - Fatigue and Fracture
- Materials and Manufacturing
  - Macro and Micro Machining
  - Modern Machining
  - Metrology
  - CAD/CAM
  - Composite Materials
  - Ferrous and Non-Ferrous Metallurgy
  - Materials for Electronics Application
  - Additive Manufacturing/3D printing
  - Digital Manufacturing and Design
  - Mechatronics and industrial automation
  - Materials for Sustainable Development
  - Structure-Property Correlation of materials
  - Advanced structural and functional ceramics
  - Biomaterials and surface engineering
- Thermal and Energy Engineering
  - Renewal Energy Technologies
  - Energy Conservation
  - Fuel Cells and Hydrogen Technology
  - Computational Fluid Dynamics
  - Heat Pipes

- Cryogenics
- Jets and Flow Acoustics
- Combustion and Fire Safety
- Fluid-Structure Interactions
- Multi-phase Flows
- High Performance Computing
- Lattice Boltzmann Modeling
- High Speed Flows
- Turbo-machinery
- Internal Combustion Engines
- Convection and Radiation Heat Transfer
- Non-Newtonian flows
- Heating and Ventilation Systems
- Thermal Management
- Microfluidics

## PHYSICS

- Organic Solar Cell
- Nanomaterials for Energy & Environmental Applications
- Organic & Hybrid Electronics & Photonics
- Photonic devices based on 2D materials, Paper-based retinomorphic photodetectors
- Nonlinear Optics and Nano Photonics
- Statistical mechanics of phase transitions – Soft condensed matter Systems
- Computational Modeling of Materials
- Climate, Atmospheric and Environmental Monitoring using principle of Optics
- Experimental Condensed Matter Physics
- Surface and Interface Science
- Diamond and Related Materials
- Oxide Thin films and Heterostructures
- Microfluidics and optofluidics
- Gravity and Black holes, Constrained dynamics
- Theoretical High Energy physics - Quantum Field Theory, Lattice gauge theory, Quantum Chromodynamics
- Solar Astrophysics
- Photonic Crystals, Metamaterials, and Terahertz Devices
- Soft matter and statistical physics
- Statistical Physics and Thermodynamics
- Lasers, Imaging through Disordered media, Photonic crystals, and optical waveguides
- Nonlinear optics and Fluorescence microscopy
- Microfluidics and Optofluidics
- Soft Matter
- Astrophysics, 21-cm Cosmology, Radio Astronomy, Cosmological Simulations
- Experimental Nuclear Physics

- Gravitational Wave Physics
- Gas Sensors, Chemical Sensors, Energy Storage Devices, Interface Electronics

### **MANAGEMENT STUDIES**

- Finance and Accounting, Marketing Management, Consumer Psychology, Human Resource Management and Organisational Behaviour, Behavioural Science, Operations Management Decision Sciences, Data Analytics, Information Systems, Strategic Management, Economics, Health Care Management, Public Policy and Governance, Natural Resource Management, Entrepreneurship, Technology Management.

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

English Studies, ELT, Cultural Studies, Indian Writing in English and Translations, Postcolonial Studies, Dalit Studies, Food and Culture, Gender Studies, Early Childhood Education, Childhood Studies, Canadian Literature, Comparative Literature, Memory Studies and Trauma Narratives, Literary Theories, Theatre and Drama.

### **MATERIALS SCIENCE AND ENGINEERING**

- Solar Thermal Systems
- Solar Fuels
- Microscale/Nanoscale heat transfer
- Interferometric measurements
- Thermal Management of Devices (Electronics/Batteries)
- Emerging Solar Cell Technologies
- Perovskite Solar Cells
- Nanofluids
- Photo Catalysis/ Water Splitting
- Biomaterials
- Corrosion and Wear Resistant Coating
- Nano Composites for Energy
- Nanocomposites and Nanosensors
- Surface Modifications and Coating Techniques (Metals)
- Biodegradable Metals
- Lightweight metallic systems
- Electrospinning
- Nanocomposites
- Medical Materials (Metals and alloys)
- Affordable Healthcare
- Magnesium based Hydrogen storage
- Applied microscopy and spectroscopy
- Phase Change Materials
- Carbon materials for energy and devices
- Semiconductor Memories and devices
- Additive manufacturing materials
- Mechanical behaviour of materials
- Process-Microstructure-property correlations
- Multiscale numerical modelling

- Computational material science
- Microfluidics and Nanofluidics

## Part II

### ADMISSION TO M. TECH./M. PLAN. PROGRAMMES

#### 1. Introduction

The details of M. Tech. and M. Plan programs offered by various departments at NITC are given below.

Dept.	Dept./ School code	Specialization of the M. Tech. / Plan. programmes	M. Programme Code
Architecture and Planning	AP	Urban Planning	AR61
Civil Engineering	CE	Structural Engineering	CE61
		Traffic & Transportation Planning	CE62
		Offshore Structures	CE63
		Geotechnical Engineering	CE64
		Water Resources Engineering	CE65
		Environmental Engineering	CE66
Chemical Engineering	CH	Chemical Engineering	CH61
Computer Science & Engineering	CS	Computer Science & Engineering	CS61
		Computer Science & Engineering (Information Security)	CS62
Electrical Engineering	EE	Instrumentation & Control Systems	EE61
		Power Systems	EE62
		Power Electronics	EE63
		Industrial Power and Automation	EE64
		High Voltage Engineering	EE65
Electronics & Communication Engineering	EC	Electronics Design & Technology	EC61
		Microelectronics & VLSI Design	EC62
		Telecommunication	EC63
		Signal Processing	EC64
Mechanical Engineering	ME	Industrial Engineering & Management	ME61
		Thermal Sciences	ME62
		Manufacturing Technology	ME63
		Energy Engineering & Management	ME64
		Materials Science & Technology	ME65
		Machine Design	ME66

Materials Science and Engineering	MT	Materials Science and Engineering (Nanotechnology)	MT61
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## 2. Eligibility for Admission to M.TECH./M. PLAN. Programmes

Candidates for admission to M. Tech. degree programme should have passed B.E./B. Tech. in an appropriate branch from an approved Institute/University with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories. Candidates for admission to M. Plan. degree programme should have passed B.Arch./B. Plan./B.Tech (Civil engineering) from an approved Institute/University with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories. Candidates applying for M. Tech. admission with MCA should have minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories, in both MCA and the undergraduate degree. Candidates who secured B.E./B. Tech./B.Arch./B.Plan. under the lateral entry scheme should have passed the three-year diploma in Engineering with minimum 60% marks (or CGPA 6.5/10) for GEN/GEN-EWS/OBC and 55% marks (or CGPA 6.0/10) for SC/ST/PwD categories. Only primary mode of evaluation (CGPA or percentage) as mentioned in the qualifying degree certificate/mark sheet shall be considered while verifying eligibility. In case both CGPA and percentage are mentioned, then only CGPA would be considered. Conversion from CGPA to percentage or vice versa given by individual Institute/University will not be considered/ allowed. If CGPA is on a different scale than the 10-point scale, then it would be linearly mapped to a 10-point scale.

**Candidates must have a valid GATE\* score of the year 2022/2023/2024 in the respective discipline.**

Holders of AMIE (approved by AICTE) / other nationally approved programmes equivalent to B. Tech. / B.E., in an appropriate area of study, may also be considered eligible, subject to the condition that the candidate possesses valid GATE\* score in the appropriate discipline.

Final semester students with a valid GATE score can also apply provided their final semester marks are made available by 30th September 2024. Such candidates may be considered for provisional admission. Any candidate admitted provisionally will have to discontinue the course, if the candidate fails to produce the provisional degree certificate and mark lists (satisfying the minimum requirements of marks / CGPA) on or before 30th September 2024. Such candidates will not be eligible for any refund of fees paid by him/her.

**Eligible UG degrees and GATE Mapping details for M.Tech. / M.Plan. Admissions (2024-25) at NIT Calicut are given in Annexure 1.**

## 3. Process of Admission to M. Tech. /M. Plan. (Regular) Programmes through CCMT

Admission to M. Tech. /M. Plan. programmes offered by NIT Calicut during the academic year 2024-25 will be carried out based on a centralized counselling process common to all NITs in accordance with the decision of the NIT Council constituted by the Ministry of Education, Government of India. This year NIT Surat is coordinating the process through CCMT 2024 (website: <https://ccmt.admissions.nic.in/>) and all other NITs are the participating institutes. Selection of candidates will be based on their GATE score, subject to meeting the eligibility

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\* The Graduate Aptitude Test in Engineering (GATE) is an All-India Examination conducted IITs, on behalf of the National Coordinating Board-GATE, Department of Education, Ministry of Education, Govt. of India



requirements and the availability of seats.

#### 4. Seat Matrix for M. TECH./ M. PLAN. Admission (2024-2025) at NIT Calicut

The seat matrix for M. TECH./ M. PLAN. Admission (2024-2025) at NIT Calicut is as given below:

S. No.	PG Program	Group	OPEN	OPEN-PwD	EWS	EWS-PwD	SC	SC-PwD	ST	ST-PwD	OBC	OBC-PwD	Total
1	Urban Planning - AR61	G1	7	0	1	1	2	0	1	0	4	0	16
2	Structural Engineering - CE61	G1	10	0	2	0	3	1	2	0	7	0	25
3	Traffic & Transportation Planning - CE62	G1	9	1	2	0	4	0	2	0	6	1	25
4	Offshore Structures - CE63	G1	10	0	2	0	4	0	1	1	7	0	25
5	Geotechnical Engineering - CE64	G1	5	1	2	0	2	0	1	0	4	0	15
6	Water Resources Engineering - CE65	G1	6	0	2	0	2	0	1	0	4	1	16
7	Environmental Engineering - CE66(G1)	G1	3	0	1	0	0	0	1	0	2	0	7
8	Environmental Engineering - CE66(G2)	G2	1	0	0	0	1	0	0	0	1	0	3
9	Chemical Engineering - CH61	G1	7	0	1	1	2	0	1	0	4	0	16
10	Computer Science & Engineering - CS61	G1	9	1	3	0	4	0	2	0	6	0	25
11	Computer Science & Engineering (Information Security) - CS62	G1	10	0	2	0	4	0	2	0	6	1	25
12	Electronics Design & Technology - EC61	G1	10	0	2	0	3	1	2	0	7	0	25
13	Microelectronics & VLSI Design - EC62	G1	10	0	2	0	4	0	1	1	7	0	25
14	Telecommunication - EC63	G1	6	1	2	0	2	0	1	0	4	0	16
15	Signal Processing - EC64	G1	6	0	1	1	3	0	1	0	4	0	16
16	Instrumentation & Control System - EE61(G1)	G1	6	0	1	0	2	0	1	0	4	1	15
17	Instrumentation & Control System - EE61(G2)	G2	3	1	1	0	2	0	1	0	2	0	10
18	Power Systems - EE62	G1	10	0	2	0	4	0	2	0	6	1	25
19	Power Electronics - EE63	G1	9	1	2	0	4	0	2	0	7	0	25
20	Industrial Power & Automation - EE64	G1	9	1	3	0	4	0	2	0	6	0	25
21	High Voltage Engineering - EE65	G1	7	0	2	0	1	1	1	0	4	0	16
22	Industrial Engineering & Management - ME61	G1	9	1	3	0	3	0	2	0	7	0	25
23	Thermal Sciences - ME62	G1	9	1	2	0	4	0	2	0	7	0	25
24	Manufacturing Technology - ME63	G1	10	0	3	0	4	0	2	0	5	1	25
25	Energy Engineering & Management - ME64	G1	10	0	2	0	4	0	2	0	6	1	25
26	Materials Science & Technology - ME65	G1	10	0	2	0	3	1	2	0	6	1	25
27	Machine Design - ME66	G1	6	1	2	0	2	0	1	0	4	0	16
28	Nanotechnology - MT61	G1	6	1	2	0	2	0	1	0	4	0	16

Abbreviations: OBC-other Backward Classes, SC-Scheduled Caste, ST-Scheduled Tribe, Economically Weaker Section, PwD- Persons with Disability.

EWS -

## 5. Fee Structure

The fee structure for M.Tech/M.Plan (Regular) Programme 2024-25 admissions is given below.

