

## Renewable Energy Sources

### First Year

<b>I Semester- First Year</b>				
<b>Code</b>	<b>Subject</b>	<b>Credits</b>	<b>Lessons</b>	<b>Total</b>
2FI100112	Mathematics 1	8	3+2+2	216
2FI110112	Informatics	6	2+2+1	156
2ET100112	Electrotechnics 1	8	3+2+2	216
	Elective Subject unit 1	4	2+1+1	120
	Elective Subject unit 2	4	2+1+1	120
	<b>TOTAL:</b>	<b>30</b>	<b>12+8+7</b>	<b>828</b>
	Elective Subject unit 1:			
2FI100212	Fundamentals of Programing	4	2+1+1	120
2FI1333412	Programing Language	4	2+1+1	120
	Elective Subject unit 2:			
2ET100212	Kinematics and Dynamics	4	2+1+1	120
2ET100312	Physics of Waves and Acoustics	4	2+1+1	120

<b>II Semester- First Year</b>				
<b>Code</b>	<b>Subject</b>	<b>Credits</b>	<b>Lessons</b>	<b>Total</b>
2FI100112	Mathematics 2	8	3+2+2	216
2ET100412	Physics	6	2+2+1	156
2ET100512	Electrotecnics 2	6	2+2+1	156
	Elective Subject unit 3	4	2+1+1	120
	University Elective Subject 1	6	2+2+1	156
UGD102712	Sports	No credits	0+0+2	
	Elective Subject unit 3:			
2ET100612	Engineering Economics	4	2+1+1	120
2ET100712	CAD/ CAM	4	2+1+1	120
	<b>TOTAL:</b>	<b>30</b>	<b>11+9+6</b>	<b>804</b>

### Second Year

<b>III Semester- Second Year</b>				
<b>Code</b>	<b>Subject</b>	<b>Credits</b>	<b>Lessons</b>	<b>Total</b>
2ET100812	Electrical Measurements	6	2+2+1	156
2FI104712	Linear Transforms	8	3+2+2	216
2ET100912	Electronics	8	3+2+2	216
	Elective Subject unit 4	4	2+1+1	120
	Elective Subject unit 5	4	2+1+1	120
	<b>TOTAL:</b>	<b>30</b>	<b>12+8+7</b>	<b>828</b>
	Elective Subject unit 4:			

2FI130712	Probability and Statistics	4	2+1+1	120
2ET101012	Quality Systems and Standards in Electrical Engineering	4	2+1+1	120
	Elective Subject unit 5:			
2ET101112	Electrical Installations	4	2+1+1	120
2ET101212	Materials in Electrical Engineering	4	2+1+1	120

<b>IV Semester- Second Year</b>				
<b>Code</b>	<b>Subject</b>	<b>Credits</b>	<b>Lessons</b>	<b>Total</b>
2ET104112	Power Generation and Distribution	8	3+2+2	216
2ET101412	Power Electronics	6	2+2+1	156
2ET101512	Electrical Machines	6	2+2+1	156
	Elective Subject unit 6	4	2+1+1	120
	University Elective Subject 2	6	2+2+1	156
	<b>TOTAL:</b>	<b>30</b>	<b>11+9+6</b>	<b>804</b>
	Elective Subjects unit 6:			
2ET104212	Fundamentals of Automation Control	4	2+1+1	120
2FI131712	Modeling and Simulation	4	2+1+1	120

### Third Year

<b>V Semester- Third Year</b>				
<b>Code</b>	<b>Subject</b>	<b>Credits</b>	<b>Lessons</b>	<b>Total</b>
2ET101612	Analysis and Synthesis of Electrical Circuits	8	3+2+2	216
2ET104312	Fundamentals of Renewable Energy Sources	8	3+2+2	216
2ET101812	Electromotor Drives	6	2+2+1	156
	Elective Subject unit 7	4	2+1+1	120
	Elective Subject unit 8	4	2+1+1	120
	<b>TOTAL:</b>	<b>30</b>	<b>12+8+7</b>	<b>828</b>
	Elective Subjects unit 7:			
2ET104412	Geothermal Energy	4	2+1+1	120
2ET104512	Relay Protection	4	2+1+1	120
	Elective Subject unit 8:			
2ET104612	Energy Efficiency and Energy Savings	4	2+1+1	120
2ET104712	Transmission and Distribution Systems	4	2+1+1	120

<b>VI Semester- Third Year (Three Years Study)</b>				
<b>Code</b>	<b>Subject</b>	<b>Credits</b>	<b>Lessons</b>	<b>Total</b>
2ET104812	Wind Generator Systems	6	2+2+1	156
2ET104912	Photovoltaic Energy Conversion	8	3+2+2	216

	Elective Subject unit 9	4	2+1+1	120
	University Elective Subject 3	6	2+2+1	156
2ET105712	FINAL EXAM	6	0+0+6	144
	<b>TOTAL:</b>	<b>30</b>	<b>9+7+11</b>	<b>792</b>
	Elective Subjects unit 9:			
2ET105012	Microcomputers and Programmable Controllers	4	2+1+1	120
2ET105112	Computer Controlled Processes	4	2+1+1	120

