



# Çanakkale Onsekiz Mart University

Education Information System

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## Course Information

### COURSE INFORMATION

Course Title	Code	Semester	L+U Hour	Credits	ECTS
Physics Of Ionosphere	FZ5042		3 + 0	3.0	7.5

<b>Prerequisites</b>	None
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<b>Language of Instruction</b>	Turkish
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<b>Course Level</b>	Second Cycle
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<b>Course Type</b>	Elective
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<b>Mode of delivery</b>	Face to face
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<b>Course Coordinator</b>	Assoc. Prof. Dr. Hüseyin ÇAVUŞ
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<b>Instructors</b>	Prof. Dr. Osman DEMİRCAN
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<b>Assistants</b>	
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<b>Course Objectives</b>	In this course, the formation of ionosphere which its layers and the physical properties are explained.
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<b>Course Content</b>	Layers of Earth's atmosphere,Formation of Ionosphere,Photochemical and transport processes in ionosphere ,Photochemical and transport processes in ionosphere ,D, E, F1 ve F2 kayer,Ionosphere in the night and day ,Mid-term exam,Irregular behaviors and anomalies,Formation of Earth's magnetic field (Geomagnetism),Geomagnetism and ionosphere ,Solar wind and its interaction with Earth's magnetic field,Investigation of papers previously given to students ,Final Exam
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<b>Course Learning Outcomes</b>	1) get the knowledge about formation and physical properties of ionosphere. 2) have the knowledge about ionosphere in order to investigate medium and advanced level papers.
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### WEEKLY COURSE CONTENT

Week	Topics	Teaching and Learning Methods and Techniques	Study Materials
1. Week	Layers of Earth's atmosphere	Oral lectures with interactive discussions, Homework	
2. Week	Formation of Ionosphere	Oral lectures with interactive discussions, Homework	
3. Week	Photochemical and transport processes in ionosphere	Oral lectures with interactive	

### Quick Access

### Physics (Master)

- Qualification Awarded
- Level of Qualification
- Qualification Requirements and Regulations
- Specific Admission Requirements
- Recognition of Prior Learning
- Profile of the Program
- Program Key Learning Outcomes
- Occupational Profile of Graduates
- Access to Further Studies
- Course Structure & Credits
- Exam Regulations & Assessment & Grading
- Graduation Requirements
- Mode of Study
- Programme Director(or Equivalent)
- Evaluation Questionnaire
- TYYÇ

### Course Information

- Course Information
- Weekly Course Content
- Resources
- Course Category
- CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES
- ECTS credits and course workload

		discussions, Homework	
4. Week	Photochemical and transport processes in ionosphere	Oral lectures with interactive discussions, Homework	
5. Week	D, E, F1 and F2 layers	Oral lectures with interactive discussions, Homework	
6. Week	D, E, F1 and F2 layers	Oral lectures with interactive discussions, Homework	
7. Week	Ionosphere in the night and day	Oral lectures with interactive discussions, Homework	
8. Week	Irregular behaviors and anomalies	Oral lectures with interactive discussions, Homework	
9. Week	Irregular behaviors and anomalies	Oral lectures with interactive discussions, Homework	
10. Week	Formation of Earth's magnetic field (Geomagnetism)	Oral lectures with interactive discussions, Homework	
11. Week	Geomagnetism and ionosphere	Oral lectures with interactive discussions, Homework	
12. Week	Solar wind and its interaction with Earth's magnetic field	Oral lectures with interactive discussions, Homework	
13. Week	Solar wind and its interaction with Earth's magnetic fields	Oral lectures with interactive discussions, Homework	
14. Week	Investigation of papers previously given to students	Oral lectures with interactive discussions, Homework	
15. Week	General Review	Oral Lectures	
16. Week	Final Exam	Written Exam	

## RESOURCES

Recommended Sources
M.C. Kelley, 2009, The earth's ionosphere: plasma physics and electrodynamics, Academic Press
R.D. Hunsucker, J.K. Hargreaves, 2003, The high-latitude ionosphere and its effects on radio propagation, Cambridge University Press.

## ASSESSMENT

Measurement and Evaluation Methods and Techniques
40% Mid Term Exam 60% Final Exam

## COURSE CATEGORY

Course Category	Percentage
Core Courses	% 100

## CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES

Programme Outcomes	Contribution Level	DK1	DK2
PY1	4	5	3
PY2	3	3	3
PY3	3	2	4
PY4	3	4	2
PY5	4	4	4
PY6	4	4	4
PY7	3	3	3
PY8	3	3	3
PY9	3	3	3
PY10	3	3	3
PY11	3	3	3
PY12	3	3	3
PY13	3	3	3
PY14	3	3	3
PY15	3	3	3

\*DK = Course's Contribution.

	0	1	2	3	4	5
Level of contribution	None	Very Low	Low	Fair	High	Very High

## ECTS CREDITS AND COURSE WORKLOAD

Event	Quantity	Duration (Hour)	Total Workload (Hour)
Class Hours (14 weeks)	14	3	42
Presentation/Seminar	2	2	4
Final Exam Preparation	1	25	25
Research&Project	2	16	32
Assignment 1	1	10	10
Mid Term Exam Preparation	1	21	21
Preliminary Study	14	1	14
Further Study	14	2	28
Mid Term Exam 1	1	3	3
Final Exam	1	3	3
Assignment 2	1	10	10
<b>Total Workload</b>			192
<b>Total Workload / 25.5 (s)</b>			7.53
<b>ECTS Credit of the Course</b>			8

