



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 \(PhD\)](#) [Solar System Astrophysics](#) **Course Information**

Course Information

COURSE INFORMATION

Course Title	Code	Semester	L+U Hour	Credits	ECTS
Solar System Astrophysics	FZ-6016		3 + 0	3.0	7.5

Prerequisites	None
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Language of Instruction	English
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Course Level	Third Cycle
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Course Type	Elective
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Mode of delivery	Face to face
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Course Coordinator	Assist. Prof. Dr. Gülnur GÜN
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Instructors	Prof. Dr. Osman DEMİRKAN Assoc. Prof. Dr. Faruk SOYDUGAN Assoc. Prof. Dr. Esin SOYDUGAN Assist. Prof. Dr. Gülnur GÜN
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Assistants	
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Course Objectives	The aim of this course is to give knowledge to students about the Sun and the Solar System objects , exploration of solar system by satellites and robot instruments and results obtained, possibilities of life in solar system bodies, star systems including extrasolar planets in Milky way.
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Course Content	The history of Sun and the Solar System, The terrestrial planets: Mercury, Venus, Mars, Moon asteroid belt, The gas giants : Saturn, Jupiter, Uranus and Neptun, The Galilean moons of Jupiter, Titan and the other moons, The comets, History about the exploration of solar system by satellites and robot instruments and their results, The trans-Neptunian bodies, Kuiper Belt, The Oort Cloud, The possibilities of life in solar system bodies., The extrasolar planets in milkyway and their comparison with our solar system, The observational studies of planets.
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Course Learning Outcomes	1) Explain what the planet and the star are. 2) Define the Sun and its properties. 3) Explain the components of solar system in detail. 4) Compare the Sun and other stars and every planet to each other in solar system. 5) Interpret the extrasolar planets and the life possibility in them
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WEEKLY COURSE CONTENT

Week	Topics	Teaching and Learning Methods and Techniques	Study Materials
1. Week	The history of Sun and the Solar System	(Face to face lecture and the relevant part of the course materials is	

[Quick Access](#)

Physics (PhD)

[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](#)

		studied by the students)	
2. Week	The terrestrial planets: Mercury, Venus, Mars, Moon asteroid belt	(Face to face lecture and the relevant part of the course materials is studied by the students)	
3. Week	The gas giants : Saturn, Jupiter, Uranus and Neptun	(Face to face lecture and the relevant part of the course materials is studied by the students)	
4. Week	The Galilean moons of Jupiter, Titan and the other moons	(Face to face lecture and the relevant part of the course materials is studied by the students)	
5. Week	The comets	(Face to face lecture and the relevant part of the course materials is studied by the students)	
6. Week	History about the exploration of solar system by satellites and robot instruments and their results	(Face to face lecture and the relevant part of the course materials is studied by the students)	
7. Week	The trans-Neptunian bodies, Kuiper Belt	(Face to face lecture and the relevant part of the course materials is studied by the students)	
8. Week	Midterm exam	Written or test exam	
9. Week	The Oort Cloud	(Face to face lecture and the relevant part of the course materials is studied by the students)	
10. Week	The possibilities of life in solar system bodies-I	(Face to face lecture and the relevant part of the course materials is studied by the students)	
11. Week	The possibilities of life in solar system bodies-II	(Face to face lecture and the relevant part of the course materials is studied by the students)	
12. Week	The extrasolar planets in milkyway and their comparison with our solar system-I	(Face to face lecture and the relevant part of the course materials is studied by the students)	
13. Week	The extrasolar planets in milkyway and their comparison with our solar system-II	(Face to face lecture and the relevant part of the course materials is studied by the students)	

14. Week	The observational studies of planets-I	(Face to face lecture and the relevant part of the course materials is studied by the students)	
15. Week	The observational studies of planets-II	(Face to face lecture and the relevant part of the course materials is studied by the students)	
16. Week	Final exam	Written or test exam	

RESOURCES

Recommended Sources
Editörler : Özdemir, S., Güven, B., demircan, O., 2005, Astronomi ve Astrofizik, Asil yayın dağıtım.
Seeds, M.A., Backman, D.E., 2009, Astronomy : The solar system and beyond, Cengage Learning.
Carroll, B.W., Ostlie, D.A., 1996, An Introduction to Modern Astrophysics, Addison-Wesley Publishing Company, Inc.

ASSESSMENT

Measurement and Evaluation Methods and Techniques
Midterm exam (40 %) Final exam (60 %)

COURSE CATEGORY

Course Category	Percentage
Area of?Specialization Courses	% 100

CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES

Programme Outcomes	Contribution Level	DK1	DK2	DK3	DK4	DK5
<u>PY1</u>	5	5	5	5	5	5
<u>PY2</u>	3	3	3	3	3	3
<u>PY3</u>	5	5	5	5	5	5
<u>PY4</u>	1	1	1	1	1	1
<u>PY5</u>	1	1	1	1	1	1
<u>PY6</u>	5	5	5	5	5	5
<u>PY7</u>	5	5	5	5	5	5
<u>PY8</u>	5	5	5	5	5	5
<u>PY9</u>	5	5	5	5	5	5
<u>PY10</u>	5	5	5	5	5	5
<u>PY11</u>	4	4	4	4	4	4
<u>PY12</u>	5	5	5	5	5	5
<u>PY13</u>	5	5	5	5	5	5
<u>PY14</u>	5	5	5	5	5	5
<u>PY15</u>	5	5	5	5	5	5

*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
Further Study	14	6	84
Final Exam Preparation	1	20	20
Mid Term Exam Preparation	1	14.25	14.25
Final Exam	1	2	2
Mid Term Exam 1	1	1	1
Preliminary Study	14	2	28
Total Workload			191.25
Total Workload / 25.5 (s)			7.50
ECTS Credit of the Course			8