



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Preparation of the diploma thesis with elements of scientific research

		Course
Field of study		Year/Semester
Civil Engineering		4/7
Area of study (specialization)		Profile of study
---		general academic
Level of study		Course offered in
First-cycle studies		polish
Form of study		Requirements
full-time		compulsory

			Number of
<b>hours</b>			
Lecture	Laboratory classes		Other (e.g. online)
Tutorials	Projects/seminars		
5			
<b>Number of credit points</b>			
15			

		Lecturers
Responsible for the course/lecturer:		Responsible for the course/lecturer:
Prodziekan ds. kształcenia		Supervisors
dr inż. Marlena KUCZ		
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**Prerequisites**  
Basic knowledge (at the engineering level) on the strength of materials and building mechanics, basics of construction, metal, reinforced concrete, masonry, wooden / communication constructions (bridges, roads, railways)

### Course objective

Acquiring practical skills in the field of construction, dimensioning and preparation of partial construction documentation of a simple building structure.

### Course-related learning outcomes

Knowledge

depends of topic of thesis



have advanced knowledge of the principles of descriptive geometry and technical drawing, recording and reading architectural drawings, construction maps and geodetic maps, as well as the methods of preparing the maps both traditionally and using the Building Information Modelling (BIM) technology.

know building legislation, Polish standards (PN) and European standards (EN), technical conditions of constructing building facilities, as well as basic ideas and rules in the field of intellectual and industrial property protection.

have advanced knowledge of building materials and their properties, research methods, basic elements of design as well as performance and assembly technologies (including environment-friendly materials).

know the rules of constructing and analysing civil engineering, low-energy, passive, sustainable, industrial, road, bridge, and railroad transport units.

#### Skills

are able to gather information from literature, databases and other properly selected information sources; can synthesize the obtained information, interpret and evaluate it, as well as draw conclusions, formulate, discuss and justify opinions and positions.

are able to read and interpret architectural, building, installation and geodetic drawings, prepare graphic documentation in a traditional way and using selected CAD software (including the BIM technology).

can apply the building law regulations and legal documents concerning building facilities

can evaluate the technical condition of building facilities and indicate appropriate methods for their maintenance.

#### Social competences

take responsibility for the accuracy and reliability of work results and their interpretation.

understand that it is necessary to protect the intellectual property, are ready to obey the principles of professional ethics and to take care of the achievements and traditions of the engineer's profession.

#### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Completion of the course based on:

- assessment of the diploma thesis presented,
- regularity of its implementation,
- technical problem solving skills.

#### Programme content



Compatible with the given topic of the thesis.

### Teaching methods

Discuss with the Student about current problems, clarify on an ongoing basis or provide sources in the literature on the subject to solve problems.

### Bibliography

Basic

1. Scientific and technical literature necessary to prepare the thesis
2. Technical standards and normative
3. Building law etc.,

Additional

### Breakdown of average student's workload

	Hours	ECTS
Total workload	375	15,0
Classes requiring direct contact with the teacher	5	0,5
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) <sup>1</sup>	370	14,5

<sup>1</sup> delete or add other activities as appropriate