

COURSE GUIDE

<u>Subject name</u>	Engineering and technical drawing
<u>Course of study</u>	Quality Management and Production
<u>The form of study</u>	Full-time
<u>Level of qualification</u>	I
<u>Year</u>	II
<u>Semester</u>	3
<u>The implementing entity</u>	Institute of Engineering Production
<u>The person responsible for preparing</u>	Dr inż. Justyna Żywiołek
<u>Profile</u>	General academic
<u>Course type</u>	elective
<u>ECTS points</u>	4

TEACHNING METHODS – NUMBER OF HOURS PER SEMESTER

LECTURE	CLASS	LABORATORY	PROJECT	SEMINAR
15		15		

COURSE AIMS

C1. AutoCAD support.

C2. Preparing project documentation for technical markets or engineering graphics.

ENTRY REQUIREMENTS FOR KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. The student knows the basics of creating a technical drawing

2. The student has basic mathematical knowledge supporting the creation of drawings

3. The student use computer effectively

LEARNING OUTCOMES

EK 1- student has the ability to prepare technical drawings

EK 2- student has the ability to use AutoCAD

EK 3- student knows the theoretical principles of creating drawings and dimensioning them

COURSE CONTENT

Type of teaching – LECTURES	Number of hours
W1- Basic Considerations, Overview of Technical Drawings.	1
In 2- Types of projection - rectangular and axonometric projections.	2
W 3- Cross section technique and dimensioning.	2
4- Drawing and reading rules for executive drawings of parts and assemblies, machinery and equipment.	1
W 5 Tolerances of dimensions, shape and position, fit.	1
W 6- Marking of the type of machining and the geometrical structure of the surface.	1
7- Kinds and drawings of disconnect and inseparable connections.	2
W 8- Using computer graphics to create technical documentation.	2
W9- Schematization in engineering graphics.	2
W10- Forms of construction recordings - training drawings, offers and catalogs, photographic record of construction	1
Type of teaching – LABORATORY	Number of hours
L 1- Set the rules in the studio, basic information about engineering graphics and technical drawing	1
L 2- Rectangular projection - projections of planes, planes, polyhedra and solids.	2
L 3 Principles of execution and normalized elements of technical drawings. .	1
L 4-Drawings - rules of projection selection, dimensioning.	1
L 5 - Presentation with views, cross-sections, layouts.	1
L 6-Manual drawing - sketch. Determination of surface geometry and tolerances and fits.	2
L 7-Drawings and collating drawings. Graphical presentation of detachable and inseparable connections.	1
L8- Axonometric projection.	1

L9- Computer aided drawing of technical drawings.	1
L10- Principles of reading drawings and diagrams of machines and devices as well as production processes.	1
L11 - Drawings and catalogs of technical objects	1

TEACHING TOOLS

1. Manuals and scripts
2. Audiovisual Equipment
3. Computer with Internet access
4. Specialized software: AutoCAD,

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

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

STUDENT WORKLOAD

Form of activity		Average number of hours for realization of the activity		
		[h]	ECTS	ECTS
Contact hours with teacher	Lectures	15	0,6	1,12
Preparation for pass		10	0,4	
Examination		3	0,12	
Godziny kontaktowe z prowadzącym	Laboratory	30	1,2	2,28
Preparation for the laboratory		12	0,48	
Preparation of reports on specific tasks (laboratories)		15	0,6	
Get acquainted with the indicated literature		10	0,4	
Attendance at consultations		5	0,2	0,2
TOTAL NUMBER OF HOURS / ECTS POINTS FOR SUBJECT		100	4	

BASIC AND SUPPLEMENTARY RESOURCE MATERIALS

Literatura podstawowa:

1. Pratt William K. , Digital Image Processing, John Wiley and Sons, New York, 1991.
2. Seibokiene Elena, Computer Graphics :A Comprehensive Guide for Students, Vilnius, Technika, 2005.

3. Stevens Roger T., Graphics Programming in C. A. Comprehensive Resource for Every C., Reedwood City , M and Publishing, 2000.

Supplementary resources:

1. Bafle Alan, CorelDraw! 4, Oficyna Wydaw. READ ME, Warszawa, 1993.

TEACHERS (NAME,SURNAME, ADRES E-MAIL)

4. Dr inż. Justyna Żywiołek

MATRIX OF LEARNING OUTCOMES REALISATION

1.

Learning outcome	Reference of given outcome to outcomes defined for whole program	Course aims	Course content	Teaching tools	Ways of assessment
EK1	K_W06, K_W09, K_U03 K_K01	C1	W1-W10	1, 2	F2, P1
EK2	K_W06, K_U02, K_K03	C2	L1- L11	3,4	F2, P1
EK3	K_W06, K_U07, K_K01	C1, C2	W1-W4, L1, L10, L11	2, 4	F1, F2.

2. FORMY OCENY - SZCZEGÓŁY

	Na ocenę 2	Na ocenę 3	Na ocenę 4	Na ocenę 5
Efekt 1	The student can not prepare the technical drawing. The student can make simple instructions in preparation of the technical drawing, but he can not prepare it himself.	The student can not prepare the technical drawing. The student can make simple instructions in preparation of the technical drawing, but he can not prepare it himself.	The student can not prepare the technical drawing. The student can make simple instructions in preparation of the technical drawing, but he can not prepare it himself.	The student can not prepare the technical drawing. The student can make simple instructions in preparation of the technical drawing, but he can not prepare it himself.
Efekt 2	The student is able to prepare not complicated drawings, but without dimension, he does not know the rules of preparing the documentation. The student has the ability to prepare all technical drawings	The student is able to prepare not complicated drawings, but without dimension, he does not know the rules of preparing the documentation. The student has the ability to prepare all technical drawings	The student is able to prepare not complicated drawings, but without dimension, he does not know the rules of preparing the documentation. The student has the ability to prepare all technical drawings	The student is able to prepare not complicated drawings, but without dimension, he does not know the rules of preparing the documentation. The student has the ability to prepare all technical drawings
Efekt 3	Students do not have the ability to use AutoCAD program. Students have basic skills in using AutoCAD software. They are familiar with simple commands, can not prepare drawings from the whole student has the ability to use AutoCAD program, makes small mistakes in drawing the students have the skills to use the AutoCAD program.	Students do not have the ability to use AutoCAD program. Students have basic skills in using AutoCAD software. They are familiar with simple commands, can not prepare drawings from the whole student has the ability to use AutoCAD program, makes small mistakes in drawing the students have the skills to use the AutoCAD program.	Students do not have the ability to use AutoCAD program. Students have basic skills in using AutoCAD software. They are familiar with simple commands, can not prepare drawings from the whole student has the ability to use AutoCAD program, makes small mistakes in drawing the students have the skills to use the AutoCAD program.	Students do not have the ability to use AutoCAD program. Students have basic skills in using AutoCAD software. They are familiar with simple commands, can not prepare drawings from the whole student has the ability to use AutoCAD program, makes small mistakes in drawing the students have the skills to use the AutoCAD program.

ADDITIONAL USEFUL INFORMATION ABOUT THE COURSE

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

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Coordinator