

# **INFORMATION BULLETIN**

**M. Sc. REGULAR ADMISSIONS (Through JAM)**

**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 authority in academic matters. Chairman of the Board of Governors is nominated by the visitor. NITC 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, NIT Calicut 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 theeast, Calicut is known for its serene beaches, lush green countryside, historic sites, calm backwaters, wildlife sanctuaries, rivers and waterfalls. The campus of National Institute of Technology 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. Local buses are available frequently for commutation between campus and the main city.

### 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 this institution. 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 meet 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 MSc 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</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.Sc. PROGRAMMES

### 1. Introduction

Programmes leading to M.Sc. degree are offered by Departments of Mathematics, Physics and Chemistry.

Department	Code	Programme	Programme Code
Mathematics	MA	M.Sc. Mathematics	MA62
Physics	PH	M.Sc. Physics	PH62
Chemistry	CY	M.Sc. Chemistry	CY62

### 2. Eligibility for Admission to M Sc. Programmes

The candidates applying for admission to M.Sc. programmes at NITC have to satisfy the following minimum academic eligibility requirements as given below

**M.Sc. Degree in Mathematics:** B. Sc. Degree in Mathematics/ Applied Mathematics Or B. Mathematics with Mathematics/Statistics in all semesters Or B. Tech Degree in Engineering Physics/ Electrical Engineering/ Electronics Engineering/ Computer Science & Engineering/ Mechanical 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 and qualified JAM (2024) in Mathematics. In addition to these, the candidate should have done Mathematics at 10+2 level.

**M.Sc. Degree in Physics:** B Sc Degree in Physics/Applied Physics/Electronics with Mathematics as one of the subsidiary subjects in any four semesters (2 years) Or B. Sc. Ed. With Physics/Chemistry/Mathematics related subjects in any 4 semesters (2 years) Or B. Tech. degree in Engineering Physics/ Electronics/ Electrical/ Computer Science and Engineering/ Mechanical Engineering/ Material Science Engineering/ Chemical 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 and qualified JAM (2024) in Physics.

**M.Sc. Degree in Chemistry:** B Sc Degree in Chemistry (Main) with Mathematics as one of the subsidiaries (should have mathematics in 2 semesters or 1 year) 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 and qualified JAM (2024) in Chemistry.

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 appearing for final semester/year Bachelor's degree during the academic year 2023-24 are also eligible to apply provided their final semester/year results are made available by 30th September 2024. Such candidates may be considered for provisional admission. Any candidate admitted provisionally, subject to his/her producing provisional certificate and mark lists as proof of having satisfied the eligibility criteria, shall have to discontinue the course, if he/she does not produce the provisional 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. Provisional admission is not applicable to candidates who have failed in the qualifying examination and subsequently appeared for the supplementary examination.

**Eligible Degrees, Special Eligibility Conditions and JAM Mapping for M. Sc. (2024-25) Admissions at NIT Calicut are given in Annexure 1.**

**3. Process of Admission to M.Sc. Programmes**

Admission to M.Sc. programmes at NIT Calicut for the academic year 2024-25 will be based on JAM score and will be done through the centralized counselling process CCMN. NIT Surat is the coordinating institute for CCMN 2024 (website: <https://ccmn.admissions.nic.in/>). Prospective candidates willing to join M.Sc. programme at NIT Calicut are required to apply through CCMN 2024.

**4. Seat Matrix for M.Sc. Admissions (2024-25) at NIT Calicut**

M. Sc. Programmes											
Programme Name	OP	OB	SC	ST	EWS	PwD					Total
						OP	OB	SC	ST	EWS	
Mathematics	10	6	4	2	2	0	1	0	0	0	25
Physics	10	6	3	2	2	0	0	1	0	1	25
Chemistry	9	7	3	2	3	1	0	0	0	0	25

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

Candidates may check the website ([www.ncbc.nic.in](http://www.ncbc.nic.in)) of the National Commission for Backward Classes, Govt. of India to ascertain from the CENTRAL LIST OF OTHER BACKWARD CLASSES whether they are entitled to seats reserved for the OBC category. The criteria for exclusion of OBC candidates belonging to "creamy layer" will be based on OM NO. 36033/3/2004-Estt. (Res) dated 9th March 2004 and any other modifications that may take place from time to time in this regard.

NITC provides 5% seats reservation for PwD category as per Govt. of India rules.

**5. Highlights of the M.Sc. Programmes Conducted by NIT Calicut**

The Four semester (Two year) M.Sc. programmes are based on the credit system comprising different core and elective courses and project work. The highlights of M.Sc. programmes offered by various departments at NITC are given in the following section.



## DEPARTMENT OF MATHEMATICS

*M.Sc. Degree in Mathematics:* The focus of the Programme would be to generate mathematics graduates with strong fundamentals, who are confident of applying their knowledge to practical/research problems in Mathematics and related areas. The curriculum and syllabi maintain an appropriate balance between pure and applied mathematics by providing familiarity with a wide range of mathematical tools on the one hand and at the same time giving enough importance for developing analytical skills, thus keeping career option in academia, R&D organizations and Industries open.

## DEPARTMENT OF CHEMISTRY

*M.Sc. Degree in Chemistry:* The department is offering a M.Sc. course in Chemistry. The aim of the programme is to prepare students for a career in academia or industry, with strong basics in fundamental aspects of chemistry and exposure to the latest research trends. The programme curriculum and syllabi are designed to cover all major branches of chemistry with regular revisions to incorporate the latest developments in each area.

