RĪGAS TEHNISKĀ UNIVERSITĀTE

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Study programme "Civil Engineering"

Main attributes

Title	Civil Engineering
Identification code	BGB0
Education classification code	47582
Level and type	Professional Master (Second Cycle) Studies
Higher education study field	Architecture and Civil Engineering
Head of the study field	Uģis Bratuškins
Deputy head of the study field	Lana Migla
Department responsible	Faculty of Civil and Mechanical Engineering
Head of the study programme	Lana Migla
Professional classification code	46582
The type of study programme	Full time
Language	Latvian, English
Accreditation	16.11.2022 - 17.11.2028; Accreditation certificate No 2022/31-A
Variant 1	
Volume (credit points)	60.0
Duration of studies (years)	Full time studies - 1,0
Degree or/and qualification to be obtained	Professional master degree in civil engineering / –
Qualification level to be obtained	The 7th level of European Qualifications Framework (EQF) and Latvian Qualifications Framework (LQF)
Programme prerequisites	Professional bachelor degree in civil engineering and professional qualification of a civil engineer, or comparable education
Variant 2	
Volume (credit points)	150.0
Duration of studies (years)	Full time studies - 2,5
Degree or/and qualification to be obtained	Professional master degree in civil engineering / civil engineer
Qualification level to be obtained	The 7th level of European Qualifications Framework (EQF) and Latvian Qualifications Framework (LQF); the 7th level of professional qualification
Programme prerequisites	Bachelor degree of engineering science in civil engineering or comparable education

Description

Abstract	The study programme provides for the acquisition of compulsory study courses corresponding to the profile, compulsory optional study courses, as well as pedagogy and psychology study courses. The duration of the studies is 1 year and the volume of the study programme is 60 CP. (including 9 CP allocated for practice). By fulfilling all the requirements of the study program, the student obtains a professional master's degree in Civil Engineering.
Aim	The aim of the study programme is to provide in-depth knowledge in the construction sub-sector of the civil engineering sector, to prepare students for further studies in the doctoral degree, for university teaching work or for practical work, as well as to provide the highest second cycle professional education in the civil engineering to applicants with an engineering academic bachelor's degree in construction science, and to prepare engineers for permanent work.
Tasks	The tasks of the study programme: - to develop research work and technical literature analysis skills in the construction industry; - to lead students' ability to use theoretical knowledge for formulating and solving specific tasks in the construction industry; - to develop students' ability to organize and perform pedagogical work.
Learning outcomes	Graduates of the study programme: - are able to demonstrate a comprehensive knowledge of facts, theories and patterns necessary for personal growth and development, civic participation, social integration and continuing education; - are able to understand in detail and demonstrate knowledge of a wide variety of specific facts, principles, processes and concepts in a given field of study or professional activity; - are familiar with technologies and methods for carrying out learning tasks or work assignments; - are able to plan and organise work, use a variety of methods, technologies, devices, tools and materials to carry out tasks; - are able to cooperate, plan and carry out learning or work tasks in the profession individually, in a team or by leading a team. Studies provide knowledge that creates a high degree of culture and intelligence, enabling to engage in social and professional activities, to have contact with academic and professional circles in Latvia and abroad.

Final/state examination procedure, assessment	The final thesis of the master's studies requires specific research in the field of construction. As far as possible, in the master's thesis, the student continues the topic started in the bachelor's thesis. Students with an academic bachelor's degree additionally develop an engineering project in which a variant of the possible implementation of the researched question is developed. Before defending the master's thesis, these are evaluated by reviewers who are approved by the director of the relevant institute. Master's theses are defended at an open meeting of the State Examination Commission (SEC) appointed by RTU Rector, which also includes representatives of professional associations and companies in the construction industry. The SEC collegially evaluates students' knowledge and skills on a 10-point scale.
Description of the future employment	As a result of the studies, the student acquires the necessary knowledge to be able to start a permanent job in the construction industry or to perform pedagogical work, training young specialists in the construction industry. The realization variant of the study programme (150 CP) ensures the acquisition of the qualification of a civil engineer.
Special enrollment requirements	English language proficiency equivalent to at least CEFR B2 level.
Opportunity to continue studies	Studies at doctoral level study programmes.

