KARTA PRZEDMIOTU

I. Dane podstawowe

Nazwa przedmiotu	Artificial intelligence
Nazwa przedmiotu w języku angielskim	Artificial intelligence
Kierunek studiów	Informatyka – grupa w języku angielskim
Poziom studiów (I, II, jednolite magisterskie)	Pierwszego stopnia
Forma studiów (stacjonarne, niestacjonarne)	stacjonarne
Dyscyplina	informatyka
Język wykładowy	angielski

Koordynator przedmiotu/osoba odpowiedzialna	dr hab. R. Kozera

Forma zajęć *(katalog zamknięty ze słownika)*	Liczba godzin	semestr	Punkty ECTS
wykład	30	IV	5
konwersatorium			
ćwiczenia			
laboratorium	30	IV	
warsztaty			
seminarium			
proseminarium			
lektorat			
praktyki			
zajęcia terenowe			
pracownia dyplomowa			
translatorium			
wizyta studyjna			

Wymagania wstępne	W1. Logic. Propositional logic. Predicate logic.
	W2. Linear algebra and analytic geometry.
	W3. Discrete mathematics.
	W4. Introduction to computer science.

II. Cele kształcenia dla przedmiotu

C1. Familiarize students with the basics of proving the truth of sentences and formulas, truth table, application of inferences and refutation in the area of artificial intelligence
C2. Familiarize students with declarative programming in a selected programming language
C3. Familiarize students with automation of theorem proving.
C4. Exercises with documentation
C5. Application of artificial intelligence methods

III.   Efekty uczenia się dla przedmiotu wraz z odniesieniem do efektów kierunkowych

Symbol	Opis efektu przedmiotowego	Odniesienie do efektu kierunkowego
WIEDZA		
W_01	The student understands the meaning of computer science in the area of artificial intelligence	K_W01
W_02	The student has a basic knowledge in the area of artificial intelligence	K_W06
UMIEJĘTNOŚCI		
U_01	The student has the ability to search and to use knowledge in order to solve defined informatics problems (especially in the area of AI) using documentation, help files, Internet and literature	K_U02
U_02	The student is able to use specialized vocabulary in the area of computer science and artificial intelligence	K_U04
U_03	The student is able to apply basic recursive algorithms, searching algorithms, sorting algorithms and implementing them in declarative programming language and chosen programming environment.	K_U09
U_4	The student can apply data structures, implement data structures and use them.	K_U10
U_5	The student is able to use basic issues of artificial intelligence	K_U16
U_6	The student can use mechanisms supporting decision making to solve practical problems	K_U18
KOMPETENCJE SPOŁECZNE		
K_01	The student is aware of the level of his knowledge and ability. He understands the need for continuous improvement of qualifications.	K_K01
K_02	The student can communicate using various techniques in a professional environment.	K_K07

IV.   Opis przedmiotu/ treści programowe

1 Introduction to artificial intelligence. 2 Propositional logic in artificial intelligence. 3 Predicate logic in artificial intelligence. 4 Unification algorithm. 5 Programming in Prolog. Lists. 6 Herbrand's theorem. 7 Searching nad SLD trees.

V.   Metody realizacji i weryfikacji efektów uczenia się

Symbol efektu	Metody dydaktyczne (lista wyboru)	Metody weryfikacji (lista wyboru)	Sposoby dokumentacji (lista wyboru)

WIEDZA			
W_01	- Laboratory analysis - Discussion, - Conventional lecture, - Conversational lecture, - Problem lecture	- written exam, test, - preparation for classes	- written work, - paper printout, - protocol
W_02	- Laboratory analysis - Discussion, - Conventional lecture, - Conversational lecture, - Problem lecture	- written exam, test, - preparation for classes	- written work, - paper printout, - protocol
UMIEJĘTNOŚCI			
U_01, U_02, U_03, U_04, U_05, U_06, U_07	- Laboratory classes, - Practical classes, - Discussion, - Project-based learning	- written exam, test, - project, - preparation for classes	- written work, - folder of files, - protocol,
KOMPETENCJE SPOŁECZNE			
K_01	- Laboratory classes, - Discussion, - Project-based learning,	- written exam, test, - project, - work and activity during laboratories and lectures	- register of bonus points, - written work, - folder of files, - protocol,
K_02	- Laboratory classes, - Discussion, - Project-based learning,	- written exam, test, - project, - work and activity during laboratories and lectures	-register of bonus points, - written work, - folder of files, - protocol,

VI.   Kryteria oceny, wagi…

CLASSES:

Passing the classes - test (50% of final evaluation) after the half semester. Group project to complete (50% of final evaluation).

Grading scale: below 50% fail (2.0).

Detailed assessment rules are given to students with each subject edition.

LECTURE:

Written exam (for students which pass classes).

Grading scale: 50%-57% sufficient (3.0), 58%-64% satisfactory (3.5), 65%-72% good (4.0), 73%-80% very good (4.5), above 80% excellent (5.0), below 50% fail (2.0)

VII. Obciążenie pracą studenta

Forma aktywności studenta	Liczba godzin
Liczba godzin kontaktowych z nauczycielem	Lecture 30, Classes 30, Consultations 30,
Liczba godzin indywidualnej pracy studenta	Preparation for classes 30, Studying literature 10, Preparation for the test and exam 20,

VIII. Literatura

Literatura podstawowa
1. R. Kozera, "Artificial Intelligence and Logic Programming" - wykład 2. G. Royle, "Logic programming", 1999 3. M. Ben-Ari, „Mathematical Logic for Informatics", 2006
Literatura uzupełniająca
1. J. Wielemaker, "SWI Prolog 2.7 Reference Manual", Updated for version 2.7.14, September 1996, University of Amsterdam, Dept. of Social Science Informatics 2. SWI Prolog Documentation, link: swi-prolog.org (16.12.2017) 3. James Lu, Jeru d J. Mead, „Prolog. A Tutorial Introduction", Computer Science Department Bucknell University, Lewisburg, PA 17387. 4. Leon S. Sterling, Ehud Y. Shapiro, „The Art of Prolog, Second Edition. Advanced Programming Techniques", MIT Press, 1994 5. William F.Clocksin, Christopher S. Mellish, „Programming in Prolog. Using ISO Standard. Fifth Edition", Springer-Verlag Berlin Heidelberg 2003