## DEPARTMENT OF PHYSICS

*M.Sc. Degree in Physics:* The objective of this two year M.Sc. Physics programme is to prepare students for a career of research and academics, in basic or applied sciences. The programme focuses on building a strong base of fundamental principles on which modern physics is built. This would enable the students emerging from this programme to compete with the best of talent available at the entry point to Ph.D. programmes anywhere in the country or abroad.

## 6. Fee Structure

**The fee structure for M.Sc. Programmes (2024-25) admissions is as 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 5th May, 2014 and subsequent clarifications under reference F No. 28/2013/TS.III dated 21st 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	4,000				
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. 51,500/-</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	7,500*	7,500*	7,500*	7,500*	
Registration Fee	2,000	2,000	2,000	2,000	

Examination Fee	2,000	2,000	2,000	2,000
Health Centre Facility Fee	1,200	-	1,200	-
Students Activities Fee	1,000	-	1,000	-
Sports Fee	1,000	-	1,000	-
Campus Amenities Fee	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.19,286</b>	<b>Rs.11,500</b>	<b>Rs. 19,286</b>	<b>Rs. 11,500</b>
<b>Total Amount during admission</b>	<b>Rs.70,786/-</b>			

\*NIL for SC/ST students

\*\*Mediclaime coverage will be available for the registered students from 31<sup>st</sup> July 2023 to 30<sup>th</sup> July 2024.

Policy amount may vary year to year.

#Subject to revision every year

## 7. 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)
<b>A. One-time fee at the time of admission</b>		
	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/-
	<b>Total (One-time fee at the time of admission)</b>	<b>22,000/-</b>
<b>B. Hostel establishment charges and other charges per semester</b>		<b>13,000/-</b>
<b>C. Mess advance per semester</b>		<b>25,000/-</b>
<b>D. Hostel Seat Rent (Includes Room Rent, Electricity, Water Charges)#</b>	<b>Rs. 9,000/- (Shared Room)</b>	<b>9000/-@</b>
	<b>Rs. 10,000/- (Single Room)</b>	
<b>Total Fee at the time of admissions</b>		<b>60,000/-</b>

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

**Annexure 1**  
**Eligible Degrees, Special Eligibility Conditions and JAM Mapping**  
**M. SC. 2024 Admissions**

S.No	Institute	Department	PG Program	Qualifying Degree	JAM Paper
1	National Institute of Technology Calicut	Chemistry	M Sc in Chemistry (CY)	B.Sc. Chemistry-(S103)	Chemistry (CY)
2				B.Sc. Honors (Chemistry)- (S102)	Chemistry (CY)
3				B.Sc. Applied Chemistry- (S105)	Chemistry (CY)
4				B.Sc. Honors (Applied Chemistry)-(S104)	Chemistry (CY)
5				B. Sc. - (S-101)	Chemistry (CY)
6		Physics	M.Sc. in Physics (PH)	B.Sc. Physics-(S108)	Physics (PH)
7				B.Sc. Honors (Physics)- (S107)	Physics (PH)
8				B.Sc. Applied Physics- (S110)	Physics (PH)
9				B.Sc. Honors (Applied Physics)-(S109)	Physics (PH)
10				B.Sc. Electronics-(S112)	Physics (PH)
11				B.Sc. Honors (Electronics)-(S111)	Physics (PH)
12				B.Sc. Ed.-(S114)	Physics (PH)
13				B. Sc. - (S-101)	Physics (PH)
14				B.E./B.Tech. (any discipline)-(T999)	Physics (PH)
15	National Institute of Technology Calicut	Mathematics	M.Sc. in Mathematics (MA)	B.Sc. Mathematics-(S116)	Mathematics (MA)
16				B.Sc. Honors (Mathematics)-(S115)	Mathematics (MA)
17				B.Sc. Applied Mathematics-(S118)	Mathematics (MA)
18				B.Sc. Honors (Applied Mathematics)-(S117)	Mathematics (MA)
19				B. Mathematics-(A202)	Mathematics (MA)
20				B.Sc. Mathematics and Computer Applications-(S125)	Mathematics (MA)
21				B. Sc. - (S-101)	Mathematics (MA)
22				B.Sc. Mathematical Sciences - (S123)	Mathematics (MA)
23				B.E./B.Tech. (Engineering Physics)-(T301)	Mathematics (MA)
24				B.E./B.Tech. (Electronics)-(T302)	Mathematics (MA)
25				B.E./B.Tech. (Electrical)- (T303)	Mathematics (MA)
26				B.E./B.Tech. (Computer Science and Engineering)-(T304)	Mathematics (MA)

27			B.E./B.Tech. (Mechanical Engineering) -(T305)	Mathematics (MA)
28			B. A . in Mathematics (A205)	Mathematics (MA)
29			B. A . in Applied Mathematics (A206)	Mathematics (MA)
30			B. E./B. Tech. (Mathematics and Computing) (T310)	Mathematics (MA)
31	<b>National Institute of Technology Calicut</b>			Mathematics (MA)
32			B. Sc. Statistics (S120)	Mathematics (MA)
33			B. Sc. Ed. In Mathematics (S167)	Mathematics (MA)
34			B. S. in Mathematics (S165)	Mathematics (MA)
35			B. S. in Applied Mathematics (S166)	Mathematics (MA)
36			B. Sc. Mathematics and Computing (S169)	Mathematics (MA)
37			B. Sc. Mathematics and Computer Science (S170)	Mathematics (MA)
			B. Sc. Mathematics, Statistics and Computer Science (S171)	Mathematics (MA)