Tuition Fee may vary as per the directives of Ministry of HRD, Government of India from time to time. The present tuition fee is as per MHRD Order F. No. 33-4/2014-TS.III dated 5<sup>th</sup> May, 2014 and subsequent clarifications under reference F No. 28/2013/T.S.III dated 21<sup>st</sup> October, 2014. Other fees are as determined by the Institute as per provision of Statute No. 37(i)(b)

Fee Category		All Candidates			
<b>(a) Onetime fee at the time of admission# (Rs.)</b>					
Caution Deposit	20,000				
Admission Fee	5,000				
Library Fee	5,000				
Development Fee	12,000				
Association & Cultural fee	1,000				
Alumni Affairs Fee	2,000				
Seminar/Thesis Fee	1,500				
Career Development Fee	2,000				
Students Welfare Fee	1,000				
Convocation Fee	3,000				
<b>Total (a)</b>	<b>Rs. 52,500/-</b>				
<b>(b) Other Fee# (Rs.)</b>	<b>Monsoon Semester 2024-25</b>	<b>Winter Semester 2024-25</b>	<b>Monsoon Semester 2025-26</b>	<b>Winter Semester 2025-26</b>	
Tuition Fee	35,000*	35,000*	35,000*	35,000*	
Registration Fee	2000	2000	2000	2000	
Examination Fee	2000	2000	2000	2000	
Health Centre Facility Fees	1,200	-	1,200	-	
Students Activities Fee	1,000	-	1,000	-	
Sports Fees	1,000	-	1,000	-	
Campus Amenities	1,200	-	1,200	-	
Central Computing Facility Fee	1,000	-	1,000	-	
Internet Fee	1,200	-	1,200	-	
Mediclaime**	1,186	-	1,186	-	
<b>Total (b)</b>	<b>Rs.46,786</b>	<b>Rs.39,000</b>	<b>Rs.43,005</b>	<b>Rs.39,000</b>	
<b>Total Amount during admission</b>	<b>Rs. 99,286/-</b>				

\*NIL for SC/ST students

\*\*Mediclaime policy amount may vary year to year.

#Subject to revision every year

## 6. Hostel Fee Structure

Hostel fee details common to all UG/PG/PhD programmes (w.e.f. 2024 admissions) are as given below.

Sl.No.	Description	Amount (in Rupees)
A. One-time fee at the time of admission		
	1. Cost of Application Form (Non-Refundable)	500/-
	2. Hostel Amenities fund (Non-Refundable)	6,500/-
	3. Caution and Furniture Deposit (Refundable at the end of the Programme on the production of Non-Liability Certificate)	15,000/-
	Total (One-time fee at the time of admission)	22,000/-
B. Hostel establishment charges and other charges per semester		13,000/-
C. Mess advance per semester		25,000/-
D. Hostel Seat Rent (Includes Room Rent, Electricity, Water Charges)#	<b>Rs. 9,000/- (Shared Room)</b> <b>Rs. 10,000/- (Single Room)</b>	9000/-@
Total Fee at the time of admissions		60,000/-

@ Room rent for shared room is added. Additional rent of Rs.1000/- for single room, if allotted, shall be collected later as dues.

### Note:

1. Items B & C are payable upfront, in the beginning of every semester.
2. Hostel seat rent collected by Institute covers rent, electricity charges and water charges.

## 7. Financial Assistance

Teaching Assistantship with Scholarship is available to those who are GATE qualified and admitted to M. Tech./M.Plan. programmes in different departments, subject to the maximum number available as stipulated by the Ministry of Education (MoE). At present, the amount of assistantship is Rs. 12,400/- per month. This is awarded based on the minimum academic requirements and is available for a maximum period of 24 months only. The award and renewal of this scholarship is as per the guidelines issued by MoE from time to time. Those who are receiving the scholarship are required to assist the department in academic work for a minimum of 8 hours per week.

As per the rules in force, those who are interested in getting the scholarship are required to give an undertaking on stamped paper to the effect that they will not discontinue the course before completion. Those who discontinue the M. Tech./M.Plan. programme are required to refund the entire scholarship amount drawn by them. However, if the student has discontinued the programme with the written permission from the concerned authority, the Director may consider the refund of the recovered amount of scholarship, provided the student completes all the requirements for the award of the degree within the maximum period as specified in the ordinances and regulations for the M.Tech./M.Plan. course in the Institute. The scholarship is NOT available for sponsored candidates or any student getting financial support from any agency including state and central governments.

## **8. Highlights of M.TECH./ M. PLAN. Programmes at NIT Calicut**

The four-semester (two-year) M. Tech./M. Plan. Programmes are based on the credit system. The programmes comprise several core and elective courses and project work. The highlights of M.Tech./M.Plan. Programmes offered by various departments are given in the following section.

### **DEPARTMENT OF ARCHITECTURE AND PLANNING**

#### **M.Plan. in Urban Planning (AR61)**

The Post Graduate Degree (2 Year M. Plan.) Program in Urban Planning aims to produce generalist planning professionals of international quality who can adapt to any challenging planning situation with superior capability to use geo-informatics which includes GIS, remote sensing, related models and quantitative methods in urban, regional and environmental planning. The program envisages inculcating scientific diagnostic and urban management abilities in professional planners to understand planning issues holistically and equip them with predictive ability to analyze the outcome of economic, social, environment and energy impacts using simulation of future scenarios.

### **DEPARTMENT OF CHEMICAL ENGINEERING**

#### **M. Tech. Programme in Chemical Engineering (CH61)**

The M.Tech. Programme in Chemical Engineering is designed to provide a strong base on Chemical reactor theory, Transport phenomena, Thermodynamics, Mathematical methods in chemical engineering, Process simulation, Optimization and control, Separation processes, Polymer engineering, as well as in frontier areas of Energy and environment, Nanoscience, Molecular simulations, and Biotechnology. The research component of the programme is meant to develop capabilities to confidently undertake an independent analysis of problems of industrial relevance as well as of fundamental significance. The M.Tech. programme equips students with skills which enable them to contribute to the development of Chemical Industry in India.

### **DEPARTMENT OF CIVIL ENGINEERING**

#### **M.Tech. Programme in Structural Engineering (CE61)**

The M.Tech. Programme in Structural Engineering was started in the year 1971 with an intention of providing a comprehensive education and training to civil engineers using a holistic approach to structural systems engineering by emphasising and building on the commonality of engineering structures at the levels of materials, mechanics, analysis and design. The programme provides a thorough training in the design principles and structural action as related to components and systems over a broad range of application areas. It also provides a thorough training in the methods of analysis, including problem formulation and the use of current mathematical and computational tools. The programme covers specialised topics in Theory of Elasticity, Earthquake Resistance Structures, Structural Dynamics, Structural Optimisation, Finite Element Analysis, Advanced Metal Structures, etc.

#### **M.Tech. Programme in Traffic and Transportation Planning (CE62)**

The M. Tech. Programme in Traffic and Transportation Planning was started in the year 1985. The programme aims to impart futuristic and need-based technical education, and to promote reengineering in the field of Transportation Engineering for working out cost- effective solutions in liaison with local authorities and to establish social relevance of research and developmental activities. Under the PMGSY (Pradhan Mantri Gram SadakYojana), and National Highway Development Programme (NHDP-Golden Quadrilateral, North-South and East-West corridors),

etc. the importance given to the highway development has increased in leaps and bounds. Similarly, considerable attention is being given to the development of railways, waterways and airways. The present programme in Traffic and Transportation Planning has three broad areas of specialization namely i) Traffic Engineering ii) Transportation Planning and iii) Pavement Technology.

#### **M.Tech. Programme in Offshore Structures (CE63)**

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 ocean environment. The oil industry with its crucial role in deciding the economy of the nation is shifting its exploitation strategy from land-based to ocean-based systems the world over. This shift in emphasis has resulted in turn in a growing need for structural engineers with expertise in design of offshore platforms and other deepwater structures, marine pipelines, towed bodies and cable systems, etc. The various major courses offered in the programme are Dynamics, Design of Offshore Structures, Marine Foundations, Offshore Structural Systems-Modelling and Behaviour, Theory of Elasticity, Structural Wave Hydrodynamics, Statistics, Probability & Reliability Methods in Civil Engineering.

#### **M.Tech. Programme in Geotechnical Engineering (CE64)**

The M.Tech. Program in Geotechnical Engineering at the National Institute of Technology Calicut is structured to provide graduates with a comprehensive foundation for both professional practice and scholarly pursuit in the field. Our curriculum is carefully structured to offer a well-rounded education encompassing theoretical knowledge, analytical skills, practical applications, and experimental methodologies essential for effective geotechnical engineering endeavours. Through a meticulously curated selection of courses such as Advanced Soil Mechanics and Foundation Engineering, Site Investigations, Geotechnical Earthquake Engineering, Rock Mechanics, Tunnelling and Underground Structures, Finite Element Modelling, and Slope & Retaining Wall Design, students gain specialized expertise in key areas of geotechnical engineering.

This course also focuses on Geophysical and Geotechnical ground investigations, including field and laboratory testing, as well as numerical modelling to simulate real field applications. It trains students in the utility of advanced equipment and software to conduct accurate site assessments and predictive modelling, optimizing project outcomes. This holistic approach ensures that graduates are equipped with the requisite knowledge and skills to navigate diverse challenges in geotechnical projects worldwide, positioning them as adept professionals capable of making significant contributions to the field.

#### **M.Tech. Programme in Water Resources Engineering (CE65)**

The M.Tech. Programme in Water Resources Engineering was started by the Department of Civil Engineering in the year 2015. A scientific and systematic approach is required to efficiently manage any water resources system which is characterized by either scarcity or excess issues, and quality issues. The success of any water resources project depends on the sound understanding of the interactions of various components of the system, effectiveness in collection and interpretation of relevant data, and use of modern computational techniques in the solution of the problem. This PG Programme intends to prepare graduates in Civil Engineering to attain these abilities by introducing them to topics like Advanced Fluid Mechanics, Surface and Subsurface Hydrology, Water Resources Systems Analysis and Design, Remote Sensing and its Applications in Water Resources Engineering and Computational Hydraulics and Hydrology. In addition to these core courses, six more elective courses from the

related fields of Water Resources Engineering can be credited by the students depending on their aptitude and interest. A project work in the second year of the Programme provides the student with an opportunity to apply the principles and methods got familiarized in the first year to analyze and design some aspects of realistic water resources case studies.

#### **M. Tech. Programme in Environmental Engineering (CE66)**

The M.Tech. Programme in Environmental Engineering shall equip the graduants with the ability to study water, air and soil pollution problems, and impart necessary skills to develop technical solutions to solve, attenuate or control these problems in a manner that meets legislative, economic, social and political requirements. The students shall be trained in the accepted engineering practices and protocols for planning, design and operation of water and wastewater treatment facilities, modelling and analysis of water and air quality, design of soil remediation systems, design of air pollution control systems, and the management of solid waste, including its collection, transport, processing, recovery and disposal. Students shall also be trained in undertaking high quality research, professional report preparation and scientific communication.

### **DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

#### **M.Tech. Programme in Computer Science and Engineering (CS61)**

The two-year post graduate Programme in Computer Science is intended to train the students in advanced areas in computer science and specialized topics in emerging areas in computing. Courses offered include Topics in Algorithms, Topics in Programming Languages, Operating Systems Design, Trends in Middleware Technologies, Bioinformatics and Machine Learning. The project work in the second year is intended to orient the student towards deeper study and research in her/his area of interest.

#### **M.Tech. Programme in Computer Science and Engineering [Information Security] (CS62)**

Information security relates to the protection of IT assets against the risks of loss, misuse, disclosure or damage. Information security management comprises of the controls that sensibly manage these risks. By proactively managing information security, we can reduce the likelihood and/or the impact on our information systems from a wide range of threats. The M.Tech. Programme in Computer Science and Engineering (Information Security) is envisaged to train graduates in Computer Science and Engg. / IT/ MCA with the necessary skills to design and develop policies, protocols and techniques to secure information systems.

### **DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

#### **M.Tech. Programme in Electronic Design and Technology (EC61)**

This course aims to educate / train engineers as creative designers of electronic products and systems. This 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. The electronics industries need design engineers, who can identify customer requirements and develop appropriate systems. This program is one among the very few post graduate programmes in India, providing specialized training program on Electronics Design Technology with emphasis on practical design and problem solving skills. In this program the students are trained with the courses in the field of Mathematics, Digital System Design, Embedded System Design, Analog and Digital VLSI designs. The students will also get exposure to specialized courses required for electronics industries such as Electromagnetic Compatibility, Electronic Product Design Lab etc. with necessary competence and innovative skills to be an effective part of the research field of electronics design

and development.

### **M.Tech. Programme in Microelectronics and VLSI Design (EC62)**

The programme is focussed at training students in design, simulation, modelling of electronic components and systems. The programme cover the basics of all aspects of Microelectronics, Analog & circuits digital IC design and physical design. A significant component of all courses are devoted for laboratory works where the students carry out pre silicon design and testing of analog and digital circuits using industry standard EDA tools besides modelling modern semiconductor devices. The programme has elective courses in the field of advanced semiconductor devices, testing and verification, MEMS and sensors, data converters, high frequency analog and digital design. and in allied areas of Electronic Design and Technology, Telecommunication and Signal Processing. At the end of this two year M.Tech programme, the fundamental knowledge and the expertise in modern Microelectronics and VLSI tools will equip the students undergoing this programme to take up challenges in industry in wide variety of areas in the field of Microelectronics and VLSI Design.

