

POLITECHNIKA KRAKOWSKA IM. TADEUSZA KOŚCIUSZKI

KARTA PRZEDMIOTU

obowiązuje studentów rozpoczynających studia w roku akademickim 2020/2021

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	Rysunek techniczny
NAZWA PRZEDMIOTU W JĘZYKU ANGIELSKIM	Technical Drawing
KOD PRZEDMIOTU	WIL BUD oIS C18 20/21
KATEGORIA PRZEDMIOTU	Przedmioty kierunkowe
LICZBA PUNKTÓW ECTS	2.00
SEMESTRY	2

2 RODZAJ ZAJĘĆ, LICZBA GODZIN W PLANIE STUDIÓW

SEMESTR	WYKŁAD	ĆWICZENIA AUDYTORYJNE	LABORATORIA	LABORATORIA KOMPUTERO- WE	PROJEKTY	SEMINARIUM
2	0	0	0	0	30	0

3 CELE PRZEDMIOTU

Cel 1 Ability to effectively communicate engineering concepts and problem solutions for civil engineering design.

Cel 2 Ability to make (create) as well as to read technical drawings of designed constructions according to related drawing standards and conventions of engineering graphics. In particular, a special attention will be paid both to architectural and building drawings and to construction drawings (technical drawings for reinforced concrete

structures and for structural metal works) presented at various degrees of accuracy. Schematic drawings, assembly drawings, working drawings and detailed drawings will be specified.

4 WYMAGANIA WSTĘPNE W ZAKRESIE WIEDZY, UMIEJĘTNOŚCI I INNYCH KOMPETENCJI

1 Descriptive Geometry Course

2 Ability to represent a 3D object in European and U.S. Standard (orthographic views).

5 EFEKTY KSZTAŁCENIA

EK1 Wiedza The graduate will have knowledge of the National and the European Standards required to prepare both construction and structural design projects.

EK2 Umiejętności The graduate will have the ability to prepare design projects according to various degrees of accuracy. In particular, a special attention will be paid both to architectural and building drawings and to branch drawings (constructional and sanitary drawings, technical drawings for structural metal works and for reinforced constructions).

EK3 Umiejętności The graduate will have the ability to use the AutoCAD system to create a design project.

EK4 Kompetencje społeczne The graduate will be able to communicate design ideas with his/her co-workers and to work in a team.

6 TREŚCI PROGRAMOWE

PROJEKTY		
LP	TEMATYKA ZAJĘĆ OPIS SZCZEGÓŁOWY BLOKÓW TEMATYCZNYCH	LICZBA GODZIN
P1	Introduction to technical drawing standardization. Classification of drawings: schematic, working, assembly and detailed drawings and relevant scales. Standard sheet sizes (PN ISO 5457). Spaces for drawing and for text, and title blocks on drawing sheets (PN-ISO 9431). Title blocks (PN-ISO 7200). Completing the documentary of drawings (PN-86/N-01603). Scales on technical drawings (PN-EN ISO 5455). Lettering (PN-EN ISO 3098). Standard drawing lines (PN-EN 128). Introduction into AutoCAD tools and menu environment. Formatting of a sheet size, drawing limits, units, title block, line and text style. Assignment 1. Drawing sheet with a large and a small title block (Scale 1:1).	4
P2	Assignment 2. (Scale 1:1): Rolled Profiles. I-beam, C-beam, Angle beam and T-beam (PN-EN ISO 5261). Drawing standards and conventions application. Dimensioning principles (PN ISO 129).	4
P3	Assignment 3. Architectural design project. Ground-floor plan of a detached family house as an exemplary drawing for an architectural design project (Scale 1:100). Simplified and symbolic designations on architectural and building drawings (PN-B 01025). Dimensioning and indications on architectural drawings (PN-ISO 129).	8
P4	Assignment 4. Reinforced Concrete Constructional Drawing. Simplified representation of reinforcing bars (PN-EN ISO 3766), scheduling of reinforcing bars. Bill of materials used in a reinforced construction (Scale 1:20).	6

