

DESCRIPTION OF THE COURSE OF STUDY

Course code	0719-2ID-F50-PWK	
Name of the course in	polskim	Projektowanie Wspomagane Komputerowo Computer Assisted Design
	angielskim	

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	First-cycle engineering studies
1.4. Profile of study*	General academic
1.5. Person/s preparing the course description	Dr inż. Paweł Jagodziński
1.6. Contact	pawel.jagodzinski@ujk.edu.pl

2. GENERAL CHARACTERISTICS OF THE course of study

2.2. Język wykładowy	English
2.3. Wymagania wstępne	

3. DETAILED CHARACTERISTICS OF THE COURSE OF STUDY

3.1. Form of classes	Lectures, Laboratory	
3.2. Place of classes	Classes held in UJK teaching rooms (on campus)	
3.3. Form of assessment	passing with a note	
3.4. Teaching methods	Verbal – presentation of topics, multimedia presentation Practical – work in the FreeCAD software package, solving practical problems using the FreeCAD application	
3.5. Bibliography	Required reading	- FreeCAD Manual – by Yorik van Havre and The FreeCAD Community https://www.freecadweb.org/manual/a-freecad-manual.pdf http://www.freecadweb.org/wiki
	Further reading	

4. OBJECTIVES, SYLLABUS CONTENT AND INTENDED LEARNING OUTCOMES

4.1. Course objectives (including form of classes) Lecture, Laboratory classes: C1. To introduce students to computer-aided design (CAD). C2. To gain experience in working within a 3D environment. C3. To acquire practical skills in creating virtual models of three-dimensional objects. C4. To develop practical skills in 3D modeling using a CAD-type system.
4.2. Detailed syllabus (including form of classes) Lecture, Laboratory classes: Introduction to the FreeCAD package. Discussion of the interface and document structure. Creating and editing solids; extrusion of solids. Creating a two-dimensional sketch based on constraints. Adding, subtracting, and combining solids – union, difference, and intersection of objects. Creating a three-dimensional model using basic solids and based on a two-dimensional model. Modeling text objects in a drawing. Dimensioning. Projections and cross-sections of the drawing. Preparation for printing. Lighting and rendering. Scripts and macros. 3D printing.

4.3. Przedmiotowe efekty uczenia się

Code	A student, who passed the course	Relation to learning outcomes
	within the scope of KNOWLEDGE:	

W01	knows physical phenomena and processes and is able to apply them when working with the FreeCAD environment	ID1A_W06
W02	knows the concepts, issues, and basic principles of computer-aided design (CAD).	ID1A_W06
within the scope of ABILITIES:		
U01	is able to independently obtain professional information necessary for preparing a technical drawing, can independently construct projections and cross-sections of solids, and, based on them, determine the shapes and dimensions of the solids.	ID1A_U06
within the scope of SOCIAL COMPETENCE:		
K01	is aware of the importance of adhering to professional ethics and respecting copyright.	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*		
	Form of classes			Form of classes			Form of classes			Form of classes			Form of classes			Form of classes		
	L	C	...	L	C	...	L	C	...	L	C	...	L	C	...	L	C	...
W01				+	+													
W02				+	+													
U01					+									+				
K01														+				

1. Criteria of assessment of the intended learning outcomes		
Form of classes	Grade	Criterion of assessment
lecture (L) (including e-learning)	3	achievement of <50 - 60) % of the assessment requirements
	3,5	achievement of <60 - 70) % of the assessment requirements
	4	achievement of <70 - 80) % of the assessment requirements
	4,5	achievement of <80 - 90) % of the assessment requirements
	5	achievement of <90 - 100> % of the assessment requirements
classes (C)* (including e-learning)	3	achievement of <50 - 60) % of the assessment requirements
	3,5	achievement of <60 - 70) % of the assessment requirements
	4	achievement of <70 - 80) % of the assessment requirements
	4,5	achievement of <80 - 90) % of the assessment requirements
	5	achievement of <90 - 100> % of the assessment requirements

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/	30	
Participation in lectures*	15	
Participation in classes, seminars, laboratories*	15	
INDEPENDENT WORK OF THE STUDENT/NON-CONTACT HOURS/	20	
Preparation for the classes, seminars, laboratories*	10	
Preparation for the exam/test*	10	
TOTAL NUMBER OF HOURS	50	
ECTS credits for the course of study	2	

*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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