GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Integrated design, PG_00064751		
Field of study	Power Engineering, Power Engineering		
Date of commencement of studies	February 2027	Academic year of realisation of subject	2027/2028
Education level	second-cycle studies	Subject group	Specialty subject group Subject group related to scientific research 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	3.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Building Engineering -> Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Wojciech Migda	
	Teachers	dr inż. Wojciech Migda	

Lesson types

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	8.0	37.0	75

Subject objectives

The aim of the course is to equip students with:- knowledge of the basics of Building Information Modeling (BIM) technology in design practice,- ability to create an integrated BIM model design- ability to filter and process BIM model data in order to obtain basic analyses, summaries, projections, visualizations and animations.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_U03] identifies and formulates task specifications in the scope of energy systems, machines and devices, transmission grids, buildings and internal installations	Is able to design and analyze the project.	[SU1] Assessment of task fulfilment
[K7_U15] evaluates the feasibility of advanced methods and tools for solving complex engineering tasks of a practical nature, characteristic of the field of study, and selects and applies appropriate methods and tools for this purpose	Is able to present and evaluate the course and effects of work in a team implementing an advanced engineering project. Is able to use technical documentation and create it independently, formulates conclusions and describes the results of his own work.	[SU1] Assessment of task fulfilment

Subject contents

Course content – laboratory

Introduction to BIM technology. BIM models, basic concepts: LOD, LOI, BIM nD. Teamwork, file sharing. Data hierarchy, object taxonomy, parameter structure. Project template and view templates.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
project	60.0%	100.0%

Recommended reading

Basic literature

Anger A., Łaguna P., Zamara B.: BIM dla managerow, PWN, 2021

Kasznia D.: BIM w praktyce. Standardy. Wdrozenie. Case Study, PWN Warszawa, 2018

	Supplementary literature	https://buildingsmart.org.pl/open-bim/
	eResources addresses	
Example issues/ example questions/ tasks being completed	Creat a BIM model and export it into IFC format.	
Practical activites within the subject	Not applicable	

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