Cracow University of Technology

Course syllabus

binding for the doctoral students of the CUT Doctoral School commencing their studies in the academic year 2022/2023

Information on the course

Name of the course in Polish	Rewitalizacja obiektów zabytkowych z uwzględnieniem czynnika efektywności energetycznej
Name of the course in English	Revitalization of historic buildings, taking into account the efficiency factor
Number of the ECTS points	1
Language of instruction	Polish
Category of the course	Choosable
Field of education	Engineering and Technology
Discipline of education	Civil Engineering and Transport / All disciplines
Person responsible for the course Contact	Małgorzata Fedorczak-Cisak PhD Eng. mfedorczak-cisak@pk.edu.pl tel. 696046050

Type of course, number of hours in the study programme curriculum

Semester	Credit type (G / NG)*	Lecture	Practical classes	Laboratory	Computer Lab	Project Class	Seminar
2, 3, 4, 5	G	15	0	0	0	0	0

*G – graded credit, NG – non-graded credit

Course objectives

Code	Objective description
Objective 1	Expanding knowledge about modern research methods concerning the internal environment of historic buildings
Objective 2	Expanding knowledge in the field of diagnostics of the technical condition of historic buildings
Objective 3	Acquiring the ability to select appropriate "in situ" research methods of the internal environment of historic buildings and to conduct hygrothermal analyses of partitions of historic buildings

Learning Outcomes

Code	Description of the learning outcome adjusted to the specific characteristics of the discipline	Learning outcome symbol in the CUT SD	Methods of verification
OUTCOMES RELATED TO KNOWLEDGE			

EUW1	A PhD student knows and understands the methodology of conducting "in situ" research on historic buildings	E_W01, E_W02	Involvement in class activities, a presentation of the test report assessment
EUW2	A PhD student knows and understands the principles of diagnostics of the technical condition of historic buildings	E_W01, E_W02	Involvement in class activities, a presentation of a paper assessment
OUTCOMES RELATED TO SKILLS			
EUU1	A PhD student is able to choose appropriate methods of "in situ" research of historic buildings and is able to propose improvement of energy efficiency of historic buildings in terms of improving energy efficiency	E_U01	Involvement in class activities, a presentation of a paper assessment
EUU2	A PhD student is able to diagnose the technical condition of a historic object, including the interpretation of the observed damage, plan and carry out the necessary tests, and prepare a technical study.	E_U01	Involvement in class activities, a presentation of a paper assessment
OUTCOMES RELATED TO SOCIAL COMPETENCES			
EUK1	A PhD student is ready to critically evaluate the methodology of applied research on historic buildings and to analyse the results of these studies, described in the subject literature	E_K01	Involvement in class activities, a presentation of a paper assessment
EUK2	A PhD student is ready to recognize the importance of knowledge about conducting "in situ" research on historic buildings and the hygrothermal analysis of partitions.	E_K03	Involvement in class activities, a presentation of a paper assessment

Course outline

No.	Contents	Learning outcomes for the course	No. of hours
LECTURE			
W1	Historic buildings in contemporary architecture	EUW1, EUU1, EUK1, EUK2	2
W2	Technologies for improving the energy efficiency of historic buildings - insulating buildings from the inside	EUW1, EUU1, EUK1, EUK2	2
W3	Installations in energy-efficient buildings	EUW1, EUU1, EUK1, EUK2	2
W4	Modern materials and technologies in the modernization of historic buildings	EUW2, EUU2, EUK1, EUK2	2
W5	Thermal and humidity analyses of historic buildings	EUW2, EUU2, EUK1, EUK2	2
W6	Diagnostics of historic buildings - 'in situ' research	EUW2, EUU2, EUK1, EUK2	2

W7	Principles of preparation of technical studies: protocol and test report; technical opinion, expertise.	EUW2, EUU2, EUU3, EUK1, EUK2	2
W8	Selected modernizations of historic buildings	EUW2, EUU2, EUU3, EUK1, EUK2	1

The ECTS points statement

WORKING HOURS SETTLEMENT	
Type of activity	Average number of hours (45 min.) dedicated to the completion of an activity type
SCHEDULED CONTACT HOURS WITH AN ACADEMIC TEACHER	
Hours allotted in the syllabus	15
Consultations	1
Examination / course credit assignment	1
HOURS WITHOUT THE PARTICIPATION OF AN ACADEMIC TEACHER	
Independent study of the course contents	8
Preparation of a paper, a report, a project, a presentation, a discussion	5
ECTS POINTS STATEMENT	
Total number of hours	30
The ECTS points number	1

Preliminary requirements

No.	Requirements
1	Not specified

Course credit assignment conditions / method of the final grade calculation

No.	Description
COURSE CREDIT ASSIGNMENT CONDITIONS	
1	75% attendance in class.
2	Oral credit for a written dissertation prepared by a PhD student on the methodology of experimental research on historic buildings, related to the subject of a PhD dissertation.
METHOD OF THE FINAL GRADE CALCULATION	
Assessment of the presented paper, taking into account the attendance	

Additional information

Not specified

The course reading list

1	Budownictwo ogólne. Tom 1. *Materiały i wyroby budowlane*, praca zbiorowa pod redakcją B. Stefańczyka, 2010, Arkady.
2	*Badania materiałów budowlanych i konstrukcji inżynierskich*, praca zbiorowa pod redakcją M. Kamińskiego, 2004, Dolnośląskie Wydawnictwo Edukacyjne.
3	PKN standards for testing materials, products and construction elements

4	Scientific journals and conference materials