### **M.Tech. Programme in Telecommunication (EC63)**

The M.Tech program in “Telecommunication” is designed to cater the needs of Industry in diverse domains of wireless communication and networking with a special emphasis on current and next generation wireless systems and standards. This program has a rich blend of core courses in communication system design and electives focusing on “Data Structures”, “Artificial Intelligence”, and “Design & Verification of VLSI Systems”. A significant component of all courses is devoted for laboratory works where the students get familiarized programming in Python, C/C++ along with software defined radio systems, wireless communication testbed etc. At the end of this program, the students will be gaining adequate fundamental knowledge, application level design orientation, and algorithm development and analysis skills, with sound footing on programming and system level VLSI design skillsets, which will make them industry ready.

### **M.Tech. Programme in Signal Processing (EC64)**

The M Tech program in Signal Processing is focused on creative design and development of multidisciplinary signal processing systems. In addition to strong theoretical foundations and practical knowledge earned through courses such as Linear Algebra, Random Process, Statistical Signal Processing and Data Compression Techniques the students of this program earn specialized skills in areas such as Artificial Intelligence, Pattern Recognition & Machine Learning, Computer Vision, DSP Algorithms & System Design, Testing and Verification of VLSI Systems, Physical Design Automation, etc. with the coding skills in VERILOG, C/C++, Python, MATLAB, Simulink and OpenCV. The program is designed to make the graduates industry ready with skills to identify, analyze and solve multi-disciplinary problems and expertise in application development through system level VLSI design.

## **DEPARTMENT OF ELECTRICAL ENGINEERING**

### **M.Tech. Programme in Instrumentation and Control Systems (EE61)**

Instrumentation is the heart of any industry and sophisticated process control and guidance techniques are essential in modern days. This course, which was the first master's Programme to be started in this institute, has been very useful in processing sufficient knowledge in control system and instrumentation to cater to the needs of industry and research organisations. The syllabus of this programme is structured to have the latest trends in Control and Instrumentation.

### **M.Tech. Programme in Power Systems (EE62)**

This course is structured to give a strong base on power system generation, transmission and distribution, operation, analysis, dynamics and control together with the recent advances such as FACTS, power quality and deregulation and smart grid technologies. Adequate exposure is also given on software tools and techniques in the relevant areas. The course is designed so as to enable the students to work effectively both in industries and utilities.

### **M.Tech. Programme in Power Electronics (EE63)**

This programme was introduced to meet the needs of the modern power industry which makes use of power converters and inverters. The emphasis is given for both theory and practical through design, fabrication and testing. The courses incorporate modern trends in switched mode power supplies, active power filters and the latest control techniques in drives.

### **M.Tech. Programme in Industrial Power and Automation (EE64)**

Micro-processors/Micro-controller/DSP controlled motor drives, process control and SCADA systems, plant automation, cogeneration, power wheeling, power factor controllers etc. in industries make the necessity of integrating these devices and systems with electric power control. With the introduction of time of use and dynamic tariff schemes by the utilities, industries can effectively adapt load control techniques and energy conservation programmes. Computer controlled systems with integrated load control become essential for the modern industries. The M.Tech. programme in 'Industrial Power and Automation' is with this objective to provide sufficient theoretical and field experience on the above systems to the Electrical engineers.

### **M.Tech. Programme in High Voltage Engineering (EE65)**

With the progress of technology, the transmission voltages have increased to ultra- high voltage levels. At these levels the insulators, the circuit breakers and all other equipments that are in operation will have to deal with strong electromagnetic fields that can affect the power quality as well as the proper functioning of the equipment. Thus it is essential that the electrical engineers need be equipped with the latest research and development issues in high voltage transmission and distribution technology and its analysis from the electromagnetic point of view. The curriculum is designed to include both theoretical and practical aspects of high voltage technology. Exposure is also given on experimental techniques for testing of insulators as well as on software tools and techniques in the relevant area. Emphasis is also given on the latest developments in the field of nanodielectrics.

## **DEPARTMENT OF MECHANICAL ENGINEERING**

### **M.Tech. Programme in Industrial Engineering and Management (ME61)**

NIT Calicut has started PG Programme in Industrial Engineering in the year 1984. Later this Programme was restructured in the year 2003 to include management topics also and it was renamed as Industrial Engineering and Management. This Programme is tailored to train the students to meet the current needs of operations function. Along with it, this programme integrates other business functions to develop a total Industrial Engineer who can very well manage the resources of an organization. The Programme includes courses covering Decision modelling, Statistics for management, Inventory and supply chain management, Manufacturing planning and control, Machine learning and artificial intelligence, Accounting and finance management and a number of electives courses from different business functions. A choice of several advanced electives in areas such as Lean manufacturing, Marketing Management, Human resource management, Strategic management, Work system design, System modelling and simulation, Risk management, Quality engineering, Decision support system, etc. are offered



under the Programme. The theory is enhanced through laboratory classes and seminars. Adequate exposure is also given on software tools and techniques in the relevant areas. This Programme is tailored to develop suitable skills for students to manage resources optimally, especially in the data science era and to develop better procedures and management practices for efficient operation of the corporate.

#### **M.Tech. Programme in Thermal Sciences (ME62)**

The M.Tech. in Thermal Sciences is designed to equip engineers with latest know-how of the current trends related in the fields of research and industry. The course content includes adequate amount of theoretical aspects of thermodynamics, fluid flow and heat transfer applied to classical and practical engineering problems. The major courses offered in this specialization are Advanced chemical thermodynamics, Advanced fluid mechanics, Analytical methods in heat transfer, Analysis of thermal power plant cycles and systems, Cryogenic engineering, Thermal environmental engineering, Internal combustion engine systems, Combustion and performance analysis, Multiphase flow, Design of heat transfer equipments Advanced computational methods in fluid flow and heat transfer, etc. The students also get opportunity to undertake research work pertaining to current engineering problems in the dissertation wherein they are exposed to latest equipments and software packages.

#### **M.Tech. Programme in Manufacturing Technology (ME63)**

The objective of this PG programme is to train manpower required to develop and manage the manufacturing capabilities of industries. The students will develop a capability to model, analyse and solve complex engineering problems in manufacturing and allied fields. The thrust areas of the programme are machining science, advanced machining processes, advanced metrology, digital manufacturing and automation. The core courses offered in this specialization are Advanced Machining Science, Modern Machining Processes, Machine Tool Design, Industrial Automation & Robotics and Advanced Metrology & Computer Aided Inspection. Two Laboratory courses in Advanced Manufacturing and CAD/CAM are also part of the curriculum. Students may also choose electives such as Mechatronics Systems, Additive Manufacturing, Quality Engineering & Management, Six Sigma, Vibration & Noise in Machine Tools and Machinery, Finite Element Methods and Applications, Design of Experiments, Computer Aided Design, etc.

#### **M.Tech. Programme in Energy Engineering and Management (ME64)**

Energy Management is critical to our future economic prosperity and environmental well-being. This M.Tech. Programme is designed to develop Mechanical/Chemical engineers with a high standard of expertise in energy management. The core courses offered in this Programme include Energy conversion systems, Renewable energy technology, Electrical energy systems and management, Design and analysis of energy systems, Energy and environment, and Energy conservation in thermal systems. A number of courses such as Energy policies for sustainable development, Optimal design of heat exchangers, Direct energy conversion, Cost management, Heat pump technology, Fluidized bed systems, Industrial load management etc., are offered as electives. There is ample scope for doing project work in non-conventional energy systems.

#### **M.Tech. Programme in Materials Science and Technology (ME65)**

The educational mission of the Materials Science and Technology Programme is to provide students with a unique interdisciplinary academic foundation on which development of intellectual capacity, and the scholarly training needed to address complex problems in materials science with emphasis on advances in materials processing, Electronic materials, Ceramics, Composites, Polymers, Super alloys, and the selection of materials to meet specific design goals. An in-depth study on materials science and technologies will contribute to the development of

newer materials and material systems. The programme provides students the following essential elements: a firm grasp of the fundamentals of science and engineering, ample exposure to a wide range of applications and an understanding of contemporary issues and the need for lifelong learning.

#### **M.Tech. Programme in Machine Design (ME66)**

The objective of this programme is to develop personnel trained in design of mechanical systems and related areas for serving the industry as design engineers and analysts, or to motivate them for research in this challenging field. The thrust areas of this programme can be divided into two major categories: (i) stress analysis and related fields and (ii) vibration and dynamics. Students will be given a thorough training in both these areas before being exposed to an advanced design course, where in they are expected to use their knowledge for system level design. After doing advanced core courses in subjects like solid mechanics, mechanisms and design, the students are expected to choose electives of their interest from an array of specialised courses like fracture mechanics, non-linear dynamics, etc., for developing the skills required for a successful career as a design engineer, analyst or researcher.

### **SCHOOL OF MATERIALS SCIENCE AND ENGINEERING**

#### **M.Tech. Programme in Nanotechnology (MT61)**

Nanotechnology is an emerging interdisciplinary area, which is rated as one of the top- ranked subjects in academics and research. This programme will impart state-of-the art knowledge in this new area, and has an objective of training the students to make them capable of addressing the challenges of this emerging technological field. The programme is designed for students with a background in Mechanical/Production/ Chemical Engineering. This will deal with topics related to the fundamentals and applications of the subject, with a focus on emerging areas in nanoscience and nanotechnology. The courses offered in the programme include fundamental and applied subjects such as Physics of Materials, Thermodynamics of Nano Materials and Systems, Mechanics of Finite-size Elements, Microscale and Nanoscale Heat Transfer, Nanosized Structures, Experimental Techniques in Nanotechnology and Micro Electro Mechanical Systems, and a variety of elective subjects ranging from Computational Nanotechnology to Composite Materials from which students can choose, according to their background and interest. Laboratory courses dealing with production and applications of nanoparticles, nanofluids and nanocomposites, as well as giving exposure to discrete computational analysis of nanoscale phenomena and systems will also be offered as part of the curriculum. The specialization in Nanotechnology holds a very high potential for employment in R&D, academics and industries, as well as provides a gateway to this extremely challenging field, which is expected to have a profound impact on the future of all streams of science and technology.

#### **Address for Correspondence**

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### Annexure 1

#### Eligible Degrees and GATE Mapping for M. Tech./ M. Plan. 2024-25 Admissions

S.No.	Institute	Department	PG Program	Group	Qualifying Degree	GATE Paper
1	National Institute of Technology Calicut	Civil Engineering (CE)	Environmental Engineering (EV)	G1	B.E./B.Tech. in Chemical Engineering- [T117]	CE/ES/CH
2					B.E./B.Tech. in Civil Engineering- [T118]	CE/ES/CH
3					B.E./B.Tech. in Civil Environmental Engineering- [T119]	CE/ES/CH
4					B.E./B.Tech. in Environmental Engineering- [T142]	CE/ES/CH
5					B.E./B.Tech. in Chemical Technology- [T207]	CE/ES/CH
6					B.E./B.Tech. in Civil Engineering and Planning- [T208]	CE/ES/CH
7					B.E./B.Tech. in Civil Technology- [T209]	CE/ES/CH
8					B.E./B.Tech. in Environment and Pollution Control- [T247]	CE/ES/CH
9	National Institute of Technology Calicut	Civil Engineering (CE)			B.E./B.Tech. in Environmental Science and Engineering- [T248]	CE/ES/CH
10					B.E./B.Tech. in Health Science and Water Engineering- [T259]	CE/ES/CH
11					B.E./B.Tech. in Civil and Transportation Engineering- [T324]	CE/ES/CH
12					B.E./B.Tech. in Chemical and Bio Engineering- [T334]	CE/ES/CH
13					B.E./B.Tech. in Civil and Transportation Technology- [T336]	CE/ES/CH
14					B.E./B.Tech. in Civil Engineering (Public Health Engineering)- [T337]	CE/ES/CH
15					B.E./B.Tech. in Environmental Science and Technology- [T344]	CE/ES/CH
16					B.E./B.Tech. in Civil and Water Management- [T396]	CE/ES/CH
17					B.E./B.Tech. in Civil and Infrastructure Engineering- [T425]	CE/ES/CH

