Załącznik nr 9
do Zarządzenia Rektora PŚk Nr 35/19
w brzmieniu ustalonym Zarządzeniem Nr 12/22

COURSE DESCRIPTION

Course code	full-timestudies	
	part-time-studies	
Course name	**Metody przetwarzania języka naturalnego**	
Course name in English	**Natural language processing methods**	
Valid from academic year	**2022/23**	

PLACEMENT IN THE TEACHING PROGRAM

Field of study	Computer Science
Level of education	1st degree
Studies profile	General
Form and method of teaching classes	**Full-time and part-time studies**
Specialization	**All specializations/Information systems / Computer graphics / Information and communication technology**
Organizational unit responsible for the course	**Department of Information Systems**
Course coordinator	**Dr inż. Adam Krechowicz**
Approved by	**Dean of the Faculty of Electrical Engineering, Automatic Control and Computer Science Roman Deniziak, KUT prof., DSc, PhD**

GENERAL CHARACTERISTIC OF THE COURSE

Course affiliation		**Specialty subject**
Course status		1st degree
Language		**English**
Semester	full-timestudies	**VI**
	part-time-studies	**VII**
Requirements		**Intelligent Systems I**
Exam (YES/NO)		**NO**
ECTS		**4**

Course form		**lecture**	**classes**	**laboratory**	**project**	**other**
Hours per semester	full-timestudies	**30**		**30**		
	part-time-studies	**18**		**18**		

LEARNING RESULTS

Category	Result Symbol	Learning Results	References to the field of study results
Knowledge	W01	Knows and understands the basic methods of text processing	INF1_W17
	W02	Knows and understands the methods of natural language representation	INF1_W17
	W03	Knows and understands the methods of text processing	INF1_W17
Skills	U01	Can use the basic methods of text processing	INF1_U17
	U02	Can use the methods of natural language representation	INF1_U17
	U03	Can use the methods of text processing	INF1_U17
Social competence	K01	Is ready to cooperate in the creation of systems using natural language processing	INF1_K1, INF1_K2

COURSE CONTENT

Course Form	Content
lecture	Basic methods of text coding and processing Creation and use of regular expressions Natural language representation methods Basic methods of natural language processing (tokenization, detection of parts of speech, natural language parsing, correlation search) Determining the sentiment Text classification Text generation
laboratory	Tworzenie wyrażeń regularnych Implementacja metod przetwarzania języka naturalnego Implementacja metod zamiany reprezentacji języka naturalnego Klasyfikacja tekstu Generowanie tekstu

LEARNING RESULTS VERIFICATION METHODS

Result Symbol	Learning results verification methods					
	Oral Exam	Written Exam	Midterm	Project	Report	Other
W01			X			
W02			X			
W03			X			
U01			X			
U02			X			
W03			X			
K01			X			

ASSESSMENT FORMS AND CRITERIA

Course Form	Assessment Form	Assessment Criteria
lecture	Passing with grade	The student obtained a minimum of 50% of the points from the test
classes		
laboratory	Passing with grade	The student obtained a minimum of 50% of the points from the test
project		
other		

STUDENT'S VOLUME OF WORK

ECTS Balance												
No.	Activity Type	Student Involvement										Unit
		full-timestudies					part-time-studies					
1)	Participation in classes according to the schedule	Lec	C	Lab	P	S	Lec	C	Lab	P	S	h
		30		30			18					
2)	Other (consultations, exams)	2		2			2		2			h
3)	**Total with the direct assist of an academic teacher**	**64**					**40**					h
4)	**Number of ECTS, that students obtains with the direct assist of an academic teacher**	**2.56**					**1,6**					ECTS
5)	**Hours of unassisted student work**	**36**					**60**					h
6)	**Number of ECTS that student obtains working unassisted**	**1,44**					**2,4**					ECTS
7)	**Practical classes volume of work**	**30**					**18**					h
8)	**Number of ECTS obtained by student at practical classes**	**1,2**					**0,72**					ECTS
9)	**Total student's volume of work expressed in hours**	**100**					**100**					h
10)	**ECTS**	**4**										ECTS

BIBLIOGRAPHY

1. Lane Hobson, Cole Howard, Hannes Hapke; Przetwarzanie języka naturalnego w akcji; Wydawnictwo Naukowe PWN
2. Steven Bird, Ewan Klein, Edward Loper; Natural Language Processing with Python: Analyzing Text with the Natural Language Toolkit; O'Reilly
3. Uday Kamath, John Liu, James Whitaker; Deep Learning for NLP and Speech Recognition; Springer
4. Richard M Reese, Ashishsingh Bhatia; Natural Language Processing with Java: Techniques for building machine learning and neural network models for NLP; Packt Publishing