PROJEKTY		
LP	TEMATYKA ZAJĘĆ OPIS SZCZEGÓŁOWY BLOKÓW TEMATYCZNYCH	LICZBA GODZIN
P5	Assignment 5: Metalwork Constructions - Mechanical fastening (rivets and bolts) Schematic (Scale 1:50; 1:100) and detailed (Scale 1:10) drawings for a steel construction. Simplified representation of bars and profile sections, Symbolic representation of rivets and bolts. Dynamic blocks application.	4
P6	Assignment 6: Metalwork Constructions: welded and soldered joints. Welding designations (PN-EN ISO 5461, PN-EN 22553). Steel truss drawing.	4

7 NARZĘDZIA DYDAKTYCZNE

N1 Ćwiczenia projektowe / projects

N2 Prezentacje multimedialne / presentations

N3 Konsultacje / consultations

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	5
Egzaminy i zaliczenia w sesji	5
Godziny bez udziału nauczyciela akademickiego wynikające z nakładu pracy studenta, w tym:	
Przygotowanie się do zajęć, w tym studiowanie zalecanej literatury	0
Opracowanie wyników	0
Przygotowanie raportu, projektu, prezentacji, dyskusji	20
SUMARYCZNA LICZBA GODZIN DLA PRZEDMIOTU WYNIKAJĄCA Z CAŁEGO NAKŁADU PRACY STUDENTA	60
SUMARYCZNA LICZBA PUNKTÓW ECTS DLA PRZEDMIOTU	2.00

9 SPOSOBY OCENY

OCENA FORMUJĄCA

F1 Projekt indywidualny / project

F2 Odpowiedź ustna / oral answers

OCENA PODSUMOWUJĄCA

P1 Kolokwium / tests

P2 Średnia ważona ocen formujących / average marks

WARUNKI ZALICZENIA PRZEDMIOTU

W1 delivery of project

KRYTERIA OCENY

EFEKT KSZTAŁCENIA 1	
NA OCENĘ 2.0	Student has passed none of the partial tests nor the final test. He/she does not present sufficient level of knowledge in terms of proper designations and dimensioning on the architectural and construction drawings.
NA OCENĘ 3.0	Student has passed all the partial tests and the final test at the level of 60% of the full score. He/she presents basic level of knowledge in terms of proper designations and dimensioning on the architectural and construction drawings.
NA OCENĘ 3.5	The final test and the partial tests passed with the score ranging from 61% up to 70%. Student knows basic standards and their application into architectural and construction drawings.
NA OCENĘ 4.0	The final test and the partial tests passed with the score ranging from 71% up to 80%. Student presents a good level of the basic standards and their application into architectural and construction drawings.
NA OCENĘ 4.5	The final test and the partial tests passed with the score ranging from 81% up to 90%. Student presents a very good level of the basic standards and their application into architectural and construction drawings.
NA OCENĘ 5.0	The final test and the partial tests passed with the score ranging from 91% up to 100%. Student presents excellent level of the basic standards and their application into architectural and construction drawings.
EFEKT KSZTAŁCENIA 2	
NA OCENĘ 2.0	Student is not able to provide correct representation neither of the architectural nor of the constructional drawings. He/she makes basic mistakes in dimensioning and designations.
NA OCENĘ 3.0	Student is able to provide correct representation both of the architectural nor of the constructional drawings. He/she makes basic mistakes in dimensioning and designations but after a numerous corrections the final assignment does not have basic mistakes. Assignment(s) delivered after the deadline.
NA OCENĘ 3.5	The same requirements as for the grade 3.0 but the mistakes get corrected after one or maximum two corrections. Assignment(s) delivered in due time.

