

POLITECHNIKA KRAKOWSKA IM. TADEUSZA KOŚCIUSZKI

KARTA PRZEDMIOTU

obowiązuje studentów rozpoczynających studia w roku akademickim 2022/2023

Wydział Inżynierii Lądowej

Kierunek studiów: Budownictwo

Profil: Ogólnoakademicki

Forma studiów: stacjonarne

Kod kierunku: BUD

Stopień studiów: I

Specjalności: Bez specjalności - studia w języku angielskim

1 INFORMACJE O PRZEDMIOCIE

NAZWA PRZEDMIOTU	Kosztorysowanie
NAZWA PRZEDMIOTU W JĘZYKU ANGIELSKIM	Cost Estimation
KOD PRZEDMIOTU	WIL BUD oIS C37 22/23
KATEGORIA PRZEDMIOTU	Przedmioty kierunkowe
LICZBA PUNKTÓW ECTS	2.00
SEMESTRY	5

2 RODZAJ ZAJĘĆ, LICZBA GODZIN W PLANIE STUDIÓW

SEMESTR	WYKŁAD	ĆWICZENIA AUDYTORYJNE	LABORATORIA	LABORATORIA KOMPUTERO- WE	PROJEKTY	SEMINARIUM
5	15	0	0	15	0	0

3 CELE PRZEDMIOTU

Cel 1 To provide students with information related to the quantity surveying in construction projects. To get students acquainted with methods of cost estimation. To familiarize students with various types of cost analyses carried out during construction project.

Cel 2 To get students acquainted with applied formulas of cost estimation. To familiarize students with cost estimation elements. To familiarize students with sources of technical and financial information required in

cost estimation. To prepare students (at a basic level) to take part in research within the field of construction cost management.

4 WYMAGANIA WSTĘPNE W ZAKRESIE WIEDZY, UMIEJĘTNOŚCI I INNYCH KOMPETENCJI

- 1 Knowledge on building materials.
- 2 Knowledge on types of building structures and their elements.
- 3 Knowledge on technology of construction works.

5 EFEKTY KSZTAŁCENIA

EK1 Wiedza Basic knowledge within the field of quantity surveying and cost estimation.

EK2 Wiedza Basic knowledge on applied types of cost analyses carried out during construction project.

EK3 Umiejętności Ability to solve basic problems within the field of quantity surveying. Ability to estimate cost of a simple construction element. Ability of basic analyses of cost data.

EK4 Kompetencje społeczne Ability to solve simple cost estimation problem working alone or in team. Being responsible for obtained results of cost estimations.

6 TREŚCI PROGRAMOWE

LABORATORIA KOMPUTEROWE		
LP	TEMATYKA ZAJĘĆ OPIS SZCZEGÓŁOWY BLOKÓW TEMATYCZNYCH	LICZBA GODZIN
K1	Taking-off and quantity analyses of simple construction elements.	4
K2	Cost estimations of simple construction elements.	7
K3	Analisis and presentation of quantity analyses and cost estimations results.	4

WYKŁAD		
LP	TEMATYKA ZAJĘĆ OPIS SZCZEGÓŁOWY BLOKÓW TEMATYCZNYCH	LICZBA GODZIN
W1	Introduction to quantity surveying. Definitions and concepts of cost estimation in construction projects.	2
W2	Quantity take-off. Problem of measuring quantities of construction works. Methods of quantity measuring. Sources of technical information for cost estimation. Workshop on quantity take off.	3
W3	Elements of cost estimation. Direct costs, indirect costs and profit. Sources of information about the demand for resources for cost estimation. Sources of financial information for cost estimation.	3

WYKŁAD		
LP	TEMATYKA ZAJĘĆ OPIS SZCZEGÓŁOWY BLOKÓW TEMATYCZNYCH	LICZBA GODZIN
W4	Cost estimation methods and formulas according to standards applied in Poland. Simplified method and detailed methods of cost estimation. Workshop on cost estimation.	3
W5	Legal conditions and principles of cost estimation for public procurement in Poland.	1
W6	Types of cost estimation documents regarding the objectives of cost estimation process. Functions of cost estimation documents. Chosen problems of quantity measuring, quantity surveying and cost estimation.	3

7 NARZĘDZIA DYDAKTYCZNE

N1 Lectures

N2 Multimedia presentatons

N3 Computer laboratory tasks

N4 Workshops

N5 Discussion

N6 Other

8 OBCIĄŻENIE PRACĄ STUDENTA

FORMA AKTYWNOŚCI	ŚREDNIA LICZBA GODZIN NA ZREALIZOWANIE AKTYWNOŚCI
Godziny kontaktowe z nauczycielem akademickim, w tym:	
Godziny wynikające z planu studiów	30
Konsultacje przedmiotowe	0
Egzaminy i zaliczenia w sesji	3
Godziny bez udziału nauczyciela akademickiego wynikające z nakładu pracy studenta, w tym:	
Przygotowanie się do zajęć, w tym studiowanie zalecanej literatury	15
Opracowanie wyników	5
Przygotowanie raportu, projektu, prezentacji, dyskusji	5
SUMARYCZNA LICZBA GODZIN DLA PRZEDMIOTU WYNIKAJĄCA Z CAŁEGO NAKŁADU PRACY STUDENTA	58
SUMARYCZNA LICZBA PUNKTÓW ECTS DLA PRZEDMIOTU	2.00

9 SPOSOBY OCENY

OCENA FORMUJĄCA

F1 Reports from computer laboratory tasks and assignments.

