# POZNAN UNIVERSITY OF TECHNOLOGY



EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS) pl. M. Skłodowskiej-Curie 5, 60-965 Poznań

# **COURSE DESCRIPTION CARD - SYLLABUS**

Course name Supply chain design

#### Course

Field of study Year/Semester 1/1 Logistics Area of study (specialization) Profile of study Supply chain logistics Level of study Second-cycle studies polish Form of study Requirements full-time elective

# general academic Course offered in

## Number of hours

Lecture	Laboratory classes	Other (e.g. online)
30		
Tutorials	Projects/seminars	
	30	
Number of credit points		

5

#### Lecturers

Responsible for the course/lecturer: prof. dr hab. inż. Marek Fertsch e-mail: marek.fertsch@ put.poznan.pl tel. 48 61 665 3416

Wydział Inżynierii Zarządzania

ul. Jacka Rychlewskiego 2.

60-965 Poznań

Responsible for the course/lecturer:

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#### Prerequisites

The student starting this subject should have a basic knowledge of logistics 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. dependencies in the given area and their relations with logistics [P7S\_WG\_01]

2. issues in the field of production engineering and its connections with the field of logistics [P7S\_WG\_02]

3. extended concepts for logistics and its detailed problems and supply chain management [P7S\_WG\_05]

#### Skills

1. 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 logistics and its specific issues and supply chain management [P7S\_UW\_01]

2. communicate using appropriately selected resources in a professional environment and in other environments as part of logistics and its specific issues as well as supply chain management [P7S\_UW\_02]

3. assess the suitability and the possibility of using new achievements (techniques and technologies) in the field of logistics and functionally related areas [P7S\_UW\_06]

#### Social competences

1. identify changes in requirements, standards, regulations, technical progress and the reality of the labor market, and on their basis determine the need to supplement own and other knowledge [P7S\_UU\_01]

2. correct identification and resolution of dilemmas related to the profession of logistic manager, with respect for professional ethics and respect for diversity of views and cultures [P7S\_KK\_02]

3. 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]

#### 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)



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#### **Programme content**

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

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., 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 201

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	125	5,0
Classes requiring direct contact with the teacher	60	2,5
Student's own work (literature studies, preparation for project,	65	2,5
preparation for tests/exam, project preparation) <sup>1</sup>		

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