



### COURSE SPECIFICATION

Course title in Polish	<b>Projektowanie zrównoważone – podstawy</b>
Course title in English	<b>Sustainable design - basics</b>
Valid from academic year	<b>2020/2021</b>

### CURRICULAR ALIGNMENT

Programme	<b>ARCHITECTURE</b>
Level	<b>first-cycle</b>
Programme profile	<b>academic</b>
Mode of attendance	<b>full-time</b>
Specialism	-
Academic unit responsible for the course	<b>Department of Architecture and Urban Planning</b>
Course coordinator	<b>dr hab. inż. arch. Lucjan Kamionka, prof. PŚk</b>
Approved by	<b>prof. dr hab. inż. Marek Iwański</b>

### COURSE DESCRIPTION

Teaching block	<b>major</b>
Course status	<b>required</b>
Language of instruction	<b>Polish</b>
Semester of delivery	<b>semester III</b>
Prerequisites	-
Exam (YES/NO)	<b>NO</b>
ECTS	<b>2</b>

<b>Mode of teaching</b>	<b>lecture</b>	<b>class</b>	<b>lab</b>	<b>project</b>	<b>seminar</b>
<b>Number of hours per semester</b>				<b>30</b>	

### LEARNING OUTCOMES

<b>Category</b>	<b>Code</b>	<b>Learning outcomes</b>	<b>Corresponding programme outcome code</b>
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Knowledge	W01	Students have knowledge and understanding of architectural and urban design to carry out simple tasks, in particular: simple buildings taking into account the basic needs of users in terms of sustainable design; design of commercial facilities in residential complexes, public facilities in an open landscape or urban environment in terms of sustainable design.	A1_W01 A1_W02
	W02	Preparing the foundation for creating a design workshop and the skills to present their own ideas and design concepts in the field of sustainable design.	A1_W02 A1_W03
Skills	U01	Students can design an architectural object, creating and transforming space so as to give it new values – in accordance with a given program that takes into account the requirements and needs of all users.	A1_U01 A1_U02 A1_U04
	U2	Students are able to think and act creatively, using the workshop skills necessary to maintain and expand the ability to implement artistic concepts in architectural and urban design.	A1_U05 A1_U06 A1_U08 A1_U09
	K01	Students think independently in order to solve simple design problems.	A1_K01
	K02	Students take responsibility for shaping the natural environment and cultural landscape, including the preservation of regional, national and European heritage.	A1_K02

## COURSE CONTENT

Teaching mode*	Topics covered
Project	1. Discussion of the design class syllabus and the theme of the project. Discussion of the design task - design of an architectural object - considering social space in terms of sustainable design. Detailed discussion of the scope of the semester project and the scope of the overview.
	2 Discussion of sustainable design issues. Conceptual work in group, discussion.
	3 Conceptual work. Idea and preliminary, functional-spatial assumptions. Individual work. Discussion of conceptual sketches.
	4 Conceptual work. Preliminary architectural and urban planning solutions. Presentation and discussion of the concept.
	5. Overview 1. Presentation and discussion of architectural and urban design concepts. Preliminary architectural and urban design concept, landscaping, sketch presentation of the function and body of the building, A3 format). Discussion, corrections, summary.
	6 Design work. Functional and spatial solutions, sustainability aspect. Individual corrections.
	7. Design work. Functional and spatial solutions, sustainability aspect. Individual corrections.
	8. Design work. Functional and spatial solutions, sustainability aspect. Individual adjustments.
	9. Overview 2. Presentation and group discussion. Architectural and urban concept of the building: development, integration into the site, projections, sections, elevations; perspective views in the form of visualizations. Presentation of own project. Analysis of solutions, group discussion. Suggestions for changes to design solutions - sustainable design aspect. Interim assessment.
	10. Design work. Functional and spatial solutions aspect of sustainability. Individual corrections.
	11. Design work. Functional and spatial solutions aspect of sustainability. Individual adjustments.

	12. Overview 3. Presentation of the project in terms of sustainable design. Aspects: integration into the site, energy optimization, optimization of water and wastewater management, optimization of material solutions, quality of use of the building. Analysis of solutions and group discussion. Indications and suggestions for changes in design solutions - evaluation of solutions.
	13. Design work. Functional and spatial solutions aspect of sustainability. Individual corrections.
	14. Submission of the semester project. Presentation and discussion of the work. Evaluation of projects.
	15. Presentation and discussion of selected term papers. Summary of projects and classes.

