



Subject card

Subject name and code	CAD. Integrated Architectural Design, PG_00057067						
Field of study	Architecture						
Date of commencement of studies	October 2022	Academic year of realisation of subject			2022/2023		
Education level	second-cycle studies	Subject group			Optional subject group Subject group related to scientific research in the field of study		
Mode of study	Full-time studies	Mode of delivery			e-learning		
Year of study	1	Language of instruction			English		
Semester of study	2	ECTS credits			3.0		
Learning profile	general academic profile	Assessment form			assessment		
Conducting unit	Department of Visual Techniques -> Faculty of Architecture						
Name and surname of lecturer (lecturers)	Subject supervisor	mgr inż. arch. Dariusz Cyparski					
	Teachers						
Lesson types and methods of instruction	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	0.0	45.0	0.0	0.0	45
	E-learning hours included: 45.0						
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	45	6.0		24.0	75	
Subject objectives	The aim is to build the students' knowledge about the possibilities of using of Building Information Modelling (BIM) and communication techniques in spatial planning practice, to develop basic skills in the area of digital visualization of the built environment and in preparing graphic presentations using AutoDesk REVIT computer software. It incorporates the features, commands, and techniques for creating BIM models, importing, exchanging parametric data, editing and printing.						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K7_W02] knows and understands the rules of gathering information and their interpretation as a part of project concept preparation; detailed issues related to architecture and urban planning in the field of complex design problems solving	knows and understands the rules of gathering information and their interpretation as a part of project concept preparation;			[SW3] Assessment of knowledge contained in written work and projects		
	[K7_U03] is able to prepare advanced graphic, written and oral presentation of own design concepts in the field of architecture and urban planning, meeting the requirements of a professional record appropriate for architectural and urban design	Capacity to work, design and understand the role and application of Building information Modelling technology (BIM) in the process of architectural and urban design, using computer visual software. The student knows how to use properly selected computer simulations, analyzes and information technologies supporting architectural and urban design;			[SU4] Assessment of ability to use methods and tools [SU3] Assessment of ability to use knowledge gained from the subject [SU2] Assessment of ability to analyse information		

Subject contents	Describe BIM (Building Information Modelling) in Revit Architecture. Bi-directional associativity and parametric relationships. Understand the Revit User Interface. Start projects using Revit templates, view and navigate a Revit model. Set up and modify interactive construction grids. Create an interactive levels and floor plans, use editing tools. Link a CAD file to REVIT and maintain a connection between the file and the model. Work with component families and parametric objects. Use dimensions and constraints. Create a shape of the building using tools such as: Mass & Form, Connect Forms. Create building elements from Mass Instances. Create floors, add roofs and curtain walls, and work with building model. Place Mullions on a curtain grid system. Create Multi-story Stairs and Shaft Openings. Create a Section View. Control object visibility in elevations, section and 3D views. Work with drawing sheets and titleblocks. Generate a single sheet file that contains multiple views. Save for an online viewing, save to PDF (Portable Document Format).		
Prerequisites and co-requisites	Basic knowledge of CAD software and/or 3D modeling techniques in any software.		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		60.0%	100.0%
Recommended reading	Basic literature	User manuals available from the help menu of the program and user online manuals on: www.autodesk.com	
	Supplementary literature	Mastering Autodesk Revit 2020. Robert Yori, Marcus Kim, Lance Kirby Revit 2020 for Architecture. Wing, Eric Revit® 2020 for Architecture: No Experience Required by John Wiley & Sons	
	eResources addresses	Adresy na platformie eNauczenie:	
Example issues/ example questions/ tasks being completed	<ul style="list-style-type: none"> • Link a CAD file to REVIT project, adjust the scale, maintain a connection between the file and the model, • Set up interactive construction grids and levels, • Draw and build 3D forms using AutoCAD Reference Lines, • Join multiple forms into One Solid Geometry (Mass) and generate Mass Floors, • Build Elements from Mass Instances such as Curtain Grid System, Floors, Roofs. 		
Work placement	Not applicable		