Annex No. 9
to the Rector's Decision No. 35/19
as amended by Decision No. 12/22

COURSE SPECIFICATION

Course code	full-time:	**B1-1-106**
	part-time:	**BN1-1-105**
Course title in Polish	**Metody komputerowego wspomagania projektowania 1**	
Course title in English	**Methods of Computer Aided Design 1**	
Valid from academic year	**2023/2024**	

CURRICULAR ALIGNMENT

Programme	**CIVIL ENGINEERING**
Level	**first-cycle**
Programme profile	**academic**
Mode of study	**full-time; part-time**
Specialism	**all**
Academic unit responsible for the course	**Department of Theory of Structures and BIM**
Course coordinator	**dr hab. inż. Paweł Kossakowski, prof. PŚk**
Approved by	**prof. dr hab. inż. Grzegorz Świt**

COURSE DESCRIPTION

Teaching block		**major**
Course status		**required**
Language of instruction		**Polish**
Semester of delivery	full-time	**semester I**
	part-time	**semester I**
Prerequisites		**Basic knowledge of Computer Science - high school level**
Exam (YES/NO)		**NO**
ECTS		**2**

Mode of instruction		**lecture**	**class**	**lab**	**project**	**other**
No. of hours per semester	full-time			**30**		
	part-time			**24**		

Learning outcomes

Category of outcome	Outcome code	Course learning outcomes	Corresponding programme outcome code
Knowledge	W01	Students know principles of descriptive geometry and technical drawing, and have skills to prepare and interpret architectural and construction drawings. Students are able to prepare drawings and technical documentation using CAD .	B1_W05
Skills	U01	Students are able to read and interpret technical drawings in the field of architecture, structural and civil engineering and installations sector.	B1_U06
	U02	Students are able to prepare architectural and construction technical documentation using CAD.	B1_U07
Competence	K01	Students demonstrate the ability to solve problems independently and make autonomous decisions. Students are able to work in a team.	B1_K01
	K02	Students are able to expand their knowledge. They can stay updated with their field of study and learn new technologies, tools and methodology. They are able to adapt their skills and knowledge to changing requirements and implement new solutions effectively.	B1_K03

COURSE CONTENT

Teaching mode*	Topics covered
lab	Introduction to AutoCAD. User interface elements, drawing area, dialog box, status line, toolbar selection.
	Drawing simple geometric figures (rectangle, arch, circle, ellipse), using editing commands to generate complex shapes.
	Creating, deleting, and managing layers in the consecutive stages of the construction drawing process. Learning and practical use of precision drawing tools. Creating and editing text styles and making captions (single and multiline text).
	Parameter selection (pattern, scale, rotation angle) and hatching patterns, creation of own hatching patterns (user defined). Hatching closed areas, inheritance and parameter edition.
	Dimension line elements and dimensioning style parameters. Creating and editing own dimensioning styles. Dimensioning elements using basic commands and quick dimensioning tools (QDIM).
	Block properties, defining attributes, creating file blocks and disk blocks (with and without attributes). Inserting and breaking blocks, attributes edition.
	Drawing and editing commands practice using a structural drawing of a reinforced concrete column. Creating text and dimension styles for reinforced concrete structures, entering element descriptions, reinforcement dimensioning
	Printing from the model (MODEL): print area, paper size, scale, page orientation, print styles. Saving and editing entered page settings.

	Further practice of drawing and editing commands using a structural drawing of a steel girder. Creating text and dimension styles for a steel structure. Entering element and joint descriptions, dimensioning details. Printout composition.
	Reading specialist technical documentation, interpretation of drawings. Creating selected elements of installation drawings.

METHODS OF LEARNING OUTCOMES VERIFICATION

Learning outcome	Verification methods					
	Oral examination	Written examination	Test	Project	Report	other
W01			X			
U01			X			
U02			X			
K01			X			
K02			X			

ASSESSMENT

Teaching mode	Assessment type	Assessment criteria
lab	mark-based	*Obtaining at least 50% of the points from the test.*

STUDENT WORKLOAD

ECTS weighting												
	Activities	Student workload										
		full-time					part-time					
1.	Scheduled contact hours	W	C	L	P	S	W	C	L	P	S	
				30					24			
2.	Other (office hours, exams)			2					2			h
3.	**Total number of contact hours**	**32**					**26**					h
4.	**Number of ECTS credits for contact hours**	**1,3**					**1**					ECTS
5.	**Independent study hours**	**18**					**24**					h
6.	**Number of ECTS credits for independent study**	**0,7**					**1**					ECTS
7.	**Practical hours**	**50**					**50**					h
8.	**Number of ECTS credits for practical hours**	**2**					**2**					ECTS
9.	**Total workload**	**50**					**50**					h

10.	**ECTS credits for the course** *1 ECTS credit =25 student learning hours*	**2**	ECTS

READING LIST

1. Pikoń A.: AutoCAD 2021 PL: pierwsze kroki, Helion, Gliwice 2020.
2. Jaskulski A.: AutoCAD 2021PL/EN/LT+ : metodyka efektywnego projektowania parametrycznego i nieparametrycznego 2D i 3D, Helion, Gliwice 2020.
3. Podręcznik użytkownika programu AutoCAD 2024. Dostęp online: https://help.autodesk.com/view/ACD/2024/PLK/
4. User's guide for AutoCAD 2024. Dostęp online: https://help.autodesk.com/view/ACD/2024/ENU/