# POZNAN UNIVERSITY OF TECHNOLOGY



#### EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

### **COURSE DESCRIPTION CARD - SYLLABUS**

Course name

Organization and Technology of Assembly

**Course** 

Field of study Year/Semester

Management and Production Engineering 1/2

Area of study (specialization) Profile of study

general academic

Level of study Course offered in

Second-cycle studies Polish

Form of study Requirements part-time compulsory

**Number of hours** 

Lecture Laboratory classes Other (e.g. online)

12

Tutorials Projects/seminars

8

**Number of credit points** 

3

#### **Lecturers**

Responsible for the course/lecturer: Responsible for the course/lecturer:

PhD., Eng.Jan Uniejewski

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Faculty of Mechanical Engineering

Piotrowo street 3, 60-965 Poznań

# **Prerequisites**

Basic knowledge in the field of technological process design, ordered theoretical knowledge in the field of study, logical thinking, use of various sources of information (library, Internet) and processing of acquired information, self-study and self-education, use of information and communication techniques appropriate for engineering tasks, understanding the need to learn, acquiring new knowledge, organizing obtained information, understanding non-technical aspects and effects of engineering activities

### **Course objective**

Presentation of theoretical and practical problems related to the organization and technology of assembly processes

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# **Course-related learning outcomes**

# Knowledge

- 1. Knows and understands the essence and importance of the technological process of assembly in the production system- [K2\_W02, K2\_W03, K2\_W05]
- 2. Knows the structure of the technological process of assembly and assembly methods- [K2\_W02, K2\_W03, K2\_W05]

#### Skills

1. Develop the assembly project for the selected machine assemblies- [K2 U8, K2 U05, K2 U12]

# Social competences

- 1. Can cooperate in a group- [K2\_K03]
- 2. Will follow the rules of ethics- [K2 K02]
- 3. Is able to express his / her opinion and justify it [K2\_K03]

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

The evaluation methods

- a) in the scope of the project on the basis of form and quality of prepared project,
- b) in the scope of the lectures: exam in the form of multiple-choice test, with answers among which at least one is correct, each question is scored on a scale from 0 to 1; the exam is awarded after obtaining at least 55% points.

### **Programme content**

#### Lecture:

- the essence and importance of the technological process of assembly in the production system;
- structure of technological process of assembly;
- accuracy and quality of assembly.
- classification of organizational forms of assembly;
- organization of assembly stations;
- characteristics of assembly methods;
- basic technologies used in assembly of machines and equipment;
- degrees of mechanization and automation of assembly;
- flexible assembly systems.

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### Project:

- development of the assembly project for the selected machine assemblies

# **Teaching methods**

- 1. Lecture: multimedia presentation.
- 2. Project: project development (students own work), discussion, team work.

# **Bibliography**

#### Basic

- 1. Podstawy technologii montażu maszyn i urządzeń, Puff Tt., Sołtys W., WNT, Warszawa, 1980,
- 2. Feld M., Technologia budowy maszyn, Wydawnictwo PWN, Warszawa 1993

#### Additional

- . Projektowanie i automatyzacja procesów technologicznych części maszyn, Feld M., WNT, Warszawa, 1994
- 2. Technologia i automatyzacja montażu maszyn, T. Kowalski, G. Lis, W. Szenajch, Wyd. Politechniki Warszawskiej, Warszawa, 2000,

# Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,0
Classes requiring direct contact with the teacher	26	1,0
Student's own work (literature studies, preparation for laboratory	49	2,0
classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>		

<sup>&</sup>lt;sup>1</sup> delete or add other activities as appropriate