OCENA PODSUMOWUJĄCA

P1 Final test

WARUNKI ZALICZENIA PRZEDMIOTU

W1 Completion of all of the computer laboratory tasks within the deadlines.

W2 Positive grade on final test.

OCENA AKTYWNOŚCI BEZ UDZIAŁU NAUCZYCIELA

B1 Assessment of the reports and involvement in the discussion

KRYTERIA OCENY

EFEKT KSZTAŁCENIA 1	
NA OCENĘ 2.0	x
NA OCENĘ 3.0	Student is able to mention and discuss all kinds of input information needed in cost estimates. Student is able to mention and discuss sources of technical and financial information required in cost estimation. Student is able to discuss sources of information about demanded quantities of labour, materials and equipment for the purposes of cost estimation. Student is able to discuss direct costs and overheads in cost estimation. Student is able to estimate direct costs and overheads. Student is able to use mention, discuss and apply rules of quantity takeoff to analyse scope and quantities of construction works. Student is able to use various methods of cost estimation. Student is able to present and discuss similarities and differences of cost estimation methods. Student is able to discuss and compare various types of cost analyses carried out during construction project. Student is able to estimate costs for simple cases of construction works.
NA OCENĘ 3.5	Student is able to mention and discuss all kinds of input information needed in cost estimates. Student is able to mention and discuss sources of technical and financial information required in cost estimation. Student is able to discuss sources of information about demanded quantities of labour, materials and equipment for the purposes of cost estimation. Student is able to discuss direct costs and overheads in cost estimation. Student is able to estimate direct costs and overheads. Student is able to use mention, discuss and apply rules of quantity takeoff to analyse scope and quantities of construction works. Student is able to use various methods of cost estimation. Student is able to present and discuss similarities and differences of cost estimation methods. Student is able to discuss and compare various types of cost analyses carried out during construction project. Student is able to estimate costs for simple cases of construction works.

NA OCENĘ 4.0	<p>Student is able to mention and discuss all kinds of input information needed in cost estimates. Student is able to mention and discuss sources of technical and financial information required in cost estimation. Student is able to discuss sources of information about demanded quantities of labour, materials and equipment for the purposes of cost estimation. Student is able to discuss direct costs and overheads in cost estimation. Student is able to estimate direct costs and overheads. Student is able to use mention, discuss and apply rules of quantity takeoff to analyse scope and quantities of construction works. Student is able to use various methods of cost estimation. Student is able to present and discuss similarities and differences of cost estimation methods. Student is able to discuss and compare various types of cost analyses carried out during construction project. Student is able to estimate costs for simple cases of construction works.</p>
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NA OCENĘ 5.0	<p>Student is able to mention and discuss all kinds of input information needed in cost estimates. Student is able to mention and discuss sources of technical and financial information required in cost estimation. Student is able to discuss sources of information about demanded quantities of labour, materials and equipment for the purposes of cost estimation. Student is able to discuss direct costs and overheads in cost estimation. Student is able to estimate direct costs and overheads. Student is able to use mention, discuss and apply rules of quantity takeoff to analyse scope and quantities of construction works. Student is able to use various methods of cost estimation. Student is able to present and discuss similarities and differences of cost estimation methods. Student is able to discuss and compare various types of cost analyses carried out during construction project. Student is able to estimate costs for simple cases of construction works.</p>
EFEKT KSZTAŁCENIA 2	
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NA OCENĘ 3.0	<p>Student is able to mention and discuss all kinds of input information needed in cost estimates. Student is able to mention and discuss sources of technical and financial information required in cost estimation. Student is able to discuss sources of information about demanded quantities of labour, materials and equipment for the purposes of cost estimation. Student is able to discuss direct costs and overheads in cost estimation. Student is able to estimate direct costs and overheads. Student is able to use mention, discuss and apply rules of quantity takeoff to analyse scope and quantities of construction works. Student is able to use various methods of cost estimation. Student is able to present and discuss similarities and differences of cost estimation methods. Student is able to discuss and compare various types of cost analyses carried out during construction project. Student is able to estimate costs for simple cases of construction works.</p>
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EFEKT KSZTAŁCENIA 3	
NA OCENĘ 2.0	x
NA OCENĘ 3.0	<p>Student is able to mention and discuss all kinds of input information needed in cost estimates. Student is able to mention and discuss sources of technical and financial information required in cost estimation. Student is able to discuss sources of information about demanded quantities of labour, materials and equipment for the purposes of cost estimation. Student is able to discuss direct costs and overheads in cost estimation. Student is able to estimate direct costs and overheads. Student is able to use mention, discuss and apply rules of quantity takeoff to analyse scope and quantities of construction works. Student is able to use various methods of cost estimation. Student is able to present and discuss similarities and differences of cost estimation methods. Student is able to discuss and compare various types of cost analyses carried out during construction project. Student is able to estimate costs for simple cases of construction works.</p>
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EFEKT KSZTAŁCENIA 4	
NA OCENĘ 2.0	x
NA OCENĘ 3.0	<p>Student is able to estimate costs for simple cases of construction works. Student is able to use computer aided solutions for cost estimation of simple cases of construction works. Student completes assigned tasks meeting deadlines. Student is able to discuss and explain obtained results of cost estimates.</p>

