

Programme Highlights

- Secured funding for research projects worth over **₹2.89 crores** in the last three years
- Consultancies worth **₹5.63 lakhs** in the last three years
- Applied 9 patents in the last 5 years
- Consistently high placement percentage with attractive salary packages

Graduating Year	2020	2021	2022	2023
Placement %	88	81	100	86

Research areas

Faculties are actively involved in research, mainly, in the areas of Alternative fuels for automobiles, Heat transfer in mini and micro channels, Bio-hydrogen production, Computational Analysis, Renovation in refrigeration and air-conditioning systems, Renewable energy systems, Bio-diesel production and utilization, Solar energy utilization, Fuel cell systems, Compact heat exchangers, Biomass gasification and fluidized bed gasifier, Cryocooler designed and experimentation, Hybrid energy systems, Heat pipes and natural convection loops, Machine Learning for Thermal and Energy systems, etc.

Laboratory Facilities

Being a residential campus, PG students get unlimited access to the well-equipped labs and additional facilities, to develop practical and research skills required for research and industry, under the able guidance and supervision of faculty and supporting staff. The facilities include Computational laboratories, Thermal engineering laboratory, Solar energy center, Heat engines laboratory, Green energy lab, Heat transfer laboratory, Thermal Science laboratory, Fluid mechanics and machinery laboratory, and Centre for Advanced Studies in Cryogenics.



M. Tech. Programme in Thermal Sciences



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Vision and Mission of the Institute



Vision: International standing of the highest calibre.

Mission: To develop high quality technical education and personnel with a sound footing on basic engineering principles, technical and managerial skills, innovative research capabilities, and exemplary professional conduct to lead and to use technology for the progress of mankind, adapting themselves to changing technological environment with the highest ethical values as the inner strength.



Vision and Mission of the Department



Vision: To impart nationally and internationally recognized education in the fields of Mechanical Engineering, leading to well-qualified engineers who are innovative contributors to the profession and successful in advanced studies and research.

Mission: To offer high quality graduate and post graduate programmes in the fields of Mechanical Engineering and to prepare students for professional career and higher studies promoting excellence in teaching, research, entrepreneurship, collaborative activities with ethical values, making positive contributions to the society.



M. Tech. in Thermal Sciences



With ever-increasing need for the development of energy efficient systems, study of thermal sciences has gained perennial importance. Since its inception in 1989, the M.Tech. programme offered by the Mechanical Engineering Department of National Institute of Technology Calicut has been designed to equip the mechanical engineers with latest know-how of current trends related to this field in research and industry.



The curriculum includes adequate quantity of theoretical aspects reinforced with practical problem-solving capability. Exposure to the latest equipment and software packages are the added advantage.



Important Courses of Study

- Cryogenics Engineering
- Conduction and Radiation
- Liquid and Cryogenic Rocket Propulsion
- Design of Heat Transfer Equipment
- Aerodynamics
- Thermal Management in Electric Vehicle Battery and Fuel Cell System
- Internal Combustion Engine Technologies
- Multiphase Flow Modeling
- Advanced Computational Fluid Dynamics
- Analysis of Thermal Engineering Cycles
- Compressible and Incompressible Flow
- Convective Heat and Mass Transfer
- Applied Thermodynamics
- Theoretical and Computational Combustion
- Boiling and Condensation
- Finite Element Method for Fluid Flow and Heat Transfer

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