COURSE DESCRIPTION CARD - SYLLABUS

Course name
The Latest Trends in Artificial Intelligence

Course

Field of study	Year/Semester
Computing	2/3
Area of study (specialization)	Profile of study
Artificial Intelligence	general academic
Level of study	Course offered in
Second-cycle studies	Polish
Form of study	Requirements
full-time	elective

Number of hours

Lecture	Laboratory classes	Other (e.g. online)
Tutorials	Projects/seminars	
	30	

Number of credit points

1

Lecturers

Responsible for the course/lecturer:

Wojciech Kotłowski, Ph.D., D.Sc.
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Responsible for the course/lecturer:

Miłosz Kadziński, Ph.D., D.Sc.
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Prerequisites

The student should have a general knowledge on the latest developments in the field of artificial intelligence and machine learning, and be familiar with the current trends and research in these areas. The student should also have the ability to model real problems using the mathematical apparatus acquired during the studies, as well as understand the non-technical aspects of the applied artificial intelligence technologies, including social, ethical and legal aspects.

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The student should also have a research experience gained during the on-site training (1-2 research visits) at research centers in Poland or abroad, as well as experience in research and development trends obtained as a result of participating in scientific conferences.

Knowledge of English at the B2 level is also required.

Course objective

The aim of the course is to get acquainted with the latest research trends in the field of artificial intelligence, to learn about the working methods of research centers and the interests of specialists in this field, and to exchange innovative ideas and experiences. Students also deal with non-technical aspects of artificial intelligence technology, e.g. legal, ethical and social aspects.

Course-related learning outcomes

Knowledge

1. Has advanced and detailed knowledge of the processes occurring in the life cycle of hardware or software information systems closely related to artificial intelligence[K2st_W5]

2. Knows advanced methods, techniques and tools used to solve complex engineering tasks and conduct research in the field of artificial intelligence [K2st_W6]

3. Knows the economic, legal and other determinants of the activities of IT companies [K2st_W8]

4. Has basic knowledge of management / running a business and individual entrepreneurship [K2st_W9]

Skills

1. Is able to obtain information from literature, databases and other sources (both in Polish and English), integrate them, interpret and critically evaluate them, draw conclusions and formulate and fully justify opinions [K2st_U1]

2. Is able to use information and communication techniques used in the implementation of IT projects [K2st_U2]

3. Is able to assess the usefulness of methods and tools for solving an engineering task, consisting in the construction or evaluation of an IT system or its components, including the limitations of these methods and tools; [K2st_U9]

4. Is able - in accordance with a given specification, taking into account non-technical aspects - to design a complex device, IT system or process and implement this project - at least in part - using appropriate methods, techniques and tools, including adapting to this purpose existing tools or developing new ones [K2st_U11]

5. Can communicate both in Polish and English using different techniques in a professional environment and in other environments, also using IT tools [K2st_U12]

6. Is able to interact in a team, taking various roles in it [K2st_U15]

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Social competences

1. Understands that in the field of IT the knowledge and skills quickly become obsolete [K2st_K1]

2. Understands the importance of using the latest knowledge in the field of computer science in solving research and practical problems [K2st_K2]

3. Is aware of the need to develop professional achievements and comply with the rules of professional ethics [K2st_K4]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Each student prepares a multimedia presentation about his or her experience and problems encountered during the research visits and scientific conferences. The presentation is given in the class and is discussed jointly by the teacher and all students. The assessment consists of:

1. Assessment of the presentation, based on the following criteria: formal correctness, factual correctness, content and content adequacy, as well as informational and educational values.

2. Assessment of student activity during all classes, in particular participation in discussions

Programme content

As part of the course, students will learn about the latest research trends in the field of artificial intelligence, based on their own and others' experiences gained during visits to leading research centers in this field and visits to scientific conferencess.

At each class, there is a multimedia presentation of a selected student (or a group of students), concerning the experience in research and development trends, gained during research visits and scientific conferences in Poland or abroad, the working methods of the visited center, the interests of specialists in the field of artificial intelligence, innovative ideas and the latest scientific trends. The presentation is followed by an analysis of the presented content, during which the speakers answer questions and participate in the substantive discussion. During the course, students expand their substantive knowledge, as well as learn about the legal, ethical and social aspects of artificial intelligence technology. At the same time, students develop their communication, oratory, effective argumentation, language (in the case of English-language presentations), teamwork and social skills

Teaching methods

Multimedia presentations summarizing completed projects, obtained results, demonstrations of developed or developed software, questions and discussion

Bibliography

Basic

1. Profesjonalna prezentacja multimedialna. Jak uniknąć 27 najczęściej popełnianych błędów, Lenar P., Helion, Gliwice, 2010.

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2. Sekrety skutecznych prezentacji multimedialnych. Wydanie II rozszerzone, Lenar P., Helion, Gliwice, 2011.

Additional

1. A. Jay, R. Jay: "Skuteczna prezentacja", Zysk i S-ka, Poznań, 2001.

2. R. Williams: "Prezentacja, która robi wrażenie. Projekty z klasą", Helion, Gliwice, 2011.

Breakdown of average student's workload

	Hours	ECTS
Total workload	30	1,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) [1]	0	0,0

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[1]　　　　　　　　　　　delete or add other activities as appropriate

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