STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Construction Economics**		Code **1010104181010110105**
Field of study **Civil Engineering First-cycle Studies**	Profile of study (general academic, practical) **general academic**	Year /Semester **4 / 8**
Elective path/specialty **-**	Subject offered in: **Polish**	Course (compulsory, elective) **obligatory**
Cycle of study: **First-cycle studies**	Form of study (full-time,part-time) **part-time**	
No. of hours Lecture: **22** Classes: **10** Laboratory: **-** Project/seminars: **10**		No. of credits **5**
Status of the course in the study program (Basic, major, other) **major**	(university-wide, from another field) **from field**	
Education areas and fields of science and art **technical sciences** **Technical sciences**		ECTS distribution (number and %) **5 100%** **5 100%**

Responsible for subject / lecturer:

dr inż. Marcin Gajzler
email: marcin.gajzler@put.poznan.pl
tel. 6652190
Budownictwa Lądowego i Inżynierii Środowiska
ul.Piotrowo 5 60 965 Poznań

Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Basic knowledge of building materials, construction, technology and organization
2	**Skills**	The use of structural and material solutions, technological and organizational use of analytical methods to formulate and solve engineering problems
3	**Social competencies**	knows how to work in a group and present the results of their work

Assumptions and objectives of the course:

The acquisition of knowledge, skills and competence in planning, monitoring and accounting of the costs of implementation of works, preparation of construction cost estimates and other cost studies, evaluation of the effectiveness of construction projects using simple methods.

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. Student knows the basic elements of the economics of design, implementation, operation of facilities and construction company - [-K_W16]
2. Student knows the structure and costing principles in the construction industry, the process of determining and formulating multiple-price estimate - [-K_W15]
3. Student knows the development cost and the rules of their preparation, selected methods of planning and cost control - [-K_W11]
4. Student knows selected methods for assessing the economic efficiency of construction projects - [-K_W17]

Skills:

1. Student is able to draw up a construction cost estimate for the specified scope of work (using a cost estimation software) - [-K_U15]
2. Student is able to estimate the cost of a construction project - [-K_U15]
3. Student can choose the method and apply techniques for the account of investment profitability - [-K_U17]
4. Student is able to assess the impact of planned decisions in terms of economic and financial - [-K_U16]

Social competencies:

1. Student recognizes the need to use economic principles in all phases of the investment process - [-K_K06]
2. Student acquires the ability to work in a team - [-K_K01]
3. Student is aware of the case in accordance with the rules of professional ethics at every stage of the investment process - [-K_K10]

Assessment methods of study outcomes

Lecture - written exam

exercise - final test

exercise design - preparing cost estimate for the indicated range of works performed on the basis of the bill of quantities

The scale of assessments determined% of:

90 very good (A)

85 good plus (B)

75 good (C)

65 sufficient plus (D)

Sufficient 55 (E)

Less than 54 insufficient

Course description

Construction as a branch of the national economy. The specificity of the construction industry. Factors determining the condition of the building. Forms of payment and pay for the works. Bills of costs (generic system, spreadsheet, according to places of their origin, according to media costs resulting). Determinants of process costing in construction. Functions and types of cost studies in construction. Cost calculations in the pre-investment phase. Types of estimates. Collective statement of costs. General and specific rules przedmiarowania works. Method of calculating price estimate. Normative base and price-cost and rules for their use. Calculation of the individual components as estimate. Principles for calculating the individual. Valuation of the cost of design work. Monitoring costs during execution of the work. Cost control. Selected elements of the economics of operation of buildings. Elements of financial analysis in construction companies, financial result and the rules determining. Evaluation of the effectiveness of construction projects - the criteria. Selected methods of assessing the effectiveness of construction projects.

Basic bibliography:

1. Pałaszewski T.; Koszty i ceny w budowlanej działalności inwestycyjnej, PWN, Warszawa 1989,
2. Smoktunowicz E.; Kosztorysowanie obiektów i robót budowlanych, Polcen, Warszawa 2001
3. Zajączkowska.T. Kalkulacja kosztorysowa i jej komputerowe wspomaganie, Zamex, Kraków 2002
4. Werner W.A.; Proces inwestycyjny w budownictwie Oficyna Wydawnicza Politechniki Warszawskiej Warszawa 2000,

Additional bibliography:

1. Rowiński L.,Mikoś J. Organizacja i ekonomika w budownictwie. PWN, Warszawa, 1977
2. Duraj J. Podstawy ekonomiki przedsiębiorstwa, PWE, Warszawa 2004
3. Vademecum kosztorysanta, Ośrodek Wdrożeń Ekonomiczno-Organizacyjnych Budownictwa, Promocja, Warszawa 2002
4. Rozporządzenie Ministra Infrastruktury z dnia 18 maja 2004r. w sprawie określenia metod i podstaw sporządzania kosztorysu inwestorskiego, obliczania planowanych kosztów prac projektowych oraz planowanych kosztów robót budowlanych określonych w programie funkcjonalno ? użytkowym (Dziennik Ustaw 2004 nr 130,poz.1389) obowiązująca od 24 czerwca 2004r.
5. Standardy kosztorysowania robót budowlanych, Stowarzyszenie Kosztorysantów Budowlanych, Warszawa 2005

Result of average student's workload

Activity	Time (working hours)
1. Participation in lectures	22
2. Participation in classes	10
3. Participation in project classes	5
4. Preparation for classes	5
5. Preparation of projects	5
6. Preparation for final test	5
7. Preparation for exam	10

Student's workload

Source of workload	hours	ECTS
Total workload	125	5

Contact hours	45	2
Practical activities	45	2