



G H RAISONI COLLEGE OF ENGINEERING AND MANAGEMENT WAGHOLI PUNE

(An Autonomous Institute under UGC Act 1956 & Affiliated to Savitribai Phule Pune University)

Domkhel Road , GAT No.: 1200 Wagholi, Pune – 412207

Course wise Teaching Plan for Session : Summer 2019

Course : UNCONVENTIONAL ENERGY SOURCES

Faculty : c.limbadi@raisoni.net - LIMBADRI CHINTA

Unit	Topic Code	Topic Covered	Date	Course	Section
1	1	Indian Scenario, Need, Characteristics and challenges in the successful utilization of renewable energy sources	03/12/2018	BMEL404	A
1	2	Jawaharlal Nehru National Solar Mission (JNNSM) Solar Energy Resource: Estimation of Potential of the Sun. Solar Extraterrestrial Radiation	04/12/2018	BMEL404	A
1	3	Spectral Distribution, Earth sun angles	10/12/2018	BMEL404	A
1	4	observer sun angles, Tilt factor	11/12/2018	BMEL404	A
1	5	solar radiation intensity incident on tilted surface, Measurement of Solar Radiation	17/12/2018	BMEL404	A
2	6	Low temperature applications of Solar Thermal Energy	18/12/2018	BMEL404	A
2	7	Water and air Heating, Flat Plate collectors losses	24/12/2018	BMEL404	A
2	8	Performance evaluation, storage, Testing and standards	01/01/2019	BMEL404	A
2	9	Economics, Subsidies and incentives available	07/01/2019	BMEL404	A
2	10	Numericals	08/01/2019	BMEL404	A
3	11	Medium and high temperature applications of Solar Thermal Energy – Concentrating collectors	14/01/2019	BMEL404	A
3	12	classification, types and suitability,	15/01/2019	BMEL404	A
3	13	tracking, Performance evaluation	21/01/2019	BMEL404	A
3	14	Storage issues and challenges in the commercialization	22/01/2019	BMEL404	A
3	15	Numericals	28/01/2019	BMEL404	A
4	16	Solar Photovoltaic Conversion- Basic Semiconductor Physics, A generic photovoltaic cell	29/01/2019	BMEL404	A
4	17	Modules and Arrays, Impact of Temperature and Shading on the performance of a PV module	04/02/2019	BMEL404	A
4	18	Stand alone and grid connected Solar Photovoltaic Systems	05/02/2019	BMEL404	A



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4	19	components, system design and economics	11/02/2019	BMEL404	A
5	20	Wind power systems – Types of Wind turbines, Terminology,	12/02/2019	BMEL404	A
5	21	Impact of tower height, Maximum Rotor efficiency (Betz Limit)	25/02/2019	BMEL404	A
5	22	Wind turbine generators, Average power in wind	26/02/2019	BMEL404	A
5	23	Estimation of wind availability, performance evaluation	01/03/2019	BMEL404	A
6	24	Classification of biomass, Biomass conversion processes, Types of gasifiers	02/03/2019	BMEL404	A
6	25	Briquetting, Gasification and combustion of biomass, Biomethanation, Biogas as a rural energy source	05/03/2019	BMEL404	A
6	26	Environmental significance, Biogas production mechanism, Biogas plant and its components,	08/03/2019	BMEL404	A
6	27	Types of biogas plants, Design and construction features	09/03/2019	BMEL404	A