



**BYDGOSZCZ UNIVERSITY
OF SCIENCE AND TECHNOLOGY**
Faculty of Civil and Environmental Engineering
and Architecture

SECOND-CYCLE STUDIES IN CIVIL ENGINEERING (7th QUALIFICATION FRAMEWORK)

Description of the field

Second-cycle studies in the field of Civil Engineering are a continuation of engineering studies, expanding and supplementing the knowledge and skills in the field of design, construction and operation of buildings. The studies are three semesters long (1.5 years). The first semester is dedicated to the transfer of knowledge in major and basic subjects, while the other two are semesters devoted to specialized subjects. Our students can choose one of the four available fields of specialization: Roads, Streets and Airports; Building and Engineering Structures; Bridges; Low-Energy Construction.

Second-cycle studies are intended primarily for construction engineers who want to expand their knowledge and skills in the field of workmanship in the direction of a selected specialization, and those who are thinking about a career as a structural designer (obtaining full executive qualifications for designing is possible after obtaining the professional title of Master of Science Engineer in the field of Civil Engineering).

What will you study?

You will expand your knowledge in the field of general construction, building physics and modern material solutions, concrete and metal structures, foundations, construction project management, and construction economics. You will gain new knowledge and skills in the field of new generation concretes, together with the theory of elasticity and plasticity.

If you choose the specialization of Building and Engineering Structures, you will expand your knowledge or gain new knowledge in the field of designing prestressed, wooden, composite, industrial and other structures. You will learn the essence of FEM, performing dynamic calculations. You will learn how to practically use computer programs used in BIM and used for static and strength analyzes.

By choosing the Roads, Streets and Airports specialization, you will expand your knowledge and skills in the field of road and street design, intersections, road surfaces, organization and road safety. You will receive knowledge related to the design of communication systems, you will learn the practical use of computer-aided design tools in road construction.

In the Low-Energy Construction specialization, you will gain knowledge and skills related to energy-saving and passive construction, you will learn how to perform the energy characteristics of buildings, you will learn about issues related to the field of thermal modernization of buildings. You will learn to use the tools of computer aided calculations of hygrothermal building partitions.

If you choose the Bridges specialization, you will gain knowledge and skills in the field of bridge construction. You will learn the principles of designing concrete, steel and other bridges. You will get acquainted with the methods of bridge diagnosis. You will learn the practical use of BIM and FEM programs for conducting static and strength analyzes.

Students of the Faculty of Civil Engineering, Architecture and Environmental Engineering in the field of Civil Engineering, are not afraid of challenges!! They are making their dreams come true both at home and abroad. At the Faculty, the ERASMUS PLUS program is very popular, as part of which you can study or obtain professional practice abroad, e.g. in Great Britain, Italy, Spain, Portugal, Greece, Canary Islands, Croatia and Turkey. This exchange contributes to establishing many professional contacts and friendships for life.

What job can you get after graduation?

Thanks to modern technology and innovations, work in the construction industry is becoming more and more pleasant and interesting. If you like challenges and the monotony of everyday life is not for you, if you want to meet new people and work in a dynamic environment - don't wait! Enroll now!

The places of work are, among others construction companies dealing with construction execution, as well as design offices. Employment can also be found in local government units or government agencies. An enterprising graduate will easily find something inspiring on the job market.

Civil Engineering is undergoing the most important digital transformation in years. Building Information Modeling (BIM) is an approach that will soon become a standard, and we will help you understand its essence. Each idea that improves work and gives new opportunities, mainly thanks to digitization, can be commercialized and can lead you to business success!

Why Civil Engineering?

When you choose a second-cycle program, you probably already know what civil engineering and construction are. Studying at the Faculty of Civil Engineering, Architecture and Environmental Engineering can perfectly complement your knowledge. Whether you are leaning towards execution, design, laboratory work or costing, you will surely meet specialized staff who will help you develop knowledge and skills in this field. Second-cycle programs are necessary to obtain or extend qualifications in the field of building and construction.

We are waiting for you!