DESCRIPTION OF THE COURSE OF STUDY

Course code	**0719-2ID-F51_PWJJ**	
Name of the course in	Polish	**Programowanie w języku Java**
	English	**Java Programming**

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
1.3. Level of study	Undergraduate engineering study
1.4. Profile of study*	General academic
1.5. Person/s preparing the course description	Przemysław Ślusarczyk
1.6. Contact	pslusarczyk@ujk.edu.pl

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

2.1. Language of instruction	English
2.2. Prerequisites*	Introduction to programming Object Oriented Programming

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

3.1. Form of classes		lectures, laboratories, project
3.2. Place of classes		Courses in the UJK teaching rooms of the Faculty of Exact and Natural Sciences
3.3. Form of assessment		credit with grade (lectures, laboratories), credit without grade (project)
3.4. Teaching methods		lectures– informative lectures laboratories, project – laboratory method (practical classes using Java development tools)
3.5. Bibliography	**Required reading**	1. C.S.Horstmann, Core Java Volume I - Fundamentals (13th Ed.), Oracle Press 2024 2. C.S.Horstmann, Core Java Volume II - Advanced Features (13th Ed.), Oracle Press 2024
	Further reading	1. Oracle and/or its affiliates, Learn Java, https://dev.java/learn/ 2. Oracle and/or its affiliates, Java Tutorials Learning Paths, https://docs.oracle.com/javase/tutorial/tutorialLearningPaths.html 3. Bruce Eckel, Thinking in Java (4th Edition), Prentice Hall 2006

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

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

Lecture:

C1. Gaining knowledge of the object-oriented programming in Java language

Laboratory + project

C2. Developing skills in object-oriented software development in Java language.

4.2. Detailed syllabus ***(including form of classes)***

Lectures and laboratories:

1. Java development tools.
2. Defining classes: access control, inheritance, polymorphism.
3. String processing
4. Interfaces and exceptions
5. Collections
6. Java input-output package.
7. Multithreading

Project:

Student designs and implements low complexity software based on Java development tools.

4.3. Intended learning outcomes

Code	A student, who passed the course	Relation to learning outcomes
within the scope of **KNOWLEDGE:**		
W01	has knowledge and understanding of Java programming structures	ID1A_W07
W02	has knowledge and understanding of object-oriented programming techniques in Java	ID1A_W07
W03	has knowledge and understanding of fundamental Java libraries	ID1A_W07
within the scope of **ABILITIES:**		
U01	can design and implement software based on the object-oriented paradigm in Java	ID1A_U07
U02	can design and implement software using Java collections and I/O streams	ID1A_U07
U03	identifies the need to continuously improve competences in Java programming	ID1A_U11 ID1A_U15
within the scope of **SOCIAL COMPETENCE:**		
K01	is aware of the role of the engineer in providing expert knowledge in the field of Java programming.	ID1A_K03 ID1A_K04

4.4. Methods of assessment of the intended teaching outcomes

Teaching outcomes *(code)*	Method of assessment (+/-)																	
	Oral answer			Reports			Project			Effort in class								
	Form of classes			*Form of classes*			*Form of classes*			*Form of classes*			*Form of classes*			*Form of classes*		
	L	*C*	*P*	*L*	*C*	*P*	*L*	*C*	*P*	*L*	*C*	*P*	*L*	*C*	*P*	*L*	*C*	*P*
W01		+	+		+						+							
W02		+	+		+						+							
W03		+	+		+						+							
U01		+	+		+				+		+							
U02		+	+		+				+		+							
U03		+	+		+				+		+							
K01		+	+		+				+		+							

4.5. Criteria of assessment of the intended teaching outcomes

Form of classes	Grade	Criterion of assessment
lecture (L)	3	at least 50% and not more than 60% of the total number of available points
	3,5	more than 60% and not more than 70% of the total number of available points
	4	more than 70% and not more than 80% of the total number of available points
	4,5	more than 80% and not more than 90% of the total number of available points
	5	more than 90% of the total number of available points
classes (C)	3	at least 50% and not more than 60% of the total number of available points
	3,5	more than 60% and not more than 70% of the total number of available points
	4	more than 70% and not more than 80% of the total number of available points
	4,5	more than 80% and not more than 90% of the total number of available points
	5	more than 90% of the total number of available points
project (P)	3	at least 50% and not more than 60% of the total number of available points
	3,5	more than 60% and not more than 70% of the total number of available points
	4	more than 70% and not more than 80% of the total number of available points
	4,5	more than 80% and not more than 90% of the total number of available points
	5	more than 90% of the total number of available points

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/		
Participation in lectures	30	
Participation in laboratories	30	
Project	15	
INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/		
Preparation for the laboratories	10	
Gathering materials for the project	40	
TOTAL NUMBER OF HOURS	***125***	
ECTS credits for the course of study	***5***	

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

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