STUDY MODULE DESCRIPTION FORM

Name of the module/subject	Code
Machine Technology and Design of Production Processes	**1011101351011120159**

Field of study	Profile of study (general academic, practical)	Year /Semester
Engineering Management - Full-time studies -	**(brak)**	**3 / 5**
Elective path/specialty	Subject offered in:	Course (compulsory, elective)
-	**Polish**	**obligatory**

Cycle of study:	Form of study (full-time,part-time)
First-cycle studies	**full-time**

No. of hours					No. of credits
Lecture: **30**	Classes: **-**	Laboratory: **15**	Project/seminars: **15**		**4**

Status of the course in the study program (Basic, major, other)	(university-wide, from another field)
(brak)	**(brak)**

Education areas and fields of science and art	ECTS distribution (number and %)

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Basic knowledge from high school. The necessary information in the field of technology and machine parts will be explained subsequently.
2	**Skills**	Ability to solve simple problems, the ability to obtain information from the identified sources
3	**Social competencies**	Understanding the importance of technical sciences and their applications

Assumptions and objectives of the course:

The aim of the course is to familiarize students with the theoretical and practical issues related to the design of technological processes and assembly processing with particular emphasis on the conditions within the market economy. Preparation of documentation regarding technological process.

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. Has basic knowledge of products? lifecycle - [K01-InzA_W01]
2. Knows fundamental methods, techniques, tools and materials that are applied in solving simple engineering tasks relating building and machines? exploitation - [K04-InzA_W02]
3. Knows some typical industrial technologies and has an extensive knowledge of building technologies and machines? exploitation - [K07-InzA_W05]

Skills:

1. Is able to identify the project tasks and solve simple design tasks in the field of construction and exploitation of machinery - [K01-InzA_U2]
2. Is able to perform a technical and economic analysis of the undertaken engineering activities - [K01-InzA_U04]
3. Is able to design and analyze technological processes and organize production systems - [K01-InzA_U5]
4. Can design a structure or technology of simple machinery parts and components as well as design the organization of the production units of the first complexity degree - [K01-InzA_U06, K01-InzA_U07]

Social competencies:

1. Recognizes the importance of design and organization of technological processes in business engineering - [K01-InzA_K1]
2. Is aware of the significance of good design processes in finished products - [K01-InzA_K2]

Assessment methods of study outcomes

Formative assessment:

Laboratories: on the basis of the current progress

Lectures: on the basis of the answers to the questions regarding the covered material during previous lectures

Collective assessment:

Lecture: written exam on the basis of previously prepared set of questions

Written assignment based in laboratories

Course description

The course covers the following topics: Documentation of technological process. Technical standards of working time. Quality. The accuracy of the machining process. The structure of the typical process engineering. Editing. Design of the assembly process. Elements of automation and robotic manufacturing processes. Analysis of the cost. Quality control. Certification. Surveying and layout fits. Tolerances.

Project activities include the design of a technological process of a selected part, the documentation of the process and a variant analysis of the cost regarding process implementation. Laboratories conducted in the factory. Unconventional methods of education. Selected technological production processes.

Basic bibliography:

Additional bibliography:

Result of average student's workload

Activity	Time (working hours)
1. lecture	30
2. laboratories	30
3. consultation	18
4. preparation for classes	15
5. preparation for credits	15
6. credits	2

Student's workload

Source of workload	hours	ECTS
Total workload	110	4
Contact hours	80	3
Practical activities	30	1