



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Passing project [N2MiBM1-KMiU>PP]

Course

Field of study

Mechanical Engineering

Year/Semester

2/3

Area of study (specialization)

Machine Design

Profile of study

general academic

Level of study

second-cycle

Course offered in

polish

Form of study

part-time

Requirements

compulsory

Number of hours

Lecture

0

Laboratory classes

0

Other (e.g. online)

0

Tutorials

0

Projects/seminars

20

Number of credit points

4,00

Coordinators

Lecturers

Prerequisites

Knowledge of technical drawing, technical mechanics, material strength, materials science, design of technological processes, selection of machines and devices.

Course objective

Expanding knowledge in the field of technological lines design and selection of machines and devices. Strengthening application skills, skills in performing engineering calculations. Acquiring the skills to independently shape technological lines, managing the work of construction teams.

Course-related learning outcomes

Knowledge:

Detailed knowledge of machinery and equipment, including typical components and subassemblies, development trends of machinery and equipment, and manufacturing technologies with particular regard to mechanical technology,

Skills:

Conceptual work, analyzing kinematic structures, mapping and dimensioning of machines; designing and performing strength calculations of mechanical systems using computer aided design of machines.

Social competences:

Collaboration and teamwork, taking on different roles and tasks.

Ability to map and dimension machine elements; designing and performing strength calculations of mechanical systems using computer aided design of machines.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes presented above are verified as follows:

Completion of the project.

Programme content

- Design and selection of machines and devices
- requirements and restrictions for machines and devices,
- basic design principles with particular regard to safety during the operation of machinery,
- structural reliability,
- economic and ecological aspects of design,
- indicating the areas of acceptable solutions and effective solutions to the problem.

Teaching methods

Presentation of issues, problem solving, discussion, teamwork, consultation.

Bibliography

Basic

1. Obrabiarki skrawające do metali, L.T. Wrotny, WNT, Warszawa 1974
2. Automatyzacja obrabiarek i obróbki skrawaniem, J. Kosmol, WNT, Warszawa 2000.
3. L. T. Wrotny, Podstawy konstrukcji obrabiarek, WNT, Warszawa 1974.
4. Poradnik inżyniera mechanika. WNT, Warszawa 1970.

Additional

1. Catalogs of manufacturers of machine elements.
2. Websites of machine and device manufacturers.

Breakdown of average student's workload

	Hours	ECTS
Total workload	125	5,00
Classes requiring direct contact with the teacher	20	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	105	4,00