

Electrical and Electronic Engineering (English)			
Bachelor	TR-NQF-HE: Level 6	QF-EHEA: First Cycle	EQF-LLL: Level 6

Course Introduction and Application Information

Course Code:	UNI420						
Course Name:	Global Climate Changes and Green Transformation P						
Semester:	Spring Fall						
Course Credits:	<table border="1"> <tr> <td>ECTS</td> </tr> <tr> <td>5</td> </tr> </table>			ECTS	5		
ECTS							
5							
Language of instruction:	English						
Course Condition:							
Does the Course Require Work Experience?:	No						
Type of course:	University Elective						
Course Level:	<table border="1"> <tr> <td>Bachelor</td> <td>TR-NQF-HE:6. Master`s Degree</td> <td>QF- EHEA:First Cycle</td> <td>EQF-LLL:6. Master`s Degree</td> </tr> </table>			Bachelor	TR-NQF-HE:6. Master`s Degree	QF- EHEA:First Cycle	EQF-LLL:6. Master`s Degree
Bachelor	TR-NQF-HE:6. Master`s Degree	QF- EHEA:First Cycle	EQF-LLL:6. Master`s Degree				
Mode of Delivery:	E-Learning						
Course Coordinator:	Dr. Öğr. Üy. MÜGE KOÇUM SEVİM						
Course Lecturer(s):							
Course Assistants:							

Course Objective and Content

Course Objectives:	The aim of this course is to help students gain awareness of environmental factors that will affect their professions while they are gaining professional training, to ensure that they know what causes global climate change, which is a global issue, and what climate change can cause, to foresee the cost of these effects to the business world, to direct them to projects and activities that will minimize these effects, to develop new techniques for existing activities in line with net zero
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	emission targets, and to also ensure that they master new fields of activity and new business lines.
Course Content:	This course covers; climate; the importance of climate in human life; global climate change; the source of global climate change; international organizations and initiatives to prevent global climate change; the European Green Deal and its effects on international trade, the border carbon adjustment mechanism, the concept and methods of green marketing, green financing, green production, green consumption within the scope of green transformation, and the sectoral effects of global climate change.

Learning Outcomes

The students who have succeeded in this course;

- 1) They become aware of the importance of climate in human life
- 2) They gain an environmental perspective
- 3) They give importance to projects and innovations that will prevent global warming
- 4) They understand how production and service sectors may be affected by global climate change
- 5) Gain perspective on reducing CO2 emissions in all economic and commercial activities

Course Flow Plan

Week	Subject	Related Preparation
1)	Climate and Factors Affecting Climate	
2)	Climate and Factors Affecting Climate	
3)	Global Climate Change and Natural and Anthropogenic Sources of Climate Change	
4)	Possible Effects of Global Climate Change (Global & Türkiye)	
5)	Possible Impacts of Global Climate Change (Sectoral & Vital)	
6)	Possible Impacts of Global Climate Change (Sectoral)	
7)	Possible Impacts of Global Climate Change (Sectoral & Economic & International Trade)	
8)	International Initiatives to Prevent Climate Change	
9)	Green Transformation Movement in Business World	
10)	Green Marketing - Green Finance - Green Energy	
11)	European Union Green Deal	
12)	The Impact of the EU Green Deal – Border Carbon Adjustment Mechanism	

13)	Transition to a Low Carbon Economy – Carbon Footprint – Carbon Pricing Mechanisms	
14)	Green Opportunities and Carbon Capture Technologies Impacts of Climate Change-Related Disasters on Industries	
15)	Final Exams	
16)	Final Exams	

