



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Supply chain design [S2Log2-MPTS>PLD]

### Course

Field of study

Logistics

Year/Semester

2/3

Area of study (specialization)

Manager of a Transport and Forwarding Company

Profile of study

general academic

Level of study

second-cycle

Course offered in

Polish

Form of study

full-time

Requirements

elective

### Number of hours

Lecture

15

Laboratory classes

0

Other

0

Tutorials

0

Projects/seminars

15

### Number of credit points

2,00

### Coordinators

prof. dr hab. inż. Marek Fertsch  
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### Lecturers

### Prerequisites

The student starting this subject should have a basic knowledge of logistics engineering & supply chain management. 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 supply chain design.

### Course-related learning outcomes

Knowledge:

1. Knows the dependencies related to supply chain design [P7S\_WG\_02]
2. Knows issues in the field of production engineering and its connections with supply chain design [P7S\_WG\_02]
3. Knows extended concepts for logistics and its detailed issues related to supply chain design [P7S\_WG\_05]

Skills:

1. Is able to collect, based on the literature on the subject and other sources and present in an orderly manner information regarding a problem falling within the framework of logistics and its detailed issues related to the design of the supply chain [P7S\_UW\_01]]
2. Is able to communicate using appropriately selected means in a professional environment and in other environments within logistics and its detailed issues related to supply chain design [P7S\_UW\_02]]
3. Is able to assess the usefulness and possibility of using new achievements (techniques and technologies) in the field related to supply chain design [P7S\_UW\_06]
4. Is able to identify changes in requirements, standards, regulations, technical progress and labor market reality, and on their basis determine the needs to supplement own and other knowledge related to supply chain design [P7S\_UU\_01]

Social competences:

1. Notices cause-and-effect relationships in the implementation of set goals and gradates the importance of alternative or competitive tasks related to supply chain design [P7S\_KK\_01]
2. Correctly identifies and resolves dilemmas related to the profession of logistics manager, observing the principles of professional ethics and respecting the diversity of views and cultures [P7S\_KK\_02]
3. Is aware of responsibility for one's own work and is ready to obey the principles of teamwork and take responsibility for jointly performed tasks [P7S\_KR\_01]

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture: grade based on written credit.

Project: assessment based on a team-developed project.

### Programme content

Supply chain as a logistics system. Supply chain design reference models. Designing logistics systems.

### Course topics

Choosing a supply chain strategy. Strategic analysis. Krajlica, Cox, Saunders models. Olsen and Ellram model, assessment of the functioning of the supply chain. Supply chain configuration: Supply chain configuration theories. Balance methods in supply chain design. Supply chain dimensions. Simulation methods in supply chain design. Physical system design: identification of available alternatives, data collection and use, selection of methods and techniques for analyzing alternatives, selection of criteria for assessing alternatives, analysis of results.

Project: In the design class, students design the supply chain specified by the lecturer.

### Teaching methods

Lecture: an informative lecture supported by a multimedia presentation, illustrated with examples given on the blackboard.

Project: project method supported by a multimedia presentation illustrated with examples given on the board and the implementation of tasks given by the teacher.

### Bibliography

Basic:

1. Fertsch M., Projektowanie łańcuchów dostaw, Wydawnictwo Politechniki Poznańskiej, Poznań, 2012.
2. Kisperska-Moroń D. (red.), Pomiar funkcjonowania łańcucha dostaw, Prace Naukowe Akademii Ekonomicznej Imienia Karola Adamieckiego w Katowicach, Katowice, 2006.
3. Ciesielski M., Długosz J. (red.), Strategie łańcuchów dostaw, PWE, Warszawa, 2001.
4. Gołębska E., Szymczak M., Informatyzacja w logistyce przedsiębiorstw, Wydawnictwo Naukowe PWN, Warszawa, 1997.

Additional:

1. Witkowski J., Zarządzanie łańcuchem dostaw, PWE, Warszawa, 2010.
2. Schary P.B., Skjott-Larsen T., Zarządzanie globalnym łańcuchem podaży, Wydawnictwo Naukowe PWN, Warszawa, 20002.

### Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	20	1,00