



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Artificial Intelligence [S1Lot2>AI]

Course

Field of study

Aviation

Year/Semester

1/1

Area of study (specialization)

–

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

2,00

Coordinators

dr inż. Przemysław Grzymisławski

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Lecturers

Prerequisites

Basic knowledge in the field of computer science and mathematics.

Course objective

Providing knowledge of the basics of artificial intelligence and machine learning

Course-related learning outcomes

Knowledge:

has an extended and in-depth knowledge of mathematics and physics useful for formulating and solving complex technical tasks related to aviation and modeling real problems

Skills:

is able to properly use information and communication techniques, applicable at various stages of the implementation of aviation projects

Social competences:

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

can think and act in an entrepreneurial way, incl. finding commercial applications for the created system, taking into account not only the business benefits, but also the social benefits of the conducted activity

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

LECTURE: Assessment of knowledge and skills - tasks performed during lectures - practical use of acquired knowledge

Programme content

1. Basic concepts of artificial intelligence
2. Artificial intelligence methods
3. Selected issues of artificial intelligence
4. State space search
5. Evolutionary computations
6. Reasoning based on logic
7. Image recognition and cluster analysis
8. Areas of application of artificial intelligence systems

Course topics

1. History of artificial intelligence research
2. Basic concepts of AI;
3. State space and search tree
4. Genetic algorithms
5. Description of the world using first-order logic
6. Image recognition task
7. Image perception and recognition
8. Social and emotional intelligence and creativity
9. Prospects of artificial intelligence

Teaching methods

Online information lecture. Students carrying out experiments independently on computers.

Bibliography

Basic:

Transport lotniczy. Zagrożenia ekologiczne oraz sposoby ich ograniczania - Paweł Głowacki, Stefan Szczeciński

Perspektywy rozwoju lotnictwa wojskowego i wykorzystania kosmosu - Jerzy Gotowała

Additional:

Bezzałogowe statki powietrzne. Nowa era w prawie lotniczym. Rozwój regulacji prawnych dotyczących bezpieczeństwa lotnictwa bezzałogowego - Piotr Kasprzyk

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
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)	35	1,50