COURSE DESCRIPTION CARD - SYLLABUS

Course name
Diploma Seminar

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 studies

Course offered in
Polish

Form of study
part-time

Requirements
compulsory

Number of hours

Lecture

Laboratory classes

Other (e.g. online)

Tutorials
18

Projects/seminars

Number of credit points

4

Lecturers

Responsible for the course/lecturer:
dr hab. inż. Maciej Szumigała, professor PUT

Responsible for the course/lecturer:

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:

- 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	100	4,0
Classes requiring direct contact with the teacher	18	0,5
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) [1]	82	3,5

[1] delete or add other activities as appropriate