

# Study programme Civil Engineering - Municipal Engineering

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<b>Faculty</b>	Faculty of Civil Engineering
<b>Type of study</b>	Follow-up Master
<b>Language of instruction</b>	English
<b>Code of the programme</b>	N0732A260016
<b>Title of the programme</b>	Civil Engineering - Municipal Engineering
<b>Regular period of the study</b>	1,5 year
<b>Cost</b>	50,000 CZK per semester
<b>Coordinating department</b>	Department of Urban Engineering
<b>Coordinator</b>	doc. Ing. Vladislav Křivda, Ph.D.
<b>Key words</b>	environment, public infrastructure, urbanism, technical infrastructure, building law

## About study programme

The field of Urban Engineering hides the issue of decision-making about the placement of buildings and water supply, electricity, gas, drainage, etc. To solve these problems, it is necessary to know all technical and non-technical possibilities in the territory, composition and population needs and legislation. The field also deals with the environment and landscape. The view is focused not only on the surroundings of the buildings but also on the interiors where it is necessary to respect the regulations so that, for example, a mother with a baby in a stroller can freely move inside of building. This is a very diverse field where graduates gain very interesting jobs in the state and private sectors. Very often, they become heads of departments, project managers.

## Professions

- Construction manager
- Specialist of technical building investigation
- Cost Engineer
- City Planner
- Construction supervision
- Facility manager
- Project Analyst
- Planner
- Construction Office Clerk

## Hard skills

- Construction management
- Property management
- Facility management
- Typology
- Line constructions
- Building permits
- Spatial analytics
- Urban planning
- Planning

## **Graduate's employment**

A graduate of this study program will be involved in the preparation, design, implementation and maintenance of technical infrastructure and facilities as well as administrative activities within the field, both at regional level and within the whole of the Czech Republic. The graduate is being prepared for the position of a manager, a specialist. In addition, the application will be found in the positions of the technical supervisor of the public works contractor, the building manager, the designer of the buildings and utility networks, the building contractors, the analysts, the building authorities, and the departments of spatial planning or investment departments, etc. Applicability of graduates is in the commercial sphere of investor and supplier companies, in research institutes and centers (ÚÚR, VCPD), in public administration as head of departments (transport, investment), construction offices, administrators of technical infrastructure.

## **Study aims**

The aim of the study is to educate staff in the field of urban engineering. Graduates will acquire advanced knowledge and skills in the following areas: creation of concepts of solution of territorial-technical problems and concepts of development of technical equipment of the area; methods of prognosis of further development; transport and technical servicing of the urbanized area (through transport systems, transport buildings, transport engineering, water engineering); management of investment processes; and areas of co-ordination of the integrated technical service of the urbanized area. Graduates will also acquire the necessary knowledge from the field of engineering urbanism.

## **Graduate's knowledge**

The study program is based on a common knowledge base, ie on the theoretical and professional construction and technical disciplines, which are developed in the area of territorial technical and regional development and in the field of public infrastructure (Act No. 183/2006, § 2). Urban engineering is based on several interrelated themes:

- \* technical and transport infrastructure (technical service of urbanized areas)
- \* Territorial-technical issues (urbanism and spatial planning issues)
- \* General technical requirements for construction and barrier-free environment of buildings
- \* Management of investment processes focused on comprehensive technical service of settlements
- \* facility management (asset management and public infrastructure operation).

It includes a methodology for solving and deciding on technical-ecological issues related to the planning, development and subsequent operation of cities and municipalities. It covers aspects of the overall concept of sustainable development of the urbanized area, including in particular the issues of spatial planning and public infrastructure.

## **Graduate's skills**

Graduate of the study program is a specialist in urban engineering, able to respect both the technical aspects of the city's operation and other aspects that substantially affect the functionality and usability of technical solutions, especially aesthetic and cultural aspects. To take into account these aspects, it uses the knowledge of public infrastructure - the technical and transport infrastructure, the public space and the civic amenities. The diploma thesis is focused mainly on the issue of public infrastructure of towns and municipalities and on the functions of the territory and the city, ie the technical, aesthetic and cultural factors influencing these functions. The graduate will find work in both design offices, construction sites and construction offices.

## **Graduate's general competence**

The graduate will be able to perform individual activities within the above mentioned professional areas and participate in the implementation teams for comprehensive solution of large scale orders. He / she will be able to solve the tasks and coordinate, plan, implement, organize and decide construction activities and work, whether directly in construction or project and construction practice, especially in the field of technical engineering. After completing other conditions, the graduate may be authorized in the

field of urban engineering (CKAIT) and become involved in the lifelong learning system. Graduates of the follow-up Master's program may continue to take up the postgraduate study program Civil Engineering in the study profile of subjects in the field of urban engineering.

## **Study curriculum**

- form Full-time (en)