



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Production planning and scheduling

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### Course

Field of study

Management and Production Engineering

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

3/6

Profile of study

general academic

Course offered in

Polish

Requirements

elective

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### Number of hours

Lecture

Laboratory classes

Other (e.g. online)

Tutorials

Projects/seminars

15

15

### Number of credit points

3

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### Lecturers

Responsible for the course/lecturer:

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Faculty of Mechanical Engineering

Piotrowo 3, 60-965 Poznań, room 307

Responsible for the course/lecturer:

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### Prerequisites

A student should have knowledge of the operation of a production enterprise, including the basic tasks



of functional units in the enterprise. It should also be able to identify the processes at enterprises and assess their impact on the company's operations.

### Course objective

The aim of the course is to acquaint students with the methods of production planning and scheduling, as well as the possibilities of computer aided production planning.

### Course-related learning outcomes

#### Knowledge

A student knows the basic concepts in production planning and scheduling.

A student is able to indicate the role of production planning in the organization of the enterprise.

A student knows the levels and stages of production planning.

A student has knowledge of the methods of production planning and scheduling.

A student knows the possibilities of computer aided production planning.

#### Skills

A student is able to perform the process of production planning.

A student using appropriate methods and tools able to develop a production schedule.

A student is able to lead a discussion on production planning.

A student is aware of the importance of production planning in the organization of a production company.

#### Social competences

A student is able to assess the feasibility of the plan and production schedule.

A student is creative in the selection of methods and the preparation of production schedules.

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

The knowledge and skills acquired during the tutorials will be verified on the basis of a final test in the last class of the semester. The test consists of 5-10 open and closed questions and 3-4 computational tasks. Passing threshold: 50%.

The skills acquired during the project classes will be verified by reporting on the project developed by the students (in groups) and by discussing the work with the teacher.

### Programme content

Tutorials:



Characteristics of the production strategy. Basic concepts in production planning. The role and place of production planning in the organization of the enterprise. Levels, stages and methods of production planning. Production scheduling methods. Computer aided production planning.

**Project:**

Selection of products, characteristics of the product structure. Characteristics of the technological process and production strategy. Balancing the production capacity. Material requirements planning. Inventories of raw materials, finished products, work in progress. Operational scheduling.

**Teaching methods**

Tutorials: multimedia presentation illustrated with examples given on the board, solving problems, practical exercises, discussion, workshops, case studies.

Project: multimedia presentation, solving practical problems, searching for sources, teamwork, discussion

**Bibliography**

Basic

Pająk E.: Zarządzanie produkcją. Produkt, technologia, organizacja. PWN Warszawa 2006

Waters D., Zarządzanie operacyjne, PWN Warszawa 2012

Brzeziński M., Organizacja i sterowanie, Wyd. Placet 2002

Additional

Kulińska E., Busławski A., Zarządzanie procesem produkcji, Wyd. Delfin 2019

Liddell M., Niebieska książeczka o harmonogramowaniu, DSR.S.A 2020

Stadtler H., KilgerCh., editors, Supply Chain Management and Advanced Planning, Springer Berlin 2008

Durlik I.: Inżynieria zarządzania, AW Placet Warszawa 1997

**Breakdown of average student's workload**

	Hours	ECTS
Total workload	75	3,0
Classes requiring direct contact with the teacher	45	2,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	30	1,0

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