GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	CAD. 3D Modeling, PG_00061505		
Field of study	Architecture		
Date of commencement of studies	October 2024	Academic year of realisation of subject	2024/2025
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	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	30.0	0.0	0.0	30

E-learning hours included: 0.0

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	30	2.0	18.0	50

Subject objectives

Expanding knowledge and deepening the ability to use advanced digital tools for creating complex geometric structures and free (curvilinear) forms.

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.

Gaining knowledge about the current directions of development of tools for advanced modeling of architectural objects (parametric modeling, animation, BIM).

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 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.	[SU4] Assessment of ability to use methods and tools [SU1] Assessment of task fulfilment
[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

Subject contents

1. 3D geometry modeling in AutoCAD 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

3. The use of 3D modeling and visualization skills for the task carried out on the subject Architectural Design sem II

<table>
<tr><td>Prerequisites and co-requisites</td><td>Ability to prepare 2D architectural drawings

Ability to build models of architectural objects with simple geometry

Ability to post-process raster images</td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>50</td><td>80.0%</td><td>50.0%</td></tr>
<tr><td>50</td><td>80.0%</td><td>50.0%</td></tr>
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<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>on line help https://knowledge.autodesk.com/</td></tr>
<tr><td>Supplementary literature</td><td>Helenowska-Peschke M., "Warsztat współczesny architekta", w dodatek Architektura -Murator nr. 4 , 2018

Radziszewski R.,. " Architektura parametryczna", w dodatek Architektura -Murator nr. 4 , 2018

Radziszewski R., "Projektowanie generatywne", w dodatek Architektura -Murator nr. 4 , 2018

Rogińska-Niesłuchowska, "Architektura i światło", w Czasopismo Techniczne , 2010</td></tr>
<tr><td>eResources addresses</td><td>Adresy na platformie eNauczanie:</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td>Model of an object with free curvilinear geometry

Photorealistic visualization of the external scene (object with its surroundings)

Development of variants of material and color solutions of your own design</td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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