DESCRIPTION OF THE COURSE OF STUDY

Course code		
Name of the course in	Polish	***Techniki informacyjno-komunikacyjne***
	English	***Information and Communication Technologies***

1. **LOCATION OF THE COURSE OF STUDY** within the system of studies

1.1. Field of study	**Data engineering**
1.2. Mode of study	**Full-time studies**
1.3. Level of study	**First-cycle of engineering studies**
1.4. Profile of study*	**General academic**
1.5. Person/s preparing the course description	**dr inż. Regina Stachura**
1.6. Contact	**regina.stachura@ujk.edu.pl**

2. **GENERAL CHARACTERISTICS OF THE** course of study

2.1. Language of instruction	**English**
2.2. Prerequisites*	**none**

3. **DETAILED CHARACTERISTICS OF THE COURSE OF STUDY**

3.1. **Form of classes**		Laboratory
3.2. **Place of classes**		Didactic classes at at UJK facilities – computer laboratory
3.3. **Form of assessment**		credit with a grade
3.4. **Teaching methods**		Practical classes with students working at the computer
3.5. **Bibliography**	**Required reading**	1. Mercury Learning and Information , Gupta C. P., Goyal K. K., Computer Concepts and Management Information Systems. A Comprehensive Guide to Modern Computing and Information Management, Mercury Learning, 2024 2. Foulkes L., Learn Microsoft Office 2021. Your one-stop guide to upskilling with new features of Word, PowerPoint, Excel, Outlook, and Teams - Second Edition, Packt Publishing, 2022 3. Carter N., Office 365 User Guide. A comprehensive guide to increase collaboration and productivity with Microsoft Office 365, Packt Publishing, 2019 4. Mount G., Modern Data Analytics in Excel, O'Reilly Media, 2024
	Further reading	1. Mount G., Advancing into Analytics, O'Reilly Media, 2021 2. Mercury Learning and Information, Korol J., Access 365 Project Book. Hands-On Database Creation, Mercury Learning, 2024

4. **OBJECTIVES, SYLLABUS CONTENT AND INTENDED LEARNING OUTCOMES**

4.1. **Course objectives** ***(including form of classes)***

***Laboratory*:**

C1. Understanding the importance of information and communication technologies (ICT), becoming familiar with their basic terminology, and exploring possibilities of their practical application in everyday work and study.

C2. Mastering key concepts related to computer hardware, operating systems, and application software.

C3. Acquiring knowledge and skills in using selected application software, including tools for creating, editing, and organizing information.

C4. Developing practical competencies in the use of Microsoft Office package and applying it to the preparation of documents, presentations, spreadsheets, and data analysis.

C5. Gaining knowledge and skills in the use of scientific and technical applications (e.g. Maxima) for solving computational problems, performing simulations, supporting data analysis, and visualizing results.

4.2. Detailed syllabus (including form of classes)

Laboratory:

1. Fundamentals of Information and Communication Technologies.
2.Computer Usage.

3. Word Processing and Spreadsheets.
4. Databases.
5. Managerial and Presentation Graphics.
6. Web Browsing and Electronic Communication.
7. Scientific and Technical Applications.

4.3 Intended learning outcomes

Code	A student, who passed the course	Relation to learning outcomes
within the scope of **KNOWLEDGE:**		
W01	Knows and understands basic information and communication technologies and their application in working with data, including Microsoft Office tools supporting the collection, processing, analysis, and presentation of information.	ID1A_W06
W02	Has knowledge of selected scientific and technical applications, such as Maxima, and understands their use in numerical calculations, data analysis, and visualization of research results.	ID1A_W06
W03	Possesses basic knowledge of data protection and security on the World Wide Web.	ID1A_W06
within the scope of **ABILITIES:**		
U01	Is able to use selected application software (e.g., Microsoft Excel, PowerPoint, Word) and information technologies for data collection, searching, statistical analysis, and visualization.	ID1A_U06
U02	Can practically apply the Microsoft Office package and scientific-technical applications (e.g., Maxima) for text editing, preparing presentations, and solving computational problems related to data analysis.	ID1A_U06
U03	Possesses the ability to design and edit documents as well as prepare graphical presentations using application software.	ID1A_U06
within the scope of **SOCIAL COMPETENCE:**		
K01	Demonstrates a responsible and reliable approach to the use of information and communication technologies and promotes good practices in teamwork and professional environments.	ID1A_K02
K02	Is aware of the necessity to respect software copyright, applies the principles of legal use of programs and IT tools.	ID1A_K02

4.4. **Methods of assessment of the intended learning outcomes**

Teaching outcomes *(code)*	Method of assessment (+/-)																				
	Exam oral/written*			Test*			Project*			Effort in class*			Self-study*			Group work*			Others* e.g. standardized test used in e-learning		
	Form of classes			*Form of classes*			*Form of classes*			*Form of classes*			*Form of classes*			*Form of classes*			*Form of classes*		
	L	*C*	*Lb*	*L*	*C*	*Lb*	*L*	*C*	*Lb*	*L*	*C*	*Lb*	*L*	*C*	*Lb*	*L*	*C*	*Lb*	*L*	*C*	.. .
W01						+						+			+						
W02						+						+			+						
W03						+						+			+						
U01						+						+			+						
U02						+						+			+						
U03						+						+			+						
K01						+						+			+						
K02						+						+			+						

**delete as appropriate*

4.5. **Criteria of assessment of the intended learning outcomes**

Form of classes	Grade	Criterion of assessment
Laboratory (L)*	**3**	Achievement of <50–60% of the requirements applied in the assessment methods
	3,5	Achievement of <60–70% of the requirements applied in the assessment methods
	4	Achievement of <70–80% of the requirements applied in the assessment methods
	4,5	Achievement of <80–90% of the requirements applied in the assessment methods
	5	Achievement of <90–100% of the requirements applied in the assessment methods

5. **BALANCE OF ECTS CREDITS – STUDENT'S WORK INPUT**

Category	Student's workload	
	Full-time studies	**Extramural studies**
NUMBER OF HOURS WITH THE DIRECT PARTICIPATION OF THE TEACHER /CONTACT HOURS/	***20***	
*Participation in laboratories**	***20***	
INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/	***5***	
*Preparation for the classes, seminars, laboratories**	***2***	
*Preparation for the exam/test**	***3***	
TOTAL NUMBER OF HOURS	***25***	
ECTS credits for the course of study	**1**	

****delete as appropriate***

Accepted for execution *(date and legible signatures of the teachers running the course in the given academic year)*

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