



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Astronomy

Course

Field of study

Aviation

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

2/3

Profile of study

general academic

Course offered in

Polish

Requirements

compulsory

Number of hours

Lecture

15

Laboratory classes

0

Other (e.g. online)

0

Tutorials

0

Projects/seminars

0

Number of credit points

1

Lecturers

Responsible for the course/lecturer:

dr Justyna Gołębiewska

jg@amu.edu.pl

Responsible for the course/lecturer:

Uniwersytet im. Adama Mickiewicza w Poznaniu

Obserwatorium Astronomiczne

Prerequisites

Knowledge: Basic knowledge of physics

Skills: Can obtain information from literature, databases and other sources

Social competences: Is aware of the responsibility for own work and readiness to submit to the rules of teamwork and bear the responsibility of the role. He is aware of the importance of behaving in a professional manner, observing the rules of professional ethics and demanding it from others

Course objective

Getting to know the basic issues of modern astronomy. Understanding phenomena occurring in stars, planets and outer space



Course-related learning outcomes

Knowledge

1. has detailed knowledge related to selected issues in the field of the most important phenomena occurring in the Earth's atmosphere, the possibility of their prediction, recognition, research, as well as limiting the negative impact of human activity on the surrounding environment

Skills

1. when formulating and solving tasks related to civil aviation, is able to apply appropriately selected methods, including analytical, simulation or experimental methods

Social competences

1. understands that in technology, knowledge and skills very quickly become obsolete

2. is aware of the social role of a technical university graduate, in particular understands the need to formulate and provide the society, in an appropriate form, with information and opinions on engineering activities, technological achievements, as well as the achievements and traditions of the engineer profession

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

- assessment of knowledge and skills demonstrated in the written test.

Programme content

The structure of the universe. Electromagnetic radiation - the main source of information about the Universe - methods of registration and analysis.

Star Evolution. The formation of the solar system.

The structure of the sun. Solar activity and its impact on the Earth.

Structure, dynamics, physical characteristics of planets, dwarf planets and moons of the Solar System.

Genesis and structure of atmospheres and magnetospheres of planets and the Sun.

Earth: atmosphere, magnetosphere, interior structure, surface shaping mechanisms.

Small Solar System Bodies.

Other planetary systems: search methods, planet statistics, dynamic features.

History and present day of space research, the most important planetary missions.

Celestial sphere - natural and artificial objects visible on the celestial sphere.

Satellite techniques? basic issues



Teaching methods

Informative lecture (conventional) (transmission of information in a systematic way) - may have course (propedeutic) or monographic (specialist) character

Bibliography

Basic

1. Encyclopedia of Astronomy and Astrophysics - eaa.iop.org

Additional

1. Berotti, B., Farinella, P., Vokrouhlicky, D., 2003, Physics of the Solar System. Dynamics and Evolution, Space Physics and Spacetime Structure, Kluwer Academic Publishers.

Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,0
Classes requiring direct contact with the teacher	15	0,5
Student's own work (literature studies, preparation for laboratory classes / preparation for the test, preparation of the project) ¹	10	0,5

¹ delete or add other activities as appropriate