



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Prediploma practice, 6 weeks

		Course
Field of study		Year/Semester
SUSTAINABLE BUILDING ENGINEERING		3/6
Area of study (specialization)		Profile of study
		general academic
Level of study		Course offered in
First-cycle studies		english
Form of study		Requirements
full-time		compulsory

			Number of
hours			
Lecture	Laboratory classes		Other (e.g. online)
Tutorials	Projects/seminars		
160			
Number of credit points			
5			

		Lecturers
Responsible for the course/lecturer:		Responsible for the course/lecturer:
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Prerequisites
Knowledge of building subjects at the 3rd year student level tailored to the type of pre-graduate practice (profile of interest or diploma) and future specialty of the profession of civil engineer related to the type of building objects.
The ability to link knowledge acquired at the University with the practice of its application, including a critical look at the quality of project documentation and design processes and production processes at the construction site in the context of continuous improvement of knowledge
Awareness of the role of civil engineer in the field of designing buildings and managing construction works while maintaining the principles of professional ethics and respect for other participants in the work process and the environment (engineer as a profession of public trust).



Course objective

The basic goal is to learn the specifics of the work of a construction engineer in the performance of independent technical functions, i.e., e.g. a designer or construction manager. An additional goal is to develop a critical look at the fields of self-improvement and the practice of its application. Pre-graduate practice helps to clarify your professional interests, the necessary choice of specialty profession and the future path of self-improvement.

Course-related learning outcomes

Knowledge

know building legislation, Polish standards (PN) and European standards (EN), technical conditions of constructing building facilities and energy-saving buildings.

have basic knowledge of the organisation and rules of managing the construction site, the development of construction work quality management procedures; know the working standards in building engineering.

have basic knowledge of land planning and energy planning, relations between architecture and urban planning, technical and economic potential of building engineering as well as the effect of building investment on the built sustainable environment.

Skills

are able to interpret architectural, building, installation and geodesic drawings; to prepare graphic documentation in traditional way, and in the environment of selected CAD software (including the BIM technology).

are able to estimate the hazards of construction and installation works, implement appropriate safety rules (including elements of Safety and Health Protection (BIOZ – Bezpieczeństwo i Ochrona Zdrowia).

are able to organise work at the construction site, applying the rules of technology and building engineering management.

Social competences

are able to adapt to new and changing circumstances, can define priorities for performing tasks defined by themselves and other people, acting in the public interest and with regard to the purposes of sustainable development

understand the need of team work, are responsible for the safety of their own work and team's work.

are able to critically evaluate the results of their own work.

understand that it is necessary to protect the intellectual property and are ready to obey the principles of professional ethics.

can realise how important is to take care of personal health and physical fitness



Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Exercise evaluation

The basis for getting credit is the apprenticeship journal signed by an authorized representative of the organization enabling the apprenticeship (if possible also authorized to perform independent technical functions within the meaning of the law). The internship is credited and the appropriate tutor on behalf of the University makes the entry in the index.

The scope of the practice should include many different tasks, among others :

1. Health and safety training.

2. Understanding the general scope of activity and the specifics of the functioning of a construction company or design office.

3. Familiarizing the student with:

- organization of the construction site, duties of the contract manager, construction manager, foreman, foreman, supervision inspector,

- the implementation of documentation and design works, as well as the duties of the design and administrative team,

- construction works technology, cost estimation, schedules, organization of construction projects,

- construction, assembly and material solutions of implemented facilities,

- payroll, billing and invoicing system,

- current activity of the workplace (through active participation in the investment process, preferably performing the function of assistant construction engineer: in preparatory, design, executive, marketing and other works).

It is advisable to familiarize the trainee with many different sentences implemented during construction.

Considering the possibilities of the guardian on the part of the workplace within the time of the internship, not all tasks from point 3 need to be completed.

During the internship, the student documents (daily) their activities in the internship diary. These entries must be confirmed by the internship supervisor on the part of the workplace (with the establishment's stamp).

Completion of the internship is made by the Internship supervisor, appropriate for the diploma profile, appointed by the internship attorney at WILIT.

Programme content



- The practice takes place in contracting companies (on the construction site) or in design offices, as well as in supervision and operation services or in research facilities, e.g. at the University, however, due to the importance of knowledge about performance in designing, practice on the construction site is preferred. On the formal side, the internship must take place via the Poznań University of Technology Practice and Career Center.

The internship takes place taking into account the specificity of sustainable construction. .

Teaching methods

local vision, participation in works, discussions

Bibliography

Basic

1. Gawrysiak U., Budownictwo. Bezpiecznie od startu. Państwowa Inspekcja Pracy, Warszawa 2009
2. Rozporządzenia wykonawcze prawa budowlanego o warunkach technicznych, jakim powinny odpowiadać obiekty budowlane i ich usytuowanie (rodzaje obiektów zależnie od przyszłej specjalności zawodu).
3. Rozporządzenie Ministra Infrastruktury z dnia 6 lutego 2003 r. w sprawie bezpieczeństwa i higieny pracy podczas wykonywania robót budowlanych. Dz. U. 2003 nr 47 poz. 401
4. Gawrysiak U., Budownictwo. Bezpiecznie od startu. Państwowa Inspekcja Pracy, Warszawa 2009.
5. Rozporządzenia wykonawcze prawa budowlanego o warunkach technicznych, jakim powinny odpowiadać obiekty budowlane i ich usytuowanie (rodzaje obiektów zależnie od przyszłej specjalności zawodu).
6. Rozporządzenie Ministra Infrastruktury z dnia 6 lutego 2003 r. w sprawie bezpieczeństwa i higieny pracy podczas wykonywania robót budowlanych. Dz. U. 2003 nr 47 poz. 401

Additional

1. Gilewicz A., Gilewicz M., Poradnik BHP w projektowaniu, wykonawstwie i nadzorze robót budowlano-montażowych. Alfa-Wero, Warszawa 1997.
2. Wieczorek Z., Budownictwo. Wymagania bezpieczeństwa pracy. Państwowa Inspekcja Pracy, Warszawa 2011
3. Strojna E., Piotrowicz J., Żywiec-Dąbrowska E., Klasyfikacja zawodów i specjalności na potrzeby rynku pracy. Ministerstwo Pracy i Polityki Społecznej, Warszawa 2010.
4. Gilewicz A., Gilewicz M., Poradnik BHP w projektowaniu, wykonawstwie i nadzorze robót budowlano-montażowych. Alfa-Wero, Warszawa 1997.
5. . Strojna E., Piotrowicz J., Żywiec-Dąbrowska E., Klasyfikacja zawodów i specjalności na potrzeby rynku pracy. Ministerstwo Pracy i Polityki Społecznej, Warszawa 2010.



6. BHP i BIOZ na budowie

Breakdown of average student's workload

	Hours	ECTS
Total workload	160	5,0
Classes requiring direct contact with the teacher	90	3,0
Student's own work (literature studies, preparation for laboratory classes/tutorials, preparation for tests/exam, project preparation) ¹	70	2,0

¹ delete or add other activities as appropriate