



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Production Management [S1DSwB1>ZProd]

### Course

Field of study

Data Science in Business

Year/Semester

1/2

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

Polish

Form of study

full-time

Requirements

compulsory

### Number of hours

Lecture

15

Laboratory classes

0

Other

0

Tutorials

0

Projects/seminars

30

### Number of credit points

3,00

### Coordinators

dr hab. inż. Łukasz Hadaś prof. PP

lukasz.hadas@put.poznan.pl

dr inż. Agnieszka Grzelczak

agnieszka.grzelczak@put.poznan.pl

### Lecturers

### Prerequisites

A student starting this course should have basic knowledge of production technologies and processes, as well as fundamental management principles. They should also possess the skills to understand technological (production) processes and be prepared to design production organization. In terms of social competencies, the student should have the ability to work in a team.

### Course objective

To familiarize students with the basics of production management.

### Course-related learning outcomes

Knowledge:

Characterizes production systems, production processes, and their parameters and standards in the context of production management [DSB1\_W04].

Describes methods of production planning, control, and scheduling, considering process structure and

the production capacity of the enterprise [DSB1\_W09].

Explains modern concepts of production management and their impact on the efficiency of production and logistics systems [DSB1\_W03].

#### Skills:

Designs production systems and processes within an organization, considering their structure and material flow [DSB1\_U08].

Analyzes production parameters and selects methods for control and scheduling to optimize manufacturing processes [DSB1\_U07].

Identifies and manages production capacities, inventories, and product range within the organization [DSB1\_U09].

Applies both classical and modern methods to analyze and optimize production systems and logistics processes [DSB1\_U10].

Develops and implements production control standards to improve the operational efficiency of the organization [DSB1\_U05].

#### Social competences:

Collaborates in project teams on the optimization of production systems, integrating knowledge of management and engineering [DSB1\_K02].

Considers economic, technological, and environmental aspects in the production management process, making informed operational decisions [DSB1\_K05].

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: Knowledge acquired during lectures is verified by a colloquium during the last class and/or by tests (quizzes) during individual classes. Passing threshold: 50% of points.

Project: quality assessment of individual stages/tasks of the completed project.

### Programme content

The essence of production management. Production system. Production process and its parameters. Production planning and control. Production management parameters and standards. Modern production management concepts.

### Course topics

Lecture: The essence of production management. Parameters and standards of production management. Product (product and service). Basics of technical preparation of production. Production assortment. Production stocks and their functions. Production capacity management. Scheduling. Analysis of production flow. Logistic processes. Basics of production planning and control. Production control standards. Methods and levels of production control. Production structure. Classification of processes in the enterprise. Production process and production system. Classical and modern production systems.

Project: Designing a production system and production process in a production unit.

### Teaching methods

Lecture: informative lecture (conventional) supported by multimedia presentation, illustrated with examples and tasks and case study method - analysis of specific cases of illustrative (demonstrative) or problem-related nature (problem recognition).

Project: project method.

### Bibliography

Basic:

1. Pająk E., Klimkiewicz M., Kosieradzka A., Zarządzanie produkcją i usługami, PWE, Warszawa 2014.
2. Brzeziński M. (red.), Organizacja i sterowanie produkcją, AW Placet, Warszawa, 2002.
3. Mazurczak J., Projektowanie struktur systemów produkcyjnych, WPP, Poznań, 2001.
4. Hadaś Ł., Fertsch M., Cyplik P., Planowanie i sterowanie produkcją, Wydawnictwo PP, Poznań 2012

Additional:

1. Muhlemann A., Oakland J., Lockyer K., Zarządzanie. Produkcja i usługi, PWN , Warszawa, 2001.
2. Pająk E., Zarządzania produkcją, Wydawnictwo Naukowe PWN, Warszawa 2017.
3. Senger Z., Sterowanie przepływem produkcji, WPP, Poznań, 1998.

#### Breakdown of average student's workload

|                                                                                                                                         | Hours | ECTS |
|-----------------------------------------------------------------------------------------------------------------------------------------|-------|------|
| Total workload                                                                                                                          | 75    | 3,00 |
| Classes requiring direct contact with the teacher                                                                                       | 47    | 2,00 |
| Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation) | 28    | 1,00 |