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
Assembly basics

Course

Field of study	Year/Semester
Mechanical engineering	4 / 7
Area of study (specialization)	Profile of study
	general academic
Level of study	Course offered in
First-cycle studies	Polish
Form of study	Requirements
full-time	elective

Number of hours

Lecture	Laboratory classes	Other (e.g. online)
15	15	
Tutorials	Projects/seminars	

Number of credit points

3

Lecturers

Responsible for the course/lecturer:

PhD., Eng.Jan Uniejewski

email: jan.uniejewski@put.poznan.pl

tel. 665 2051

Faculty of Mechanical Engineering

Piotrowo street 3, 60-965 Poznań

Responsible for the course/lecturer:

Prerequisites

Basic knowledge of mechanical technology, design of technological processes

Basic knowledge of mechanical technology, design of technological processes

Understanding the need for learning and acquiring new knowledge

Course objective

Understanding the problems associated with technology, organization and automation of assembly

Course-related learning outcomes

Knowledge

1. Knows the organizational forms of assembly - [K_W09]

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2. Knows assembly methods - [K_W09]

3. Knows the criteria for assessing assembly efficiency - [K_W09]

4. Knows criteria, principles, levels of assembly automation - [K_W09]

Skills

1. Is able to choose the assembly method for a specific assembly unit - [K_U14]

2. Is able to choose the appropriate organizational form of assembly - [K_U14]

3. Is able to assess the technological efficiency of the structure from the point of view of assembly and assembly automation - [K_U14]

Social competences

1. Student is able to cooperate in a group - [K_K03]

2. The student is aware of the role of assembly technology in the modern economy and for society - [K_K02]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

in the scope of laboratory exercises based on prepared reports,

in the scope of lectures based on the final test - 3 questions, each question is rated on a scale of 2 to 5; pass after obtaining at least 55% of points.

Programme content

Lecture:

Essence and importance of the assembly process. Structure of the assembly technological process. Classification of assembly organizational forms. Organization of assembly stations. Characteristics of assembly methods. Basic technologies used in the assembly of machines and devices. Technologicality of construction in terms of assembly, principles. Degrees of mechanization and automation of assembly. Flexible assembly automation. The benefits of automation. Pre-storage, orientation, dosing, operational storage, transport. Vibrating feeder. Transport - object pallets, pallet changers, conveyors.

Laboratory: Elements of the assembly process and its automation on a selected example

Teaching methods

1. lecture: multimedia presentation, examples illustrated with examples - films, discussion and problem analysis.

2. laboratory exercises: practical exercises, problem solving, discussion, teamwork.

Bibliography

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Basic

1. Puff T., Sołtys W., Podstawy technologii montażu i urządzeń, WNT, Warszawa, 1980

2. Kowalski T., Lis G., Szenajch W,. Technologia i automatyzacja montażu maszyn, WPW, Warszawa, 2000

Additional

1. Feld M., Technologia budowy maszyn, PWN, Warszawa, 1993

2. Richter E., Schilling W., Weise M. (red.) , Montaż w budowie maszyn, WNT, Warszawa, 1980

Breakdown of average student's workload

	Hours	ECTS
Total workload	75	3,0
Classes requiring direct contact with the teacher	40	1,5
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation)[1]	35	1,5

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[1] delete or add other activities as appropriate