COURSE DESCRIPTION CARD - SYLLABUS

Course name
Construction economics [S2Bud1-IPB>EB]

Course

Field of study
Civil Engineering

Year/Semester
1/2

Area of study (specialization)
Construction Engineering and Management

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
30

Projects/seminars
30

Number of credit points

5,00

Coordinators

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Lecturers

Prerequisites

Knowledge of the structure of the investment process in construction and the principles of calculating its costs.

Course objective

KNOWLEDGE: Basic knowledge of entrepreneurship. Knowledge of the structure of the investment process in construction and the rules for calculating its costs. SKILLS: The ability to obtain information from literature and the ability to self-educate. Ability to use analytical methods to formulate and solve problems SOCIAL COMPETENCES: Awareness of the need to deepen knowledge in order to acquire skills solving complex decision-making problems. Awareness of the importance of economic issues in construction against the background of all engineering knowledge. Ability to work independently and collaboratively team on assigned tasks.

Course-related learning outcomes

empty

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lectures: written exam on the date given at the beginning of the semester, passing grade based on 60% positive responses.
Auditorium classes: written final test at the last class of the semester, final exam positive based on 65% positive responses.
Design exercises: development and individual defense of the completed project

Programme content

Lecture: The specificity of a construction company in the context of the principles of financial management. Goals
company's activities. Types of financial result of an enterprise and their interpretation.
The structure of the enterprise's assets and sources of its financing. Company balance sheet. Flow cash flow in the enterprise and analysis of the reasons that differentiate cash flow from net profit.
Discussion of related concepts. The concept of profitability, break-even points and their interpretation (incl graphical interpretation of the value and quantitative break-even point), return on capital, profitability of assets, profitability of sales. Operational risk in the context of quantitative and value break-even point. Company liquidity; concepts and basic assessment indicators liquidity level. Resource utilization rates. Financial risk in business enterprises. Capital structure and methods of financing investment projects. Rules calculation of the cost of capital involved in financing the company's activities. admission to creating business plans for new investment projects.
Exercises and Projects: Introduction to methods of assessing investment effectiveness. Initial characteristics
selected methods (simple and discounted payback period method, NPV-based method, method based on profitability index, method based on internal rate of return, profitability index, financial leverage effect). Case study related to construction efficiency analysis investment venture. Risk assessment of investment projects and how it is recognized efficiency account.
General principles for calculating building life cycle costs (LCC).

Teaching methods

1. Lecture: multimedia presentation, illustrated with examples given on the board
2. Auditorium exercises: presentation of tasks with examples given on the board and execution tasks given by the teacher - practical exercises
3. Design exercises: presentation of the scope of the project illustrated with short examples and implementation of the project given by the teacher - practical exercise

Bibliography

References:
1. Samuelson W.F, Marks S. G., Ekonomia menedźerska, PWE, Warszawa 2009
2. Rogowski W., Rachunek efektywnosci inestycji, Oficyna Wolters Kluwer business, Warszawa 2013
2. Duraj J., Podstawy ekonomiki przedsiębiorstwa, PWE, Warszawa 2004
3. Paczuła C., Rachunkowość przedsiębiorstwa budowlano-montażowego, PCB, Warszawa 2001
4. Ostrowska E., Ryzyko projektów inwestycyjnych, PWE, Warszawa 2002
5. Gawron H., Metody oceny opłacalności inwestycji na rynku nieruchomości, Wyd. UE w Poznaniu, Poznań 2011
Uzupełniająca
1. Żywica R., Meszek W., Żywica A., Organizacja procesu inwestycyjnego, Wyd. PP, Poznań 2003
2. Skudlik M., Planowanie i ocena rentowności przedsięwzięcia, Wydawnictwo Helion, Gliwice 2013
3. Jakubczyc J., Metody oceny projektu gospodarczego, PWN, Warszawa 2008

Breakdown of average student's workload

	Hours	ECTS
Total workload	127	5,00
Classes requiring direct contact with the teacher	77	3,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	50	2,00