

First-Semester Curriculum Plan						
Course Code	Course Name	Theoretical	Practical	ECTS	Compulsory/Elective	Instructor
ESE820	PHD DISSERTATION	0	0	30	Compulsory	-
ESE509	SOLAR ENERGY BASICS	3	0	8	Elective	Prof. Dr. Abdullah YILDIZ
ESE511	NEW TECHNOLOGIES AND APPLICATION OF HYDROGEN	3	0	8	Elective	-
ESE513	RENEWABLE ENERGY SYSTEMS	3	0	8	Elective	Prof. Dr. Abdullah YILDIZ
ESE515	SPECIAL ELECTRIC MACHINES	3	0	8	Elective	Asst. Prof. Dr. Mehmet Zahid EREL
ESE517	HYDROGEN ENERGY TECHNOLOGIES	3	0	8	Elective	Assoc. Prof. Dr. Meryem Sena AKKUŞ
ESE519	POWER ELECTRONICS	3	0	8	Elective	Asst. Prof. Dr. Mehmet Zahid EREL
ESE521	PROJECT MANAGEMENT	3	0	8	Elective	-
ESE523	PRINCIPLES AND APPLICATIONS OF SOLAR ENERGY PHYSICS	3	0	8	Elective	Prof. Dr. Metin AKTAŞ
ESE525	ADVANCED BORON TECHNOLOGIES	3	0	8	Elective	Assoc. Prof. Dr. Meryem Sena AKKUŞ
ESE529	SUSTAINABLE ENERGY PRODUCTION AND USAGE	3	0	8	Elective	-
ESE555	THERMODYNAMIC ANALYSIS OF ENERGY RELATED SYSTEMS AND TECHNOLOGIES	3	0	8	Elective	Prof. Dr. Bülent YAŞILATA
ESE557	HEAT TRANSFER ANALYSIS OF ENERGY RELATED SYSTEMS AND TECHNOLOGIES	3	0	8	Elective	Prof. Dr. Bülent YAŞILATA
ESE559	PROBABILITY AND STOCHASTIC PROCESS	3	0	8	Elective	Asst. Prof. Dr. Musaria Karim Mahmood
ESE561	ELECTROCHEMICAL ENERGY SYSTEMS	3	0	8	Elective	Prof. Dr. Nuray ÇELEBİ
ESE563	THERMAL ENVIRONMENTAL ENGINEERING	3	0	8	Elective	Prof. Dr. Bülent YAŞILATA
ESE565	FUEL CELL TECHNOLOGIES	3	0	8	Elective	Assoc. Prof. Dr. Meryem Sena AKKUŞ
TOTAL ECTS				158		

Second-Semester Curriculum Plan						
Course Code	Course Name	Theoretical	Practical	ECTS	Compulsory/Elective	Instructor
ESE800	SPECIAL STUDIES	8	0	8	Compulsory	-
ESE810	SEMINAR	0	2	10	Compulsory	-
FBE4000	STUDY FOR PH.D QUALIFYING EXAM	0	0	30	Compulsory	-
FBE5000	THESIS PROPOSAL STUDY	0	0	30	Compulsory	-
FBE900	RESEARCH METHODS AND ETHICS	3	0	8	Compulsory	-
ESE504	RADIATION DETECTION AND MEASUREMENT	3	0	8	Elective	Prof. Dr. Fahrettin GÖKTAŞ
ESE512	ELECTRICAL POWER QUALITY	3	0	8	Elective	-
ESE524	ENERGY ECONOMICS AND POLITICS	3	0	8	Elective	-
ESE528	COMBUSTION	3	0	8	Elective	-
ESE536	NANOGENERATORS AND SELF-POWERED NANOSYSTEMS	3	0	8	Elective	Prof. Dr. Abdullah YILDIZ
ESE538	FOUNDATIONS OF PHOTOVOLTAIC ENERGY SYSTEMS	3	0	8	Elective	Prof. Dr. Metin AKTAŞ
ESE542	HISTORY OF SCIENCE AND TECHNOLOGY	3	0	8	Elective	-
ESE544	NUCLEAR ENERGY	3	0	8	Elective	Prof. Dr. Fahrettin GÖKTAŞ
ESE550	ADVANCED POWER ELECTRONICS	3	0	8	Elective	-
ESE552	ELECTRICAL, OPTICAL AND MAGNETIC PROPERTIES OF MATERIALS	3	0	8	Elective	Prof. Dr. Abdullah YILDIZ
ESE558	TECHNOLOGY AND INNOVATION MANAGEMENT	3	0	8	Elective	Prof. Dr. Bülent YAŞILATA
ESE566	HYDROGEN ENERGY	3	0	8	Elective	Assoc. Prof. Dr. Meryem Sena Akkuş
ESE568	STEAM BOILERS	3	0	8	Elective	-
ESE570	ADVANCED CIRCUIT ANALYSIS	3	0	8	Elective	Asst. Prof. Dr. SITKI KOCAOĞLU
ESE572	ROBOTICS AND ITS APPLICATIONS TO ENERGY SYSTEMS	3	0	8	Elective	Asst. Prof. Dr. SITKI KOCAOĞLU
ESE574	BIOFUELS, BIOMASS AND BIOTECHNOLOGY	3	0	8	Elective	Assoc. Prof. Dr. Ekin DEMİRAY
MATH511	ADVANCED ENGINEERING MATHEMATICS	3	0	8	Elective	-
TOTAL ECTS				222		