



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Tooling

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### Course

Field of study

logistics

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

4/7

Profile of study

general academic

Course offered in

polish

Requirements

elective

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### Number of hours

Lecture

15

Tutorials

Laboratory classes

Projects/seminars

15

Other (e.g. online)

### Number of credit points

3

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### Lecturers

Responsible for the course/lecturer:

prof. dr hab. inż. Marek Fertsch

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60-965 Poznań

Responsible for the course/lecturer:



### Prerequisites

The student starting this subject should have a basic knowledge of logistics and mechanical technology. He should also be able to obtain information from specified sources and be willing to cooperate as part of a team.

### Course objective

Mastering the student's knowledge, skills and social competences related to tool management in a mechanical engineering company

### Course-related learning outcomes

#### Knowledge

- knows the basic issues of construction, technology and techniques related to logistics [P6S\_WG\_01]
- knows the basic issues of the life cycle of socio-technical systems (logistics systems) and the life cycle of industrial products [P6S\_WG\_06]
- knows the basic management issues specific to logistics and supply chain management [P6S\_WG\_08]

#### Skills

- can present, using properly selected means, a problem that falls within logistics and its specific issues, and supply chain management [P6S\_UK\_01]
- is able to identify and formulate a practical (engineering) project task, characteristic of logistics, able to identify and formulate a practical (engineering) task, characteristic of logistics [P6S\_UO\_01]
- is able to identify changes in requirements, standards, regulations, technical progress and the reality of the labor market, and based on them determine the needs of supplementing knowledge [P6S\_UU\_01]

#### Social competences

- is aware of the critical assessment and perception of cause-effect relationships in achieving the set goals and ranking the significance of tasks [P6S\_KK\_01]
- is aware of the recognition of the importance of knowledge in the field of logistics and supply chain management in solving cognitive and practical problems [P6S\_KK\_02]
- is aware of cooperation and work in a group to solve problems within logistics and supply chain management [P6S\_KR\_02]

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

assessment based on a team-developed project,

grade based on written credit (exam)

### Programme content



Lectures: Planning of tool consumption: statistical methods, statistical coefficient method, analytical method. Organization of tooling. Tool shop production program. Tool shop equipment. Tool room crew. Organization of efficient tool release point. Tool release point. Single and multi-brand system. Tool suppliers services. Tool stocks.

Project: Planning of tool wear: statistical methods, statistical coefficient method, analytical method. Organization of tool economy. Tool shop production program. Tool shop equipment. Tool room crew. Tool suppliers services. Tool stocks.

### Teaching methods

1. Lecture: multimedia presentation, illustrated with examples on the board. 2. Projects: multimedia presentation illustrated with examples given on the board and performance of tasks given by the teacher.

### Bibliography

#### Basic

1. Fertsch M., Werner –Lewandowska K., Logistyka gospodarki narzędziowej [w:] Fertsch M. (red), Elementy Inżynierii Logistycznej, Wydawnictwo Instytutu Logistyki i Magazynowania, Poznań, 2017.
2. Liwowski B., Kozłowski R., Podstawowe zagadnienia zarządzania produkcją, Oficyna Wolters Kluwer business, Kraków 2007.
3. Ciesielski K. (red), Organizacja pomocniczych procesów produkcyjnych (rozdz. II: Gospodarka pomocami warsztatowymi), Wydawnictwo Politechniki Poznańskiej, Poznań, 1977.
4. Ciesielski K., Humpich M., Kawczyński W., Organizacja pomocniczych procesów produkcyjnych. Skrypt do projektowania. (rozdz. II: Projektowanie organizacji gospodarki pomocami warsztatowymi), Wydawnictwo Politechniki Poznańskiej, Poznań, 1989.

#### Uzupełniająca

#### Additional

#### Literatura uzupełniająca:

1. Wasiak J., Gospodarka narzędziowa, WNT, Warszawa, 1972.
2. Górski E., Poradnik narzędziowca, WNT, Warszawa, 1980.



### Breakdown of average student's workload

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

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