History of the Development of Artificial Intelligence

Course description sheet

Basic information

Field of study Social Informatics	**Didactic cycle** 2026/2027
Major -	**Course code** HIFSS.I2.17988.26
Organisational unit Faculty of Humanities	**Lecture languages** Polish
Study level First-cycle studies	**Mandatoriness** Obligatory
Form of study Full-time studies	**Block** Core Modules
Profile Practical	**Course related to scientific research** No

Course coordinator	Jakub Gomułka
Lecturer	Jakub Gomułka

Period	**Method of verification of the learning outcomes**	**Number of ECTS credits**
Semester 2	Exam **Activities and hours** Lectures: 14 Laboratory classes: 14	3

Goals

C1	Introducing students to the history of the development of the artificial intelligence research program and its milestones
C2	Teaching students to apply selected algorithmic techniques developed within the artificial intelligence research program

Course's learning outcomes

Code	Outcomes in terms of	Learning outcomes prescribed to a field of study	Methods of verification
Knowledge – Student knows and understands:			
W1	A student knows the history of the development of the artificial intelligence research program from the 1950s to the 2020s and can list the most important techniques associated with this program	IFS1P_W01	Examination
W2	A student knows and understands the basics of game theory and general issues related to probabilistic reasoning	IFS1P_W01	Execution of laboratory classes, Examination
Skills – Student can:			
U1	A student can practically implement selected search algorithms	IFS1P_U05, IFS1P_U10	Execution of laboratory classes
U2	A student applies algorithmic techniques related to constraint satisfaction problems (CSP)	IFS1P_U05	Execution of laboratory classes, Examination

Program content ensuring the achievement of the learning outcomes prescribed to the module

Lectures:

- General outline of the history of the artificial intelligence research program
- Fundamental mathematical issues related to artificial intelligence techniques
- Problem-solving and search algorithms
- Constraint satisfaction problems
- Probabilistic reasoning
- Basics of game theory and decision-making under uncertainty

Laboratory Exercises:

- Implementation of selected search algorithms
- Algorithmic solving of constraint satisfaction problems
- Probabilistic programming

Student workload

Activity form	Average amount of hours* needed to complete each activity form
Lectures	14
Laboratory classes	14
Preparation for classes	30
Contact hours	5
Preparation of project, presentation, essay, report	15

Examination or final test/colloquium	2

Student workload	**Hours** 80
Workload involving teacher	**Hours** 28

* hour means 45 minutes

Program content

No.	Program content	Course's learning outcomes	Activities
1.	General outline of the history of the artificial intelligence research program	W1	Lectures
2.	Fundamental mathematical issues related to artificial intelligence techniques	W2	Lectures
3.	Problem-solving and search algorithms	W1, U1	Lectures
4.	Constraint satisfaction problems	W1, U2	Lectures
5.	Probabilistic reasoning	W2	Lectures
6.	Basics of game theory and decision-making under uncertainty	W2	Lectures
7.	Implementation of selected search algorithms	U1	Laboratory classes
8.	Algorithmic solving of constraint satisfaction problems	U2	Laboratory classes
9.	Probabilistic programming	W2	Laboratory classes

Extended information/Additional elements

Teaching methods and techniques :

Problem Based Learning, Project Based Learning, Demonstration, Lecture

Activities	Methods of verification	Credit conditions
Lectures	Examination	A prerequisite for taking the exam is prior completion of the laboratory exercises. A positive final grade is achieved after obtaining a passing result on the exam, following successful completion of the exercises. A condition for passing the course is correctly answering more than 50% of the questions on the written exam
Lab. classes	Execution of laboratory classes	A condition for passing the laboratory is the completion of all assigned laboratory exercises in the form of mini-projects.

Prerequisites and additional requirements

Basic programming skills in Python
Basic knowledge on the contemporary AI technology

Literature

Obligatory

1. Stuart Russell, Peter Norvig, Sztuczna inteligencja. Nowe spojrzenie. Wydanie IV. Tom 1, Helion: Gliwice 2023

Learning outcomes prescribed to a field of study

Code	Content
IFS1P_U05	posiada umiejętność analizy proponowanego rozwiązania konkretnych problemów i proponuje odpowiednie rozstrzygnięcia w tym zakresie, posiada umiejętność wdrażania proponowanych rozwiązań.
IFS1P_U10	potrafi posługiwać się technikami informacyjno-komunikacyjnymi właściwymi do realizacji różnorodnych zadań oraz umie prezentować problem wykorzystując odpowiednie programy komputerowe.
IFS1P_W01	ma wiedzę z zakresu algebry, analizy matematycznej, probabilistyki, informatyki, metod programowania, konstrukcji i ekstrakcji baz danych.