FACULTY OF CIVIL ENGINEERING

SUBJECT CARD

Name in English: **Praca dyplomowa**
Name in Polish: **Master (MSc) thesis**
Main field of study (if applicable): *Civil Engineering*
Specialization (if applicable): **Civil Engineering**
Level and form of studies: ~~1st /~~ **2nd level*, full-time** ~~/ part-time~~*****
Kind of subject: **obligatory** ~~/ optional / university-wide~~*****
Subject code: **CEB099963**
Group of courses: ~~YES /~~ **NO***

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU)					
Number of hours of total student workload (CNPS)				**540**	
Form of crediting	Examination / crediting with grade *	Examination / crediting with grade *	Examination-/ crediting with grade *	Examination / crediting with grade *	Examination / crediting with grade *
For group of courses mark (X) final course					
Number of ECTS points				**18**	
including number of ECTS points for practical (P) classes				**18,0**	
including number of ECTS points for direct teacher-student contact (BK) classes				**0,3**	

* delete as appropriate

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Has an advanced theoretical knowledge and skills in accordance with the requirements of the field of study *building* of the second cycle of the program, including Civil Engineering specialty.
2. Can shape, model, analyze, and measure complex structural components of buildings.
3. Knows the applicable standards, guidelines and regulations for the design of buildings, including the extended in the range of building structures.
4. Has the ability and computational efficiency in design, including computer-aided calculation and plotting.
5. Has the ability to independently acquire, use, and analysis of scientific and technical information.

SUBJECT OBJECTIVES

C1. Synthesis of knowledge of the whole the second cycle studies and practical experience, especially in the chosen diploma specialty.
C2. Getting knowledge of the planning and realization of a variety, complex technical, scientific and technical research.
C3. Strengthening the knowledge of the principles of programming, modeling and solving complex engineering design tasks.
C4. Learning students how to select and use advanced computational tools, including

	computer programs.
C5.	Strengthening skills of development the results and drawing conclusions.
C6.	Strengthening the ability to use and critical analysis of scientific and technical information.

SUBJECT EDUCATIONAL EFFECTS

Relating to knowledge:

PEK_W01	Has a well-established and extended knowledge of the issues of the construction industry, particularly in the area of diploma specialization.
PEK_W02	Has a theoretically grounded knowledge of programming, modeling and solving complex design engineering tasks.
PEK_W03	Knows the rules for the application of advanced techniques and computer programs supporting the design and research processes.

Relating to skills:

PEK_U01	Has detailed, developed skills in solving problems in the construction industry, in particular of the studying specialty.
PEK_U02	Has the ability to collect and critically analyze, from a variety of sources, of information in the field of construction, especially of the studying specialty.
PEK_U03	Can select the methods and tools to solve complex engineering tasks and basic research problems.
PEK_U04	Has the ability to document the work or research projects done by himself and their presentation.
PEK_U05	Is able to establish directions of further education and follow the process of self learning.

Relating to social competences:

PEK_K01	Is able to set priorities for implementation of specified by himself or the others tasks or research projects and is responsible for his decisions.
PEK_K02	Has an internal belief in the need for the continuous self-development, including related to his profession.

PROGRAMME CONTENT	
Form of classes - lecture	**Number of hours**

Lec1		
…		
	Total hours	

Form of classes - class	**Number of hours**

Cl1		
...		
	Total hours	

Form of classes - laboratory	**Number of hours**

Lab1		
…		
	Total hours	

Form of classes - project	**Number of hours**

Proj1		
…		
	Total hours	

Form of classes - seminar		Number of hours
Sem1		
…		
	Total hours	

TEACHING TOOLS USED
N1. Studies of literature and other sources of information.
N2. Preparation and execution of calculations and / or experimental and / or case study analysis.
N3. Analysis of the comparisons results, summary, formulation of conclusions, editorial preparation of the thesis.
N4. Participation in consultations related to the thesis, summarizing discussions.

EVALUATION OF SUBJECT EDUCATIONAL EFFECTS ACHIEVEMENT		
Evaluation (F – forming (during semester), P –concluding (at semester end)	Educational effect number	Way of evaluating educational effect achievement
P1, P2, P3, P4	PEK_W01, PEK_W02, PEK_W03, PEK_U01, PEK_U02, PEK_U03, PEK_U04, PEK_U05, PEK_K01, PEK_K02	Rating the thesis by the supervisor and reviewer. Thesis defense. Diploma exam.
P1 – evaluation of the thesis by the supervisor and reviewer P2 – defense of the thesis P3 – evaluation of diploma exam		

PRIMARY AND SECONDARY LITERATURE
Literature depending on specialty in which the diploma is realized. Literature related to the thesis topic chosen independently by student and under the direction of the supervisor.
SUBJECT SUPERVISOR (NAME AND SURNAME, DIVISION, E-MAIL ADDRESS)
Thesis supervisor.
MEMBERS OF TEH EDUCATIONAL TEAM (NAME AND SURNAME, E-MAIL ADDRESS)
Thesis reviewer

MATRIX OF CORRELATION BETWEEN EDUCATIONAL EFFECTS FOR SUBJECT
Master thesis
AND EDUCATIONAL EFFECTS FOR MAIN FIELD OF STUDY *Civil Engineering*
AND SPECIALIZATION **Civil Engineering**

Subject educational effect	Correlation between subject educational effect and educational effects defined for main field of study and specialization (if applicable)**	Subject objectives ***	Programme content ***	Teaching tool number ***
Knowledge				
PEK_W01	K2_W07, K2S_CEB_W16-K2S_CEB_W22	C1, C2, C3, C4		N1, N2
PEK_W02	K2_W02-K2_W05, K2S_CEB_W16-K2S_CEB_W22	C1, C2, C3, C4		N1, N2
PEK_W03	K2_W09, K2S_CEB_W16-K2S_CEB_W22	C1, C2, C3, C4		N1, N2
Skills				
PEK_U01	K2S_CEB_U18-K2S_CEB_U23	C4-C6		N1, N2, N3, N4
PEK_U02	K2_U01, K2_U08	C4-C6		N1, N2, N3, N4
PEK_U03	K2_U06-K2_U09, K2_U15, K2_U16	C4-C6		N1, N2, N3, N4
PEK_U04	K2_U17	C4-C6		N1, N2, N3, N4
PEK_U05	K2_U03	C1, C6		N1, N2, N3, N4
Social competence				
PEK_K01	K2_K02, K2_K04	C1, C6		N1, N4
PEK_K02	K2_K01, K2_K04	C1, C6		N1, N4

** - enter symbols for main-field-of-study/specialization educational effects
*** - from table above