

3.	Other Renewable Energy Technologies Geothermal technology, wave energy, tidal energy, ocean thermal energy, Considerations for power and heat generation, Status of commercialization Examples of operational projects and challenges Challenges of integrating renewable energy with conventional energy/power system	7	0	0
		45	0	0
Evaluation criteria <ul style="list-style-type: none"> ▪ Assignments: 20% (after Module 1 and 3 and 5) ▪ Minor test 1: 15% (after Module 1) ▪ Minor test 2: 15% (after Module 2) ▪ Major test: 50% (after all module) 				
Learning outcomes On successful completion of this course the students will be able to: <ul style="list-style-type: none"> ▪ Calculate Bioenergy and Other Renewable Energy potentials (Test 1, 2) ▪ Identify the best solution (Test 2, 3 and assignments) ▪ Quantify the amount of Energy produced (Test 2,3) ▪ Translate theories into practice (Assignments) 				
Pedagogical approach A combination of class-room interactions, tutorials, field visits, assignments and projects.				
Materials Recommended readings Text Books VVN Kishore, “Renewable Energy Engineering and Technology – A Knowledge Compendium”, ed. (TERI Press, 2008). Reference Books Donald Klass, “Biomass for Renewable Energy, Fuels, and Chemicals”, (Entech International Inc., USA) Godfrey Boyle, “Renewable Energy”, (Atlantic Publishing Company, 2008) Thomas Read & Agua Das, “Handbook of biomass downdraft gasifier engine systems” (The Biomass Energy Foundation Press, 1988) Klaus von Mitzlaff, “Engines for Biogas – Theory, Modification, Economic Operation” (Deutsche Gesellschaft für Entwicklungstechnologien GATE, 1988)				
Additional information (if any):NA				
Student responsibilities Attendance, feedback, discipline: as per university rules.				

Course Reviewers

1. Prof. S. Maji, Department of Mechanical Engineering, SOET, IGNOU, New Delhi
2. Dr Oruganty Prasada Rao, Scientist, CSIR (Retired)