



Subject card

Subject name and code	CAD. Integrated Architectural Design, PG_00052799						
Field of study	Architecture						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2021/2022		
Education level	first-cycle studies	Subject group			Obligatory subject group in the field of study		
Mode of study	Full-time studies	Mode of delivery			at the university		
Year of study	2	Language of instruction			Polish		
Semester of study	3	ECTS credits			2.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Urban Architecture and Waterscapes -> Faculty of Architecture						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. arch. Robert Juchnevič					
	Teachers	dr inż. arch. Jarosław Bąkowski dr inż. arch. Robert Juchnevič mgr inż. arch. Kacper Radziszewski dr hab. inż. arch. Maria Helenowska-Peschke					
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	30.0	0.0	0.0	30
	E-learning hours included: 0.0						
	Adresy na platformie eNauczanie: Projektowanie zintegrowane RJ_2021/22 - Moodle ID: 17546 https://enauzanie.pg.edu.pl/moodle/course/view.php?id=17546						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours		Self-study		SUM
	Number of study hours	30	1.0		19.0		50
Subject objectives	During the course, students will learn about: the concept of integrated design and the use of modern digital tools in an integrated design process. During the course, students will prepare architectural project that can be reused in: environmental analyzes, traditional architectural design documentation and architectural visualization.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_U03] is able to prepare a graphic, written and oral presentation of your own design concepts in the field of architecture and urban planning, meeting the requirements of a professional record appropriate for architectural and urban design	The student is able to define the key features of the concept of integrated design. Student is able to choose proper tools to implement this concept.			[SU4] Assessment of ability to use methods and tools		
	[K6_U02] is able to design an architectural object or a simple urban complex that meets the aesthetic and technical requirements	The student understands the advantages of using the concept of integrated design. Student is able to create an integrated model of a single-family building. Student is able to reuse an integrated model through entire design process.			[SU1] Assessment of task fulfilment		

Subject contents	<p>The classes will use the Autodesk Revit in the concept of integrated design. Discussion about the concept of integrated design and digital tools dedicated to it. Overview of the IFC standardized format. Overview of Autodesk Revit and workflow methods. Development of a model of a simple sample building. Overview of graphic properties of component objects. Preparing projections, elevations, cross-sections, site plan. Overview of the basics of creating families. Development of simple parametric family. Introduction to rendering techniques in Revit and external rendering engines (Enscape, Vray, Lumion). Discussion of the possibility of publishing the project to archiving formats. Discussion of the possibility of conducting environmental analyzes based on the model normalized. Creating an integrated model of your own design. Development of comprehensive documentation of the conceptual design.</p>											
Prerequisites and co-requisites	<p>Basic skills of any CAD drawing program. Basic skills of any 3d modeling program. Basic skills of any raster graphics editing program. Ability to use the PG eLearning platform.</p>											
Assessment methods and criteria	<table border="1"> <thead> <tr> <th data-bbox="453 692 794 719">Subject passing criteria</th> <th data-bbox="794 692 1139 719">Passing threshold</th> <th data-bbox="1139 692 1489 719">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="453 723 794 750"></td> <td data-bbox="794 723 1139 750">40.0%</td> <td data-bbox="1139 723 1489 750">30.0%</td> </tr> <tr> <td data-bbox="453 754 794 781"></td> <td data-bbox="794 754 1139 781">40.0%</td> <td data-bbox="1139 754 1489 781">70.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade		40.0%	30.0%		40.0%	70.0%
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Recommended reading	<p>Basic literature</p>	<p>Books: Eastman C.M., BIM handbook : a guide to building information modeling for owners, managers, designers, engineers, and contractors, Wiley 2008.</p> <p>Webpages: https://www.autodesk.com/autodesk-university https://www.youtube.com/channel/UC0y73dD7p4gJV2x9etleL4w https://www.chaosgroup.com/vray/revit/tutorial-videos</p>										
	<p>Supplementary literature</p>	<p>Books: A. Tedeschi, AAD, Algorithms-aided design: parametric strategies using Grasshopper, 2014.</p>										
	<p>eResources addresses</p>	<p>Projektowanie zintegrowane RJ_2021/22 - Moodle ID: 17546 https://enauczenie.pg.edu.pl/moodle/course/view.php?id=17546</p>										
Example issues/ example questions/ tasks being completed												
Work placement	<p>Not applicable</p>											