18				B.E./B.Tech. in Chemical Engineering (Desalination and Water Treatment)- [436]	CE/ES/CH
19				B.E./B.Tech. in Civil and Rural Engineering- [T437]	CE/ES/CH
20				B.E./B.Tech. in Civil Engineering Environment and Pollution Control- [T438]	CE/ES/CH
21	<b>National Institute of Technology Calicut</b>	<b>Civil Engineering (CE)</b>		B.E./B.Tech. in Civil Engineering with Computer Application- [T439]	CE/ES/CH
22				B.E./B.Tech. in Civil Engineering (Construction Technology)- [T440]	CE/ES/CH
23				B.E./B.Tech. in Civil and Structural Engineering- [T476]	CE/ES/CH
24				B.E./B.Tech. in Chemical and Biochemical Engineering- [T477]	CE/ES/CH
25				B.E./B.Tech. in Civil and Environmental Engineering- [T478]	CE/ES/CH
26				B.E./B.Tech. in Civil Engineering (Environmental Engineering)- [T479]	CE/ES/CH
27				B.E./B.Tech. in Energy and Environmental Management- [T485]	CE/ES/CH
28					
29	<b>National Institute of Technology Calicut</b>	<b>Civil Engineering (CE)</b>		B.E./B.Tech. in Biotech Engineering- [T112]	CE/ES/BT/CH/ME
30					
31				B.E./B.Tech. in Biotechnology- [T113]	CE/ES/BT/CH/ME
32					
33				B.E./B.Tech. in Mechanical Engineering- [T158]	CE/ES/BT/CH/ME
34					
35				B.E./B.Tech. in Water Management- [T186]	CE/ES/BT/CH/ME
36					
37				B.E./B.Tech. in Bioengineering- [T197]	CE/ES/BT/CH/ME
38					
39				B.E./B.Tech. in Biological Sciences and Bioengineering- [T198]	CE/ES/BT/CH/ME
40					
41				B.E./B.Tech. in Biosciences and Bioengineering- [T200]	CE/ES/BT/CH/ME
42				B.E./B.Tech. in Biotechnology and	CE/ES/BT/CH/ME

43					Biochemical Engineering- [T201]	
44						
45		<b>Civil Engineering (CE)</b>			B.E./B.Tech. in Industrial Biotechnology- [T262]	CE/ES/BT/CH/ME
46	<b>National Institute of Technology Calicut</b>				B.E./B.Tech. in Biochemical and Biotechnology Engineering- [T333]	CE/ES/BT/CH/ME
47						
48					B.E./B.Tech. in Geospatial Technology and Geoinformatics- [T487]	CE/ES/BT/CH/ME
49						
50					B.E./B.Tech. in Mechanical Engineering (Production)- [T490]	CE/ES/BT/CH/ME
51						
52					B.E./B.Tech. in Civil Engineering - (T118)	CE
53					B.E./B.Tech. in Civil Environmental Engineering - (T119)	CE
54					B.E./B.Tech. in Civil Engineering and Planning - (T208)	CE
55					B.E./B.Tech. in Civil Technology - (T209)	CE
56					B.E./B.Tech. in Civil and Transportation Engineering -(T324)	CE
57					B.E./B.Tech. in Civil and Transportation Technology - (T336)	CE
58					B.E./B.Tech. in Civil Engineering (Public Health Engineering)- (T337)	CE
59		<b>Civil Engineering (CE)</b>			B.E./B.Tech. in Civil and Environmental Engineering -(T478)	CE
60					B.E./B.Tech. in Civil Engineering (Environmental Engineering)- (T479)	CE
61					B.E./B.Tech. in Civil Engineering - (T118)	CE
62					B.E./B.Tech. in Civil Technology - (T209)	CE
63					B.E./B.Tech. in Structural Engineering - (T180)	CE
64					B.E./B.Tech. in Marine Engineering - (T156)	CE
65					B.E./B.Tech. in Ocean Engineering and Naval Architecture - (T290)	CE
66					B.E./B.Tech. in Civil Engineering - (T118)	CE

67					B.E./B.Tech. in Civil Technology - (T209)	CE		
68					B.E./B.Tech. in Structural Engineering - (T180)	CE		
69					B.E./B.Tech. in Computer Aided Design of Structures (T212)	CE		
70			<b>Traffic and Transportation Planning (TT)</b>	G1	B.E./B.Tech. in Civil and Transportation Engineering - (T324)	CE		
71					B.E./B.Tech. in Civil and Transportation Technology - (T336)	CE		
72					B.E./B.Tech. in Civil Engineering - (T118)	CE		
73					B.E./B.Tech. in Civil Engineering and Planning - (T208)	CE		
74		<b>Civil Engineering (CE)</b>			B.E./B.Tech. in Civil Technology - (T209)	CE		
75					B.E./B.Tech. in Highway Engineering - (T143)	CE		
76					B.E./B.Tech. in Transportation Engineering - (T184)	CE		
77					B.E./B.Tech. in Civil and Infrastructure Engineering - (T425)	CE		
78					<b>Water Resources Engineering (WA)</b>	G1	B.E./B.Tech. in Civil Engineering - (T118)	CE
79							B.E./B.Tech. in Agriculture Engineering - (T103)	CE/AG
80			B.E./B.Tech. in Civil and Water Management - (T396)	CE/AG				
81			B.E./B.Tech. in Water Management - (T186)	CE/AG				
82			B.E./B.Tech. in Civil Technology - (T209)	CE				
83			B.E./B.Tech. in Civil Engineering and Planning - (T208)	CE				
84			B.E./B.Tech. in Civil and Rural Engineering- (T437)	CE/AG				
85			B.E./B.Tech. in Civil Engineering with Computer Application - (T439)	CE				
86			<b>Chemical Engineering (CH)</b>	G1	B.E./B.Tech. in Chemical Engineering (T117)	CH/PE/XE		
87		<b>Chemical Engineering (CH)</b>			B.E./B.Tech. in Chemical Technology (T207)	CH/PE/XE		
88					B.E./B.Tech. in Petro-Chemical Engineering (T170)	CH/PE/XE		
89					B.E./B.Tech. in Petroleum Engineering (T296)	CH/PE/XE		
90					B.E./B.Tech. in Petrochemical Technology (T366)	CH/PE/XE		

91				B.E./B.Tech. in Industrial Biotechnology (T262)	CH/PE/XE
92				B.E./B.Tech. in Food Process Technology (T346)	CH/PE/XE
93				B.E./B.Tech. in Biochemical Engineering (T109)	CH/PE/XE
94				B.E./B.Tech. in Biotech Engineering (T112)	CH/PE/XE
95				B.E./B.Tech. in Ceramic Engineering (T116)	CH/PE/XE
96				B.E./B.Tech. in Metallurgical Engineering and Material Science (T163)	CH/PE/XE
97				B.E./B.Tech. in Textile Engineering (T182)	CH/PE/XE
98				B.E./B.Tech. in Food Technology(T347)	CH/PE/XE
99				B.E./B.Tech. in Petrochem and Petroleum Refinery Engineering (T365)	CH/PE/XE
100				B.E./B.Tech. in Petroleum Technology (T367)	CH/PE/XE
101		<b>Chemical Engineering (CH)</b>		B.E./B.Tech. in Chemical and Biochemical Engineering(T477)	CH/PE/XE
102				B.E./B.Tech. in Biotechnology (T113)	CH/PE/XE
103				B.E./B.Tech. in Biotechnology and Biochemical Engineering (T201)	CH/PE/XE
104				B.E./B.Tech. in Cement and Ceramic Technology (T115)	CH/PE/XE
105				B.E./B.Tech. in Polymer Technology (T174)	CH/PE/XE
106				B.E./B.Tech. in Environmental Engineering (T142)	CH/PE/XE
107				B.E./B.Tech. in Chemical and Bio Engineering (T334)	CH/PE/XE
108				B.E./B.Tech. in Chemical and Polymer Engineering (T205)	CH/PE/XE
109				B.E./B.Tech. in Environmental Science and Engineering (T248)	CH/PE/XE
110				B.E./B.Tech. in Environmental Science and Technology (T344)	CH/PE/XE
111				B.E./B.Tech. in Food Technology and Management (T463)	CH/PE/XE
112		<b>Chemical Engineering (CH)</b>		B.E./B.Tech. in Chemical and Alcohol Technology (T328)	CH/PE/XE
113				B.E./B.Tech. in Biochemical and Biotechnology Engineering (T333)	CH/PE/XE

114				B.E./B.Tech. in Chemical Engineering (Plastic and Polymer) (T335)	CH/PE/XE	
115				B.E./B.Tech. in Polymer Science and Chemical Technology (T378)	CH/PE/XE	
116				B.E./B.Tech. in Chemical and Electrochemical Engineering (T405)	CH/PE/XE	
117		<b>Chemical Engineering (CH)</b>		B.E./B.Tech. in Material Science and Engineering (T157)	CH/PE/XE	
118				B.E./B.Tech. in Food Engineering and Technology (T426)	CH/PE/XE	
119				B.E./B.Tech. in Chemical Engineering (Desalination and Water Treatment) (T436)	CH/PE/XE	
120				B.E./B.Tech. in Petroleum Engineering and Technology (T475)	CH/PE/XE	
121				B.E./B.Tech. in Food Technology and Biochemical Engineering- (T407)	CH/PE/XE	
122		<b>Computer Science and Engineering (CT)</b>		B.E./B.Tech. in Computer Engineering - (T120)	CS	
123				B.E./B.Tech. in Computer Engineering and Application - (T213)	CS	
124				B.E./B.Tech. in Computer Science - (T121)	CS	
125				B.E./B.Tech. in Computer Science and Engineering - (T122)	CS	
126				B.E./B.Tech. in Computer Science and Information Technology- (T123)	CS	
127			<b>Computer Science and Engineering (XG)</b>	B.E./B.Tech. in Computer Science and Systems Engineering - (T215)	CS	
128				B.E./B.Tech. in Computer Science and Technology - (T216)	CS	
129				B.E./B.Tech. in Computer Technology - (T124)	CS	
130				B.E./B.Tech. in Information and Communication Technology - (T265)	CS	
131				B.E./B.Tech. in Information Engineering - (T266)	CS	
132				B.E./B.Tech. in Information Science - (T267)	CS	
133				B.E./B.Tech. in Information Science and Engineering - (T268)	CS	



134		
135		
136		<b>Computer Science and Engineering (CT)</b>
137		
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147		
148		
149		<b>Computer Science and Engineering (CT)</b>
150		
151		
152		
153		

B.E./B.Tech. in Information Science and Technology - (T348)	CS
B.E./B.Tech. in Information Technology - (T149)	CS
B.E./B.Tech. in Information Technology and Engineering - (T349)	CS
B.E./B.Tech. in Software Engineering - (T313)	CS
B.E./B.Tech. in Computer Networking - (T214)	CS
B.E./B.Tech. in Computer Science and Applied Mathematics - (T441)	CS
B.E./B.Tech. in Computer Science and Biosciences (T442)	CS
B.E./B.Tech. in Computer Science and Design (T443)	CS
B.E./B.Tech. in Computer Science and Business Systems (T444)	CS
B.E./B.Tech. in Computer Science and Engineering (Cyber Security) (T445)	CS
B.E./B.Tech. in Computer Science and Engineering (Artificial Intelligence) (T446)	CS
B.E./B.Tech. in Computer Science and Engineering (Artificial Intelligence and Machine Learning) (T447)	CS
B.E./B.Tech. in Computer Science and Engineering (Data Science) (T448)	CS
B.E./B.Tech. in Computer Science and Engineering (Internet of Things and Cyber Security Including Block Chain Technology)(T449)	CS
B.E./B.Tech. in Computer Science and Engineering (IoT) (T450)	CS
B.E./B.Tech. in Computer Science and Engineering (Networks) (T451)	CS
B.E./B.Tech. in Computer Science and Engineering and Business Systems (T452)	CS
B.E./B.Tech. in Computer Science and Medical Engineering (T453)	CS
B.E./B.Tech. in Computer Engineering (Software Engineering) (T480)	CS
MCA - (B453)	CS

154				B.Tech in Data Science and Artificial Intelligence (T501)	CS	
155				B.E./B.Tech. in Computing in Software (T219)	CS	
156				B.E./B.Tech. in Computer and Communication Engineering (T211)	CS	
157			<b>Computer Science and Engineering - Information Security(XF)</b>			
158						
159						
160					B.E./B.Tech. in Computer Engineering - (T120)	CS
161					B.E./B.Tech. in Computer Engineering and Application - (T213)	CS
162					B.E./B.Tech. in Computer Networking - (T214)	CS
163		<b>Computer Science and Engineering (CT)</b>			B.E./B.Tech. in Computer Science - (T121)	CS
164					B.E./B.Tech. in Computer Science and Engineering - (T122)	CS
165					B.E./B.Tech. in Computer Science and Information Technology - (T123)	CS
166					B.E./B.Tech. in Computer Science and Systems Engineering - (T215)	CS
167					B.E./B.Tech. in Computer Science and Technology - (T216)	CS
168					B.E./B.Tech. in Computer Technology - (T124)	CS
169					B.E./B.Tech. in Information and Communication Technology - (T265)	CS
170					B.E./B.Tech. in Information Engineering - (T266)	CS
171					B.E./B.Tech. in Information Science - (T267)	CS
172					B.E./B.Tech. in Information Science and Engineering - (T268)	CS
173					B.E./B.Tech. in Information Science and Technology - (T348)	CS
174					B.E./B.Tech. in Information Technology - (T149)	CS
175					B.E./B.Tech. in Information Technology and Engineering - (T349)	CS
176		<b>Computer Science and Engineering (CT)</b>			B.E./B.Tech. in Software Engineering - (T313)	CS
177				B.E./B.Tech. in Computer Science and Applied Mathematics - (T441)	CS	
				B.E./B.Tech. in Computer Science and Biosciences (T442)	CS	

