



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Project Cost Management [S2Arch1>ZKI]

Course

Field of study
Architecture

Year/Semester
1/1

Area of study (specialization)
–

Profile of study
general academic

Level of study
second-cycle

Course offered in
polish

Form of study
full-time

Requirements
compulsory

Number of hours

Lecture
15

Laboratory classes
0

Other (e.g. online)
0

Tutorials
15

Projects/seminars
0

Number of credit points

2,00

Coordinators

Lecturers

dr inż. Maria Celińska-Mysław

dr inż. Agnieszka Dziadosz
agnieszka.dziadosz@put.poznan.pl

Prerequisites

1 Knowledge: • Has knowledge of construction law, organization and economics of the investment process • Has a basic knowledge of the life cycle of building objects and their systems of technical structure 2 Skills: • Can make a preliminary analysis of the economic effectiveness of an investment and estimate the labor consumption of engineering activities • Can use information and communication techniques appropriate to the implementation of tasks typical for design activities related to the performance of independent technical functions in construction. 3 Social competences: • Can think and act in an entrepreneurial, creative and innovative way • Is aware of the social and humanistic aspects of the architect's work - a profession of public trust

Course objective

The aim of the course is to introduce students to the issues of cost management in the construction investment process. Presentation of methods of cost planning, their monitoring and settlement. Acquiring the practical ability to prepare a project budget and evaluate the economic effectiveness of an investment.

Course-related learning outcomes

Knowledge:

B.W4. issues related to architectural, urban and spatial planning, such as technical infrastructure, communication, natural environment, landscape architecture, economic, legal and social conditions - necessary for understanding social, economic, ecological, natural, historical, cultural, legal and other non-technical determinants of engineering activities and sees the need to take them into account in architectural, urban and rural design and spatial planning;

B.W6. technical and construction regulations;

Skills:

B.U3. recognize systemic and non-technical aspects, including environmental, cultural, artistic, economic and legal aspects in the process of architectural, urban and planning design with a high degree of complexity;

B.U5. use properly selected advanced computer simulations, analyzes and information technologies, supporting architectural and urban design, as well as evaluate the obtained results and their usefulness in design, and draw constructive conclusions;

B.U6. prepare and present a presentation on the detailed results of the design engineering task using various communication techniques, including one formulated in a commonly understandable manner;

B.U7. prepare and present a presentation on the detailed results of the design engineering task using various communication techniques, including one formulated in a commonly understandable manner;

B.U8. properly apply professional and ethical standards and rules as well as legal provisions in the field of architectural and urban design and spatial planning.

Social competences:

B.S1. formulate and transfer information and opinions to the society on the achievements of

B.S2. formulate reliable self-assessment, formulate constructive criticism regarding architectural and urban planning activities, as well as accept criticism of the solutions presented by them, responding to criticism in a clear and factual manner, also using arguments referring to the available achievements in the scientific discipline, and creative and constructive use of criticism .

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lectures on the subject of Investment Cost Management end with a written test.

The learning outcomes of the exercises are checked by carrying out an exercise in the field of estimating the total costs in the life cycle for 3 variants of construction works and their alternative material solutions, additionally supplemented with a sensitivity analysis.

Lecture:

- the results of the final test announced at the beginning of the semester, a test with one correct answer.
- activity (registered) during classes.

Classes:

Design exercises are assessed on the basis of the final grade for a correctly performed exercise.

Grading scale: 2,0; 3.0; 3.5; 4.0; 4.5; 5.0

Summative assessment:

Lecture:

grade obtained from the test, supplemented with activity during the classes.

Classes:

assessment of a correctly performed exercise using the LCCA approach.

Grading scale: 2,0; 3.0; 3.5; 4.0; 4.5; 5.0

Obtaining a positive grade for the module depends on the student achieving all the learning outcomes listed in the syllabus.

Programme content

Lectures include:

Methods of assessing the economic effectiveness of investment projects. Financing of investment activities. Valuation of investment costs at the stage of its programming and planning. Planning of costs in the life cycle of a building structure. Costs of the operation phase of a building structure, with particular emphasis on the cost of renovation works. The impact of costs in individual stages on the total costs of the facility based on the LCCA approach. Planning a construction investment budget. Monitoring

and settlement of construction investment costs. Basic cost accounts used in construction. Project risk analysis, sensitivity strategies.

Classes include the following content:

- assessment of the effectiveness of construction investments - examples
- updating cash flows (interest rate, discounting), principles of the efficiency account, basic static and dynamic methods - examples
- determination of costs in the life cycle of a building object - examples

Students prepare a study:

Assessment of the total costs in the life cycle of the building for selected 3 construction works and their material variants, including a sensitivity analysis.

Teaching methods

1. Problem lectures with the use of multimedia techniques, case study, solving tasks based on practical examples during exercises, didactic discussions.
2. eLearning Moodle (a system supporting the teaching process and distance learning).

Bibliography

Basic

1. A guide to the Project Management Body of Knowledge (PMBOK guide), PMI, 2017.
2. Kapliński O. (red.). Metody i modele badań w inżynierii przedsięwzięć budowlanych. IPPT PAN, W-wa 2007.
3. Ashworth A., Perera S., Cost Studies of Buildings, Taylor&Francis Ltd, 2000.
4. Kotapski R., Budżetowanie w zarządzaniu przedsiębiorstwem budowlano-montażowym, Wydawnictwo Marina, Wrocław, 2014.

Additional

1. Faisal A, Munib A, Critical Success Factors of Construction Project Management, OmniScriptum GmbH & Co. KG 2010.
2. Potts K., Ankrah N., Construction Cost Management, Taylor&Francis Ltd, 2008.

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)	0	0,00