



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Introduction to civil construction design [N1Bud1>WdPwB]

Course

Field of study

Civil Engineering

Year/Semester

1/1

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

Polish

Form of study

part-time

Requirements

compulsory

Number of hours

Lecture

12

Laboratory classes

0

Other (e.g. online)

0

Tutorials

0

Projects/seminars

0

Number of credit points

2,00

Coordinators

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Lecturers

dr inż. Jeremi Rychlewski

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Prerequisites

KNOWLEDGE: Student beginning this course should have knowledge on high school level from mathematics, physics, chemistry and environment (natural, economic, judiciary). SKILLS: Student should be able to analyse, synthesize and interpret acquired information. COMPETENCIES: Student should be conscious about a need to work for common good, to reach goals, both individual and social. Student should be ready to cooperate with other students and the teacher, should avoid actions disturbing other student's learning.

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: Student:

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

SKILLS: Student:

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.

SOCIAL COMPETENCES: Student:

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

The module's programme covers the following topics:

1. Present in a preliminary way topics of building construction, including similarities between different specialisations;
2. Present programme of I level building construction studies;
3. Present specialisations of building construction: construction, technology, transportation (roads, railways, bridges);
4. Hint on interaction with corresponding specialisations (i.e. urbanism, traffic engineering, environment protection).

Course topics

Programme of the lecture covers preliminary presentation of the following topics:

1. Essence of civil engineering;
2. Construction investment process and building's life cycle;
3. Program of first cycle civil engineering studies;
4. Legal codes in civil engineering and their hierarchy;
5. Description of civil engineering specialisations: construction, work technology and organisation, construction of car roads and railroads, construction of bridges;
6. Interaction with neighbouring specialisations on example of influence on environment, urbanism, traffic engineering and universal design;
7. Advantages and dangers of using intelligent solutions in civil engineering.

Teaching methods

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 jednorodzinne. PWRiL Poznań.
3. Skrypt internetowy, Mechanika budowli. 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	2,00
Classes requiring direct contact with the teacher	12	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	38	1,50