



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Organization of Production and Logistics in Automotive Industry

Course

Field of study

Logistics

Area of study (specialization)

Corporate Logistics

Level of study

Second-cycle studies

Form of study

full-time

Year/Semester

1

Profile of study

general academic

Course offered in

Polish

Requirements

elective

Number of hours

Lecture

15

Tutorials

0

Laboratory classes

0

Projects/seminars

30

Other (e.g. online)

0

Number of credit points

5

Lecturers

Responsible for the course/lecturer:

dr inż. Paulina Golińska Dawson

Wydział Inżynierii Zarządzania

Politechnika Poznańska

ul. Jacka Rychlewskiego 2, 60-965 Poznań

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Responsible for the course/lecturer:

dr inż. Monika Kosacka-Olejniki

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Prerequisites

The student starting this subject should have a knowledge of the fundamentals of production



organization and logistics. He/she should also be able to obtain information from specified sources and be willing to cooperate as part of a team.

Course objective

To teach students the principles of organization of production and logistics in the automotive industry. Students learn also practical solutions used in this area

Course-related learning outcomes

Knowledge

1. Student knows issues in the field of production engineering and its connections with the organization of production and logistics in the automotive industry [P7S_WG_02]
2. Student knows the detailed methods, tools and techniques specific to the organization of production and logistics in the automotive industry [P7S_WK_01].
3. Student knows the extended concepts for logistics and its detailed problems and supply chain management and supply chain management in the automotive industry [P7S_WG_05]

Skills

1. Student can design, using appropriately selected means, a process of analysis or a scientific study solving a problem within the framework of problem within the organization of production and logistics in the automotive industry [P7S_UK_01]
2. The student can collect on the basis of the literature of the subject and other sources (in Polish and English) and in an orderly manner, provide information on the problem within the framework of the organization of production and logistics in the automotive industry [P7S_UW_01]
3. Student formulate and solve tasks through interdisciplinary integration of knowledge from different fields and disciplines used to design logistics systems in the automotive industry [P7S_UO_01]
4. Student makes a critical analysis of technical solutions used in the analyzed logistics system in production and logistics in the automotive industry (in particular with regard to devices, objects and processes) [P7S_UW_04].

Social competences

1. The student is aware of the responsibility for own work and readiness to comply with the rules of working in a team and taking responsibility for the tasks carried out jointly [P7S_KR_01]
2. The student is able recognize causal relationships in achieving the set goals and grading the significance of alternative or competitive tasks [P7S_KK_01]

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Formative assessment

- a) project - based on a discussion of the solutions that he wants to propose under the project



b) on a lecture based on answers to questions about the material discussed in the previous lecture

Final assessment

a) project - on the basis of public presentation of the project results and discussion about them, on the basis of the substantive quality of the prepared project

b) lecture - written test on the last lecture

Programme content

The lecture begins with a short presentation of the car as an industrial product (complexity, technologies used, basic assemblies) and the design process. Typical assembly systems, assembly line organization and organization of a car manufacturing plant are presented. The process of planning and controlling production in a car manufacturing plant is discussed. The process of planning material in the production of cars is presented. Various variants of demand coverage are discussed - suppliers' parks, Just in Time deliveries (JiT), Just in sequence deliveries (JiS). Issues related to the re-use of end-of-life vehicles and the application of new circular economy trends in the automotive industry (circular economy) will be discussed.

During design classes, students learn about the detailed problems of organizing car assembly lines, planning production and controlling its course, organization of deliveries in their various variants.

Teaching methods

Teaching methods: conventional specialist lecture, problem lecture, case method, team project, work with literature.

Bibliography

Basic

1. Golinska P., Fertsch M. Organizacja produkcji i logistyki w przemyśle samochodowym, wyd. PP 2012.
2. Rohatyński R., Remanufacturing ? istota-znaczenie- realizacja [w:] Fertsch M.(red.), Elementy inżynierii Logistycznej, Wydawnictwo Instytutu Logistyki i Magazynowania, Poznań 2017.
3. Fertsch M., Metoda planowania zapotrzebowania materiałowego w planowaniu produkcji i sterowaniu jej przebiegiem, Wydawnictwo Politechniki Poznańskiej, Poznan, 2013.

Additional

Golinska, P. (Ed.). Environmental issues in automotive industry. Springer Science & Business Media, 2014.

Hall R.W., Zero Inventories, Dow Jones Irving, Homewood, Illinois, 1983

2. Monden Y., Toyota Production System, Industrial Engineering and Management Press, Norcross, USA, 1983.



Breakdown of average student's workload

	Hours	ECTS
Total workload	125	5,0
Classes requiring direct contact with the teacher	65	3,0
Student's own work (literature studies, preparation for project, preparation for tests, project preparation) ¹	60	2,0

¹ delete or add other activities as appropriate