



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Diploma seminar [N2Bud1-KB>SD]

### Course

Field of study

Civil Engineering

Year/Semester

2/4

Area of study (specialization)

Structural Engineering

Profile of study

general academic

Level of study

second-cycle

Course offered in

polish

Form of study

part-time

Requirements

compulsory

### Number of hours

Lecture

0

Laboratory classes

0

Other (e.g. online)

0

Tutorials

10

Projects/seminars

0

### Number of credit points

4,00

### Coordinators

### Lecturers

### Prerequisites

1. Knowledge: - has the knowledge of strength of materials, mechanics of buildings, metal structures, reinforced concrete structures, masonry structures and timber structures 2. Skills: - can obtain information from sources and prepare complete documentation of various objects 3. Social competences: - understands the need for lifelong education

### Course objective

Developing the ability to extending the knowledge by reading scientific and technical journals. Developing the ability to deliver presentations.

### Course-related learning outcomes

Knowledge:

1. know in detail the principles of analysing, constructing and dimensioning elements and connections in selected building structures [P7S\_WG (I)]
2. have extended and detailed knowledge of material strength, modelling and constructing; have knowledge of theoretical principles of the finite element method as well as general rules of non-linear calculations of engineering structures [P7S\_WG (O/I)]
3. know in detail the rules of design of selected buildings [P7S\_WG (I)]
4. have detailed knowledge on business activity in construction industry and the ways of developing

different forms of individual entrepreneurship; understand the principles of enterprise financial economy [P7S\_WG (O/I)] [P7S\_WK (O)]

5. know the legal regulations in the field of industrial and intellectual property protection [P7S\_WG (O)] [P7S\_WK (O)]

Skills:

1. are able to correctly define a computational model and carry out an advanced linear analysis of complex building units, their elements and connections; are able to apply basic nonlinear computational techniques together with a critical evaluation of numerical analysis results [P7S\_UW (I)]

2. can design elements and connections in complex building units, working both individually and in a team [P7S\_UW (I)]

3. can perform a classical static and dynamic analysis and stability analysis of statically determinate and non-determinate bar structures (trusses, frames and strands) [P7S\_UW]

4. use advanced specialized tools in order to search for useful information, communication and in order to obtain software supporting the designer and organizer of building engineering works [P7S\_UW (O/I)]

5. can dimension complex construction details in selected building units [P7S\_UW (I)] 6. are able to prepare a building unit design and technical documentation in the environment of selected CAD software [P7S\_UW (I)]

Social competences:

1. are responsible for the safety of own work and team work [P7S\_KR (O)]

2. are ready to autonomously complete and broaden (extend) knowledge in the field of modern processes and technologies of building engineering [P7S\_KR (O)]

3. can realise that it is necessary to improve professional and personal competence; are ready to critically evaluate the knowledge and received content [P7S\_KK (O)]

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Learning outcomes presented above are verified as follows:

- evaluation of student activity during the seminar classes
- evaluation of the delivered presentations and activity in discussions

### Programme content

Acquainting students with the formal rules of taking the diploma examination and rules of thesis preparation

Students study literature and search for a topic from scientific and technical literature. They prepare and deliver presentations about their theses and presentations about scientific and technical topics.

Discussion about student presentations

### Teaching methods

Students prepare and deliver presentations about their theses and presentations about scientific and technical topics. The lecturer and students ask questions during presentations.

Discussion after presentations

### Bibliography

Basic

1. Books and technical and scientific journals 2. Polish and European standards

Additional

Scientific and technical literature

### Breakdown of average student's workload

	Hours	ECTS
Total workload	110	4,00
Classes requiring direct contact with the teacher	18	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	92	3,50