178					B.Tech in Data Science and Artificial Intelligence (T501)	CS
179					B.E./B.Tech. in Computing in Software (T219)	CS
180					B.E./B.Tech. in Computer and Communication Engineering (T211)	CS
181					B.E./B.Tech. in Computer Science and Design (T443)	CS
182					B.E./B.Tech. in Computer Science and Business Systems (T444)	CS
183					B.E./B.Tech. in Computer Science and Engineering (Cyber Security) (T445)	CS
184					B.E./B.Tech. in Computer Science and Engineering (Artificial Intelligence) (T446)	CS
185					B.E./B.Tech. in Computer Science and Engineering (Artificial Intelligence and Machine Learning) (T447)	CS
186					B.E./B.Tech. in Computer Science and Engineering (Data Science) (T448)	CS
187					B.E./B.Tech. in Computer Science and Engineering (Internet of Things and Cyber Security Including Block Chain Technology)(T449)	CS
188		<b>Computer Science and Engineering (CT)</b>			B.E./B.Tech. in Computer Science and Engineering (IoT) (T450)	CS
189					B.E./B.Tech. in Computer Science and Engineering (Networks) (T451)	CS
190					B.E./B.Tech. in Computer Science and Engineering and Business Systems (T452)	CS
191					B.E./B.Tech. in Computer Science and Medical Engineering (T453)	CS
192					B.E./B.Tech. in Computer Engineering (Software Engineering) (T480)	CS
193					MCA - (B453)	CS
194		<b>Electrical Engineering (EE)</b>			B.E./B.Tech. in Electrical and Electronics Engineering - (T129)	EE
195			<b>High Voltage Engineering (HV)</b>	G1	B.E./B.Tech. in Electrical Engineering - (T131)	EE
196					B.E./B.Tech. in Electronics and Electrical Engineering - (T236)	EE
197					B.E./B.Tech. in Electrical and Electronics-(T393)	EE

198				B.E./B.Tech. in Electrical Engineering (Electronics and Power) (T483)	EE
199				B.E./B.Tech. in Electrical and Electronics (Power System) -(T340)	EE
200				B.E./B.Tech. in Power Engineering - (T300)	EE
201		<b>Electrical Engineering (EE)</b>	<b>Industrial Power and Automation (IA)</b>	B.E./B.Tech. in Control and Electrical Engineering - (T128)	EE IN
202				B.E./B.Tech. in Control and Instrumentation - (T223)	EE IN
203				B.E./B.Tech. in Electrical and Electronics Engineering - (T129)	EE IN
204				B.E./B.Tech. in Electrical and Power Engineering - (T229)	EE IN
205				B.E./B.Tech. in Electrical and Computer Engineering - (T339)	EE IN
206				B.E./B.Tech. in Electrical and Electronics (Power System) - (T340)	EE IN
207				B.E./B.Tech. in Electrical Engineering - (T131)	EE IN
208				B.E./B.Tech. in Electrical Engineering and Industrial Control - (T227)	EE IN
209		<b>Electrical Engineering (EE)</b>		B.E./B.Tech. in Electrical Engineering (Power) - (T132)	EE IN
210				B.E./B.Tech. in Electrical Power Engineering - (T133)	EE IN
211				B.E./B.Tech. in Electrical and Instrumentation Engineering - (T130)	EE IN
212				B.E./B.Tech. in Electronics and Power Engineering (T239)	EE IN
213				B.E./B.Tech. in Electronics and Electrical Engineering - (T236)	EE IN
214				B.E./B.Tech. in Electronics and Instrumentation Engineering - (T136)	EE IN
215				B.E./B.Tech. in Electronics and Power Engineering - (T238)	EE IN
216				B.E./B.Tech. in Electronics and Instrumentation - (T391)	EE IN
217				B.E./B.Tech. in Instrumentation and Control Engineering - (T150)	EE IN
218				B.E./B.Tech. in Instrumentation and Process Control - (T270)	EE IN
219		<b>Electrical Engineering (EE)</b>			

220				B.E./B.Tech. in Instrumentation and Control System - (T388)	EE IN
221				B.E./B.Tech. in Power Electronics and Instrumentation Engineering - (T379)	EE IN
222				B.E./B.Tech. in Electrical and Electronics-(T393)	EE IN
223			<b>Instrumentation and Control Systems (IO)</b>	B.E./B.Tech. in Applied Electronics and Instrumentation Engineering - (T104)	EE
224				B.E./B.Tech. in Applied Electronics and Instrumentation - (T389)	EE
225				B.E./B.Tech. in Control and Electrical Engineering - (T128)	EE
226		<b>Electrical Engineering (EE)</b>		B.E./B.Tech. in Control and Instrumentation - (T223)	EE
227				B.E./B.Tech. in Control Engineering - (T127)	EE
228				B.E./B.Tech. in Control System Engineering - (T224)	EE
229				B.E./B.Tech. in Electrical and Electronics Engineering - (T129)	EE
230				B.E./B.Tech. in Electrical and Power Engineering - (T229)	EE
231				B.E./B.Tech. in Electrical and Computer Engineering - (T339)	EE
232				B.E./B.Tech. in Electrical and Electronics (Power System) - (T340)	EE
233				B.E./B.Tech. in Electrical and Mechanical Engineering - (T341)	EE
234				B.E./B.Tech. in Electrical Engineering - (T131)	EE
235				B.E./B.Tech. in Electrical Engineering and Industrial Control - (T227)	EE
236				B.E./B.Tech. in Electrical Engineering (Power) - (T132)	EE
237		<b>Electrical Engineering (EE)</b>		B.E./B.Tech. in Electrical Instrumentation and Control Engineering - (T230)	EE
238				B.E./B.Tech. in Electronic Instrumentation and Control Engineering - (T231)	EE
239				B.E./B.Tech. in Electronics and Electrical Engineering - (T236)	EE

240				B.E./B.Tech. in Electronics and Instrumentation Engineering - (T136)	EE
241				B.E./B.Tech. in Instrumentation - (T390)	EE
242				B.E./B.Tech. in Instrumentation and Control Engineering - (T150)	EE
243				B.E./B.Tech. in Instrumentation and Process Control - (T270)	EE
244				B.E./B.Tech. in Instrumentation and Control System - (T388)	EE
245		<b>Electrical Engineering (EE)</b>		B.E./B.Tech. in Instrumentation Engineering - (T151)	EE
246				B.E./B.Tech. in Power Electronics and Instrumentation Engineering - (T379)	EE
247				B.E./B.Tech. in Electrical and Electronics-(T393)	EE
248			<b>Instrumentation and Control Systems (IO)</b>	B.E./B.Tech. in Applied Electronics and Instrumentation Engineering - (T104)	IN
249				B.E./B.Tech. in Applied Electronics and Instrumentation - (T389)	IN
250				B.E./B.Tech. in Control and Electrical Engineering - (T128)	IN
251				B.E./B.Tech. in Control and Instrumentation - (T223)	IN
252				B.E./B.Tech. in Control Engineering - (T127)	IN
253				B.E./B.Tech. in Control System Engineering - (T224)	IN
254				B.E./B.Tech. in Electrical and Electronics Engineering - (T129)	IN
255				B.E./B.Tech. in Electrical and Power Engineering - (T229)	IN
256		<b>Electrical Engineering (EE)</b>		B.E./B.Tech. in Electrical and Computer Engineering - (T339)	IN
257				B.E./B.Tech. in Electrical and Electronics (Power System) - (T340)	IN
258				B.E./B.Tech. in Electrical and Mechanical Engineering - (T341)	IN
259				B.E./B.Tech. in Electrical Engineering - (T131)	IN
260				B.E./B.Tech. in Electrical Engineering and Industrial Control - (T227)	IN

261				B.E./B.Tech. in Electrical Engineering (Power) - (T132)	IN
262				B.E./B.Tech. in Electrical Instrumentation and Control Engineering - (T230)	IN
263				B.E./B.Tech. in Electronic Instrumentation and Control Engineering - (T231)	IN
264				B.E./B.Tech. in Electronics and Electrical Engineering - (T236)	IN
265				B.E./B.Tech. in Electronics and Instrumentation Engineering - (T136)	IN
266				B.E./B.Tech. in Instrumentation - (T390)	IN
267				B.E./B.Tech. in Instrumentation and Control Engineering - (T150)	IN
268		<b>Electrical Engineering (EE)</b>		B.E./B.Tech. in Instrumentation and Process Control - (T270)	IN
269				B.E./B.Tech. in Instrumentation and Control System - (T388)	IN
270				B.E./B.Tech. in Instrumentation Engineering - (T151)	IN
271				B.E./B.Tech. in Power Electronics and Instrumentation Engineering - (T379)	IN
272				B.E./B.Tech. in Electrical Engineering (Electronics and Power) (T483)	IN
273				B.E./B.Tech. in Electrical and Electronics-(T393)	IN
274				B.E./B.Tech. in Electrical and Electronics Engineering - (T129)	EE
275				B.E./B.Tech. in Electrical and Power Engineering - (T229)	EE
276		<b>Electrical Engineering (EE)</b>		B.E./B.Tech. in Electrical and Electronics (Power System) - (T340)	EE
277				B.E./B.Tech. in Electrical Engineering - (T131)	EE
278				B.E./B.Tech. in Electrical Engineering and Industrial Control - (T227)	EE
279				B.E./B.Tech. in Electrical Engineering (Power) - (T132)	EE
280				B.E./B.Tech. in Electrical Power Engineering - (T133)	EE
281					
282					
			<b>Power Electronics (PE)</b>	G1	

283				B.E./B.Tech. in Electronics and Electrical Engineering - (T236)	EE	
284				B.E./B.Tech. in Power Control and Drives - (T299)	EE	
285				B.E./B.Tech. in Power Electronics - (T175)	EE	
286				B.E./B.Tech. in Power Electronics and Instrumentation Engineering - (T379)	EE	
287		<b>Electrical Engineering (EE)</b>		B.E./B.Tech. in Power Engineering - (T300)	EE	
288				B.E./B.Tech. in Electrical and Electronics-(T393)	EE	
289			<b>Power Systems (PO)</b>	G1	B.E./B.Tech. in Electrical and Electronics Engineering - (T129)	EE
290					B.E./B.Tech. in Electrical and Power Engineering - (T229)	EE
291					B.E./B.Tech. in Electrical and Electronics (Power System) - (T340)	EE
292					B.E./B.Tech. in Electrical Engineering - (T131)	EE
293		<b>Electrical Engineering (EE)</b>			B.E./B.Tech. in Electrical Engineering (Power) - (T132)	EE
294					B.E./B.Tech. in Electrical Power Engineering - (T133)	EE
295					B.E./B.Tech. in Electronics and Electrical Engineering - (T236)	EE
296					B.E./B.Tech. in Electronics and Power Engineering - (T238)	EE
297					B.E./B.Tech. in Power Engineering - (T300)	EE
298					B.E./B.Tech. in Renewable Energy - (T179)	EE
299					B.E./B.Tech. in Electrical and Electronics-(T393)	EE
300					B.E./B.Tech. in Electrical Engineering (Electronics and Power) (T483)	EE
301		<b>Electronics and Communication Engineering (EC)</b>	<b>Electronics Design and Technology (ET)</b>	G1	B.E./B.Tech. in Applied Electronics and Instrumentation Engineering (T104)	EC
302					B.E./B.Tech. in Electrical and Electronics Engineering (T129)	EC
303					B.E./B.Tech. in Electronics and Communication Engineering (T135)	EC
304					B.E./B.Tech. in Electronics and Instrumentation Engineering (T136)	EC



305			B.E./B.Tech. in Electronics and Telecommunication Engineering (T137)	EC
306			B.E./B.Tech. in Electronics Engineering (T138)	EC
307			B.E./B.Tech. in Applied Electronics and Telecommunication Engineering (T191)	EC
308			B.E./B.Tech. in VLSI System Design (T323)	EC
309			B.E./B.Tech. in Electronics and Electrical Communication Engineering - (T235)	EC
310			B.E./B.Tech. in Electronics and Electrical Engineering (T236)	EC
311		<b>Electronics and Communication Engineering (EC)</b>	B.E./B.Tech. in Electronics Communication and Instrumentation Engineering (T240)	EC
312			B.E./B.Tech. in Electronics Design Technology (T241)	EC
313			B.E./B.Tech. in Electronics Science and Engineering (T243)	EC
314			B.E./B.Tech. in Electronics Engineering (Design and Manufacturing) (T342)	EC
315			B.E./B.Tech. in Electronics Technology (343)	EC
316			B.E./B.Tech. in Applied Electronics and Instrumentation (T389)	EC
317			B.E./B.Tech. in Electronics and Instrumentation (T391)	EC
318			B.E./B.Tech. in Instrumentation and Electronics Engineering (T392)	EC
319			B.E./B.Tech. in Electrical and Electronics (T393)	EC
320			B.E./B.Tech. in Electronics and Communication Engineering with specialization in Design and Manufacturing (T409)	EC
321			B.E./B.Tech. in Electronics System Engineering (T411)	EC
322			B.E./B.Tech. in Electronics Engineering (specialization in System Engineering) (T412)	EC
323		<b>Electronics and Communication Engineering (EC)</b>	B.E./B.Tech. in Electronics Engineering with minor in System Engineering (T413)	EC
324			B.E./B.Tech. in Microelectronics and VLSI Design (T414)	EC

