



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Production management

### Course

Field of study

Management Engineering

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

3/5

Profile of study

general academic

Course offered in

polish

Requirements

compulsory

### Number of hours

Lecture

30

Laboratory classes

Other (e.g. online)

Tutorials

15

Projects/seminars

15

### Number of credit points

5

### Lecturers

Responsible for the course/lecturer:

Agnieszka Grzelczak Ph.D.Eng.

e-mail: [agnieszka.grzelczak@put.poznan.pl](mailto:agnieszka.grzelczak@put.poznan.pl)

Responsible for the course/lecturer:

Faculty of Engineering Management

ul. Jacka Rychlewskiego 2, 60-965 Poznan

### Prerequisites

The student starting this subject should have a basic knowledge of machine technology and the basics of management and organization of work stations. He should also have the skills to understand and apply the parametric description of the production process and system as well as the design of workstation organization, as well as understand and be prepared for production management, especially in the area of production organization design, and in the field of social competence should have the ability to work in a group.

### Course objective

To familiarize students with the basics of production management.

### Course-related learning outcomes

Knowledge

has basic knowledge of the life cycle of socio-technical systems [P6S\_WG\_13]

knows the basic methods, techniques, tools and materials used to solve simple engineering tasks in the



field of production management [P6S\_WG\_16]

knows typical industrial technologies and knows the technologies of machine construction and operation in depth [P6S\_WG\_17]

has the basic knowledge necessary to understand the non-technical determinants of engineering activities; knows the basic principles of health and safety at work in force in the machine-building industry [P6S\_WG\_18]

has basic knowledge of management, including quality management, and conducting business activities [P6S\_WK\_02]

#### Skills

is able to make a critical analysis of the technological processes of machine production and organization of production systems [P6S\_UW\_13]

is able to apply typical methods of solving simple problems in the field of machine construction and operation [P6S\_UW\_15]

is able to design the structure and technology of simple machine parts and components and design the organization of first-stage complexity production units [P6S\_UW\_16]

#### Social competences

is aware of the importance and understands the non-technical aspects and effects of engineering activities, including its impact on the environment, and the associated responsibility for decisions [P6S\_KR\_01]

#### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

The knowledge gained in the lectures is verified by a 90-minute college in the last class or through tests (quizzes) by the Moodle platform. Passing threshold: 50% of points. Assessment issues are made available to students by e-mail using the university e-mail system.

The skills acquired during the classes are verified by a 90-minute test during the last class. The colloquium consists of tasks (open and calculated). Passing threshold: 50% of points.

Skills acquired during project classes are verified on the basis of project tasks (implemented in teams). Passing threshold: 50% of points.

#### Programme content

Lecture: The essence of production management. Classification of processes in an enterprise, an organized process. Parameters and norms of production management, space modeling the manufacturing process, control planes. Product (product or service), basics of technical preparation of production, range of production, program, pace and cycle of production. Product production cycle. Production stocks and their functions. Production capacity, load balancing with production capacity. Production capacity management, scheduling, production flow analysis. Basics of production control.

Tutorials: Production management parameters and norms. Produkt (product or service), production range, program, production pace and cycle. Product production cycle. Production inventory. Production



capacity, load balancing with production capacity. Production capacity management, scheduling, production flow analysis.

Project: Produkt (product or service), production range, program, production pace and cycle. Product production cycle. Production inventory. Production capacity, load balancing with production capacity.

### Teaching methods

Lecture: informative lecture (conventional) - information transfer in a systematic way, supported by multimedia presentation, illustrated with examples and tasks, and case method (case study) - analysis of specific cases of illustrative (illustrative) or problem (identifying problems) character.

Tutorials: exercise method (subject exercises) - in the form of auditorium exercises, the application of acquired knowledge in practice can take a different nature: solving cognitive tasks or training psychomotor skills, transforming conscious activity into a habit through repetition.

Project: project method - individual or team implementation of a large, multi-stage cognitive or practical task, which results in the creation of a work.

### Bibliography

#### Basic

- Pajak E., Klimkiewicz M., Kosieradzka A., Zarządzanie produkcją i usługami, PWE, Warszawa 2014.  
Brzeziński M. (red.), Organizacja i sterowanie produkcją, AW Placet, Warszawa, 2002.  
Mazurczak J., Projektowanie struktur systemów produkcyjnych, WPP, Poznań, 2001.  
Boszko J., Struktura organizacyjna przedsiębiorstwa i drogi jej optymalizacji, WNT, Warszawa 1973.

#### Additional

- Muhlemann A., Oakland J., Lockyer K., Zarządzanie. Produkcja i usługi, PWN, Warszawa, 2001.  
Pajak E., Zarządzania produkcją, Wydawnictwo Naukowe PWN, Warszawa 2017.  
Wróblewski K., Podstawy sterowania przepływem produkcji, WNT, Warszawa 1993.  
Senger Z., Sterowanie przepływem produkcji, WPP, Poznań, 1998.  
Ragin-Skorecka K., Grzelczak A., Motała D., Podstawy zarządzania nie tylko dla logistyków, Wydawnictwo WSB, Poznań 2017.

### Breakdown of average student's workload

	Hours	ECTS
Total workload	125	5,0
Classes requiring direct contact with the teacher	60	2,0
Student's own work (literature studies, preparation for tutorials and projects, preparation for tests, making a project) <sup>1</sup>	65	3,0

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