NA OCENĘ 4.0	The same requirements as for the grade 3.5 but the mistakes get corrected within the classroom meetings. Assignment(s) delivered in due time. Slight corrections of the linetypes and lineweights, dimensioning and symbolic indications required.
NA OCENĘ 4.5	The same requirements as for the grade 4 but no corrections required. Assignment(s) delivered in due time.
NA OCENĘ 5.0	The same requirements as for the grade 4.5 but no corrections required. Additionally, high level of knowledge checked and confirmed by the course leader in the subject discussion.
EFEKT KSZTAŁCENIA 3	
NA OCENĘ 2.0	The assignments not individually prepared and not personally by the student who submits them. Assignments delivered after the due time. Incompetence in AutoCAD software.
NA OCENĘ 3.0	The assignments personally prepared by the student. Assignments delivered after the deadline. Low level of competency in using AutoCAD software.
NA OCENĘ 3.5	The same requirements as for the grade 3.0 but quite good level of drawings delivered by the student. Drawings corrected after numerous number of corrections. Assignment(s) delivered in due time. Fair skills level if regards creating drawings in AutoCAD.
NA OCENĘ 4.0	The same requirements as for the grade 3.5 but good level of drawings delivered by the student. Drawings corrected after one or at the most two corrections. Assignment(s) delivered in due time. Good skills level if regards creating drawings in AutoCAD.
NA OCENĘ 4.5	The same requirements as for the grade 4 but very good level of drawings delivered by the student. Assignment(s) delivered in due time. Very good skills' level if regards creating drawings in AutoCAD. Good orientation in a Model and the Layout spaces, ability to create dynamic blocks.
NA OCENĘ 5.0	The same requirements as for the grade 4.5 but excellent level of drawings delivered by the student. Assignment(s) delivered in due time. Very good skills' level if regards creating drawings in AutoCAD. Excellent skills if regards system variables and drawing management (page setup, print setup, etc...).
EFEKT KSZTAŁCENIA 4	
NA OCENĘ 2.0	Lack of co-operation and communication over the design projects within a teamwork.
NA OCENĘ 3.0	Fair co-operation and communication over the design projects within a teamwork.
NA OCENĘ 3.5	Basic co-operation and communication over the design projects within a teamwork.
NA OCENĘ 4.0	Good co-operation and communication over the design projects within a teamwork.
NA OCENĘ 4.5	Very good co-operation and communication over the design projects within a teamwork.

NA OCENĘ 5.0	Excellent co-operation and communication over the design projects within a teamwork.
--------------	--

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_W15	Cel 1 Cel 2	p1 p2 p3 p4 p5 p6	N1 N2 N3	F1 F2 P1 P2
EK2	K_U08	Cel 1 Cel 2	p1 p2 p3 p4 p5 p6	N1 N2 N3	F1 F2
EK3	K_U14	Cel 1 Cel 2	p1 p2 p3 p4 p5 p6	N1 N2 N3	F1 F2
EK4	K_K01	Cel 1 Cel 2	p1 p2 p3 p4 p5 p6	N1 N2 N3	F2

11 WYKAZ LITERATURY

LITERATURA PODSTAWOWA

[1] | Miśniakiewicz E., Skowroński W. — *Rysunek techniczny budowlany*, Warszawa, 2009, Arkady

LITERATURA DODATKOWA

[1] | PKN — *Normy dotyczące Rysunku architektoniczno-budowlanego oraz technicznego*, 0,

[2] | Neufert — *Architect's Data*, , 2018,

12 INFORMACJE O NAUCZYCIELACH AKADEMICKICH

OSOBA ODPOWIEDZIALNA ZA KARTĘ

dr inż. arch. Andrzej Kłosak (kontakt: andrzej.klosak@pk.edu.pl)

OSOBY PROWADZĄCE PRZEDMIOT

1 dr inż. arch. Łukasz Łukaszewski (kontakt: llukaszewski@pk.edu.pl)

2 mgr inż.arch. Bartłomiej Ziarko (kontakt: bziarko@pk.edu.pl)

3 mgr inż.arch. Karolina Kolis (Warzocha) (kontakt: kkolis@pk.edu.pl)

13 ZATWIERDZENIE KARTY PRZEDMIOTU DO REALIZACJI

(miejscowość, data)

(odpowiedzialny za przedmiot)

(dziekan)

PRZYJMUJĘ DO REALIZACJI (data i podpisy osób prowadzących przedmiot)

.....
.....
.....