



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Introduction to civil construction design

		Course
Field of study		Year/Semester
Civil Engineering		1 / 1
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 hours
Lecture	Laboratory classes	Other (e.g. online)
15	0	0
Tutorials	Projects/seminars	
0	0	
<b>Number of credit points</b>		
2		

		Lecturers
Responsible for the course/lecturer:		Responsible for the course/lecturer:
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**Prerequisites**

KNOWLEDGE: student has knowledge of mathematics, physics and chemistry on level appropriate for high school graduates.

SKILLS: student can analyse, synthesize and interpret acquired information;

student has an ability to independently learn and acquire knowledge.

SOCIAL COMPETENCIES: student is conscious about a need to work for a common good, to reach goals both individual and social;

student is ready to cooperate with other students and with the lecturer, knows it is necessary to avoid actions disrupting other student's learning;



student applies rules of culture and social cohabitation, notices other people's needs.

### **Course objective**

Teaching students a general overview about:

- topics and problems they meet during the study course,
- basics of civil construction,
- dependencies between different construction specialisations, showing common elements between these specialisations.

### **Course-related learning outcomes**

Knowledge

1. Has knowledge about specialisations of civil engineering and their characteristics;
2. Has basic knowledge about social, economical and ecological dependencies of a construction process;
3. Has basic knowledge about hierarchy of legal building codes.

Skills

1. Can distinguish basic types of construction objects, knows their similarities and differences.

Social competences

1. Has beginning consciousness about dangers and perils present in a construction process;
2. Is conscious about influence of construction on social and natural environment.

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

Learning outcomes presented above are verified as follows:

The acquired knowledge from the lectures is verified by a written colloquium done on the last lecture. The colloquium has a form of a multiple choice test with penalty for wrong answers, and can be supplemented by questions of "list with a short description" type. With a small number of students the form may be changed into an oral colloquium - details should be given at the first lecture. To pass the colloquium, students should acquire at least 50% of points. Activity during the lectures and in Ekursy system may be taken into account during the colloquium's score evaluation.

Topics for the colloquium will be given to students during the first lecture or by email.

Grade scale: 50-60% 3,0; 60-70% 3,5; 70-80% 4,0; 80-90% 4,5; 90-100% 5,0.

### **Programme content**

1. Essence of civil engineering;
2. Criteria for evaluation of a building's quality;
3. Construction investment process and building's life cycle;



4. Preliminary information about technology and organisation of construction process;
5. Program of first cycle civil engineering studies;
6. Legal codes in civil engineering and their hierarchy;
7. Preliminary description of civil engineering specialisations;
8. Influence of construction process and buildings on environment, introduction to urbanism, traffic engineering and universal design;
9. Advantages and dangers of using intelligent solutions in civil engineering.

### **Teaching methods**

An informative lecture including elements of a conversation lecture, utilising a multimedia presentation with an occasional use of a blackboard.

### **Bibliography**

#### Basic

1. Gawęcki A.: Mechanika materiałów i konstrukcji prętowych. Politechnika Poznańska, Poznań, 1998.
2. Basiewicz T., Gołaszewski A., Rudziński L.: Infrastruktura transportu. Politechnika Warszawska, Warszawa 2002.
3. Żenczykowski W.: Budownictwo ogólne, t. 1. Warszawa, Arkady 1992.
4. Wiłun Z.: Zarys geotechniki. WKiŁ, Warszawa 2012.

#### Additional

1. Klemm P. (red.): Budownictwo ogólne t.2, Arkady 2005.
2. Koczyk H. (red.): Nowoczesne wyposażenie domu jednorodzinnego. PWRiL Poznań.
3. Skrypt internetowy, Mechanika budowli. [www.ikb.put.poznan.pl/node/49](http://www.ikb.put.poznan.pl/node/49).
4. Sysak J. (red.): Drogi kolejowe. PWN, Warszawa 1986.
5. Piłat J., Radziszewski P.: Nawierzchnie asfaltowe. WKiŁ, Warszawa 2004.
6. Madaj A., Wołowicki W.: Podstawy projektowania budowli mostowych. WKiŁ, Warszawa 2007.
7. Stawski B.: Konstrukcje murowe. Naprawy i wzmocnienia. Polcen, Warszawa 2014.
8. Datka S., Suchorzewski W., Tracz M.: Inżynieria ruchu. WKiŁ, Warszawa 2008.



**Breakdown of average student's workload**

	Hours	ECTS
Total workload	50	2,0
Classes requiring direct contact with the teacher	15	0,7
Student's own work (literature studies, preparation for tests/exam) <sup>1</sup>	35	1,3

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