NA OCENĘ 3.5	<p>Student is able to mention and discuss all kinds of input information needed in cost estimates. Student is able to mention and discuss sources of technical and financial information required in cost estimation. Student is able to discuss sources of information about demanded quantities of labour, materials and equipment for the purposes of cost estimation. Student is able to discuss direct costs and overheads in cost estimation. Student is able to estimate direct costs and overheads. Student is able to use mention, discuss and apply rules of quantity takeoff to analyse scope and quantities of construction works. Student is able to use various methods of cost estimation. Student is able to present and discuss similarities and differences of cost estimation methods. Student is able to discuss and compare various types of cost analyses carried out during construction project. Student is able to estimate costs for simple cases of construction works.</p>
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10 MACIERZ REALIZACJI PRZEDMIOTU

EFEKT KSZTAŁCENIA	ODNIESIENIE DANEGO EFEKTU DO SZCZEGÓŁOWYCH EFEKTÓW ZDEFINIOWANYCH DLA PROGRAMU	CELE PRZEDMIOTU	TREŚCI PROGRAMOWE	NARZĘDZIA DYDAKTYCZNE	SPOSOBY OCENY
EK1	K_U15	Cel 1	k1 k2 k3 w1 w2 w3 w4 w5 w6	N1 N2 N3 N4 N5 N6	F1 P1
EK2	K_U15	Cel 1 Cel 2	k1 k2 k3 w1 w2 w3 w4 w5 w6	N1 N2 N3 N4 N5 N6	F1 P1
EK3	K_W15	Cel 1 Cel 2	k1 k2 k3 w1 w2 w3 w4 w5 w6	N1 N2 N3 N4 N6	F1 P1
EK4	K_K01 K_K02	Cel 1 Cel 2	k1 k2 k3 w1 w2 w3 w4 w5 w6	N1 N2 N3 N4 N5 N6	F1 P1

11 WYKAZ LITERATURY

LITERATURA PODSTAWOWA

- [1] Ashworth A., Hogg K. — *Willis's Practice and Procedure for the Quantity Surveyor*, a, 2007, Blackwell Publishing
- [2] Kowalczyk Z., Zabielski J. — *Kosztorysowania i normowanie w budownictwie*, Warszawa, 2005, WSiP
- [3] Plebankiewicz E. — *Podstawy kosztorysowania robót budowlanych*, Kraków, 2007, Wydawnictwo Politechniki Krakowskiej
- [4] Cartlidge D. — *New Aspects of Quantity Surveying Practice*, a, 2011, Taylor & Francis Ltd

LITERATURA UZUPEŁNIAJĄCA

- [1] Ashworth A. — *Cost studies of buildings*, Harlow-Oxford, 2004, Pearson Prentice Hall
- [2] Potts K. — *Construction Cost Management*, a, 2008, Taylor & Francis Ltd

LITERATURA DODATKOWA

- [1] Polskie Standardy Kosztorysowania, Stowarzyszenie Kosztorysantów Budowlanych, Warszawa 2005
- [2] Akty prawne związane z kosztorysowaniem inwestorskim w zamówieniach publicznych

12 INFORMACJE O NAUCZYCIELACH AKADEMICKICH

OSOBA ODPOWIEDZIALNA ZA KARTĘ

dr inż. Michał Juszczyk (kontakt: mjuszczyk@L7.pk.edu.pl)

OSOBY PROWADZĄCE PRZEDMIOT

1 dr hab. inż. Michał Juszczyk (kontakt: mjuszczyk@L7.pk.edu.pl)

2 dr inż. Damian Wieczorek (kontakt: dwieczorek@L7.pk.edu.pl)

3 mgr inż. Patrycja Karcińska (kontakt: pkarcinska@L7.pk.edu.pl)

4 dr inż. Jarosław Malara (kontakt: jmalara@L7.pk.edu.pl)

5 mgr inż. Ewelina Mitera (kontakt: ewelina.mitera@pk.edu.pl)

7 dr inż. Grzegorz Śladowski (kontakt: grzegorz.sladowski@pk.edu.pl)

13 ZATWIERDZENIE KARTY PRZEDMIOTU DO REALIZACJI

(miejsowość, data)

(odpowiedzialny za przedmiot)

(dziekan)

PRZYJMUJĘ DO REALIZACJI (data i podpisy osób prowadzących przedmiot)

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