



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Cost estimation

Course

Field of study

Budownictwo

Area of study (specialization)

Level of study

First-cycle studies

Form of study

full-time

Year/Semester

3/V

Profile of study

general academic

Course offered in

polish

Requirements

compulsory

Number of hours

Lecture

30

Laboratory classes

Tutorials

Projects/seminars

15

Other (e.g. online)

Number of credit points

4

Lecturers

Responsible for the course/lecturer:

dr inż. Marcin Gajzler

Responsible for the course/lecturer:

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Instytut Budownictwa

Piotrowo 5

Prerequisites

Basic knowledge of building materials, construction, technology and organization of construction works

Course objective

Acquisition of knowledge, skills and competences in the field of planning, monitoring and cost settlement of construction works, and above all, preparation of construction cost estimates and other cost studies.

Course-related learning outcomes

Knowledge

- has a basic knowledge of the algorithms of operation of selected computer programs (also using BIM technology) supporting the calculation and design of structures, organization of construction works, cost



estimation and technical equipment of buildings and algorithms for the operation of programs for the evaluation and design of energy-efficient buildings

- has knowledge of the organization and principles of construction management, creating quality management procedures for construction works; knows the standards of work in construction

Skills

- can use advanced information and communication techniques appropriate to the implementation of tasks typical for engineering activities

- is able to perform a preliminary economic analysis of basic engineering activities; knows how to prepare a simple cost estimate and work schedule

- knows how to organize work on a construction site in accordance with the principles of technology and construction organization

Social competences

- is responsible for the reliability of the obtained results and their interpretation

- is aware of the need to improve professional and personal competences, understands the need and knows the possibilities of continuous training (second and third degree studies, postgraduate studies, courses)

- has the ability to critically evaluate the results of their own work

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

lecture - written exam (open questions, test)

design exercises - preparation of a cost estimate for the indicated scope of construction works based on a bill of quantities

Grading scale defined% from:

90 very good (A)

85 good plus (B)

75 good (C)

65 sufficient plus (D)

55 sufficient (E)

below 54 insufficient

Programme content



The specificity of construction. Factors determining the condition of construction. Forms of settlements and remuneration for construction works. Cost accounts (type and calculation system, according to the place of their origin, according to cost drivers, resultant). Conditions of the cost calculation process in construction. Functions and types of cost studies in construction. Pre-investment cost calculations. Types of cost estimates. Collective cost statements. General and detailed rules for the take-off of works. Methods of calculating the cost estimate. Normative and price-cost databases and the rules of using them. Calculation of individual components of the cost estimate. Principles of individual calculation. Valuation of design work costs. Monitoring of costs during the implementation of construction works. Costs control. Selected elements of the economics of building objects exploitation

Teaching methods

Lecture - multimedia presentation

Projects - carrying out a design exercise

Bibliography

Basic

1. Smoktunowicz E.; Kosztorysowanie obiektów i robót budowlanych, Polcen, Warszawa 2001
2. Zajączkowska.T. Kalkulacja kosztorysowa i jej komputerowe wspomaganie, Zamex`, Kraków 2002
3. Vademecum kosztorysanta, Ośrodek Wdrożeń Ekonomiczno-Organizacyjnych Budownictwa, Promocja, Warszawa 2002

Additional

1. Duraj J. Podstawy ekonomiki przedsiębiorstwa, PWE, Warszawa 2004
2. Standardy kosztorysowania robót budowlanych, Stowarzyszenie Kosztorysantów Budowlanych, Warszawa 2005

Breakdown of average student's workload

	Hours	ECTS
Total workload	120	4,0
Classes requiring direct contact with the teacher	45	2,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) ¹	75	2,0

¹ delete or add other activities as appropriate