School of Energy Management
Program Structure of M.Tech.(Energy Systems) Two Year Full Time Degree
(Entry Batch 2018 Onwards)

1st Semester

Sl. No.	Course Code	Course Title	L	T	P	C
1	EML 6011	Non-Conventional Energy Sources	3	0	0	3
2	EML 6012	Fuel Technology	3	0	0	3
3	EML 6013	Energy Economics and Planning	3	0	0	3
4	EML 6015	Thermal Science and Engineering	3	0	0	3
5	EME 601X/701X	Program Elective-I	3	0	0	3
6	BUL8223	Research Methodology	4	0	0	4
7	EMP 6011	Energy Laboratory-I	0	0	6	3
Total Credits						**22**

2nd Semester

Sl. No	Course Code	Course Title	L	T	P	C
1	EML 6016	Energy Auditing	3	1	0	4
2	EML 6022	Solar Energy Utilization and System Design	3	1	0	4
3	EME 602X/701X/702X	Program Elective-II	3	0	0	3
4	EME 602X	Program Elective-III	3	0	0	3
5	EML6023	Disaster Management	2	0	0	2
6	PCL 1067	Discourses on Human Virtues	3	0	0	0
7	EMP 6012	Energy Laboratory-II	0	0	6	3
Total Credits						**19**

3rd Semester

Sl. No.	Course Code	Course Title	L	T	S/P	C
1	EME 701X	Program Elective-IV	3	0	0	3
2	EME 702X	Open Elective	3	0	0	3
3	EMD 7011	Major project phase-I	0	0	20	10
4	EMC 6011	Seminar	0	3	0	3
Total Credits						**19**

4th Semester

Sl. No	Course Code	Course Title	L	T	S/P	C
1	EMD7012	Major project phase-II	0	0	40	20
Total Credits						**20**

Total Credits to be earned in order to become eligible for award of M.Tech. (Energy Systems) Two Year Full Time Degree :**80**

LIST OF PROGRAM ELECTIVES I

S. No.	Course Code	Course Title	L	T	P	C
1	EME6011	Materials for Solar Photovoltaics	3	0	0	3
2	EML 7013	Environmental Impact of renewable energy sources	3	0	0	3
3	EME7016	Pollution Control in Power Plants and Automobiles	3	0	0	3
4	EME7026	Energy Scenario and Energy Policy	3	0	0	3

LIST OF PROGRAM ELECTIVES II & III

S. No.	Course Code	Course Title	L	T	P	C
1	EME 6020	Biomass and Bio Energy Systems	3	0	0	3
2	EME 6021	Industrial Energy Systems	3	0	0	3
3	EME7012	Wind Energy Systems	3	0	0	3
4	EME7013	Small Hydro Systems	3	0	0	3
5	EME7014	Solar Passive Architecture	3	0	0	3
6	EME7024	Fuel Cell and Hydrogen Energy	3	0	0	3
7	EML7012	Solar Photovoltaic Power Plants: Planning, Design and Balance of systems	3	0	0	3
8	EME7022	Instrumentation and control in energy systems	3	0	0	3
9	EME7025	Solar refrigeration and air-conditioning	3	0	0	3

LIST OF PROGRAM ELECTIVES IV

S. No.	Course Code	Course Title	L	T	P	C
1	EME7011	Energy efficiency in buildings	3	0	0	3
2	EME7023	Energy storage	3	0	0	3

3	EME 7027	Smart Grid Technologies	3	0	0	3
4	EME7015	Decentralized Generation Systems	3	0	0	3
5	EME7021	Demand side management of energy	3	0	0	3
LIST OF OPEN ELECTIVES						
S. No.	**Course Code**	**Course Title**	**L**	**T**	**P**	**C**
1	EME7017	Cogeneration & energy efficiency	3	0	0	3
2	EME7031	Waste to Energy	3	0	0	3
3	EME7032	IC Engines and Alternative Fuels	3	0	0	3
LIST OFNON-CREDIT COURSES						
S. No.	**Course Code**	**Course Title**	**L**	**T**	**P**	**C**
1	EML 6021	Basic Electrical Engineering	1	0	0	0
2	EML 6022	Communication Skills and project presentation	1	0	0	0