<b>VI Semester- Third Year (Four Years Study)</b>				
<b>Code</b>	<b>Subject</b>	<b>Credits</b>	<b>Lessons</b>	<b>Total</b>
2ET104812	Wind Generator Systems	6	2+2+1	156
2ET104912	Photovoltaic Energy Conversion	8	3+2+2	216
2ET102812	Electromagnetic Compatibility	6	2+1+1	156
	Elective Subject unit 9	4	2+1+1	120
	University Elective Subject 3	6	2+2+1	156
	<b>TOTAL:</b>	<b>30</b>	<b>12+9+7</b>	<b>804</b>
	Elective Subjects unit 9:			
2ET105012	Microcomputers and Programmable Controllers	4	2+1+1	120
2ET105112	Computer Controlled Processes	4	2+1+1	120

#### Fourth Year

<b>VII Semester- Fourth Year</b>				
<b>Code</b>	<b>Subject</b>	<b>Credits</b>	<b>Lessons</b>	<b>Total</b>
2ET105212	Energy from Biomass	6	2+2+1	156
2ET105312	Electricity Markets	8	3+2+2	216
2ET105412	Small Hydropower Plants	8	3+2+2	216
	Elective Subject unit 10	4	2+1+1	120
	Elective Subject unit 11	4	2+1+1	120
	<b>TOTAL:</b>	<b>30</b>	<b>12+8+7</b>	<b>828</b>
	Elective Subjects unit 10:			
2ET105512	Electrical Actuators and Sensors	4	2+1+1	120
2ET101912	Systems for Remote and Distributed Control	4	2+1+1	120
	Elective Subject unit 11:			
2ET103212	Management of Electrical Engineering Projects	4	2+1+1	120
2ET103512	Telecommunication Networks	4	2+1+1	120

<b>VIII Semester- Fourth Year</b>				
<b>Code</b>	<b>Subject</b>	<b>Credits</b>	<b>Lessons</b>	<b>Total</b>

2ET105612	Design and Analysis of Systems for RES	6	2+2+1	156
2ET103612	Application Software for Automation	6	2+2+1	156
	Elective Subject unit 12	4	2+1+1	120
	University Elective Subject 4	6	2+2+1	156
2ET104012	DIPLOMA WORK	8	0+0+8	192
	<b>TOTAL:</b>	<b>30</b>	<b>8+7+12</b>	<b>780</b>
	Elective Subjects unit12:			
2ET103912	Mechatronics	4	2+1+1	120
2FP123212	Safety at Work	4	2+1+1	120

Code	<i>University Elective Subject (for 180/240 ECTS choose 3/ 4 Subjects)</i>			
<b>First Year</b>				
<b>UGD100112</b>	Foreign Language 1- English Language 1*	6	0+0+4	156
<b>UGD100212</b>	Foreign Language 1- Italian Language 1*	6	0+0+4	156
<b>UGD100312</b>	Foreign Language 1- German Language 1*	6	0+0+4	156
<b>UGD100412</b>	Foreign Language 1- French Language 1*	6	0+0+4	156
<b>UGD100512</b>	Foreign Language 1- Spanish Language 1*	6	0+0+4	156
<b>UGD100612</b>	Foreign Language 1- Russian Language 1*	6	0+0+4	156
<b>Second Year</b>				
<b>UGD100712</b>	Foreign Language 2- English Language 2**	6	0+0+4	156
<b>UGD100812</b>	Foreign Language 2- Italian Language 2**	6	0+0+4	156
<b>UGD100912</b>	Foreign Language 2- German Language 2**	6	0+0+4	156
<b>UGD101012</b>	Foreign Language 2- French Language 2**	6	0+0+4	156
<b>UGD101112</b>	Foreign Language 2- Spanish Language 2**	6	0+0+4	156
<b>UGD101212</b>	Foreign Language 2- Russian Language 2**	6	0+0+4	156
<b>Third Year</b>				
<b>UGD101412</b>	Mathematics	6	2+2+1	156
<b>UGD101512</b>	Philosophy	6	2+2+1	156
<b>UGD101612</b>	Ethics	6	2+2+1	156
<b>UGD101712</b>	Macedonian Language	6	2+2+1	156
<b>UGD101812</b>	Entrepreneurship	6	2+2+1	156
<b>UGD101912</b>	Environmental Protection	6	2+2+1	156
<b>UGD102812</b>	Contractual Law	6	2+2+1	156
<b>Fourth Year</b>				
<b>UGD102212</b>	Tourism Fundamentals	6	2+2+1	156

<b>UGD102312</b>	Ground Science	6	2+2+1	156
<b>UGD102412</b>	Physics	6	2+2+1	156
<b>UGD102512</b>	Biology	6	2+2+1	156
<b>UGD102612</b>	Health Care	6	2+2+1	156
<b>UGD102012</b>	Art History	6	2+2+1	156
<b>UGD102112</b>	National History	6	2+2+1	156

**NOTE:**

\* Choose only one language from offered Foreign Language 1

\*\* Choose only one language from offered Foreign Language 2