MODULE DESCRIPTION

Module code	full-time studies:	**Z-ZIP1-E-209**
	part-time studies:	**Z-ZIPN1-E-209**
Module name	**Engineering Graphics – SolidWorks**	
Module name in Polish	**Grafika inżynierska – SolidWorks**	
Valid from academic year	**2019/2020**	

MODULE PLACEMENT IN THE SYLLABUS

Field of study	**MANAGEMENT AND PRODUCTION ENGINEERING**
Level of education	**1st degree**
Studies profile	**General**
Form and method of conducting classes	**Full-time and Part-time**
Specialisation	**All**
Unit conducting the module	**Department of Production Engineering**
Module co-ordinator	**Artur Szmidt, PhD**
Approved by:	**Dariusz Bojczuk, PhD, DSc**

MODULE OVERVIEW

Type of subject / group of subjects	**Major**
Module status	**Compulsory**
Language of conducting classes	**English**
Module placement in the syllabus - semester	**Semester II**
Initial requirements	**Engineering Graphics**
Examination (YES/NO)	**NO**
Number of ECTS credit points	**2**

Method of conducting classes		**Lecture**	**Classes**	**Laborato-ry**	**Project**	**Other**
Per semester	full-time studies:			**30**		
	part-time studies:			**18**		

TEACHING RESULTS AND THE METHODS OF ASSESSING TEACHING RESULTS

Category	Symbol	Learning outcomes	Assignations to the directional learning outcomes
Skills	U01	The student is able to obtain information from literature, databases and other sources; can combine the obtained information, analyze and interpret, draw conclusions, formulate and justify opinions.	ZIP1_U01
	U02	The student acquires the ability to read and analyze the received technical documentation regarding the construction of mechanical parts.	ZIP1_U03
Social competences	K01	The student understands the need for continuous improvement of knowledge in the area of more and more perfect graphic computer programs supporting the processes of machine construction.	ZIP1_K01

TEACHING CONTENTS

Method of conducting classes	Teaching contents
Laboratory	Introduction to the system. Simple drawing edits. Principles of dimensioning. Creating drawing layers. Drawing cross-sections. Executive drawing of a simple detail. Executive drawing of a complex detail. Manufacturing drawing of the machine shaft. Detail drawing with consideration of roughness and tolerance. Drawing of bolted connections. Drawing of welded joints. Drawing of a gear wheel. Drawing of the pulley. Executive drawing of the body. General assembly drawing of the selected device.

METODS OF ASSESSING TEACHING RESULTS

Symbol	Methods of checking the learning outcomes *(select X)*					
	Oral exam	Written exam	Test	Project	Statement	Other
U01				X		
U02				X		
K01				X		

FORM AND CONDITIONS OF PASSING

Form of classes	Form of credit	Passing conditions
Laboratory	Credit with grade	Correct execution of all the drawings, positive evaluation of the test.

STUDENT WORKLOAD

Balance of ECTS points												
No.	Type of student's activity	Student's workload										Unit
		full-time					part-time					
1.	Participation in the activities	Lc	C	Lb	P	O	Lc	C	Lb	P	O	h
				30					18			
2.	Other (consultation, exam)			2					2			h
3.	**Number of hours of a student's assisted work**	**32**					**20**					h
4.	**Number of ECTS credit points which are allocated for assisted work**	**1,3**					**0,8**					ECTS
5.	**Number of hours of a student's unassisted work**	**18**					**30**					h
6.	**Number of ECTS credit points which a student receives for unassisted work**	**0,7**					**1,2**					ECTS
7.	**Work input connected with practical classes**	**50**					**50**					h
8.	**Number of ECTS credit points which a student receives for practical classes**	**2,0**					**2,0**					ECTS
9.	**Total number of hours of a student's work**	**50**					**50**					h
10.	**Punkty ECTS za moduł** *1 ECTS=25 hours*	**2**										ECTS

LITERATURE

1. Bethune J.D. (2017), *Engineering design and graphics with SolidWorks 2016*, Pearson Education, Boston (https://btu.edu.eg/wp-content/uploads/2020/03/Engineering-Design-and-Graphics-with-SolidWorks-2016.pdf)
2. Dassault Systems (2014), *Introducing SolidWorks* (https://files.solidworks.com/pdf/introsw.pdf)
3. Zeid I. (2015), *Mastering SolidWorks. The Design Approach*, Pearson Education, New Jersey (http://repo.darmajaya.ac.id/4194/1/Mastering%20SolidWorks_%20The%20Design%20Approach%20%28%20PDFDrive%20%29.pdf)
4. *Basics of SolidWorks Tutorial* (https://thecube.eng.ua.edu/wp-content/themes/ua-theme-coe-child/assets/instructions/SolidWorks-Tutorial.pdf)