



Çanakkale Onsekiz Mart University

Education Information System

[DEGREE PROGRAMMES](#)[BOLOGNA](#)[THE INSTITUTION](#)[INFO FOR STUDENTS](#)You are here : [Home](#) [Master's Degree& Doctorate Degree](#) [Physics \(Master\)](#) [The Physics Of Atmosphere](#) **Course Information**

Course Information

COURSE INFORMATION

Course Title	Code	Semester	L+U Hour	Credits	ECTS
The Physics Of Atmosphere	FZ 5071		3 + 0	3.0	7.5

Prerequisites	None
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Language of Instruction	Turkish
Course Level	Second Cycle
Course Type	Elective
Mode of delivery	Face to face
Course Coordinator	Prof. Dr. İsmail TARHAN
Instructors	Prof. Dr. İsmail TARHAN
Assistants	
Course Objectives	The main objective of this course is to provide informations on electromagnetic radiation, refraction and scattering in the atmosphere, , thermodynamics of the atmosphere, dynamics of the atmosphere, atmospheric acoustics, climate issues.
Course Content	Topics to be covered in this cours include are some basic concepts and ideas, thermodynamics of the atmosphere, low, middle and upper atmosphere, atmospheric dynamics, atmospheric waves, atmospheric turbulence, electromagnetic radiation in the atmosphere, refraction in the atmosphere, scattering in the atmosphere, atmospheric acoustics, atmospheric electricity, numerical modelling, chaos and atmospheric predictability, climate and climate change.
Course Learning Outcomes	<ol style="list-style-type: none"> 1) Explain fundamentals knowledge on atmosphere. 2) describe the electromagnetic radiation. 3) Interpret the thermodynamics of atmosphere. 4) Explain acoustic of atmosphere and affecting factor. 5) Write climate and climate change and its effects.

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
- Assessment
- Course Category
- CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES
- ECTS credits and course workload

WEEKLY COURSE CONTENT

Week	Topics	Teaching and Learning Methods and Techniques	Study Materials
1. Week	Some Basic Concepts and Ideas	Oral lectures with interactive discussions, researches and homeworks.	
2. Week	Thermodynamics of the Atmosphere	Oral lectures with interactive discussions,	

		researches and homeworks.	
3. Week	Low, Middle and Upper Atmosphere	Oral lectures with interactive discussions, researches and homeworks.	
4. Week	Atmospheric Dynamics	Oral lectures with interactive discussions, researches and homeworks.	
5. Week	Atmospheric Waves	Oral lectures with interactive discussions, researches and homeworks.	
6. Week	Atmospheric Turbulance	Oral lectures with interactive discussions, researches and homeworks.	
7. Week	Electromagnetic Radiation in the Atmosphere	Oral lectures with interactive discussions, researches and homeworks.	
8. Week	Midterm Examination	Written Examination	
9. Week	Refraction in the Atmosphere	Oral lectures with interactive discussions, researches and homeworks.	
10. Week	Scattering in the Atmosphere	Oral lectures with interactive discussions, researches and homeworks.	
11. Week	Atmospheric Acoustics	Oral lectures with interactive discussions, researches and homeworks.	
12. Week	Atmospheric Electricity	Oral lectures with interactive discussions, researches and homeworks.	
13. Week	Numerical Modelling	Oral lectures with interactive discussions, researches and homeworks.	
14. Week	Chaos And Atmospheric Predictability	Oral lectures with interactive discussions, researches and homeworks.	
15. Week	Climate and Climate Change	Oral lectures with interactive discussions, researches and homeworks.	
16. Week	Final Exam	Written Exam	

RESOURCES

Recommended Sources
1- J.M.Wallace, J.M. Wallace, P. V. Hobbs (2006), Atmospheric Science, Second Edition: An Introductory Survey (International Geophysics), Elsevier In.
2- M. L. Salby (1996), Fundamentals of Atmospheric Physics, Volume 61 (International Geophysics), Academic Pres.

ASSESSMENT

Measurement and Evaluation Methods and Techniques		
Mid-term exam + Assignment + Research & Project and Presentation 40%, Final Exam 60%		
In-Term Studies	Quantity	Percentage
Mid Term Exam 1	1	40
Total	1	40
End-Term Studies	Quantity	Percentage
Final Exam	1	60
Total	1	60
Contribution Of In-Term Studies To Overall Grade		40
End-Term Studies		60
Total		100

COURSE CATEGORY

Course Category	Percentage
Support Courses	% 50
Transferable Skills Courses	% 50

CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES

Programme Outcomes	Contribution Level	DK1	DK2	DK3	DK4	DK5
<u>PY1</u>	5	5	4	5	5	4
<u>PY2</u>	4	4	4	4	4	4
<u>PY3</u>	4	5	4	5	5	4
<u>PY4</u>	4	4	4	4	4	4
<u>PY5</u>	4	4	4	4	4	4
<u>PY6</u>	5	4	4	5	5	4
<u>PY7</u>	4	4	4	4	4	4
<u>PY8</u>	5	5	4	5	5	4
<u>PY9</u>	5	5	5	5	5	5
<u>PY10</u>	4	4	4	3	5	5
<u>PY11</u>	4	4	4	4	4	4
<u>PY12</u>	4	4	4	4	4	4
<u>PY13</u>	4	5	5	4	4	4
<u>PY14</u>	4	4	4	4	4	5
<u>PY15</u>	4	5	5	4	4	4

*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)
Final Exam	1	3	3
Presentation/Seminar	1	5	5
Mid Term Exam Preparation	1	10	10
Final Exam Preparation	1	12	12
Further Study	14	3	42
Research&Project	1	12	12
Assignment 1	3	7	21
Mid Term Exam 1	1	3	3
Preliminary Study	14	3	42
Class Hours (14 weeks)	14	3	42
Total Workload			192
Total Workload / 25.5 (s)			7.53
ECTS Credit of the Course			8