

Study programme Civil Engineering - BIM Engineering

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Faculty	Faculty of Civil Engineering
Type of study	Follow-up Master
Language of instruction	English
Code of the programme	N0732A260030
Title of the programme	Civil Engineering - BIM Engineering
Regular period of the study	2 years
Cost	50,000 CZK per semester
Coordinating department	Department of Urban Engineering
Coordinator	doc. Ing. Petr Konečný, Ph.D.
Key words	Designing, facility management, BIM in Construction, Management

About study programme

The two-year Master's program emphasizes the coordination of construction processes within the BIM information environment and the digitization of construction.

A graduate of the BIM engineering Master's program will find employment especially in companies designing and realising constructions or in companies providing facility management and comprehensive real estate maintenance not only with implementing BIM method.

Graduates of this program can continue in the doctoral study program Civil Engineering, in the study profile focused on information modelling and construction management.

Professions

- BIM design manager
- BIM Engineer
- Facility manager
- BIM Manager
- BIM Coordinator

Hard skills

- Planning
- BIM Design
- Facility management
- BIM Manager

Graduate's employment

The graduate of the master's program BIM engineering will find employment mainly in companies designing and implementing constructions using the BIM method or in companies providing facility management and comprehensive care for real estate using BIM.

The graduate will be theoretically equipped for follow-up doctoral studies at the Faculty of Civil Engineering VŠB-TU Ostrava or at other faculties of civil engineering in the Czech Republic and abroad.

Subsequently, the graduate can deepen his / her professional education within the offer of lifelong learning.

Study aims

The aim of the study is to satisfy the demand of practice for experts who are able to work with ICT technologies that are used in construction, know the processes across the life cycle of buildings, i.e. in the phase of preparation of capital construction, design, implementation, and in the field of facility management in the phase of operation and use of constructions, lead and connect experts from individual fields, or meet the investor's requirements for BIM, if they are part of the assignment.

In terms of content, the study program is designed to meet the requirements of:

- Act No. 111/1998 Coll., on Higher Education Institutions and on Amendments to Other Acts, as amended regulations (hereinafter referred to as the "Higher Education Act"),

- Government Order No. 274/2016 Coll., on standards for accreditation in higher education,

- Government Decree No. 275/2016 Coll., on the areas of education in higher education,

and all this in accordance with the methodological materials of the Board of the National Accreditation Office for Higher Education and the documents of the University of Mining - Technical University of Ostrava (hereinafter "VŠB-TUO") and the Faculty of Civil Engineering VŠB-TUO.

The study program is being taught in both the Czech and English languages in full-time and part-time form of study and is intended for graduates of bachelor's study programs at university and non-university technical universities in the Czech Republic and in the EU. The content of the course builds mainly on the knowledge of graduates of the four-year bachelor's degree program in Civil Engineering at the Faculty of Civil Engineering VŠB-TUO. The study program also enables the mobility of students and the completion of part of the study at other selected universities with a similar focus.

After successfully passing the final state examination, the graduate is entitled to use the title "engineer" (abbreviated to Ing.).

Graduate's knowledge

The graduate knows:

- processes in individual phases of the life cycle of buildings in relation to the BIM method,
- theoretical background and wider context of the use of the BIM method in all phases of the life cycle of buildings,
- ways and possibilities of using BIM models in simulation and decision-making processes,
- needs for preparation, planning, implementation and management of construction by BIM method,
- processes in facility management and knows how to effectively use the BIM model for their management.

Graduate's skills

The graduate is able to apply the theoretical basis of their specialization, ie, masters the concept of BIM (Building Information Modeling), prepares an investment order in software tools supporting the BIM method, works with data and graphics model, over which simulates and analyzes model situations, manages processes within life cycle of buildings and especially those in the phase of operation and use (facility management), coordinates and manages completed orders in BIM, applies the basic requirements of operation and use of construction works in relation to planning and process management in CAFM systems over data obtained from the BIM model (facility management), can move in the phases of preparation, planning, implementation and operation and use of construction works.

Graduate's general competence

At the same time, other competencies of the future graduate include soft skills. The graduate speaks English, has managerial skills, takes responsibility and solves problems independently, effectively manages time (time management), effectively communicates with other participants in the BIM project.

Study curriculum

- form Full-time (en)
- form Part-time (en)