# 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

**Activity Based Costing in Logistics** 

Course

Field of study Year/Semester

Logistics 1/2

Area of study (specialization) Profile of study

Corporate Logistics general academic Level of study Course offered in

Second-cycle studies Polish

Form of study Requirements part-time compulsory

Number of hours

Lecture Laboratory classes Other (e.g. online)

14

Tutorials Projects/seminars

14

**Number of credit points** 

4

#### Lecturers

Responsible for the course/lecturer:

Responsible for the course/lecturer:

Ph.D., D.Sc., Eng. Agnieszka Stachowiak,

**University Professor** 

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Faculty of Engineering Management

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# **Prerequisites**

Knowledge of logistics processes and their course. The ability to use quantitative methods to

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characterize logistics processes and make decisions in the field of logistics. Knowledge of economic dependencies in logistics.

## **Course objective**

Providing students with knowledge in determining logistics costs using the Activity Costing methodology. Developing skills in building cost models for logistics processes and making decisions in the field of logistics based on settlement results.

## **Course-related learning outcomes**

# Knowledge

- 1. The student knows the relationships between individual categories of logistics costs [P7S WG 01]
- 2. The student knows the conditions of logistics processes carried out in the enterprise and within the supply chain that determine the variability of logistics costs [P7S WG 05]
- 3. The student knows the essence of activity-based costing, lists the stages of cost settlement using this calculation method [P7S\_WK\_01]
- 4. The student knows the best practices for minimizing the costs of logistics processes and knows how to identify the benefits resulting from their implementation using activity-based costing [P7S\_WK\_04]

#### Skills

- 1. The student is able to search based on the subject literature and other sources and present in an orderly manner information including resource costs, activity costs and costs related to cost objects in the logistics of enterprises and supply chains using activity-based costing [P7S\_UW\_01]
- 2. The student is able to critically analyze technical solutions used in the analyzed logistics system (in particular with regard to devices, facilities and processes) using activity cost accounting [P7S\_UW\_04]
- 3. The student is able to design a cost model for a selected logistics process using activity-based costing [P7S\_UK\_01]
- 4. The student is able to prepare a well-documented study of problems in the field of Activity-Based Costing in Logistics in Polish and English at the B2 level of the Common European Framework of Reference for Languages [P7S\_UK\_02]
- 5. The student is able to identify changes in requirements, standards, regulations, technical progress and labor market reality affecting logistics costs and determining the application of activity-based costing in logistics and understands the need to update knowledge resulting from changes in the cost structure in the economy [P7S\_UU\_01]

# Social competences

1. The student correctly identifies and resolves dilemmas related to the profession of a logistics manager, making cost decisions using activity-based costing, observing the principles of professional ethics and respecting the diversity of views and cultures [P7S\_KK\_02]

# POZNAN UNIVERSITY OF TECHNOLOGY



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2. The student is able to plan and manage creatively business ventures, taking into account cost analyzes carried out using cost accounting in the field of logistics [P7S\_KO\_01]

# Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Knowledge acquired as part of the lecture is verified by the final test carried out during the last lecture. The test consists of 15 test questions (including open and closed, single and multiple choice). Passing threshold: 50% of points.

Skills acquired as part of the classes are verified on the basis of the tasks solved in class. Students solve tasks in groups of 2-3 people. Task scores vary depending on the level of difficulty. Passing threshold: 50% of points.

# **Programme content**

#### Lecture:

Logistic costs - the essence. Activity costing - the origin and essence of the methodology. Activity costing for logistics processes - examples, benefits, problems. Resource costs and unused resource costs. Customer service costs. Activity-based costing. Implementation of the ABC in enterprises

#### exercises:

Basic elements in the ABC cost model - resource cost drivers, activity cost drivers. Comparison of cost settlement using the traditional method and the activity costing method. Identification of distribution network customer service costs. Identification of unused resource costs in order processing processes. Time-based activity costing - picking problem

# **Teaching methods**

Lecture: informative lecture and chat on solutions presented

Exercises: case studies

#### **Bibliography**

# Basic

- 1. Rachunek Kosztów Działań w Logistyce, A.Stachowiak, Wydawnctwo Politechniki Poznńskie, Poznań, 2011
- 2. Projektowanie rachunku kosztów działań, R. Piechota, Difin, 2005

#### Additional

- 1. Rachunek kosztów i rachunkowość zarządcza, red. I. Sobańska, C.H. Beck, Warszawa 2006
- 2. Zarządzanie kosztami i efektywnością, R.S. Kaplan, R. Cooper, Dom wydawniczy ABC, Kraków 2000





# EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

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# Breakdown of average student's workload

	Hours	ECTS
Total workload	100	4,0
Classes requiring direct contact with the teacher	28	1,0
Student's own work (literature studies, preparation for tutorials,	72	3,0
preparation for tests, project preparation and presentation) <sup>1</sup>		

4

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