Nazwa w języku polskim: Technologia, Organizacja i Ekonomika w Budownictwie II
Nazwa w jęz. angielskim: Construction Technology, Organisation and Economics II

Dane dotyczące zajęć:
Information on course:

Jednostka oferująca: Wydział Budownictwa
Course offered by: Faculty of Civil Engineering

Język wykładowy:
Angielski
Language:
English
Strona WWW: **Course homepage:**
https://usosweb.polsl.pl/kontroler.php?_action=katalog2%2Fprzedmioty%2FpokazPrzedmiot&prz_kod=BudAB%3ESI6CONTOE19&lang=en
Skrócony opis:
Short description:
The aim of education is to familiarize with the issues of economics and organization of construction works.
Opis:
Description:
LECTURE: 30 hours Economics: Functions of the cost estimate in the course of the construction investment process. Bill of Quantity Rules. Cost estimation methods for general construction works and types of construction cost estimates. Order system and payroll systems in construction. Tender. BIM issues in design. Organization: Introduction to the theory of organization and management. Principles and guidelines for the scientific organization of work. Organized activity cycle rule. Work meters. Planning and methods of planning construction activities. Variant implementation of the investment task. Lists of the quantity and labor intensity of works. Graphic methods of planning. Schedules. Employment, material, equipment and financial schedules. Mathematical planning methods. Networks of connections. BIM issues in design. Technology: General aspects of technology. Construction of transport technology. Preparation of construction sites. Technology earthworks. Technology erection works. Manufacturability building solutions. Manufacturability requirements for building solutions. Criteria for assessing manufacturability building solutions (examples). The specificity of the implementation of the construction works due to the technology of their climb. The essence of the problem of individual character of each building. Manufacturability analysis system selection and execution solutions. Introduction to the optimal technological and organizational solutions. EXERCISES: 5 hours Economy: - Organization: Issues related to the creation of work schedules. LABORATORY: 5 hours Economics: Making a cost estimate and dividing it into elements. Organization: - PROJECT: 20 hours

Economics: For a selected construction investment, making a list of construction works, assigning material expenditures and preparing a cost estimate using the detailed method.

Organization: List of labor intensity. Acceptance of working compositions. The general schedule for the complex of facilities and the assumption of the duration of works to the network of dependencies. A network of dependencies for one object, a technological model. Completion cycle calculation. Employment schedule.

Number of hours of classes with direct participation of academic teachers or other persons teaching courses and students.
Contact hours
Lecture:

- **full-time studies: 30h**

Exercisee

- **full-time studies: 5h**

Laboratory

- **full-time studies: 5h**

Project

- **full-time studies: 20h**

Number of ECTS credits: 3

Literatura:

Bibliography:

[1] Frank R. Dagostino, Leslie Feigenbaum: Estimating in Building Construction

[2] Leland Blank, Anthony Tarquin: Engineering Economy

[3] Seeley IH.: Building Quantities Explained 5th Revised edition, Macmillan ISBN 978-0-333-71972-5

[4] Seeley IH.: Quantity Surveying Practice, 2nd Revised Macmillan; ISBN 978-0-333-68907-3

[5] Lee S. Trench W. Willis A.: Elements of Quantity Surveying. 10th Edition WileyBlackwell; ISBN 978-1-4051-2563-5

[6] Ashworth A. Hogg K.: Willis's Elements of Quantity Surveying 12 Rev Ed edition Blackwell Publishing. ISBN 978-1-4051-4578-7

[7] Roy Chudley, Construction Technology, ISBN 9780131286429

[8] Mike Rile, Alison Cotgrave, Construction technology 1 House Construction, ISBN 978-0-230-20362-4

[9] Robert L. Peurifoy, Garold D. Oberlender, Formwork for concrete structures, 4th edition, McGraw-Hill

[10] Frank Harris, Ronald McCaffer, Modern Construction Management, Blackwell Publishing

Efekty uczenia się:

Learning outcomes:

KNOWLEDGE

(1) Student know basic economic, legal, ethical and other conditions of quality management of construction works, principles of organization and management of construction and selected software supporting planning and execution of construction works - [directional effect K1A_W09].

(2) Student know fundamental dilemmas of contemporary civilization, prospects for the development of construction and consequences of the impact of construction investments on the environment, as well as the impact of environmental factors on the durability of buildings - [directional effect K1A_W10].

SKILLS

(3) Student can prepare an energy audit of a fragment of a construction object, as well as prepare a simple cost estimate and schedule of selected construction works - [directional effect K1A_U08].

(4) Student can properly select sources and information from them, evaluate, critically analyze and synthesize this information, and use software supporting the work of the investor, construction works organizer, designer, site manager and construction supervision inspector - [directional effect K1A_U09].

(5) Student can plan and organize individual and team work on the building site in accordance with the principles of construction work technology, and assess the risks during their realization by implementing appropriate safety rules - [directional effect K1A_U11]

Metody i kryteria oceniania:

Assessment methods and assessment criteria:

CONDITIONS FOR PASSING THE COURSE:

- the student's attendance at practical, laboratory and project classes is obligatory,

- proper performance of project tasks, active participation in classes, evaluation of work effects - obtaining a positive final grade from the laboratory, exercises and project classes,

- a positive grade from the exam including lectures - obtaining more than 50% of the maximum number of points from the questions in the exam. What counts is the grade from the last date of taking the exam.

Assessment from the ECONOMICS section:

50% (exam) + 50% (lab and project classes)

Assessment from the ORGANIZATION section:

50% (exam) + 50% (classes and project classes)

FINAL ASSESSMENT:

50% (score from the ECONOMICS section) + 50% score from the ORGANIZATION section)

Przynależność do grup przedmiotów w cyklach:
Element of course groups in various terms:

Opis grupy przedmiotów Course group description	Cykl pocz. First term	Cykl kon. Last term
przedmioty obieralne studia stacjonarne i niestacjonarne stopień studiów – dowolny kierunek studiów – dowolny, semestr dowolny		