



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Management processes in a production company

### Course

Field of study

Chemical and Process Engineering

Area of study (specialization)

Bioprocesses and Biomaterials Engineering

Level of study

Second-cycle studies

Form of study

full-time

Year/Semester

2/3

Profile of study

general academic

Course offered in

Polish

Requirements

compulsory

### Number of hours

Lecture

15

Laboratory classes

Other (e.g. online)

Tutorials

Projects/seminars

15

### Number of credit points

2

### Lecturers

Responsible for the course/lecturer:

dr inż. Patrycja Wagner

Responsible for the course/lecturer:

Zakład Inżynierii i Aparatury Chemicznej

Instytut Technologii i Inżynierii Chemicznej

Wydział Technologii Chemicznej

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### Prerequisites



The student can logically connect the facts, interpret the results, draw conclusions and use information from available reference sources. The student is able to plan and organise both their own work and that of their team. The student seeks opportunities to further their education and expand their competences and is aware of the need to develop one's professional skills.

### Course objective

The student will learn of process management issues in a production company and acquire basic knowledge and skills relating to production management and production process improvement methods. The course is designed to develop soft skills which affect the quality and effectiveness of one's work in any job position in various industries. During classes the student will not only hone their teamwork skills but will also be tested to work under pressure of time and competitively in order to reflect, as best as possible, the realities of the working environment.

### Course-related learning outcomes

#### Knowledge

1. The student will have the knowledge of management in the industrial sector and of production process improvements - [K\_W10]
2. The student will have the knowledge of development and training needs for staff at production companies - [K\_W12]

#### Skills

1. The student has the ability to work in a team and to lead a team - [K\_U02]
2. The student is able to critically analyze industrial processes and introduce modifications and improvements in this area, using the acquired knowledge - [K\_U13]
3. The student will know how to improve production processes - [K\_U20]

#### Social competences

1. The student is able to interact and work in a group, assuming various roles in it - [K\_K03]
2. The student is able to properly define the priorities for the implementation of the tasks set by himself or others- [K\_K04]
3. The student is able to think and act in a creative and entrepreneurial way - [K\_K06]

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

The lecture will culminate with an end-of-semester written assessment including a multiple-choice test (20 questions) and two opened-ended (narrative) questions. The pass threshold score is 51%.

The skills acquired in the course will be verified during the last class with the student defending their individual project. A pass mark will depend on the student's knowledge as reflected in their project. The final mark will be derived from the documentation score (40% weighting) and the student's oral answers to questions (60% weighting). The pass threshold score is 51%.



## Programme content

Lecture:

The lecture will address the following matters:

- Basics of operational and strategic management,
- Production planning and scheduling,
- Production flow control,
- Changeover organisation of machine,
- Production process improvements,
- Stock and warehouse management,
- Computerised production management systems,
- Change management in production,
- Employee development and training,
- Biomass processing organisation,
- Paper and paper pulp production.

Project:

A project to be completed will seek to improve a selected stage in a production process at a selected production site in line with the continuous improvement approach. The project will address such issues as process lead time analysis, working conditions at a given job position, elimination of wastage, and profit and loss analysis. During classes, students will work in teams on such issues as production management, identification of production flow disruptions or production process optimisation.

## Teaching methods

Lecture: multimedia presentation with examples and short videos to demonstrate the relevant course content; discussion with students.

Project: completing and defending the project; troubleshooting practical problems (case studies); teamwork.

## Bibliography

Basic

Zarządzanie produkcją. Produkt, technologia, organizacja, Edward Pająk, PWN, Warszawa, 2006



Strategie i praktyki sprawnego działania. Lea, Six Sigma I inne, Adam Hamrol, Wydawnictwo Naukowe PWN, Warszawa 2017

Additional

Inżynieria zarządzania, Ireneusz Durlik, AW Placet, Warszawa, 1993

Szkolenia pracowników a rozwój organizacji, Kossowska Małgorzata, Sołtysińska Iwona, Oficyna Ekonomiczna, 2002

Zarządzanie strategiczne przedsiębiorstwem, Urbanowska-Sojkin Elżbieta, Banaszyk Piotr, Witczak Hubert, PWE, Warszawa 2007

Wywieranie wpływu na ludzi. teoria i praktyka, Robert Cialdini, GWP, Gdańsk, 2012

Zarządzanie. Teoria i praktyka, Koźmiński Andrzej, Piotrowski Włodzimierz, Wydawnictwo Naukowe PWN, Warszawa 2013

Zarządzanie procesem produkcji, Ewa Kulińska, Adam Busławski, Difin, 2019

#### Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation for test, project execution, case-study analysis) <sup>1</sup>	20	1,0

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