## METHODS OF LEARNING OUTCOMES VERIFICATION

Learning outcome	Learning outcome verification methods					
	Oral exam	Written exam	Test	Project	Report	Other
W01				X		
W02				X		
U01				X		
U02				X		
K01				X		
K02				X		

## ASSESSMENT

Teaching mode*	Assessment type	Criteria
project	mark-based	<i>A passing grade or higher on the project.</i>

## STUDENT WORKLOAD

ECTS weighting							
	Activities	Student workload					Unit
		W	C	L	P	S	
1.	Scheduled contact hours				30		h
2.	Other (office hours, exams)				2		h
3.	<b>Total number of contact hours</b>	<b>32</b>					h
4.	<b>Number of ECTS credits for contact hours</b>	<b>1,28</b>					ECTS
5.	<b>Independent study hours</b>	<b>18</b>					h
6.	<b>Number of ECTS credits for independent study</b>	<b>0,72</b>					ECTS
7.	<b>Practical hours</b>	<b>50</b>					h
8.	<b>Number of ECTS credits for practical hours</b>	<b>2</b>					ECTS
9.	<b>Total workload</b>	<b>50</b>					h
10.	<b>ECTS credits for the course</b> <i>1 ECTS credit =25 student learning hours</i>	<b>2</b>					ECTS

## READING LIST

1. Baranowski A.: Projektowanie zrównoważone w architekturze. Monografia. Wydawnictwo Politechniki Gdańskiej, Gdańsk 1998.
2. Chmielewski J.M.: Teoria urbanistyki w projektowaniu i planowaniu miast, Oficyna Wydawnicza Politechniki Warszawskiej, W-wa 2001.
3. Drapelli-Hermansdorfer A.: (red.), *Oblicza równowagi: architektura, urbanistyka, planowanie u progu międzynarodowej dekady edukacji na rzecz zrównoważonego rozwoju*, Wydawnictwo Politechniki Wrocławskiej, Studia i Materiały, Wrocław 2005.
4. Grabowska-Pałecka H.: Niepełnosprawni w obszarach i obiektach zabytkowych. Problemy dostępności. Monografia 304, Wydawnictwo Politechniki Krakowskiej, 2004.

5. Kamionka L.: Architektura Zrównoważona i jej standardy na przykładzie wybranych metod oceny. Monografia M30.Wyd.Politechniki Świętokrzyskiej, Kielce 2012.
6. Kamionka L.: Architektura w zrównoważonym środowisku kulturo-przyrodniczym. Monografia. Architektura 11. Wyd.Politechniki Świętokrzyskiej, Kielce 2019.
7. Neufert E.: Podręcznik projektowania architektoniczno- budowlanego, Arkady, Warszawa.
8. Niezabitowskiej E., Masły D.:(red.), *Ocena jakości środowiska zabudowanego i ich znaczenie dla rozwoju koncepcji budynku zrównoważonego*, Monografia, Gliwice 2007.
9. Ostrowski W.: Urbanistyka współczesna, Arkady, Warszawa 1975.
10. Ostrowski W.: Zespoły zabytkowe a urbanistyka. Warszawa 1980.
11. Panek A.: *E-Audyty metoda oceny oddziaływania na środowisko obiektów budowlanych*. Biblioteka Monitoringu Środowiska, Inspekcja Ochrony Środowiska, Warszawa 2002.
12. Rogers R., Power A.: *Cities for a small country*, Faber&Faber, 2000.
13. Schneider-Skalska, *Kształtowanie zdrowego środowiska mieszkaniowego. Wybrane zagadnienia*. Politechnika Krakowska, Monografia 307, 2004.
14. Schneider-Skalska.G.: *Zrównoważone środowisko mieszkaniowe. Społeczne-Oszczędne-Piękne*. Wydawnictwo Politechniki Krakowskiej, Kraków 2012.
15. Stawicka-Wałkowska M.: *Procesy wdrażania zrównoważonego rozwoju w budownictwie*. Monografie, ITB, Warszawa 2001.
16. Stawicka-Wałkowska M.: *Budownictwo przyjazne środowisku naturalnemu w aspekcie strategii zrównoważonego rozwoju*. Sekcja Fizyki Budowli Komitetu Inżynierii Lądowej i Wodnej PAN, Łódź 2011
17. Twarowski M.: „Słońce w architekturze”, Arkady Warszawa 1996.
18. Wines J.: *Green Architecture*, Taschen.
19. Wehle-Strzelecka S.: *Architektura słoneczna*. Monografia, Wydawnictwo Politechniki Krakowskiej, 2006.
20. Wehle-Strzelecka S.: *Energia słońca w kształtowaniu środowiska mieszkaniowego-ewolucja koncepcji na przestrzeni wieków*. Wydawnictwo Politechniki Krakowskiej, 2014. Kraków
21. Vale B.R.: *Green Architecture*, Bulfinch Press, 1991.
22. Lektura uzupełniająca: czasopisma fachowe polskie i zagraniczne oraz inne pozycje literatury w uzgodnieniu z promotorem.