Fizik Bölümü / PHYSICS /

Course Code	Course Name	Teorical	Practice	Laboratory	Credits	ECTS
FZK-3017	General Astronomy I	3.00	0.00	0.00	3.00	6.00

Course Detail

Course Language	:	Turkish
Qualification Degree	:	Bachelor
Course Type	:	Optional
Preconditions	:	Not
Objectives of the Course	:	General Astronomy provides a quantitative introduction to the physics of the solar system, stars, the interstellar medium, the galaxy, and the universe, as determined from a variety of astronomical observations and models.
Course Contents	:	Topics include: planets, planet formation, stars, sun, star formation, the evolution of stars, supernovas, white dwarfs, neutron stars, black holes, star clusters, spherical and open clusters; interstellar medium, gas, dust, Newton's cosmology, the dynamic expansion of the universe and its thermal history, cosmic microwave background radiation, Big-Bang nucleosynthesis.
Recommended or Required Reading	:	1)Osman Demircan, Sacit Özdemir, Birol Gürol, Astronomi ve Astrofizik, 2002, ISBN: 9759091305 2) Zeilik, Michael, and Stephen A. Gregory. Introductory Astronomy and Astrophysics. 4th ed. Fort Worth, TX: Saunders College Publishing, 1997. ISBN: 9780030062285.
Planned Learning Activities and Teaching Methods	:	Lecture, Homework
Recommended Optional Programme Components	:	Current research topics for students
Course Instructors	:	Prof. Dr. Ahmet Erdem
Instructor's Assistants	:	Dr. Fahri ALİÇAVUŞ
Presentation Of Course	:	Face to face

Course Outcomes

Upon the completion of this course a student :

1 Knowledge and understanding of physical laws and principles in astrophysics and space science

2 An ability to present and interpret information about astrophysics and space science graphically.

Preconditions

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Weekly Contents

	Teorical	Practice	Laboratory	Preparation Info	Teaching Methods
1.Week	*Course Organization; Introduction				
2.Week	*Astronomy in the Era of Copernicus, Tycho, Kepler, and Galileo. Review of Classical Mechanics; Circular Orbits				
3.Week	*Introduction to Electromagnetic Waves; Doppler Effect				
4.Week	*Reflection, Refraction, and Optics				
5.Week	*Optical, Radio, and X-Ray Telescopes				
6.Week	*Distances and Magnitudes				
7.Week	*Binary Systems, Hertzsprung-Russell Diagrams				
8.Week		*exam			
9.Week		*Hydrostatic Equilibrium, Stellar Structure and Evolution, Nuclear Reactions in Stars, Star Formation			
10.Week		*Hydrostatic Equilibrium, Stellar Structure and Evolution, Nuclear Reactions in Stars, Star Formation			
11.Week	*Fermi Pressure, White Dwarf Stars, and the Chandrasekhar Limit, Neutron Stars, Supernovae, and Black Holes				
12.Week	*Sun, Formation and evolution of the solar system, exoplanets				
13.Week	*Sun, Formation and evolution of the solar system, exoplanets				
14.Week	*Samanyolu, HII Bölgeleri, Gökada Çeşitleri, Gökada Kütleleri ve Gökada Kümeleri				

Assesment Methods %

1 Final : 60.000

2 Vize : 20.000
3 Presentation/Seminar : 10.000
4 Research presentation : 10.000

ECTS Workload

Activities	Count	Time(Hour)	Sum of Workload
Vize	1	3.00	3.00
Final	1	3.00	3.00
Attending lectures	14	2.00	28.00
Application / Practice	3	4.00	12.00
Laboratory	4	7.00	28.00
Research presentation	8	2.00	16.00
Theoretical Lecturing	14	4.00	56.00
Tartışmalı Ders	14	2.00	28.00
Presentation/Seminar	4	1.00	4.00
Further Study	14	1.00	14.00
		Total :	192.00
		Sum of Workload / 30 (Hour) :	6
		ECTS :	6.00

Program And OutcomeRelation

	P.O. 1	P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10	P.O. 11	P.O. 12	P.O. 13	P.O. 14	P.O. 15	P.O. 16	P.O. 17	P.O. 18	P.O. 19	P.O. 20	P.O. 21	P.O. 22	P.O. 23	P.O. 24
L.O. 1	4	3	5	4	4	3	4	3	4	3	3	4	4	3	4	3	4	4	4	4	4	5	5	5
L.O. 2	5	5	5	5	5	5	4	3	4	4	4	4	4	4	5	3	4	4	4	4	5	5	5	5

Ders/Program Çıktıları İlişkisi

P.O. 1	P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10	P.O. 11	P.O. 12	P.O. 13	P.O. 14	P.O. 15	P.O. 16	P.O. 17	P.O. 18	P.O. 19	P.O. 20	P.O. 21	P.O. 22	P.O. 23	P.O. 24	P.O. 2
5	5	5	5	5	5	5	3	4	4	4	4	4	4	4	5	3	4	4	4	5	5	5	5	4