



Subject card

Subject name and code	CAD. 3D Modeling, PG_00052766						
Field of study	Architecture						
Date of commencement of studies	October 2020	Academic year of realisation of subject			2020/2021		
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	1	Language of instruction			Polish		
Semester of study	2	ECTS credits			2.0		
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	dr hab. inż. arch. Maria Helenowska-Peschke					
	Teachers	dr hab. inż. arch. Maria Helenowska-Peschke dr inż. arch. Małgorzata Rogińska-Niesłuchowska					
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						
	Address on the e-learning platform: https://enauczanie.pg.edu.pl/moodle/course/view.php?id=8920 Adresy na platformie eNauczanie:						
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	2.0		18.0		50
Subject objectives	<p>Expanding knowledge and deepening the ability to use advanced digital tools for creating complex geometric structures and free (curvilinear) forms.</p> <p>Expanding the knowledge and deepening the skills of using advanced rendering engines simulating the physical features of the real world in order to present designed architectural objects.</p> <p>Gaining knowledge about the current directions of development of tools for advanced modeling of architectural objects (parametric modeling, animation, BIM).</p>						
Learning outcomes	Course outcome	Subject outcome			Method of verification		
	[K6_U04] is able to use analytical methods to formulate and solve project tasks	The student is able to use the possibilities of processing and obtaining design information using digital tools for 3D geometry modeling and visualization.			[SU2] Assessment of ability to analyse information [SU1] Assessment of task fulfilment		
	[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 knows the specifics and possibilities of various computer tools and is able to choose the appropriate digital tool for the project task (drawing, modeling, documentation development). Understands the role of architectural visualization in communicating the design idea.			[SU1] Assessment of task fulfilment [SU4] Assessment of ability to use methods and tools		
Subject contents	1. 3D geometry modeling in AutoCAD v 2019 - tools for modeling objects belonging to Solid, Surface (Nurbs) and Mesh type.2. Creating a project presentation using advanced rendering and a viewports layout AutoCAD v 2019.3. The use of modeling and visualization skills for the task carried out on the subject Architectural Design sem 2						

Prerequisites and co-requisites	<p>Ability to prepare 2D architectural drawings</p> <p>Ability to build models of architectural objects with simple geometry</p> <p>Ability to post-process raster images</p>		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	50	80.0%	50.0%
	50	80.0%	50.0%
Recommended reading	Basic literature	Manual and help on line https://help.autodesk.com/view/ACD/2019/PLK/	
	Supplementary literature	<p>Helenowska-Peschke M., "Warsztat współczesny architekta", w dodatek Architektura -Murator nr. 4 , 2018</p> <p>Radziszewski R., " Architektura parametryczna", w dodatek Architektura -Murator nr. 4 , 2018</p> <p>Radziszewski R., "Projektowanie generatywne", w dodatek Architektura -Murator nr. 4 , 2018</p> <p>Rogińska-Niesłuchowska, "Architektura i światło", w Czasopismo Techniczne , 2010</p>	
	eResources addresses	<p>Podstawowe</p> <p>https://academy.autodesk.com/software/autocad - Free video training in AutoCAD from AutoDesk Design Academy</p> <p>Uzupełniające</p>	
Example issues/ example questions/ tasks being completed	<p>Model of an object with free curvilinear geometry</p> <p>Photorealistic visualization of the external scene (object with its surroundings)</p> <p>Development of variants of material and color solutions of your own design</p>		
Work placement	Not applicable		