



COURSE DESCRIPTION CARD - SYLLABUS

Course name

OHS, organization and planning of the building [N1Bud1>BHPOiPB]

Course

Field of study

Civil Engineering

Year/Semester

4/7

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

20

Laboratory classes

0

Other (e.g. online)

0

Tutorials

0

Projects/seminars

20

Number of credit points

4,00

Coordinators

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Lecturers

Prerequisites

Knowledge: the student knows the basics of general construction, knows the technology of various types of construction process and the technology of realization the construction of buildings. He knows the rules for creating and reading architectural and construction drawings. Student has the basic knowledge of the basics of construction **Skills:** the student is able to divide construction process based on the technology of performing a specific construction stage. He observes the realization of various building structures, with particular emphasis on the machines, devices, equipment and team compositions used, as well as the organization of the construction site development. Analysis of interdisciplinary problems, the student is aware of the need to constantly update and supplement construction knowledge and take responsibility in professional work, uses available sources of information **Social competences:** the student independently completes the knowledge in the field of new and modern technologies of construction works, methods of realization of building objects in various technologies. He can describe these technologies and methods of realization of objects. Independent thinking and working in a group

Course objective

Acquainting the students with basic health and safety regulations in modern industrial companies, as well as in non-professional life. Teaching some practical skills how to solve problems connected with development of working conditions Learning the basics of organization and motivation. Getting to know the methods of organization and planning of construction works on the basis of examples of general and communication construction facilities. Acquiring the ability to plan the course of construction works in time and analysis of the resources needed to carry out these works. Ability to implement the concept of the construction site development. Learning about the possibilities of using a computer program for planning construction process and construction projects.

Course-related learning outcomes

Knowledge:

Is able to apply the principles of health and safety at work

Can estimate hazards of building operation, implement suitable safety rules and prepare work standards as well as quality management procedures. -

The student is able to identify the works, that are occurred at the stage of earthworks, foundation and assembly works, related to the realization of a selected building object. He is able too to select the composition of working teams of construction process

The student is able to build an organizational network model, make a general schedule of works and conduct an analysis of the resources, which is necessary to achieve a construction process

Skills:

The student knows the basics of the theory of organization and motivation in relation to construction.

He knows the methods of organization and planning of construction process resulting from the adopted technology of realization, the type of facility, conditions of execution.

He knows the elements and rules of preparing a construction site development plan

Has an elementary knowledge of rules and provisions concerned with creating working conditions that do not endanger the life, health and environment of workers.-

Has the basic knowledge that is necessary to understand the determinants of non-technical engineering activity in a household and an industry

Social competences:

The student is able to cooperate with a technologist, cost estimator, investor, construction works contractors at the stage planning the realization of investment.

Can realise that is necessary to improve professional and personal competence; are ready to critically evaluate the knowledge and received content.

Understand the need to transfer to the society the knowledge about building engineering, transfer the knowledge in clear and easily comprehensible manner.

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lectures: written colloquium - below 50 insufficient (F)

Ex. design: presentation and defense of the completed study, including technology, organization and planning of works in time.

Programme content

The specificity of construction in the context of safety. Review of national regulations on occupational health and safety in construction works, including manual and mechanized works. Responsibilities of the chief designer and construction manager. Objectives and content of studies in the field of bioz in Poland against the background of good European practices. Selected examples of ensuring safety in the construction of buildings and structures. Safety and health protection plan, Specific separate OHS for all types of construction works (15h)

Basics of organization and motivation in construction. The specificity of the realization of construction objects. Methods and ways of organizing construction process. Determining the duration of construction processes. Schedules- their types and purpose, rules of preparation, compositions. Network methods in the organization and planning of construction works and construction of specific facilities. Analysis of the resources. Development of the construction site. Construction organizational structures.

Teaching methods

Information lecture with a multimedia presentation

Design exercise - design method

Bibliography

Basic:

1. Podstawy teorii organizacji i zarządzania, Bielski M., wyd. 2 rozszerzone, C.H. Beck, W-wa, 2004
2. Organizacja produkcji budowlanej, Rowiński L., Arkady, Warszawa, 1982
3. Technologia i organizacja budowy, Dyżewski A., Arkady, Warszawa, 1990
4. Metody sieciowe w budownictwie, Biernacki J., Cyunel B., Arkady, Warszawa, 1989
5. Podstawy organizacji budowy, Jaworski K.M., Wydawnictwo Naukowe PWN, Warszawa, 2004
6. Zarządzanie w procesie inwestycyjnym, Werner W.A., Oficyna Wydawnicza Politechniki Warszawskiej, Warszawa, 2008
7. Nauka o pracy - bezpieczeństwo, higiena, ergonomia. CIOP. [Http://nop.ciop.pl](http://nop.ciop.pl)
8. Obolewicz J., Przygotowanie planu BIOZ. Inżynier Budownictwa 11/2012. [Https://www.piib.org.pl](https://www.piib.org.pl)
9. Wieczorek Z., Budownictwo. Wymagania bezpieczeństwa pracy. PIP 2011. [Http://www.pip.gov.pl](http://www.pip.gov.pl)

Additional:

1. Elementy organizacji robót inżynierskich, Pisarska E., Połoński M., Wyd. SGGW, Warszawa, 2000
2. Podstawy organizacji robót drogowych, Biruk S., Jaworski K. M., Tokarski Z., PWN, Warszawa, 2007
3. Organizacja i planowanie budowy, Lenkiewicz W. PWN, Warszawa, 1985
4. Podstawy zarządzania organizacjami, Griffin R.W., PWN, W-wa, wyd. 1999
5. Świdarska G., Plan BIOZ. Bezpieczeństwo pracy na budowie. Polcen, Warszawa 2015.
6. Taczanowska T., Janowski P., Ergonomia w budownictwie. Wydawnictwo Uczelniane, Lublin 1998.
7. Wiatr T., Bezpieczeństwo w budownictwie. Planowanie obiekt i ich budowy na tle praktyk UE. Norma2/2013. [Http://www.ikb.poznan.pl/tomasz.wiatr/BiOZwEU_TWiatr.pdf](http://www.ikb.poznan.pl/tomasz.wiatr/BiOZwEU_TWiatr.pdf)

Breakdown of average student's workload

| | Hours | ECTS |
|---|-------|------|
| Total workload | 100 | 4,00 |
| Classes requiring direct contact with the teacher | 40 | 1,50 |
| Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation) | 60 | 2,50 |