



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Management for engineers

Course

Field of study

Mechatronics

Area of study (specialization)

Year/Semester

1/1

Profile of study

Level of study

Second-cycle studies

Form of study

full-time

Course offered in

English

Requirements

compulsory

Number of hours

Lecture

15

Laboratory classes

Other (e.g. online)

Tutorials

Projects/seminars

Number of credit points

1

Lecturers

Responsible for the course/lecturer:

dr hab. inż. Beata Starzyńska

email: beata.starzynska@put.poznan.pl

tel. +48 61 665-2741

Wydział Inżynierii Mechanicznej

ul. Piotrowo 3 60-965 Poznań

Responsible for the course/lecturer:

Prerequisites



The student has knowledge of the basics of entrepreneurship, understands the need to learn and acquire new knowledge, has the ability to associate facts, logical thinking and use e-resources.

Course objective

The aim of the course is to familiarize the student with the issues of management in a production company from the perspective of the executive position.

Course-related learning outcomes

Knowledge

The student perceives and describes the organization (production company) as related to each other by the relationship between the flow of materials and information: executive and management systems. He knows the basics of managing organizations.

Skills

The student is able to work in a team.

Social competences

The student is aware of the responsibility for the managerial decisions made.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Passing on the basis of passing the written multiple-choice test. The test is carried out at the end of the semester.

Programme content

Module 1. Introduction to management. Relations between the executive system and the management system in a production company. Tasks (duties), rights and responsibilities of employees. Delegating powers as an example of increasing employee autonomy in decision making. Implementation of executive tasks and functions, roles and managerial tasks. Sample employee competency matrix.

Module 2. Design office in the organizational structure of a manufacturing enterprise. Cooperation relations with other organizational units of the enterprise. Types of organizational structures. Principles of building organizational structures. Organizational chart of the selected company.

Module 3. The design process as an important element of the organization's activity with a full production cycle. Analysis of connections between the design process and other processes carried out in the enterprise. Sample process map. The idea of process management.

Module 4. The design process in the context of product quality assurance. Requirements of the ISO 9000 series standards regarding the review of product requirements, as well as product design and development. Procedures and methods of meeting the above-mentioned requirements within the framework of the quality management system of an exemplary enterprise.



Module 5. Methods supporting the process of engineering design (Kansei, QFD, Design Thinking, others). Creative work techniques used in teamwork. Problem solving methodologies. Concepts of improving the process organization.

Module 6. Fundamentals of project management. Project management methodologies. Tools supporting project management and organization of team work.

Module 7. The issue of risk management in the activities of a manufacturing enterprise. Risk identification, analysis and assessment. Examples of risk identification and analysis techniques. Risk management standards. Actions aimed at minimizing the occurrence of risks, incl. in the course of design projects.

Teaching methods

A multimedia presentation illustrated with examples.

Bibliography

Basic

Griffin Ricky: Fundamentals of management. Cengage Learning Inc., Boston 2015

Additional

Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,0
Classes requiring direct contact with the teacher	15	0,5
Student's own work (literature studies, preparation for classes/tutorials, preparation for tests/exam) ¹	10	0,5

¹ delete or add other activities as appropriate