ECONOMICS OF DESIGNING AND THE INVESTMENT PROCESS

General information	
Subject	Economics of Designing and the Investment Process
Faculty	Faculty of Civil Engineering, Architecture and Environmental Engineering
Course of study	Architecture
Profile	General academic
Type of study	I level with the degree of Eng. Arch.
Starting semester	Winter semester

Information about the subject	
Semester	5
Number of ECTS points	3
Subject type	obligatory
Language of instruction	English
Syllabus prepared by	Grzegorz Misztal PhD Eng.

Type of class					
Course type	*Number of classes per semester (full time studies)*	*Number of classes per week (full time studies)*	*Number of classes per semester (part time studies)*	*Number of classes per week (part time studies)*	*Credit type*
Lecture	15	1	-	-	Exam
Exercises	15	1	-	-	Credit with a grade

Subject objective

1. The objective in terms of knowledge is to familiarize the student with problems related to calculating the value of construction work and estimating investment costs, as well as estimating the cost of project work in the investment process and learning about economic conditions of the construction market in Poland.
2. The objective in terms of skills is to teach the student to prepare estimates of construction costs.
3. The objective in terms of personal and social competences is to prepare the student to present in class their own project for estimating construction work and services and calculating the amount of construction work done and defend it in front of a group of students.

Initial requirements

Formal: Basics of mathematics and geometry, General construction. Building Materials.

Subject scope

Lecture:

Basic concepts for estimating costs of construction work . Cost structure in construction.
Types and methods of cost estimation in construction.
Stages of project documentation and corresponding stages of cost estimation documentation.
Estimating investment costs at the stage of Technical and Economic Assumptions (TEA) and Technical Project (TP).
Methods for estimating project work costs. Initial estimates of construction works.
Types of cost estimates in construction. Estimation of cost components of construction work.
Methods for cost estimation. The role of cost estimates in tenders. Rules for making cost estimates. Normative and price bases.
Estimation of design work costs in particular industries.

Exercises:

Project exercises consisting in preparing a bill of quantities and then cost estimation of construction work, according to a specified scope of work, using one of the available applications for computer aided cost estimation.

Educational methods

Explanation methods: lectures - conventional.
Research methods: exercises - discussion of the topic of the project, an example, explanations and discussion, independent implementation of a given project exercise.

Education results and verification methods

Description	*Symbol*	*Verification method*	*Type of class*
The student has mastered basic knowledge in the terms of: Construction, Landscape Architecture, Interior Architecture and Environmental Engineering, related to their field of study. The student has elementary knowledge of design and investment economics in the field of architecture and urban planning. The student knows and can show the basic methods, techniques, tools and materials used in solving simple engineering tasks in the field of architecture and urban planning. The student has the necessary knowledge for their diploma and can take up professional activity and join the level-two course	K_W01 K_W02 K_W05 K_W07 K_W11	– exam - oral, descriptive, test, etc. – exam test with points observation and evaluation of participation in class – observation and evaluation of the student's practical skills	Lecture, Exercises
The student can determine the scope of construction work and estimate its market value. The student can use methods and tools of mapping and measuring equipment useful in inventory work in the field of architecture, construction and urban planning. The student can use various IT, computational and graphic techniques to formulate and solve simple engineering tasks in architecture, construction and urban planning. The student can use basic standards, regulations and planning and legal documentation for design, implementation and operation of architectural objects and urban complexes. The student has basic skills at economically planning and organizing the investment process as well as carrying out projects. The student is aware of the need to constantly improve their professional qualifications outside the Polish language area and to inspire and create conditions for educating other people involved in investment and project processes.	K_U01 K_U02 K_U05 K_U06 K_U09	– exam - oral, descriptive, test, etc. – exam test with points observation and evaluation of participation in class – observation and evaluation of the student's practical skills	Lecture, Exercises
The student is aware of the need to continually improve their professional qualifications also outside the Polish linguistic area, and to inspire and create conditions for educating other people involved in investment and project processes.	K_K01 K_K05 K_K08	– exam - oral, descriptive, test, etc. – exam test with points observation and evaluation of	Lecture, Exercises

The student is prepared to work independently on designated engineering tasks and to cooperate in a team and assume various roles in it. The student is prepared to take up professional activity as an auxiliary employee in construction execution and supervision as well as the level-two course in the field of architecture and urban planning.		participation in class – observation and evaluation of the student's practical skills	

Requirements to obtain a credit
Lectures: An exam in the form of a single-choice test - the minimum score to pass is 60% Exercises: A test in project exercises with a grade Checking the required participation and attendance in the classes The final gade is the sum of the grades for the lecture-50% and for the classes- 50%.

Student's work	
Student's work	*Full time study (h)*
Interaction with the teacher (classes; consultations; exam, etc.)	50
Student's individual work (preparation for the classes, test exam; literature research preparation of: written paper, project, presentation, report, speech; etc.)	25
Total	75
ECTS points	*Full time study*
Work with a teacher	2
Work without a teacher	1
Total	3

Basic literature

1. Ustawa o cenach z dnia 5 lipca 2001 r. Dz.U.nr 97, poz. 1050,wprowadzająca z dniem 12 grudnia 2001 r. zmiany w obowiązujących przepisach w sprawie kosztorysowania budowlanego.
2. Ustawa z dnia 29 stycznia 2004 r. Prawo zamówień publicznych (Dziennik Ustaw nr 19, poz. 117).
3. Rozporządzenie Ministra Infrastruktury z dnia 18 maja 2004 r. w sprawie określenia metod i podstaw sporządzania kosztorysu inwestorskiego, obliczania planowanych kosztów prac projektowych oraz planowanych kosztów robót budowlanych określonych w programie funkcjonalno-użytkowym (Dz.U.2004 nr 130, poz. 1389).
4. Rozporządzenie Rady Ministrów w sprawie szczegółowych zasad finansowania inwestycji z budżetu państwa (Dz.U.2001 nr 133, poz. 1480).
5. Rozporządzenie Rady Ministrów z dnia 12 lutego 2002 r. zmieniające rozporządzenie w sprawie Polskiej Klasyfikacji Obiektów budowlanych [PKBO],(Dz.U.2002 nr 18, poz. 170).
6. Rozporządzenie Ministra Infrastruktury z dnia 2 września 2004 r w sprawie szczegółowego zakresu i formy dokumentacji projektowej, specyfikacji technicznych wykonania i odbioru robót budowlanych oraz programu funkcjonalno–użytkowego (Dz.U.nr 202,poz. 2072).
7. Katalogi Nakładów Rzeczowych, Bazy cenowe cen jednostkowych RMS i cen scalonych.
8. Vademecum Kosztorysanta-Zesz. 01-22 Wyd. VI/VII, Sekocenbud. Wydawnictwo Promocja, 2014.

Complementary literature

1. Żenczykowski W., Budownictwo ogólne. Elementy i konstrukcje budowlane,T2/1. Arkady, 1990.
2. Rowiński L., Organizacja i ekonomika budownictwa. PWN, Warszawa 1989.
3. Dyżewski A., Technologia i organizacja budowy. Arkady, Warszawa 1981.
4. Stefański A., Walczak J., Technologia robót budowlanych. Arkady, Warszawa 1983.

5.Wspólny słownik zamówień CPV.
6. Vademecum kosztorysanta - Sekocenbud, Wydawnictwo Promocja, 2016.

Notes