

BALIKESİR UNIVERSITY
NECATİBEY FACULTY OF EDUCATION
UNIVERSITY ELECTIVE COURSE PROPOSAL FORM

Department / Program	Department of Mathematics and Science Education / Physics Education						
Course Title	Astronomy II						
Semester	Fall	X		Spring	X		
Language	Turkish	X		English			
Credits	Theory	2		Application	0		Total 2
ECTS	3						
Type of Program	Formal Education			Face to face			
Course Objectives	1- Making a telescope. 2- Observing the sky and making inferences. 3- Measuring/calculating the circumference of the Earth. 4- Measuring/calculating the distance and radius of celestial bodies such as the Moon, Mars, Jupiter, etc. 5- Measuring/calculating the masses of the Earth, Sun, planets and stars. 6- Calculating the masses of single stars and the radius of stars. 8- Making a sky map.						
Course Content	Observation, measurement and calculations in astronomy.						
Course Prerequisites	USD0005 Astronomy course must be taken and passed.						
Instructor	Prof. Dr. Hüseyin Küçüközer			mail :hkucuk@balikesir.edu.tr			
Course Assistants	-			mail : -			
Course Internship Status	The course has no internship.						
Course Resources	-Astronomi ve Uzay Bilimleri, Prof Dr. Zeki Aslan ve ark. 1996. -Deep Space: Beyond the Solar System to the End of the Universe, Govert Schilling, Black Dog & Leventhal, 2014. - https://starchild.gsfc.nasa.gov/docs/StarChild/questions/parallax.html - chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.giss.nasa.gov/edu/nycri/units/pmarchase/1-mass_of_a_planet.pdf - https://www.youtube.com/watch?v=jT59v_TLm_Q - https://www.youtube.com/watch?v=-CUu13-a18A - https://www.space.com/ - https://www.nasa.gov/ - https://www.youtube.com/results?search_query=formation+of+stars - https://www.youtube.com/watch?v=pJZQIX2Fs7A						
Course Category	Natural Sciences						
Planned Learning Activities and Methods	Inquiry, Prediction-Observation-Explanation, Question-Answer						
Course Evaluation Criteria			Course ECTS Calculation Content				
Semester Studies	Quantity	Contribution (%)	Activity	Quantity	Duration	Total Work Load (Hour)	
Mid-terms	1	40	Course Duration	14	2	28	
Short Exam			Out of Class Work Duration	14	1	14	
Homework			Midterm Exams	1	20	20	
Attendance			Final Exam	1	20	20	
Practice			Total Work Load: 82				

Project			ECTS Credits : 3
Final Exam	1	60	
Learning Outcomes	- Makes a simple telescope. - Measures/calculates the distances, masses and radius of celestial bodies. - Makes inferences and predictions from observations. - Prepares a celestial map.		
Course Topics			
Week	Topic	Pre-Study	Materials
1	Introduction, course introduction and definitions of basic quantities in science, measurement tools.	Preliminary research of the relevant subject	Course resources and presentations
2	Making observations with a telescope, obtaining results.	Preliminary research of the relevant subject	Course resources and presentations
3	Making inferences and predictions from the results obtained.	Preliminary research of the relevant subject	Course resources and presentations
4	Measuring the circumference of the Earth - Eratosthenes experiment	Preliminary research of the relevant subject	Course resources and presentations
5	Measuring the distance and radius of solar system objects	Preliminary research of the relevant subject	Course resources and presentations
6	Measuring the distance and radius of solar system objects	Preliminary research of the relevant subject	Course resources and presentations
7	Measuring the mass of celestial bodies.	Preliminary research of the relevant subject	Course resources and presentations
8	Midterm Exam	Preliminary research of the relevant subject	Course resources and presentations
9	Measuring the mass of celestial bodies.	Preliminary research of the relevant subject	Course resources and presentations
10	Measuring the mass of celestial bodies	Preliminary research of the relevant subject	Course resources and presentations
11	Measuring the radius of celestial bodies	Preliminary research of the relevant subject	Course resources and presentations
12	Measuring the temperature of celestial bodies.	Preliminary research of the relevant subject	Course resources and presentations
13	Making a sky map	Preliminary research of the relevant subject	Course resources and presentations
14	Modeling the measurement methods developed.	Preliminary research of the relevant subject	Course resources and presentations
15	Evaluation	Preliminary research of the relevant subject	Course resources and presentations

Contribution of Learning Outcomes to Program Outcomes