



विज्ञानं ब्रह्म

Shri Mata Vaishno Devi University Katra

School of Energy Management

VISION

To Establish a World Class School for Excellence in
Energy Studies

MISSION

- To create and successfully disseminate elemental knowledge about Energy Systems and their applications
- To prepare energy professionals for the challenges in a changing world by presenting them with different perspectives on energy topics
- To amalgamate, blend, and relate scientific and engineering knowledge to societal problems



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PROGRAM EDUCATIONAL OBJECTIVES

(M. Tech. Two Year Full Time Post Graduate Degree Program)

PEO 1:

Empower Post Graduate (PG) students to be competent enough to tackle problems related to their profession, be it in industry or in higher studies and research.

PEO 2:

Enable students to understand and evaluate alternative energy sources with proper planning of energy source-demand chain.

PEO 3:

Enable students to acquire knowledge of relevant technologies besides multi-disciplinary fields which eventually will be augmented broadly to deal social, ethical and environmental issues with the practiced trades.

PEO 4:

The course is expected to produce man power who can become entrepreneurs in the areas of energy systems for producing sustainable technologies.

PEO 5:

Promote students with strong scientific and engineering temperament to work individually as well as in teams to comprehend, analyze, design and create acceptable solutions for the real life problems.

PEO 6:

Cultivate with in students the virtues of professionalism, multidisciplinary approach, self-learning and effective communication to engage in them in a successful professional carrier.

Program Outcomes (POs) of M.Tech. Program offered by SoEM at SMVDU

The curriculum and syllabi of M. Tech Two Year Full Time Post Graduate Degree Program is designed to achieve identified Post Graduate Attributes (PGAs) with following POs.

After successful completion of the Time Post Graduate degree program, a student(s) will be able to;

PO1. Engineering Knowledge:

Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. Problem Analysis:

Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3. Design/ Development of Solutions:

Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4. Conduct Investigations of Complex Problems:

Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5. Modern Tool Usage:

Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6. The Engineer and Society:

Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7. Environment and Sustainability:

Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8. Ethics:

Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9. Individual and Team Work:

Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10. Communication:

Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11. Project Management and Finance:

Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12. Life-long learning:

Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Course Outcomes of every course in M.Tech. (Energy Systems) Program are mapped to POs considering following;

- Value = Addressing to Zero Degree
- Value = Addressing to Low Degree
- Value = Addressing to Medium Degree
- Value = Addressing to High Degree

CO - PO Mapping for M. Tech (Energy Systems) Two Year Full Time Post Graduate Degree Program													
		PO1	PO2	PO 3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1	EML 6011	3	2	3	2	2	3	3	1	2	2	2	3
2	EML 6012	3	3	3	2	2	3	3	2	2	2	2	3
3	EML 6013	3	2	2	3	2	3	3	2	2	2	3	2
4	EML 6015	3	2	2	3	3	3	3	2	2	2	3	2
5	EME 6011	3	3	2	2	2	2	2	2	2	2	2	3
6	BUL8223 (Research Methodology)	-	3	1	3	3	-	-	1	2	2	-	3
7	EMP 6011	3	3	2	3	2	3	2	2	3	2	2	3
8	EML 6016	3	3	2	3	2	2	2	2	2	2	2	3
9	EML 6022	3	3	3	2	2	2	1	2	2	2	2	3
10	EME 6020	3	3	2	2	3	3	3	1	1	2	2	3
11	EME 6021	3	3	3	2	2	1	2	1	2	2	2	3
12	EML6023 (Disaster Management)	2	1	1	1	1	2	2	1	2	2	2	3
13	PCL 1067 (Human Virtues)	-	-	-	-	-	3	3	3	3	-	-	3
14	EMP 6012	3	3	2	3	2	3	2	2	2	2	2	3
17	EMD 7011	3	3	2	2	1	3	3	1	3	2	1	3
18	EMC 6011	3	1	1	2	2	3	3	1	1	3	2	3
19	EMD7012	3	3	3	3	3	3	3	3	3	3	3	3
20	EME6011	3	3	2	2	2	2	2	2	2	2	2	3
21	EML 7013	3	3	3	2	3	3	3	1	2	2	1	3
22	EME7016	3	3	2	3	2	3	3	1	2	2	2	3
23	EME7026	3	2	3	2	2	2	2	2	2	2	3	3
24	EME 6020	3	3	2	2	3	3	3	1	1	2	2	3
25	EME 6021	3	3	2	3	2	2	2	1	2	2	2	3
26	EME7012	3	2	2	2	2	3	3	1	2	2	1	3
27	EME7013	3	2	2	2	2	3	3	1	2	2	1	3
28	EME7014	3	3	2	3	2	2	2	1	2	2	2	3
29	EME7024	3	2	3	2	3	3	3	1	2	2	2	3
30	EML7012	3	2	2	2	2	2	1	1	2	2	1	3
31	EME7022	3	3	3	2	3	3	3	1	2	2	1	3
32	EME7023	3	3	3	2	2	3	3	1	1	1	2	3
33	EME7025	3	2	3	2	3	3	3	1	2	2	2	3
35	EME7011	3	3	2	3	2	2	2	1	2	2	2	3
36	EME 7027	3	2	3	3	2	3	2	2	2	3	2	3
37	EME7015	3	2	3	2	3	3	3	1	2	2	3	3
38	EME7021	3	2	3	2	2	2	2	2	2	2	2	3
39	EME7017	3	3	3	2	3	3	3	1	2	2	1	3
40	EME7031	3	2	1	1	2	3	3	1	1	2	1	3
41	EME7032	3	2	1	1	3	3	3	1	1	2	1	3
42	EML 6021	3	2	2	1	1	3	1	1	1	2	1	3