Programme Highlights

- First of its kind offered by Mechanical Engineering among NITs
- The programme has potential for hundred percentage placement in process industries
- Frequently revised curriculum incorporating latest developments in energy related topics

Existing facilities

- Highly qualified engineering and allied faculty members
- Well-equipped laboratories including CFD laboratory and CAD/CAM laboratory
- Digital library in addition to the conventional technical library
- Fully internet connected campus
- World class Central Computing Centre
- Authorised energy audit cell within the institute
- AICTE/ISTE short term programmes are being conducted regularly
- Full-fledged 'Solar Energy Centre' and alternative energy related activities

Other Co-curricular Activities

- Industrial training/internship for the students
- Mini projects on specific areas (optional)
- Major project in energy related topics extends to two semesters
- Support for Paper presentation in International/National conferences

Recently Completed/Ongoing Energy Related Research Projects

- Investigation on bio-hydrogen production by thermo-chemical method in fluidized bed gasifier under catalytic support and its utilization
- Production of Bio-diesel from Chlorella Vulgaris and Salvinia Molesta and investigation on its use in single cylinder diesel engine
- Design and fabrication of retro-fittable Diesel Particulate Filter with regeneration attributes
- Development, testing and standardization of heat pump water heaters using solar photo voltaic Thermal Hybrid Evaporator.
- Development of desalination system using selectively patterned solar absorber
- Selectively patterned porous evaporative structure for enhanced solar driven interfacial evaporation



Energy Engineering and Management

Department of Mechanical Engineering National Institute of Technology Calicut

NIT Campus P.O., Kozhikode - 673601, Kerala, India



Vision and Mission of 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 recognised education in 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 Energy Engineering and Management

Energy generation and its management is critical for future economic prospects and environmental well-being. Commercial energy demand in the country is still increasing exponentially and the financial resources to establish new power plants are limited. This M.Tech. Programme is designed to convert mechanical engineers with a high standard expertise in various energy conversion and management techniques. The course is a recognized one and accredited by National Board of Accreditation. The major objectives of the programme include:

- Generate qualified manpower with technical expertise in energy engineering and management
- Analyse new trend in energy management and identify energy conservation opportunities
- Train engineers and educate working professionals on energy conservation measures
- Promote sustainable energy development
- Facilitate industry-Institute interaction
- Popularize renewable energy utilization

Important Courses of Study

- Advanced Energy Conversion Systems
- Alternative Energy Technology
- Fluid Flow and Heat Transfer in Energy Systems
- Design and Analysis of Energy Systems
- Industrial Energy Conservation
- Direct Energy Conversion Systems
- Energy and Environment
- Integrated Energy Systems
- Energy Policies for Sustainable Development
- Fluidized Bed Systems
- Design of Solar Thermal Systems
- Energy Efficient Buildings
- Energy Modeling, Economics and Project Management



M. Tech. Programme in Energy Engineering and Management