



## Subject card

Subject name and code	Integrated design, PG_00064751						
Field of study	Power Engineering						
Date of commencement of studies	February 2026		Academic year of realisation of subject		2026/2027		
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 -> Wydział Politechniki Gdańskiej						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Wojciech Migda				
	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		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_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		
	[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		
Subject contents	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		<a href="https://buildingsmart.org.pl/open-bim/">https://buildingsmart.org.pl/open-bim/</a>				
	eResources addresses						

Example issues/ example questions/ tasks being completed	Creat a BIM model and export it into IFC format.
Work placement	Not applicable

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