

PROPOSALS FOR TOPICS OF DIPLOMA THESES for graduate students of the Civil Engineering Structures course

Unit:

Institute of Building Engineering

Department of Fundamentals of Building

NOTE: In the Department of Fundamentals of Building, there is a possibility to arrange a topic of the thesis with a supervisor, taking into account the specified interests of a diploma student.

Supervisor	Thesis topic	Thesis scope	Speciality
dr inż. Agnieszka Kaliszuk-Wietecha	Energy map of multifamily building with analysis of the results.		CES
	Energy audit and thermomodernization of the historic building for a given object.		CES
	The energy performance of a building on the specific example (eg.: multi-family house, preschool, school, etc.) before and after thermal modernization based on energy audit of the object.		CES
	The project of multifamily passive building.		CES
	Raising the energy standard of the historical building.		CES
dr inż. Szymon Firląg	Optimizing the cost of construction of single-family plus energy house		CES
	Integrated assessment of the impact of the building on the environment		CES
	Minimizing heat loss through thermal bridges		CES
	Selecting the economically optimal energy standard of building		CES
	Deep renovation of building		CES
	Adaptation of the multi-family building to the NZEB		CES
	How to meet the requirements NZEB?		CES
	The project near zero energy building		CES
	Technical aspects of deep renovation		CES
	The use of RES in buildings		CES
	Closed circular economy in construction		CES
	Adapting buildings to climate change		CES
	Integrated environmental assessment of buildings		CES
	Sustainable office buildings, LEED, BREEAM certificates		CES

dr inż. Szymon Firląg	Dynamic building simulations		CES
	Quality of the indoor environment in buildings		CES
	Impact of buildings on outdoor air quality		CES
dr inż. Wojciech Terlikowski	Design of a high rise building in a selected shape, selected structural system, selected technology		CES
	Design of a high rise building considering energy efficiency (curtain walls, wind turbines etc.).		CES
	Design of a revitalisation of selected structure or building (renovations, modernisations, superstructures, strengthening, changes of functions, adaptations).		CES
	Design of a revitalisation of a selected building or structure considering energy efficiency		CES
	Design of a structure of a social service building in a selected technology		CES
	Design of a structure of multi-family dwelling building in a selected shape in the traditional technology.		CES
	Revitalisation of buildings and structures		CES
dr inż. Piotr Narloch	Analysis of building design variants influencing its energy demand		SB
	Designing physical properties of building materials and building partitions		SB
	Assessment of the feasibility of using natural or recycled building materials in temperate climates		SB
dr inż. Anna Al Sabouni-Zawadzka	Project of a timber skyscraper		CES
	Structural analysis of a timber tower		CES
	Deployable tensegrity structures		CES
dr inż. Jan Pełczyński	Modelling of timber connections		CES
	Project of a timber structure with nontypical geometry		CES