

Energy Science and Technologies Program Outcomes Course Matrix						Program Outcomes							
Code	Course Name	T	P	K	ECTS	1	2	3	4	5	6	7	8
1.Year - 1. Semester													
EBT8001	Energy Efficiency and Management	3	0	3	8	4	3	4	4	2	3	3	5
EBT8003	Renewable Energy Technologies	3	0	3	8	3	3	3	4	2	2	4	5
FBE8001	Scientific Research Techniques and Publication Ethics	3	0	3	8	3	3	2	4	4	4	5	3
EBT6001	Special Topics	5	0	0	2	5	5	4	4	4	3	3	5
EBT6003	Thesis Research (Thesis proposal)	0	1	0	2	5	5	4	4	4	3	3	5
EBT6005	Thesis Research	0	1	0	30	5	5	4	4	4	3	3	5
EBT6007	Seminar	0	2	0	6	2	2	2	2	5	4	1	2
EBT6101	Wind Energy and Technologies	3	0	3	8	3	3	2	4	4	2	3	2
EBT6103	Hydrogen and Fuel Cell Systems I	3	0	3	8	3	4	4	4	4	2	3	2
EBT6105	Nuclear Engineering	3	0	3	8	3	3	5	2	3	2	3	3
EBT6107	Characterization of Materials	3	0	3	8	2	4	4	3	3	2	3	3
EBT6109	Theoretical Computations in Nanostructures	3	0	3	8	2	4	4	3	4	2	3	2
EBT6111	Advanced Solid Design and Modelling	3	0	3	8	2	4	3	3	5	2	3	3
EBT6113	Smart Materials for Energy Applications	3	0	3	8	2	4	4	3	3	2	3	2
EBT6115	Materials for Nuclear Production and Nuclear Reactors	3	0	3	8	2	4	4	3	3	2	3	3
EBT6117	CZTS-Based Thin Film Solar Cells	3	0	3	8	2	4	5	3	3	2	3	3
EBT6119	Solar Power Plants and Systems	3	0	3	8	2	4	5	4	3	2	3	2
EBT6121	Optoelectronic Properties of Materials	3	0	3	8	2	4	4	3	3	2	3	3
EBT6123	Energy Distribution Systems	3	0	3	8	2	3	4	4	4	2	3	3
EBT6125	Introduction to Nanomaterial	3	0	3	8	3	3	4	3	3	2	3	3
EBT6127	Energy and Nanotechnology	3	0	3	8	3	5	4	3	4	2	3	3
EBT6129	Numerical Modeling and Simulation	3	0	3	8	3	5	4	4	5	2	3	3
EBT6131	Bioenergy Production and Applications	3	0	3	8	2	4	3	4	4	2	3	2
EBT6133	Microbial Fuel Cells	3	0	3	8	2	4	4	4	4	2	3	2
EBT6135	Machine Learning Techniques in Energy Systems	3	0	3	8	2	4	4	2	5	2	2	4
EBT6137	Hybrid and Electric Vehicle Technologies	3	0	3	8	2	4	5	2	2	2	2	5
EBT6139	Statistical Data Analysis in Energy Applications	3	0	3	8	2	4	4	2	5	2	2	4

1. Year - 2. Semester													
EBT8002	Material Science in Energy Applications	3	0	3	8	3	4	4	4	2	3	3	5
EBT8004	Advanced Thermodynamics	3	0	3	8	3	4	4	4	2	2	4	5
EBT6002	Special Topics	5	0	0	2	5	5	4	4	4	3	3	5
EBT6004	Thesis Research (Thesis proposal)	0	1	0	2	5	5	4	4	4	3	3	5
EBT6006	Thesis Research	0	1	0	30	5	5	4	4	4	3	3	5
EBT6008	Seminar	0	2	0	6	2	2	2	2	5	4	1	2
EBT6102	Advanced Characterization Techniques in Nanomaterials	3	0	3	8	5	5	5	3	4	3	3	4
EBT6104	Geothermal Energy and Technologies	3	0	3	8	2	4	4	3	2	2	3	2
EBT6106	Hydrogen and Fuel Cell Systems II	3	0	3	8	3	4	4	4	4	2	3	2
EBT6108	Power Generation and Principles	3	0	3	8	2	4	5	4	3	2	3	2
EBT6110	Nuclear Power Plants	3	0	3	8	3	3	5	2	3	2	3	3
EBT6112	Graphene Based Technologies	3	0	3	8	2	4	4	3	3	2	3	2
EBT6114	Fundamentals of Nanoscience	3	0	3	8	2	4	4	3	4	2	3	2
EBT6116	Growth Techniques of Low Dimensional (1D) Nanomaterials	3	0	3	8	3	3	4	3	3	2	3	3
EBT6118	Optical Properties of Solids	3	0	3	8	2	4	4	3	3	2	3	3
EBT6120	Thermal Energy Storage	3	0	3	8	2	4	5	4	3	2	3	2
EBT6122	Heat Exchangers	3	0	3	8	2	4	5	4	3	2	3	2
EBT6124	Phase Change Material	3	0	3	8	2	4	5	4	3	2	3	2
EBT6126	Combined Heat And Power Generation	3	0	3	8	2	4	5	4	3	2	3	3
EBT6128	Energy Systems for Buildings	3	0	3	8	2	4	5	4	3	2	3	2
EBT6130	Measurement Techniques in Energy Systems	3	0	3	8	4	3	3	3	3	2	2	4
EBT6132	Conventional Energy Sources	3	0	3	8	2	4	4	3	2	2	3	2
EBT6134	Hydrogen Production from Biomass	3	0	3	8	2	4	5	2	3	2	2	5
EBT6136	Advanced Photovoltaic Materials	3	0	3	8	2	4	4	2	2	2	2	4
EBT6138	Alternative Fuel Applications in Internal Combustion Engines	3	0	3	8	2	4	5	2	3	2	2	5