

## DEPARTMENT OF RENEWABLE ENERGY RAJASTHAN TECHNICAL UNIVERSITY, KOTA (Formerly known as Centre for Energy and Environment)

Renewable energy sources have the potential to provide solutions to world's energy and environment related problems. There is a need for department/centre, working only in the field of energy related research, education, and innovation. With these objectives in mind, M.Tech. (Renewable Energy Technology) program has been started by Rajasthan Technical University, Kota in August 2010, under Mechanical Engineering Department and first batch M.Tech. (RET) students were passed from Mechanical Engineering Department in 2012.

Subsequently, to have thrust on these areas, a separate Centre for Energy and Environment was approved by the Board of Management of University in November 2011 and formal orders were issued in March 2013 vide order no. RTU/CEE/Adm./2013/16407-48 dated 23/03/2013 and all students of M.Tech. (RET) were transferred from Mechanical Engineering Department to the Centre. From July 2013, M.Tech. admissions were done by the Centre for Energy and Environment (CEE). *Centre for Energy and Environment* which existed as University Centre of RTU was renamed as *Department of Renewable Energy* vide the office-order No. F(2)2/2015/3583-90 dated 27/05/2015 of the Registrar, RTU and is now presently functioning as University Teaching Department of *Rajasthan Technical University, Kota*. Presently the department offers both M.Tech. (Renewable Energy Technology) and PhD (Renewable Energy Technology) programmes.

### Vision:

To impart technical education in the fields of Renewable Energy and allied subjects and conduct research at the new frontiers of Renewable Energy and its applications.

### Mission:

To create technical manpower in the applied fields of Renewable Energy at the post graduate level and prepare students to lead a team of people in innovation and research of Renewable Energy at the national and international level.

### Research Publications in the Last Four Years

	2013	2014	2015	2016	TOTAL
Number of research papers published in International/ National level conferences and Journals during last four years	05	09	14	27	55

## ABOUT M.TECH. (RENEWABLE ENERGY TECHNOLOGY) PROGRAMME

The course curriculum of M.Tech. (Renewable Energy Technology) covers subjects ranging from Advanced Thermodynamics, Advanced Heat Transfer to Solar Energy, and Wind Energy Technology. The programme is multidisciplinary in nature with each batch having the maximum strength of 18 students. Any engineering graduate with B.E./B.Tech. degree is eligible to join this programme.

This course prepares trained manpower for the Solar, Wind, and Biomass related industries. Students are required to prepare seminar and thesis dissertation at the end of course work as part of the programme. Experts from renewable energy industry and academic institutions are also invited. Students regularly take part in various training courses at NIWE, Chennai and various National and International level conferences in India.

## COURSE CURRICULUM

### Semester-I

S.No.	COURSES
1.	Renewable Energy Sources
2.	Advanced Thermodynamics
3.	Numerical Methods
4.	Advanced Heat Transfer
5.	Renewable Energy Lab-I

### Semester-II

S.No.	COURSES
6.	Solar Energy
7.	Wind Energy Technology
8.	Fuel Cell Technology
9.	Analysis of Power Plants
10.	Renewable Energy Lab-II

### Semester-III

S.No.	COURSES
11.	Elective-1
12.	Elective-2
13.	Seminar
14.	Dissertation-I

### Semester-IV

S.No.	COURSE
15.	Dissertation - II

Two of the following six electives are also being offered in the third semester:

- a) Nuclear Power Plant
- b) Biogas/ Biodiesel Technology
- c) Advanced Applications in Solar Energy Technology
- d) Hydrogen Energy
- e) Wind Turbine Design and Control
- f) Direct Energy Conversion Systems