COURSE DESCRIPTION CARD - SYLLABUS

Course name
Astronomy [S1Lot2>Astro]

Course

Field of study
Aviation

Year/Semester
2/3

Area of study (specialization)
Air Traffic Organisation

Profile of study
general academic

Level of study
first-cycle

Course offered in
Polish

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
15

Laboratory classes
0

Other
0

Tutorials
0

Projects/seminars
0

Number of credit points

1,00

Coordinators

Halina Prętka-Ziomek

Lecturers

Prerequisites

Knowledge: Basic knowledge of physics Skills: Is able to obtain information from literature, databases and other sources Social competences: Is aware of the responsibility for their own work and is ready to comply with the rules of teamwork and take responsibility for the role they play. Is aware of the importance of behaving in a professional manner, observing the rules of professional ethics and demanding the same from others

Course objective

Learning the basics of modern astronomy. Understanding phenomena occurring in stars, planets and 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. can, when formulating and solving tasks related to civil aviation, apply appropriately selected methods,

Social competences:
1. understands that in technology, knowledge and skills very quickly become obsolete
2. is aware of the social role of a graduate of a technical university, in particular understands the need to formulate and convey to the society, in an appropriate form, 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 the knowledge and skills demonstrated in the written examination.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

none

Programme content

The structure of the Universe
Evolution of stars
The structure of the Sun
The structure, dynamics, physical characteristics of planets
The genesis and structure of atmospheres and magnetospheres of planets and the Sun.
The Earth
Small bodies of the Solar System.
Other planetary systems
The history and present of space research
The celestial sphere
Satellite techniques

Course topics

The structure of the Universe. Electromagnetic radiation the main source of information about the Universe -
methods of recording and analysis.
Evolution of stars. The formation of the Solar System.
The structure of the Sun. Solar activity and its influence on the Earth.
The structure, dynamics, physical characteristics of planets, dwarf planets and moons of the Solar System. The
genesis and structure of atmospheres and magnetospheres of planets and the Sun.
The Earth: atmosphere, magnetosphere, interior structure, surface shaping mechanisms. Small Bodies of the Solar
System.
Other planetary systems: search methods, planet statistics, dynamic characteristics. The history and present of
space research, the most important planetary missions.
The celestial sphere - natural and artificial objects visible on the celestial sphere. Satellite techniques - basic issues

Teaching methods

Informative (conventional) lecture (transmission of information in a systematic way) - may be of a course (propaedeutic) or monographic (specialist) nature

Bibliography

Basic:
1. Encyclopedia of Astronomy and Astrophysics - eaa.iop.org
Uzupełniająca

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

Additional:
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Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,00
Classes requiring direct contact with the teacher	15	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	10	0,50