# POZNAN UNIVERSITY OF TECHNOLOGY



#### EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

## **COURSE DESCRIPTION CARD - SYLLABUS**

#### Course name Diploma seminar [S1Bud1>SD]

| Course  |                        |                                   |            |
|---|------------------------|-----------------------------------|------------|
| Field of study<br>Civil Engineering   |                        | Year/Semester<br>4/7              |            |
| Area of study (specialization)<br>–   |                        | Profile of study general academic | ;          |
| Level of study<br>first-cycle   |                        | Course offered in Polish          |            |
| Form of study<br>full-time  |                        | Requirements compulsory           |            |
| Number of hours   |                        |                                   |            |
| Lecture<br>0  | Laboratory classe<br>0 |                                   | Other<br>0 |
| Tutorials<br>30   | Projects/seminars<br>0 | 8                                 |            |
| Number of credit points<br>3,00   |                        |                                   |            |
| Coordinators<br>dr inż. Marlena Kucz prof. PP<br>marlena.kucz@put.poznan.pl |                        | Lecturers                         |            |

#### **Prerequisites**

- knowledge acquired during the entire education process to date, with particular emphasis on the subject of the diploma, knowledge of numerical methods and computer aided design (CAD)

### **Course objective**

Introducing students to the rules of taking the diploma examination and the rules of preparing and defending the diploma thesis. Familiarizing students with the requirements for the substantive and formal dimension of the diploma thesis. Summary and extension of the knowledge and skills acquired during the studies. Introducing students to self-education methods. Preparing students for the public presentation of the diploma thesis.

### Course-related learning outcomes

#### Knowledge:

#### depends on thesisi subject

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.

knows detailed rules of constructing and dimensioning elements and metal connections; concrete, wooden, and brick building facilities.

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

Skills:

are able to dimension basic structural elements in the units of civil, industrial, road, bridge and railroad building, working individually or as part of a team.

are able to design selected elements and simple metal, concrete, wooden and brick constructions, working individually or as part of a team.

are able to perform preliminary economic analysis of basic engineering activities; can prepare a simple cost calculation and a work schedule.

can apply the building law regulations and legal documents concerning building facilities can make plans autonomously and carry out the lifelong learning processes; can apply the obtained knowledge in the field of building engineering in order to communicate with the surroundings using specialized terminology, and discuss important problems of building industry

Social competences:

are able to adapt to new and changing circumstances, can define priorities for performing tasks assigned by themselves and by other people, acting in the public interest and with regard to the purposes of sustainable development.

take responsibility for the accuracy and reliability of work results and their interpretation. are communicative in multimedia presentations.

understand the need to transfer to the society the knowledge about building engineering, transfer the knowledge in a clear and easily comprehensible manner.

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:

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Credit for the course on the basis of:

- evaluation of the presented diploma dissertation, presentation during the seminar, preparation of the development of issues, regularity of its implementation, ability to solve technical problems. Assessment of individual multimedia presentations in the form of oral defense

### Programme content

Basic rules related to the methodology of theses. Choosing a topic and defining a research problem. Substantive and formal requirements for the preparation of the thesis and preparation for the diploma examination.

Defining a research or design problem. Motivation, searching for materials, archiving, avoiding basic mistakes. General rules for building a thesis structure. Usefulness of the work in the form of publication, project. Problems related to plagiarism in the context of working with literature. Functions and types of footnotes and quotations.

Editorial notes on writing a thesis. Formal side: language correctness - style, writing technique, table of contents, drawings, how to format the text - working with a document

Individual presentations by students including: the scope of the work, the topic of the work, research problem, the initial structure of the work, well-known literature in the selected subject area, stages related to the implementation of theoretical chapters of the work and project parts.

Course topics

none

**Teaching methods** 

Auditorium exercises

1) Practice method

2) Search method including the method of cases

3) Workshop method

### Bibliography

#### Basic

1. Scientific and technical literature necessary to prepare the diploma thesis

2. Standards and technical norms

3. Construction law, etc.,

Additional

Poznań 1994

[2] Cabarelli G., Łucki Z., Jak przygotować pracę dyplomową lub doktorską, Universitas, Kraków 1998.

[3] Pułło A., Prace magisterskie i licencjackie. Wskazówki dla studentów, WP PWN, Warszawa 2000.

### Breakdown of average student's workload

|  | Hours | ECTS |
|--|-------|------|
| Total workload   | 75    | 3,00 |
| Classes requiring direct contact with the teacher  | 30    | 1,00 |
| Student's own work (literature studies, preparation for laboratory classes/<br>tutorials, preparation for tests/exam, project preparation) | 45    | 2,00 |