## 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

**Building facility management** 

**Course** 

Field of study Year/Semester

Civil Engineering 2/3

Area of study (specialization) Profile of study

Construction Engineering and Management general academic
Level of study Course offered in

Second-cycle studies Polish

Form of study Requirements

full-time elective

**Number of hours** 

Lecture Laboratory classes Other (e.g. online)

15 0 0

Tutorials Projects/seminars

0 15

**Number of credit points** 

2

**Lecturers** 

Responsible for the course/lecturer: Responsible for the course/lecturer:

dr inż. Tomasz Thiel second person is allowed

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Wydział Inżynierii Lądowej i Transportu

ul. Piotrowo 3, 60-965 Poznań

## **Prerequisites**

Knowledge: The student knows the basics of construction, building physics, planning and calculation of construction process

He knows the issues related to the repair and modernization of buildings and the basics of assessing the effectiveness of investments

Skills: The student is able to describe the technical condition of individual building elements, define the type and scope of damage, calculate the repair works and plan their course in time.

He can propose changes in building and determine the scope of modernization works, as well as estimate the cost of these works and the time course.

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He can collect the information about the building from various sources

Social competences: The student is aware of having the fullest possible technical, legal, economic and environmental knowledge about the building structure, which is the basis for construction management.

He knows that at the construction management stage he will cooperate with various participants in this process.

## **Course objective**

Getting to know the basics of building facility management, selected issues related to the operation and maintenance of buildings (consumption of buildings; energy assessment of the building and premises; influence to environmental; specificity and conditions of operation, planning of building exploitation and building maintenance). Preparation and analysis of a management plan for a building. Facility manager - getting to know the scope of expectations and competences in the area of building management. The use of BIM in construction management.

## **Course-related learning outcomes**

Knowledge

The student knows what a real estate as an object of management and he knows what are the functions of the manager

He knows what is the maintenance and exploitation of the building and building equipment.

He knows how to execute a real estate management plan and build variants of a real estate management strategy

He knows the scope of tasks, basic domains and areas of Facility Manager integration, and knows the role of BIM in the management of construction facilities

Skills

The student is able to estimate the degree of wear of building elements and the a whole building

He can determine the types and structure of costs and revenues at the stage of building exploitation

He can prepare a current financial analysis for the needs of building operation and can prepare a developed property management plan

He knows what a BIM model looks like for an existing building, and what is the next procedure to achieve building management with BIM

## Social competences

The student is able to formulate an opinion on the exploitation of the building and the structure of their costs and revenues.

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He knows and understands the importance of cooperation with all participants involved in the building management process

He knows what mean consideration of the technical, economic, environmental and social aspects in the preparation of a property management plan and in the whole building management process

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Written credit for the lecture

Execution of 3 exercises covering selected elements of the building management plan

#### **Programme content**

Basics of building objects management. Developed property management plans. Selected issues regarding the operation and maintenance of buildings (consumption of buildings; energy assessment of the building and premises; impact of the building on the environment; specificity and conditions of operation, planning of the operation and maintenance of buildings). Examples of software for building maintenance and management. Facility management in building management.

## **Teaching methods**

Information lecture with a multimedia presentation

Project - problem method: case and SWOT analysis, project method (team work)

#### **Bibliography**

#### Basic

- 1. Podstawy zarządzania nieruchomościami, Gawron H., Wyd. Uniw. Ekon. w Poznaniu, Poznań, 2010
- 2. Zużycie łączne budynków w szacowaniu i zarządzaniu nieruchomościami, Źróbek R., Educaterra, Olsztyn, 1998
- 3. Eksploatacja nieruchomości budynkowych, poradnik zarządcy, Olearczuk E., COIB, Warszawa, 2005
- 4. Plany zarządzania nieruchomościami modele, metody narzędzia, Sobczak A., Wyd. Poltext, Warszawa, 2010

#### Additional

- 1. Podstawy zarządzanie nieruchomościami,, pr. zb. pod. red. M. Bryxa, Wyd. Poltext, Warszawa, 2009
- 2. Przygotowanie planu zarządzania nieruchomością, Gawron H., AE w Poznaniu, Poznań, 2008





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# Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	30	1,0
Student's own work (literature studies, preparation for	20	1,0
laboratory classes/tutorials, preparation for tests/exam, project		
preparation) <sup>1</sup>		

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