325				B.E./B.Tech. in Electronics and Communication Engineering (Communication Systems Design) (T418)	EC	
326				B.E./B.Tech. in Electronics and Communication Engineering (Electronics Systems Design) (T419)	EC	
327				B.E./B.Tech. in Applied Electronics and Communications Engineering (T431)	EC	
328				B.E./B.Tech. in Electronics and Biomedical Engineering (T456)	EC	
329				B.E./B.Tech. in Electronics and Communication Engineering (Bio-Medical Engineering)(T457)	EC	
330				B.E./B.Tech. in Electronics and Communication Engineering (Industry Integrated)(T458)	EC	
331				B.E./B.Tech. in Electronics and Computer Science (T460)	EC	
332				B.E./B.Tech. in Electronics and Telecommunication Engineering (Technologynician Electronic Radio)(T461)	EC	
333				B.E./B.Tech. in Electronics and Communication Engineering (Avionics) (T500)	EC	
334		<b>Electronics and Communication Engineering (EC)</b>		B.E./B.Tech. in Electronics and Communication (Communication System Engineering) (T484)	EC	
335			<b>Micro Electronics and VLSI Design (MG)</b>	G1	B.E./B.Tech. in Applied Electronics and Instrumentation Engineering - (T104)	EC
336					B.E./B.Tech. in VLSI System Design (T323)	EC
337					B.E./B.Tech. in Electrical and Electronics Engineering (T129)	EC
338					B.E./B.Tech. in Electronics and Communication Engineering - (T135)	EC
339		<b>Electronics and Communication Engineering (EC)</b>			B.E./B.Tech. in Electronics and Instrumentation Engineering - (T136)	EC
340					B.E./B.Tech. in Electronics and Telecom Engineering - (T137)	EC
341					B.E./B.Tech. in Applied Electronics and Telecommunication Engineering (T191)	EC

342			B.E./B.Tech. in Electronics Engineering - (T138)	EC
343			B.E./B.Tech. in Electronics and Electrical Communication Engineering - (T235)	EC
344			B.E./B.Tech. in Electronics and Electrical Engineering (T236)	EC
345			B.E./B.Tech. in Electronics Communication and Instrumentation Engineering (T240)	EC
346			B.E./B.Tech. in Electronics Design Technology (T241)	EC
347			B.E./B.Tech. in Electronics Science and Engineering (T243)	EC
348			B.E./B.Tech. in Electronics Engineering (Design and Manufacturing) (T342)	EC
349			B.E./B.Tech. in Electronics Technology (343)	EC
350			B.E./B.Tech. in Applied Electronics and Instrumentation (T389)	EC
351			B.E./B.Tech. in Electronics and Instrumentation (T391)	EC
352		<b>Electronics and Communication Engineering (EC)</b>	B.E./B.Tech. in Instrumentation and Electronics Engineering (T392)	EC
353			B.E./B.Tech. in Electrical and Electronics (T393)	EC
354			B.E./B.Tech. in Electronics and Communication Engineering with specialization in Design and Manufacturing (T409)	EC
355			B.E./B.Tech. in Electronics System Engineering (T411)	EC
356			B.E./B.Tech. in Electronics Engineering (specialization in System Engineering) (T412)	EC
357			B.E./B.Tech. in Electronics Engineering with minor in System Engineering (T413)	EC
358			B.E./B.Tech. in Microelectronics and VLSI Design (T414)	EC
359			B.E./B.Tech. in Electronics and Communication Engineering (Communication Systems Design) (T418)	EC
360		<b>Electronics and Communication Engineering (EC)</b>	B.E./B.Tech. in Electronics and Communication Engineering (Electronics Systems Design) (T419)	EC

361				B.E./B.Tech. in Applied Electronics and Communications Engineering (T431)	EC	
362						
363				B.E./B.Tech. in Electronics and Biomedical Engineering (T456)	EC	
364				B.E./B.Tech. in Electronics and Communication Engineering (Bio-Medical Engineering)(T457)	EC	
365				B.E./B.Tech. in Electronics and Communication Engineering (Industry Integrated)(T458)	EC	
366				B.E./B.Tech. in Electronics and Computer Science (T460)	EC	
367				B.E./B.Tech. in Electronics and Telecommunication Engineering (Technologynician Electronic Radio)(T461)	EC	
368		<b>Electronics and Communication Engineering (EC)</b>		B.E./B.Tech. in Electronics and Communication Engineering (Avionics) (T500)	EC	
369				B.E./B.Tech. in Electronics and Communication (Communication System Engineering)(T484)	EC	
370			<b>Signal Processing (SP)</b>	B.E./B.Tech. in Applied Electronics and Telecommunication Engineering - (T191)	EC	
371				B.E./B.Tech. in Communication Engineering - (T210)	EC	
372				B.E./B.Tech. in Electronics and Communication Engineering - (T135)	EC	
373				B.E./B.Tech. in Electronics and Electrical Communication Engineering - (T235)	EC	
374				B.E./B.Tech. in Electronics and Telecom Engineering - (T137)	EC	
375				B.E./B.Tech. in Electronics Communication and Instrumentation Engineering - (T240)	EC	
376				B.E./B.Tech. in Electronics Engineering - (T138)	EC	
377				B.E./B.Tech. in Telecommunication Engineering - (T181)	EC	
378		<b>Electronics and Communication Engineering (EC)</b>			B.E./B.Tech. in Communication and Signal Processing - (T415)	EC

379				B.E./B.Tech. in Electronics and Communication Engineering (Communication Systems Design)-(T418)	EC
380				B.E./B.Tech. in Electronics and Communication Engineering (Electronics Systems Design) - (T419)	EC
381				B.E./B.Tech. in Electrical and Electronics Engineering - (T129)	EC
382				B.E./B.Tech. in Applied Electronics and Instrumentation Engineering - (T104)	EC
383				B.E./B.Tech. in Electronics and Computer Engineering - (T233)	EC
384				B.E./B.Tech. in Electronics and Electrical Engineering - (T236)	EC
385				B.E./B.Tech. in Electronics and Power Engineering - (T238)	EC
386				B.E./B.Tech. in Electronics and Communication (Communication System Engineering) (T484)	EC
387		<b>Electronics and Communication Engineering (EC)</b>	<b>Telecommunication (TK)</b>	B.E./B.Tech. in Applied Electronics and Telecommunication Engineering - (T191)	EC
388				B.E./B.Tech. in Communication Engineering - (T210)	EC
389				B.E./B.Tech. in Electronics and Communication Engineering - (T135)	EC
390				B.E./B.Tech. in Electronics and Electrical Communication Engineering - (T235)	EC
391				B.E./B.Tech. in Electronics and Telecom Engineering - (T137)	EC
392				B.E./B.Tech. in Electronics Communication and Instrumentation Engineering - (T240)	EC
393				B.E./B.Tech. in Electronics Engineering - (T138)	EC
394				B.E./B.Tech. in Telecommunication Engineering - (T181)	EC
395				B.E./B.Tech. in Communication and Signal Processing - (T415)	EC
396		<b>Electronics and Communication Engineering (EC)</b>			B.E./B.Tech. in Electronics and Communication Engineering (Communication Systems Design)-(T418)

397					B.E./B.Tech. in Electronics and Communication Engineering (Electronics Systems Design) - (T419)	EC
398					B.E./B.Tech. in Electronics and Communication (Communication System Engineering) (T484)	EC
399		<b>Mechanical Engineering (ME)</b>	<b>Energy Engineering and Management (ER)</b>	G1	B.E./B.Tech. in Aeronautical Engineering - (T101)	CH ME
400					B.E./B.Tech. in Aerospace Engineering - (T102)	CH ME
401					B.E./B.Tech. in Automobile Engineering - (T108)	CH ME
402					B.E./B.Tech. in Automotive Engineering - (T195)	CH ME
403					B.E./B.Tech. in Automotive Technology - (T196)	CH ME
404					B.E./B.Tech. in Chemical Engineering - (T117)	CH ME
405					B.E./B.Tech. in Energy Engineering - (T139)	CH ME
406					B.E./B.Tech. in Energy Science and Engineering - (T244)	CH ME
407					B.E./B.Tech. in Mechanical Engineering - (T158)	CH ME
408					B.E./B.Tech. in Mechanical Engineering Automobile - (T280)	CH ME
409					B.E./B.Tech. in Nuclear Engineering - (T169)	CH ME
410					B.E./B.Tech. in Nuclear Science and Technology - (T363)	CH ME
411					B.E./B.Tech. in Renewable Energy - (T179)	CH ME
412		<b>Mechanical Engineering (ME)</b>			B.E./B.Tech. in Energy and Environmental Management (T485)	CH ME
413			B.E./B.Tech. in Smart and Sustainable Energy (T496)	CH ME		
414		<b>Mechanical Engineering (ME)</b>	<b>Industrial Power and Automation (IA)</b>	G1	Any of the above disciplines in B.E./B.Tech. degree - (T999)	AE AG ME MT PI TF
415			<b>Machine Design (MD)</b>	G1	B.E./B.Tech. in Aeronautical Engineering - (T101)	ME PI
416					B.E./B.Tech. in Aerospace Engineering - (T102)	ME PI
417					B.E./B.Tech. in Automobile Engineering - (T108)	ME PI
418					B.E./B.Tech. in Manufacturing Engineering - (T155)	ME PI
419					B.E./B.Tech. in Mechanical Engineering - (T158)	ME PI
420		<b>Mechanical Engineering (ME)</b>			B.E./B.Tech. in Mechatronics - (T159)	ME PI

421			B.E./B.Tech. in Production and Industrial Engineering - (T176)	ME PI
422			B.E./B.Tech. in Production and Management - (T394)	ME PI
423			B.E./B.Tech. in Production Engineering - (T177)	ME PI
424			B.E./B.Tech. in Production Engineering and Management - (T178)	ME PI
425			B.E./B.Tech. in Industrial and Production Engineering - (T145)	ME PI
426			B.E./B.Tech. in Industrial Manufacturing Engineering - (T144)	ME PI
427			B.E./B.Tech. in Advanced Manufacturing and Mechanical Systems Design - (T187)	ME PI
428			B.E./B.Tech. in Applied Mechanics (T192)	ME PI
429			B.E./B.Tech. in Automotive Engineering (T195)	ME PI
430			B.E./B.Tech. in Automotive Technology (T196)	ME PI
431			B.E./B.Tech. in Engineering Design (T246)	ME PI
432			B.E./B.Tech. in Machine Engineering (T271)	ME PI
433		<b>Mechanical Engineering (ME)</b>	B.E./B.Tech. in Machine Tools Engineering (T272)	ME PI
434			B.E./B.Tech. in Manufacturing Science and Engineering (T275)	ME PI
435			B.E./B.Tech. in Mechanical and Automation Engineering (T279)	ME PI
436			B.E./B.Tech. in Mechanical Engineering Automobile (T280)	ME PI
437			B.E./B.Tech. in Robotics and Automation (T307)	ME PI
438			B.E./B.Tech. in Manufacturing Engineering and Automation - (T353)	ME PI
439			B.E./B.Tech. in Manufacturing Technology (T355)	ME PI
440			B.E./B.Tech. in Mechanical Engineering (Design and Manufacturing) (T357)	ME PI
441			B.E./B.Tech. in Industrial Production (T384)	ME PI
442		<b>Mechanical Engineering (ME)</b>	B.E./B.Tech. in Mechanical Engineering(Manufacturing Engineering) (T385)	ME PI
443			B.E./B.Tech. in Mechanical Engineering (Smart Manufacturing) (T420)	ME PI

