GRI
Gandhigram Rural Institute (GRI) is fully funded by Ministry of Human Resource Development, Government of India practicing the three-dimensional approach in higher education.

Objective of the Programme
The course aims to create technical manpower to solve the energy crisis in general and achieving Rural Energy Security in particular. This programme aspires in giving opportunity to meet the human resource requirement of the industry / R&D institutes and also to carryout the research and development of Cost Effective Renewable Energy Gadgets like solar cooker, solar still, wind water pumping system, biomass gasifiers and biogas plants etc.,

Eligibility Criteria : B.E. / B.Tech. in all disciplines
Admission based on
1. GATE Score
2. Entrance Examination conducted by GRI for Non GATE Category

Fee Structure
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Student Placements

M.Tech. Student’s Accomplishment
Student Exchange Programme

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<tr>
<th>Name</th>
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<td>Erasmus Mundus</td>
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<td>Ms.U.Mahitha</td>
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Paper Published by Students in
- International Journal : 16
- International Conferences : 35
- National Conferences : 24
- Chapter in Edited Book : 01

Awards by Students
- Best Paper Award in the International Conference at Indian Institute of Science, Bengaluru
- Best Paper Award in National Conference, Best Event Manager Award & Prize Won in various Competitions
Programme Design and Curriculum Outline

Theory Courses
- Introduction to Energy Studies
- Solar Energy
- Thermal Engineering
- Energy Auditing and Management
- Waste to Energy Conversion Technologies
- Wind Energy, Small Hydro and New Renewable Energy Technologies
- Energy Economics
- Research Methodology & Statistical Methods
- Environmental Impact Assessment
- Power Systems for Renewable Energy Sources

Electives
- Rural Electrification Technologies and Economics
- Renewable Energy & Sustainable Development
- Smart Grid
- Energy Modeling and Project Management
- New Energy Technologies

Summer Internship
Student should undergo an inplant training in a process / product industry / NGO in energy related area focusing on rural energy planning or should undergo an energy auditing in any rural industries for a period of 30 calendar days.

Minor Project
In 3rd Semesters a group of 2 or 3 Students should form a group and develop a cost effective renewable energy gadget / Biomass Assessment Study / Village Level Energy Planning / Evaluation of Renewable Energy Plants

Dissertation
In 4th Semester Individual Student should take up project related to renewable energy and work or to take up industry / institute related project with prior permission

Practical Courses
- Solar Energy Lab
- Waste to Energy Conversion Tech. Lab
- Wind Energy Lab

Programme Highlights

AICTE approved
Course Unique ID 1-2190967193

Fellowship
1. GATE (₹12,400 per month)
2. NON GATE - UGC Merit Scholarship for SC/ST (₹7,800 per month)

Scholarship from
Ministry of Minority Affairs for Minority Students
Govt. of Tamilnadu
BC / MBC Scholarship
Post Metric Scholarship for SC/ST

Wind Monitoring Station (50 m)
Laboratory

Solar Energy Laboratory
- Pyranometer
- Evacuated Tube Solar Water Heater
- Solar Water Heater
- Solar Flat Plate Collectors
- Solar Collector Test Rig
- Solar Photo Voltaic Test Rig
- Parabolic Test Rig
- Passive Building Model

Wind Energy Laboratory
- 100 W Wind turbine
- Wind Turbine Test Rig

Alternate Energy Laboratory
- Fuel Cell Test Rig

Bio Energy Laboratory
- BOD Incubator
- COD Digester
- COD Analyzer
- Wooden Log Stove
- Biomass Gasifier
- Producer Gas Analyzer
- Vapour Absorption Refrigeration Test Rig
- Bio Gas Analyzer
Energy Auditing Instrumentation Laboratory

- Low & High Temp. Calibration Baths
- Thermocouple welder
- Thermal Imaging Sensor
- IR Thermometer
- Data Loggers
- Flue Gas Analyzer
- Power Analyzer
- Pressure Meter

Simulation Lab - CFD Software

Field Exposure

- Transformer Mfg.
- Wind Farm
- Biomass Process

Various Industrial Energy Audit

- Coir
- Pumping
- Textile
- Motor

Social Responsibilities of M.Tech. Students

- Rural Energy Planning
- Awareness Rally

Troubleshooting of Remote Tribal Habitat Solar Light

Village School Programmes

For any Clarification, Contact

Dr. V. Kirubakaran
Course Coordinator
Rural Energy Centre
Gandhigram Rural Institute - Deemed University
Gandhigram - 624 302
Phone: +91 94438 59066
Web: www.ruraluniv.ac.in
M.Tech. - Renewable Energy

Course Duration:

2 Years– 4 Semesters

Eligibility Criteria:

✓ B.E. / B.Tech. / AMIE or
✓ PG in Science (Mathematics as compulsory paper in PG course) with minimum of 55% marks or CGPA of 5.5 on a 10 point scale in the qualifying examination (50% marks or CGPA of 5.0 on a 10 point scale for SC/ST candidates) from UGC / AICTE recognized Institute / University.

The selection will be as per Gandhigram Rural Institute Norms.

Category A

Based on GATE Score.

Category B

Based on the Written Examination Conducted by Rural Energy Centre, Gandhigram Rural Institute – Deemed University if GATE qualified candidates is not available.

The evaluation is as follows:

The marks obtained by the qualifying examination
from I semester to Pre Final Semester - 50% Weightage
(for the benefit of Result Awaiting Students)

Entrance Examination - 50% Weightage

Maximum number of Seats: 20
## Curriculum Outline:

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**Electives (Major):**

E1. Rural Electrification: Technologies and Economics  
E2. Renewable Energy & Sustainable Development  
E3. Smart Grid  
E5. Optimum Utilization of Heat and Power  
E6. Energy Auditing Instrumentation  
E7. Green Buildings  
E8. Environmental Impact Assessment  
E9. Technology Management
Entrance Examination for NON GATE Category

- Examination is of 90 minutes with multiple choice questions from the following subjects
  - Renewable Energy Sources
  - Basic Electrical Engineering
  - Thermodynamics / Thermal Engineering
- Use of Calculator / Cell Phone is prohibited
- No TA/DA will be paid for attending the Entrance Examination