

Engineering of logistics processes in production - course description

General information	
Course name	Engineering of logistics processes in production
Course ID	06.9-WM-ZiIP-ZL-ANG-D-17_20
Faculty	Faculty of Mechanical Engineering
Field of study	Management and Production Engineering
Education profile	academic
Level of studies	Second-cycle studies leading to MSc degree
Beginning semester	winter term 2023/2024

Course information	
Semester	2
ECTS credits to win	4
Course type	obligatory
Teaching language	english
Author of syllabus	<ul style="list-style-type: none">dr hab. inż. Waldemar Woźniak, prof. UZ

Classes forms					
The class form	Hours per semester (full-time)	Hours per week (full-time)	Hours per semester (part-time)	Hours per week (part-time)	Form of assignment
Laboratory	15	1	-	-	Credit with grade
Lecture	30	2	-	-	Exam

Aim of the course

The main effect of the training will be to provide theoretical and practical information on the planning, management and control of logistics processes, in the sphere of production and to acquire decision-making skills in the field of production logistics.

Prerequisites

Production and Service Management, Operations Research

Scope

Lecture

Production logistics in the strategy of the enterprise. Technical and organisational conditions of production logistics. The cycle of testing and streamlining logistics processes, in the sphere of production. Information base of the production logistics system; main task planning; planning which materials are required. Production planning and scheduling. Forms and methods of balancing tasks with resources. Control and inspection of the production process. Transport and storage in the company's production system. Production handling systems and spare parts logistics. The concept of "Lean production". The concept of the management of constraints, supporting production logistics in systems of the MPRII/ERP class. The integrated, computer-aided manufacturing (CIM) system.

Laboratory

Process re-engineering, based on the selected production process.

Teaching methods

Conventional lecture.

Laboratory, according to the assumptions of the subject of the course.

Learning outcomes and methods of theirs verification

Outcome description	Outcome symbols	Methods of verification	The class form
The student has detailed knowledge of selected issues of Mechanical Engineering, as broadly understood and associated with Production Engineering.	<ul style="list-style-type: none">K_W06	<ul style="list-style-type: none">activity during the classes	<ul style="list-style-type: none">LectureLaboratory
The student can work individually as well as in a team; he/she is also able to select team members for a specific task and assign tasks to the members and manage a small team.	<ul style="list-style-type: none">K_U03	<ul style="list-style-type: none">an ongoing monitoring during classes	<ul style="list-style-type: none">Laboratory
The student has knowledge of the life cycle of devices, objects and technical systems, related to Management and Production Engineering	<ul style="list-style-type: none">K_W17	<ul style="list-style-type: none">an ongoing monitoring during classes	<ul style="list-style-type: none">LectureLaboratory
The student is able to plan and carry out engineering experiments, including measurement of the parameters of technological processes and computer simulations, enabling him / her to interpret the results and draw conclusions.	<ul style="list-style-type: none">K_U22	<ul style="list-style-type: none">an ongoing monitoring during classes	<ul style="list-style-type: none">Laboratory

Outcome description	Outcome symbols	Methods of verification	The class form
The student uses English terminology in his/ her references to management and production engineering.	• K_U10	• an ongoing monitoring during classes	• Lecture • Laboratory
The student has a thoroughly extensive knowledge of the application of mathematical methods, in order to be able to formulate and solve complex tasks, related to Management and Production Engineering.	• K_W01	• activity during the classes	• Lecture • Laboratory
The student is able to integrate technical knowledge with appropriate science disciplines, relevant to Management and Production Engineering viz., production engineering, the engineering of materials, the building and use of machines, automation and robotics, management.	• K_U18	• an ongoing monitoring during classes	• Lecture • Laboratory
The student is able to prioritise and carry out his/her own tasks as well as the tasks of others.	• K_K04	• an ongoing monitoring during classes	• Laboratory
The student is able to use accepted analytical, simulational and experimental methods for solving mechanical engineering problems, as well as in the decision-making process, for production planning and control.	• K_U13	• an ongoing monitoring during classes	• Lecture • Laboratory

Assignment conditions

Lecture: graded credit. Assessment on the basis of a written test which includes verification of a knowledge of basic issues.

Laboratory: graded credit. Assessment based on a component assessing the skills associated with the implementation of the project.

Final score: the arithmetical average of the scores from each type of class.

Recommended reading

1. Muhlemann Alan, Oakland John: *Zarządzanie. Produkcja i usługi*, PWN Warszawa 1992.
2. Fertsch M.: *Logistyka produkcji*. ILiM, Poznan 2003
3. Skowronek Cz., Sarjusz - Wolski Z.: *Logistyka w przedsiębiorstwie*. PWE. Warszawa 2000
4. Beier F., Rutkowski K.: *Logistyka*. SGH. Warszawa 1996

Further reading

1. Coyle J.J.: *Zarządzanie logistyczne*. PWE, Warszaw, 2002.
2. Durlík I.: *Inżynieria zarządzania. Strategia i projektowanie systemów produkcyjnych*. Wyd. Placet Warszawa, 1995 (część 1), 1996 (część 2)
3. Johnston R. *Zarządzanie działalnością operacyjną. Analiza przypadków*. PWN, Warszawa, 2002.
4. Krawczyk S. *Zarządzanie procesami logistycznymi*. PWE, Warszawa 2001.
5. Laskowska A. *Konkurowanie czasem- Strategiczna Broń Przedsiębiorstwa*. Difin, Warszawa, 2001.
6. Pfohl H-Ch., *Systemy logistyczne. Podstawy organizacji i zarządzania*. Biblioteka Logistyka, Poznań, 1998.
7. Womack J.P., Jones D.T.: *Odchudzanie firm. CIM*, Warszawa, 2001.

Notes

Modified by dr inż. Tomasz Belica (last modification: 12-04-2023 23:05)

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