

## COURSE GUIDE

<u>Subject name</u>	<b>Engineering project I</b>
<u>Course of study</u>	<b>Quality and Production Management</b>
<u>The form of study</u>	<b>Full-time</b>
<u>Level of qualification</u>	<b>First</b>
<u>Year</u>	<b>III</b>
<u>Semester</u>	<b>VI</b>
<u>The implementing entity</u>	<b>Department of Production Engineering and Safety</b>
<u>The person responsible for preparing</u>	<b>Dr inż. Justyna Żywiolek</b>
<u>Profile</u>	<b>general academic</b>
<u>ECTS points</u>	<b>3</b>

### TYPE OF TEACHING – NUMBER OF HOURS PER SEMESTER

LECTURE	CLASS	LABORATORY	PROJECT	SEMINAR
-		-	45	-

### COURSE AIMS

- C1. Preparation of design documentation.
- C2. Methods and techniques of engineering design support.
- C3. Preparation of engineering projects.
- C4. Computational skills, presentation skills.

### ENTRY REQUIREMENTS FOR KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Basic knowledge of engineering projects.
2. Basic knowledge of the principles of engineering design.

### LEARNING OUTCOMES

- EU1. The student has the ability to prepare design documentation.
- EU2. student has the ability to use AutoCAD, Excel.
- EU3. student is able to prepare the engineering project.
- EU4. student knows the principles of dimensioning, can prepare them for the engineering project.

### COURSE CONTENT

Type of teaching – PROJECT	Number of hours
P1. Planning and designing and presenting as a form of multimedia presentation of research results on a selected subject.	3
P2. Interpretation and analysis of measurement results.	3
P3. Produce data about the real phenomenon to solve the problem.	6
P4. Identification, modeling and optimization of engineering processes.	6
P5. Computer simulation of phenomena, engineering processes.	6
P6. Production technology development, production optimization.	6
P7. Project description of the project documentation.	6
P8. Building goals, hypotheses, design conclusions.	3
P9. Design errors - unique, leveling.	3
P10. test.	3

### TEACHING TOOLS

1. Manuals and scripts.
2. Audiovisual Equipment.

3. Computer with Internet access.
4. Specialized software: AutoCAD, Excel.

### WAYS OF ASSESSMENT (F – FORMATIVE, P – SUMMATIVE)

- F1. Observation of student work.  
 F2. Passing reports from laboratory classes.  
 P1. Written test.

### STUDENT WORKLOAD

Form of activity		Average number of hours for realization of the activity		
		[h]	ECTS	ECTS
Contact hours with the teacher	Project	45	1.8	2.4
Preparation of project		15	0.6	
Get acquainted with the indicated literature		10	0.4	0.4
Consultation		5	0.2	0.2
<b>TOTAL NUMBER OF HOURS / ECTS POINTS FOR SUBJECT</b>		<b>75</b>	<b>3</b>	

### BASIC AND SUPPLEMENTARY RESOURCE MATERIALS

#### Basic resources

1. Smith N.J. Engineering Project Management. Blackwell, New York, 1995.
2. Lessard C., Lessard J.P. Project Management for Engineering Design. Synthetic lectures of engineering, London, 2007.

#### Supplementary resources

1. Tarnowski W. Podstawy projektowania technicznego. WSI w Koszalinie, Koszalin 1989.

### TEACHERS ( NAME, SURNAME, E-MAIL ADDRESS)

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 mgr inż Aleksandra Wrzalik aleksandra.wrzalik@wz.pcz.pl

### MATRIX OF LEARNING OUTCOMES REALISATION

Learning outcome	Reference of given outcome to outcomes defined for whole program (PRK)	Course aims	Course content	Teaching tools	Ways of assessment
EU1	K_W09, K_U01, K_U02, K_U03, K_U04, K_U05, K_K01	C1-C4	P1, P2, P5	1-4	F1
EU2	K_W06, K_U02, K_U03, K_K01	C1-C4	P1, P3, P7, P8	1-4	F1
EU3	K_W05, K_W09, K_U09, K_K01	C1-C4	P2, P3, P4, P9	1-4	F2
EU4	K_W07, K_W09, K_U09, K_K01	C1, C3	P4, P9	1,2	P1

### FORM OF ASSESSMENT - DETAILS

	grade 2	grade 3	grade 4	grade 5
EU1	Student does not have the skills to prepare design documentation student has the ability to prepare part of the project documentation student has the skills of preparing project documentation, with minor mistakes the student has the skills of preparing project documentation.	Student has the ability to partially prepare project documentation.	Student has the skills to prepare project documentation, with minor errors.	Student has the skills to prepare project documentation.

<b>EU2</b>	Students do not have the ability to use AutoCAD, Excel student has the ability to use AutoCAD, Excel but does it with the help of the student has the ability to use AutoCAD, Excel with minor errors student has the ability to use the program AutoCAD, Excel.	Student has the ability to use AutoCAD, Excel but does it with the help of the teacher.	Student has the ability to use AutoCAD, Excel with minor errors.	Student has the skills to use AutoCAD, Excel.
<b>EU3</b>	Student can not prepare the engineering project.	Student is able to prepare an engineering project, he will prepare it with a significant help from the teacher.	Student can prepare an engineering project, prepare it with a small guide.	Student is able to prepare an engineering project.
<b>EU4</b>	Student does not know the principles of dimensioning, he can prepare them for the engineering project.	Student knows selected dimensioning principles, he can prepare them for the engineering project.	Student knows the principles of dimensioning, can prepare them for the engineering project with help of teacher.	Student knows the principles of dimensioning, can prepare them for the engineering project.

#### **ADDITIONAL USEFUL INFORMATION ABOUT THE COURSE**

1. Information where presentation of classes, instruction, subjects of seminars can be found, etc. - presented to students during first classes, if required by the formula classes are sent electronically to the e-mail addresses of individual dean groups.
2. Information about the place of classes - Information can be found on the website of the Faculty of Management.
3. Information about the timing of classes (day of the week / time) - Information can be found on the website of the Faculty of Management
4. Information about the consultation (time + place) - Information can be found on the website of the Faculty of Management