Courses

No	Code	Name	C.p. [1]	C.p. [2]
A		**Compulsory Study Courses**	**12.0**	**34.0**
1	BM0647	Investigation and Testing of Structural Elements of Buildings	3.0	3.0
2	BM0653	The Finite Element Method (General Course)	6.0	6.0
3	BM0350	Reinforcement of Structures	3.0	3.0
4	BM0027	Timber Structures		4.0
5	BM0643	Steel Structures		3.0
6	BM0148	Reinforced Concrete Structures (general course)		5.0
7	BM0387	Construction Technology and Safety		6.0
8	BM0367	Construction Technology and Safety (study project)		3.0
9	IV0001	Basics of Labour Protection		1.0
B		**Compulsory Elective Study Courses**	**6.0**	**26.0**
B1		**Field-Specific Study Courses**	**3.0**	**23.0**
		Study courses for all study directions	*3.0*	*6.0*
1	BM0641	Rheology of Structural Elements	3.0	3.0
2	BM0660	Optimization in Engineering Design	3.0	3.0
3	BM0662	Metrology, Investigation and Testing of Structures	3.0	3.0
4	BM0658	Management of Quality in Construction	3.0	3.0
5	BM0376	Building Protection	3.0	3.0
6	BM0353	Technology of Building Repair Works	3.0	3.0
7	BM0650	Fundamentals of Research and Patents	3.0	3.0
8	BM0370	Interactive Computer Graphics	3.0	3.0
9	BM0654	Engineering Geology of Latvia	3.0	3.0
10	BM0646	Special Course of Geotechnical Engineering	3.0	3.0
11	BM0642	Dynamics of Civil Structures	3.0	3.0
12	BM0652	Polymer Composite Materials in Civil Engineering	3.0	3.0
13	BM0644	Computer Aided Design of Optimal Building Structures	3.0	3.0
		Construction of civil buildings		*17.0*
1	BM0383	Reconstruction and Restoration of Buildings		6.0
2	BM0380	Practical Civil Engineering Physics		3.0
3	BM0369	Fundamentals of Building Acoustics		3.0
4	BM0365	Building Machines (special course)		3.0
5	BM0374	Assembling Technology of Sanitary Equipment		3.0
6	BM0381	CAD in Civil Engineering (specific topics)		6.0
7	BM0386	Supplementary Course of Architectural Designe		6.0
8	BM0037	Individual Building		4.0
9	BM0009	Diagnostics of Buildings		4.0
		Building constructions and reconstruction		*17.0*
1	BM0359	Steel Structures. Special Course		3.0
2	BM0025	Timber and Plastic Structures (special course)		4.0
3	BM0150	Reinforced Concrete Structures (special course)		5.0
4	BM0381	CAD in Civil Engineering (specific topics)		6.0
5	BM0375	Computer Aided Design		3.0
6	BM0358	Metrology, Investigation and Testing of Structures		3.0
7	BM0370	Interactive Computer Graphics		3.0
		Contractor		*17.0*
1	BM0030	Investigation Methods of Materials		4.0
2	BM0154	Modern Building Materials		5.0
3	BM0338	Maintenance of Buildings		3.0
4	BM0354	Estimation of Buildings		3.0
5	IV0078	Construction Pricing		5.0
6	IV0079	Economics of Building Construction		5.0
7	IV0282	Marketing in Building Construction		3.0
8	IV0283	Management in Building Products Manufacturing		3.0
B5		**Pedagogical and Psychological Sciences Study Courses**	**3.0**	**3.0**
1	DE0643	Pedagogy	3.0	3.0
2	DE0653	Psychology	3.0	3.0
C		**Free Elective Study Courses**	**3.0**	**3.0**
D		**Practical Placement**	**9.0**	**48.0**

1	BM0645	Practical Placement	9.0	
2	BM0663	Practical Placement	9.0	
3	BM0656	Practical Placement		48.0
4	BM0640	Practical Placement		48.0
5	BM0665	Practical Placement		48.0
E		**Final Examination**	**30.0**	**39.0**
1	BM0664	Master Thesis	30.0	
2	BM0657	Master Thesis	30.0	
3	BM0649	Master Thesis	30.0	
4	BM0659	Master Thesis	30.0	
5	BM0661	Master Thesis with Engineering Design Project		39.0
6	BM0655	Master Thesis with Engineering Design Project		39.0
7	BM0648	Master Thesis with Engineering Design Project		39.0
8	BM0651	Master Thesis Including Engineering Design Project		39.0
K.p.[*] kredītpunkti studiju programmas variantā				