444				B.E./B.Tech. in Mechanical with specialization in Automotive Engineering (T422)	ME PI
445				B.E./B.Tech. in Mechanical Stream – Production Engineering (T423)	ME PI
446				B.E./B.Tech. in Automotive Design Engineering (T427)	ME PI
447				B.E./B.Tech. in Advanced Mechatronics and industrial Automation (T430)	ME PI
448				B.E./B.Tech. in Mechanical and Mechatronics Engineering	ME PI
449				(Additive Manufacturing) (T467)	
450		<b>Mechanical Engineering (ME)</b>		B.E./B.Tech. in Mechanical Engineering (Industry Integrated) (T468)	ME PI
451				B.E./B.Tech. in Automation and Robotics (T194)	ME PI
452				B.E./B.Tech. in Manufacturing Engineering and Technology (T488)	ME PI
453				B.E./B.Tech. in Mechanical and Smart Manufacturing (T489)	ME PI
454				B.E./B.Tech. in Mechanical Engineering (Production) (T490)	ME PI
455				B.E./B.Tech. in Mechanical Engineering Design (T491)	ME PI
456				B.E./B.Tech. in Advanced Manufacturing and Mechanical Systems Design - (T187)	ME PI
457		<b>Mechanical Engineering (ME)</b>		B.E./B.Tech. in Aeronautical Engineering - (T101)	ME PI
458				B.E./B.Tech. in Aerospace Engineering - (T102)	ME PI
459				B.E./B.Tech. in Automobile Engineering - (T108)	ME PI
460				B.E./B.Tech. in Automotive Engineering - (T195)	ME PI
461				B.E./B.Tech. in Industrial and Production Engineering - (T145)	ME PI
462				B.E./B.Tech. in Industrial Manufacturing Engineering - (T144)	ME PI
463				B.E./B.Tech. in Machine Tools Engineering - (T272)	ME PI
464				B.E./B.Tech. in Manufacturing Engineering - (T155)	ME PI
465		<b>Mechanical Engineering (ME)</b>		B.E./B.Tech. in Manufacturing Engineering and Automation - (T353)	ME PI



466			B.E./B.Tech. in Manufacturing Process - (T274)	ME PI
467			B.E./B.Tech. in Manufacturing Process and Automation Engineering - (T354)	ME PI
468			B.E./B.Tech. in Manufacturing Science and Engineering - (T275)	ME PI
469			B.E./B.Tech. in Manufacturing Technology - (T355)	ME PI
470			B.E./B.Tech. in Material Science and Engineering - (T157)	ME PI
471			B.E./B.Tech. in Material Science and Technology - (T356)	ME PI
472		<b>Mechanical Engineering (ME)</b>	B.E./B.Tech. in Mechanical and Automation Engineering - (T279)	ME PI
473			B.E./B.Tech. in Mechanical Engineering - (T158)	ME PI
474			B.E./B.Tech. in Mechatronics - (T159)	ME PI
475			B.E./B.Tech. in Metallurgical Engineering - (T162)	ME PI
476			B.E./B.Tech. in Production and Industrial Engineering - (T176)	ME PI
477			B.E./B.Tech. in Production Engineering - (T177)	ME PI
478			B.E./B.Tech. in Production Engineering and Management - (T178)	ME PI
479			B.E./B.Tech. in Metallurgical and Materials Engineering (T160)	ME PI
480			B.E./B.Tech. in Metallurgical and Materials Technology (T161)	ME PI
481			B.E./B.Tech. in Metallurgical Engineering and Material Science (T163)	ME PI
482			B.E./B.Tech. in Metallurgy (T164)	ME PI
483			B.E./B.Tech. in Automotive Technology (T196)	ME PI
484			B.E./B.Tech. in Machine Engineering (T271)	ME PI
485		<b>Mechanical Engineering (ME)</b>	B.E./B.Tech. in Material Science and Metallurgical Engineering (T277)	ME PI
486			B.E./B.Tech. in Materials and Metallurgical Engineering (T278)	ME PI
487			B.E./B.Tech. in Mechanical Engineering Automobile (T280)	ME PI

488				B.E./B.Tech. in Precision Manufacturing (T301)	ME PI
489				B.E./B.Tech. in Robotics and Automation (T307)	ME PI
490				B.E./B.Tech. in Tool Engineering (T321)	ME PI
491			<b>Manufacturing Technology (MF)</b>	B.E./B.Tech. in Mechanical Engineering (Design and Manufacturing) (T357)	ME PI
492				B.E./B.Tech. in Metallurgy and Material Technology (T360)	ME PI
493				B.E./B.Tech. in Industrial Production (T384)	ME PI
494				B.E./B.Tech. in Mechanical Engineering (Manufacturing Engineering) (T385)	ME PI
495				B.E./B.Tech. in Metallurgy and Materials (T386)	ME PI
496		<b>Mechanical Engineering (ME)</b>		B.E./B.Tech. in Mechanical Engineering (Welding Technology) (T387)	ME PI
497				B.E./B.Tech. in Production and Management (T394)	ME PI
498				B.E./B.Tech. in Automation Engineering (T404)	ME PI
499				B.E./B.Tech. in Mechanical Engineering (Smart Manufacturing) (T420)	ME PI
500				B.E./B.Tech. in Mechanical with specialization in Automotive Engineering (T422)	ME PI
501				B.E./B.Tech. in Mechanical Stream - Production Engineering (T423)	ME PI
502				B.E./B.Tech. in Additive Manufacturing (T429)	ME PI
503				B.E./B.Tech. in Advanced Mechatronics and industrial Automation (T430)	ME PI
504		<b>Mechanical Engineering (ME)</b>		B.E./B.Tech. in Mechanical and Mechatronics Engineering (Additive Manufacturing) (T467)	ME PI
505				B.E./B.Tech. in Mechanical Engineering (Industry Integrated) (T468)	ME PI
506				B.E./B.Tech. in Robotics and Artificial Intelligence (T474)	ME PI
507				B.E./B.Tech. in Automation and Robotics (T194)	ME PI
508				B.E./B.Tech. in Manufacturing Engineering and Technology (T488)	ME PI
509		<b>Mechanical Engineering (ME)</b>		B.E./B.Tech. in Mechanical and Smart Manufacturing (T489)	ME PI

510				B.E./B.Tech. in Mechanical Engineering (Production) (T490)	ME PI
511				B.E./B.Tech. in Mechanical Engineering Design (T491)	ME PI
512		<b>Mechanical Engineering (ME)</b>		B.E./B.Tech. in Industrial and Production Engineering - (T145)	ME MT PI
513				B.E./B.Tech. in Industrial Manufacturing Engineering - (T144)	ME MT PI
514				B.E./B.Tech. in Industrial Metallurgy - (T148)	ME MT PI
515				B.E./B.Tech. in Machine Tools Engineering - (T272)	ME MT PI
516				B.E./B.Tech. in Manufacturing Engineering - (T155)	ME MT PI
517				B.E./B.Tech. in Material Science and Engineering (T157)	ME MT PI
518				B.E./B.Tech. in Mechanical Engineering (T158)	ME MT PI
519				B.E./B.Tech. in Mechatronics (T159)	ME MT PI
520				B.E./B.Tech. in Metallurgical and Materials Engineering (T160)	ME MT PI
521				B.E./B.Tech. in Metallurgical and Materials Technology (T161)	ME MT PI
522				B.E./B.Tech. in Metallurgical Engineering (T162)	ME MT PI
523		<b>Mechanical Engineering (ME)</b>		B.E./B.Tech. in Metallurgical Engineering and Material Science (T163)	ME MT PI
524				B.E./B.Tech. in Metallurgy (T164)	ME MT PI
525				B.E./B.Tech. in Nanotechnology (T 168)	ME MT PI
526				B.E./B.Tech. in Production and Industrial Engineering (T176)	ME MT PI
527				B.E./B.Tech. in Production Engineering (T177)	ME MT PI
528				B.E./B.Tech. in Production Engineering and Management (T178)	ME MT PI
529				B.E./B.Tech. in Manufacturing Process (T274)	ME MT PI
530				B.E./B.Tech. in Manufacturing Science and Engineering (T275)	ME MT PI
531				B.E./B.Tech. in Material Science and Metallurgical Engineering (T277)	ME MT PI
532				B.E./B.Tech. in Materials and Metallurgical Engineering (T278)	ME MT PI

**Materials Science and Technology (MH)**

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533			B.E./B.Tech. in Mechanical and Automation Engineering (T279)	ME MT PI
534		<b>Mechanical Engineering (ME)</b>	B.E./B.Tech. in Mechanical Engineering Automobile (T280)	ME MT PI
535			B.E./B.Tech. in Manufacturing Process and Automation Engineering (T354)	ME MT PI
536			B.E./B.Tech. in Manufacturing Technology (T355)	ME MT PI
537			B.E./B.Tech. in Material Science and Technology (T356)	ME MT PI
538			B.E./B.Tech. in Mechanical Engineering (Design and Manufacturing) (T357)	ME MT PI
539			B.E./B.Tech. in Metallurgy and Material Technology (T360)	ME MT PI
540			B.E./B.Tech. in Production and Management (T394)	ME MT PI
541		<b>Mechanical Engineering (ME)</b>	B.E./B.Tech. in Mechanical Engineering(Manufacturing Engineering) (T385)	ME MT PI
542			B.E./B.Tech. in Metallurgy and Materials (T386)	ME MT PI
543			B.E./B.Tech. in Mechanical Engineering (Welding Technology) (T387)	ME MT PI
544			B.E./B.Tech. in Mechanical Stream-Production Engineering (T423)	ME MT PI
545			B.E./B.Tech. in Additive Manufacturing (T429)	ME MT PI
546			B.E./B.Tech. in Manufacturing Engineering and Automation - (T353)	ME MT PI
547			B.E./B.Tech. in Manufacturing Engineering and Technology (T488)	ME MT PI
548			B.E./B.Tech. in Mechanical and Smart Manufacturing (T489)	ME MT PI
549			B.E./B.Tech. in Mechanical Engineering (Production) (T490)	ME MT PI
550			B.E./B.Tech. in Mechanical Engineering Design (T491)	ME MT PI
551			B.E./B.Tech. in Ceramic Engineering (T116)	ME MT PI
552		<b>Mechanical Engineering (ME)</b>	B.E./B.Tech. in Ceramic Engineering and Technology (T203)	ME MT PI
553			B.E./B.Tech. in Ceramic Technology (T204)	ME MT PI
554			B.E./B.Tech. in Mineral Engineering (T286)	ME MT PI

555					B.E./B.Tech. in Nano Science and Technology (T492)	ME MT PI
556					B.E./B.Tech. in Aeronautical Engineering - (T101)	ME
557		<b>Mechanical Engineering (ME)</b>			B.E./B.Tech. in Aerospace Engineering - (T102)	ME
558					B.E./B.Tech. in Automobile Engineering - (T108)	ME
559					B.E./B.Tech. in Automotive Engineering - (T195)	ME
560					B.E./B.Tech. in Automotive Technology - (T196)	ME
561					B.E./B.Tech. in Energy Engineering - (T139)	ME
562					B.E./B.Tech. in Engineering Physics (T141)	ME
563					B.E./B.Tech. in Energy Science and Engineering - (T244)	ME
564					B.E./B.Tech. in Manufacturing Engineering - (T155)	ME
565					B.E./B.Tech. in Manufacturing Science and Engineering - (T275)	ME
566					B.E./B.Tech. in Mechanical and Automation Engineering - (T279)	ME
567					B.E./B.Tech. in Mechanical Engineering - (T158)	ME
568					B.E./B.Tech. in Nanotechnology (T168)	ME
569		<b>Mechanical Engineering (ME)</b>			B.E./B.Tech. in Production and Management (T394)	ME
570					B.E./B.Tech. in Petrochem Engineering (T399)	ME
571					B.E./B.Tech. in Petrochem Technology (T400)	ME
572					B.E./B.Tech. in Mechanical Engineering Automobile - (T280)	ME
573					B.E./B.Tech. in Chemical Engineering (Plastic and Polymer) (T335)	ME
574					B.E./B.Tech. in Nuclear Engineering - (T169)	ME
575					B.E./B.Tech. in Nuclear Science and Technology - (T363)	ME
576					B.E./B.Tech. in Production and Industrial Engineering - (T176)	ME
577					B.E./B.Tech. in Production Engineering - (T177)	ME
578		<b>Mechanical Engineering (ME)</b>			B.E./B.Tech. in Production Engineering and Management - (T178)	ME

**Thermal Sciences (TS)**

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579				B.E./B.Tech. in Renewable Energy - (T179)	ME	
580				B.E./B.Tech. in Energy and Environmental Management (T485)	ME	
581				B.E./B.Tech. in Mechanical and Smart Manufacturing (T489)	ME	
582				B.E./B.Tech. in Mechanical Engineering (Production) (T490)	ME	
583		<b>Materials Science and Engineering (MN)</b>	<b>Nanotechnology (NT)</b>	B.E./B.Tech. in Metallurgy and Materials Engineering (T105)	CH ME MT PI XE	
584				B.E./B.Tech. in Automobile Engineering (T108)	CH ME MT PI XE	
585						
586					B.E./B.Tech. in Engineering Physics (T141)	CH ME MT PI XE
587						
588					B.E./B.Tech. in Industrial Manufacturing Engineering (T144)	CH ME MT PI XE
589						
590					B.E./B.Tech. in Industrial and Production Engineering (T145)	CH ME MT PI XE
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592						
593					B.E./B.Tech. in Industrial Engineering (T146)	CH ME MT PI XE
594		<b>Materials Science and Engineering (MN)</b>			B.E./B.Tech. in Industrial Engineering and Management (T147)	CH ME MT PI XE
595						
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597					B.E./B.Tech. in Industrial Metallurgy (T148)	CH ME MT PI XE
598						
599					B.E./B.Tech. in Energy Engineering (T139)	CH ME MT PI XE
600						
601					B.E./B.Tech. in Manufacturing Engineering (T155)	CH ME MT PI XE
602						
603				B.E./B.Tech. in Material Science and Engineering (T157)	CH ME MT PI XE	
604						
605				B.E./B.Tech. in Mechanical Engineering (T158)	CH ME MT PI XE	