Sources

Course Notes / Textbooks:	
References:	Öğretim üyesinin hazırladığı ders notları

Course - Program Learning Outcome Relationship

Course Learning Outcomes	1	2	3	4	5
Program Outcomes					
1) Adequate knowledge in mathematics, science and Electrical and Electronics engineering; the ability to use theoretical and practical knowledge in these areas in complex engineering problems.					
2) Ability to identify, formulate, and solve complex electrical and electronics engineering problems; ability to select and apply appropriate analysis and modeling methods for this purpose.					
3) Ability to design a complex circuit, device or system to meet specific requirements under realistic constraints and conditions; ability to apply modern design methods for this purpose.					
4) Ability to develop, select and use modern techniques and tools necessary for the analysis and solution of complex problems encountered in electrical and electronics engineering applications; ability to use information technologies effectively.					
5) Ability to design, conduct experiments, collect data, analyze and interpret results for the study of complex engineering problems or electrical and electronics engineering research topics.					
6) Ability to work effectively within and multidisciplinary teams; individual study skills.					
7) Ability to communicate effectively orally and in writing; knowledge of at least one foreign language; ability to write effective reports and understand written reports, to					

prepare design and production reports, to make effective presentations, to give and receive clear and understandable instructions.	1	2	3	4	5
Course Learning Outcomes					
8) Awareness of the necessity of lifelong learning; ability to access information, to follow developments in science and technology and to renew continuously.					
9) To act in accordance with ethical principles, professional and ethical responsibility; information on the standards used in electrical and electronics engineering applications.					
10) Information on business practices such as project management, risk management and change management; awareness of entrepreneurship and innovation; information about sustainable development.					
11) Knowledge of the effects of electrical and electronics engineering practices on health, environment and safety in the universal and social scale and the problems of the era reflected in electrical and electronics engineering; awareness of the legal consequences of electrical and electronics engineering solutions.					

Course - Learning Outcome Relationship

No Effect	1 Lowest	2 Average	3 Highest

	Program Outcomes	Level of Contribution
1)	Adequate knowledge in mathematics, science and Electrical and Electronics engineering; the ability to use theoretical and practical knowledge in these areas in complex engineering problems.	
2)	Ability to identify, formulate, and solve complex electrical and electronics engineering problems; ability to select and apply appropriate analysis and modeling methods for this purpose.	
3)	Ability to design a complex circuit, device or system to meet specific requirements under realistic constraints and conditions; ability to apply modern design methods for this purpose.	
4)	Ability to develop, select and use modern techniques and tools necessary for the analysis and solution of complex problems encountered in electrical and electronics engineering applications; ability to use information technologies effectively.	
5)	Ability to design, conduct experiments, collect data, analyze and interpret results for the study of complex engineering problems or electrical and electronics engineering research topics.	

6)	Ability to work effectively within and multidisciplinary teams; individual study skills.	
7)	Ability to communicate effectively orally and in writing; knowledge of at least one foreign language; ability to write effective reports and understand written reports, to prepare design and production reports, to make effective presentations, to give and receive clear and understandable instructions.	
8)	Awareness of the necessity of lifelong learning; ability to access information, to follow developments in science and technology and to renew continuously.	
9)	To act in accordance with ethical principles, professional and ethical responsibility; information on the standards used in electrical and electronics engineering applications.	
10)	Information on business practices such as project management, risk management and change management; awareness of entrepreneurship and innovation; information about sustainable development.	
11)	Knowledge of the effects of electrical and electronics engineering practices on health, environment and safety in the universal and social scale and the problems of the era reflected in electrical and electronics engineering; awareness of the legal consequences of electrical and electronics engineering solutions.	

Assessment & Grading

Semester Requirements	Number of Activities	Level of Contribution
Midterms	1	% 40
Final	1	% 60
total		% 100
PERCENTAGE OF SEMESTER WORK		% 40
PERCENTAGE OF FINAL WORK		% 60
total		% 100

Workload and ECTS Credit Calculation

Activities	Number of Activities	Preparation for the Activity	Spent for the Activity Itself	Completing the Activity Requirements	Workload
Course Hours	14	2.5	1.5	3	98
Midterms	1	6	1	5	12

Final	1	10	1	5	16
Total Workload					126