606		<b>Materials Science and Engineering (MN)</b>		B.E./B.Tech. in Metallurgical and Materials Engineering (T160)	CH ME MT PI XE
607					
608				B.E./B.Tech. in Metallurgical and Materials Technology (T161)	CH ME MT PI XE
609					
610				B.E./B.Tech. in Metallurgical Engineering (T162)	CH ME MT PI XE
611					
612				B.E./B.Tech. in Metallurgical Engineering and Material Science (T163)	CH ME MT PI XE
613					
614				B.E./B.Tech. in Metallurgy (T164)	CH ME MT PI XE
615					
616				B.E./B.Tech. in Mineral Processing (T165)	CH ME MT PI XE
617					
618		<b>Materials Science and Engineering (MN)</b>		B.E./B.Tech. in Mining and Machinery Engineering (T166)	CH ME MT PI XE
619					
620				B.E./B.Tech. in Mining Engineering (T167)	CH ME MT PI XE
621					
622				B.E./B.Tech. in Nanotechnology (T168)	CH ME MT PI XE
623					
624				B.E./B.Tech. in Production and Industrial Engineering (T176)	CH ME MT PI XE
625					
626				B.E./B.Tech. in Production Engineering (T177)	CH ME MT PI XE
627					
628				B.E./B.Tech. in Production Engineering and Management (T178)	CH ME MT PI XE
629					
630				B.E./B.Tech. in Advanced Manufacturing and Mechanical Systems Design (T187)	CH ME MT PI XE
631		<b>Materials Science and Engineering (MN)</b>			
632				B.E./B.Tech. in Automotive Engineering (T195)	CH ME MT PI XE
633					
634				B.E./B.Tech. in Automotive Technology (T196)	CH ME MT PI XE

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647		<b>Materials Science and Engineering (MN)</b>	
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658		<b>Materials Science and Engineering (MN)</b>	
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B.E./B.Tech. in Chemical Technology (T207)	CH ME MT PI XE
B.E./B.Tech. in Environmental Science and Engineering (T248)	CH ME MT PI XE
B.E./B.Tech. in Industrial and Management Engineering (T261)	CH ME MT PI XE
B.E./B.Tech. in Machine Engineering (T271)	CH ME MT PI XE
B.E./B.Tech. in Machine Tools Engineering (T272)	CH ME MT PI XE
B.E./B.Tech. in Manufacturing Process (T274)	CH ME MT PI XE
B.E./B.Tech. in Manufacturing Science and Engineering (T275)	CH ME MT PI XE
B.E./B.Tech. in Material Science and Metallurgical Engineering (T277)	CH ME MT PI XE
B.E./B.Tech. in Materials and Metallurgical Engineering (T278)	CH ME MT PI XE
B.E./B.Tech. in Mechanical and Automation Engineering (T279)	CH ME MT PI XE
B.E./B.Tech. in Mechanical Engineering Automobile (T280)	CH ME MT PI XE
B.E./B.Tech. in Nanotechnology and Robotics (T287)	CH ME MT PI XE
B.E./B.Tech. in Polymer Engineering and Technology (T310)	CH ME MT PI XE
B.E./B.Tech. in Chemical and Alcohol Technology (T328)	CH ME MT PI XE



663			B.E./B.Tech. in Chemical and Bio Engineering (T334)	CH ME MT PI XE
664			B.E./B.Tech. in Environmental Science and Technology (T344)	CH ME MT PI XE
665			B.E./B.Tech. in Manufacturing Engineering and Automation (T353)	CH ME MT PI XE
666		<b>Materials Science and Engineering (MN)</b>	B.E./B.Tech. in Manufacturing Process and Automation Engineering (T354)	CH ME MT PI XE
667			B.E./B.Tech. in Manufacturing Technology (T355)	CH ME MT PI XE
668			B.E./B.Tech. in Material Science and Technology (T356)	CH ME MT PI XE
669			B.E./B.Tech. in Mechanical Engineering (Design and Manufacturing) (T357)	CH ME MT PI XE
670			B.E./B.Tech. in Mechanical Engineering (Repair and Maintenance) (T358)	CH ME MT PI XE
671			B.E./B.Tech. in Metallurgy and Material Technology (T360)	CH ME MT PI XE
672			B.E./B.Tech. in Polymer Science and Chemical Technology (T378)	CH ME MT PI XE
673			B.E./B.Tech. in Industrial Production (T384)	CH ME MT PI XE
674		<b>Materials Science and Engineering (MN)</b>	B.E./B.Tech. in Mechanical Engineering (Manufacturing Engineering) (T385)	CH ME MT PI XE
675			B.E./B.Tech. in Metallurgy and Materials (T386)	CH ME MT PI XE

676			B.E./B.Tech. in Mechanical Engineering (Welding Technology) (T387)	CH ME MT PI XE
677			B.E./B.Tech. in Production and Management (T394)	CH ME MT PI XE
678			B.E./B.Tech. in Chemical and Electrochemical Engineering (T405)	CH ME MT PI XE
679			B.E./B.Tech. in Mechanical Engineering (Smart Manufacturing) (T420)	CH ME MT PI XE
680				
681		<b>Materials Science and Engineering (MN)</b>	B.E./B.Tech. in Mechanical with specialization in Automotive Engineering (T422)	CH ME MT PI XE
682				
683			B.E./B.Tech. in Mechanical Stream – Production Engineering (T423)	CH ME MT PI XE
684				
685			B.E./B.Tech. in Automotive Design Engineering (T427)	CH ME MT PI
686				XE
687			B.E./B.Tech. in Additive Manufacturing (T429)	CH ME MT PI XE
688				
689			B.E./B.Tech. in Advanced Mechatronics and industrial Automation (T430)	CH ME MT PI XE
690				
691			B.E./B.Tech. in Chemical Engineering (Desalination and Water Treatment) (T436)	CH ME MT PI XE
692				
693		<b>Materials Science and Engineering (MN)</b>	B.E./B.Tech. in Mechanical and Mechatronics Engineering (Additive Manufacturing) (T467)	CH ME MT PI XE
694				
695			B.E./B.Tech. in Mechanical Engineering (Industry Integrated) (T468)	CH ME MT PI XE
696				

697				B.E./B.Tech. in Chemical and Biochemical Engineering (T477)	CH ME MT PI XE
698				B.E./B.Tech. in Energy and Environmental Management (T485)	CH ME MT PI XE
699				B.E./B.Tech. in Manufacturing Engineering and Technology (T488)	CH ME MT PI XE
700				B.E./B.Tech. in Mechanical and Smart Manufacturing (T489)	CH ME MT PI XE
701		<b>Materials Science and Engineering (MN)</b>		B.E./B.Tech. in Mechanical Engineering (Production) (T490)	CH ME MT PI XE
702				B.E./B.Tech. in Mechanical Engineering Design (T491)	CH ME MT PI XE
703				B.E./B.Tech. in Nano Science and Technology (T492)	CH ME MT PI XE
704				B.E./B.Tech. in Petroleum Engineering (T296)	CH/ME/MT/PI/PE/ XE
705				B.E./B.Tech. in Petrochemical Technology (T366)	CH/ME/MT/PI/PE/ XE
706				B.E./B.Tech. in Ceramic Engineering (T116)	CH/ME/MT/PI/PE/ XE
707				B.E./B.Tech. in Cement and Ceramic Technology (T115)	CH/ME/MT/PI/PE/ XE
708				B.E./B.Tech. in Polymer Technology (T174)	CH/ME/MT/PI/PE/ XE
709		<b>Materials Science and Engineering (MN)</b>		B.E./B.Tech. in Chemical and Polymer Engineering (T205)	CH/ME/MT/PI/PE/ XE
710				B.E./B.Tech. in Biochemical and Biotechnology Engineering (T333)	CH/ME/MT/PI/PE/ XE
711				B.E./B.Tech. in Chemical Engineering (Plastic and Polymer) (T335)	CH/ME/MT/PI/PE/ XE
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720		<b>Materials Science and Engineering (MN)</b>			
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722					

723				B.E./B.Tech. in Petroleum Engineering and Technology (T475)	CH/ME/MT/PI/PE/ XE
724		<b>Materials Science and Engineering (MN)</b>		B.E./B.Tech. in Petro-Chemical Engineering (T170)	CH/ME/MT/PI/PE/ XE
725					
726					
727				M.Sc. in Materials Science (S518)	CH/ME/MT/PI/PE/ XE
728					
729				M.Sc. in Nano Science and Technology (S546)	CH/ME/MT/PI/PE/ XE
730		<b>Architecture and Planning (AP)</b>		B. Arch. (A401)	AR CE
731				B. Planning (A402)	AR CE
732				B.E./B.Tech. in Architectural Engineering- (T106)	AR CE
733				B.E./B.Tech. in Architecture- (T107)	AR CE
734				B.E./B.Tech. in Building and Construction Technology- (T114)	AR CE
735				B.E./B.Tech. in Civil Engineering- (T118)	AR CE
736		<b>Architecture and Planning (AP)</b>		B.E./B.Tech. in Civil Environmental Engineering- (T119)	AR CE
737				B.E./B.Tech. in Construction Engineering- (T125)	AR CE
738				B.E./B.Tech. in Construction Technology- (T126)	AR CE
739			<b>M.Plan (Urban Planning) (B5)</b>	B.E./B.Tech. in Highway Engineering- (T143)	AR CE
740				B.E./B.Tech. in Planning- (T171)	AR CE
741				B.E./B.Tech. in Town planning-(T183)	AR CE
742				B.E./B.Tech.in Transportation Engineering- (T184)	AR CE
743				B.E./B.Tech. in Transportation Urban planning-(T185)	AR CE
744				B.E./B.Tech.in Water Management-(T186)	AR CE
745				B.E./B.Tech.in Architecture and Regional Planning- (T193)	AR CE
746				B.E./B.Tech.in Civil Engineering and Planning- (T208)	AR CE
747		<b>Architecture and Planning (AP)</b>		B.E./B.Tech.in Civil Technology-(T209)	AR CE
748				B.E./B.Tech.in Construction and Project Management- (T220)	AR CE

749			B.E./B.Tech.in Construction Engineering and Management-(T221)	AR CE
750			B.E./B.Tech. in Construction Technology And Management-(T222)	AR CE
751			B.E./B.Tech. in Town and Country Planning-(T322)	AR CE
752			B.E./B.Tech. in Civil and Transportation Engineering- (T324)	AR CE
753			B.E./B.Tech. in Civil and Transportation Technology- [T336]	AR CE
754		<b>Architecture and Planning (AP)</b>	B.E./B.Tech. in Civil Engineering (Public Health Engineering)-(T337)	AR CE
755			B.E./B.Tech. in Urban and Regional Planning-(T383)	AR CE
756			B.E./B.Tech. in Civil and Water Management- (T396)	AR CE
757			B.E./B.Tech. In Construction Management- (T397)	AR CE
758			B.E./B.Tech. in Building Construction Technology- (T401)	AR CE
759			M.Sc. in Geography- (S514)	AR CE
760			M.Sc. in Earth Science- (S533)	AR CE
761			B.E./B.Tech. in Environment and Pollution Control- (T247)	AR CE
762			B.E./B.Tech. in Environmental Science and Engineering- (T248)	AR CE
763			B.E./B.Tech. in Civil and Infrastructure Engineering- (T425)	AR CE
764			B.E./B.Tech. in Civil and Rural Engineering- (T437)	AR CE
765			B.E./B.Tech. in Civil Engineering Environment and Pollution Control- (T438)	AR CE
766		<b>Architecture and Planning (AP)</b>	B.E./B.Tech. in Civil Engineering with Computer Application- (T439)	AR CE
767			B.E./B.Tech. in Civil Engineering (Construction Technology)- (T440)	AR CE
768			B.E./B.Tech. in Civil and Structural Engineering- (T476)	AR CE
769			B.E./B.Tech. in Civil and Environmental Engineering- (T478)	AR CE
770			B.E./B.Tech. in Civil Engineering (Environmental Engineering)- (T479)	AR CE

