FACULTY OF CIVIL ENGINEERING,
ARCHITECTURE AND GEODESY

UNIVERSITY OF MOSTAR
FACULTY OF CIVIL ENGINEERING,
ARCHITECTURE AND GEODESY

CIVIL ENGINEERING
UNDERGRADUATE UNIVERSITY
STUDY PROGRAMME CURRICULUM

Mostar, April 2023

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1. INTRODUCTION

The curriculum of the undergraduate university study programme Civil Engineering is the result of the regular review process, which began with the Decision of the Senate at the session held on 26 February 2022 (No. 01-993-1 / 22). The regular revision procedure was carried out according to the Rulebook on the procedure of adopting new and revisions of existing study programmes (No. 01-993-1 / 22). It stipulates that the Committee coordinates the development of a revised curriculum. The Committee also includes student representatives and external users, and the scientific-teaching council of the Faculty of Civil Engineering, Architecture and Geodesy submits their proposal to the University Senate for adoption.

In order to involve all stakeholders in the process of improving the study programme, a public hearing was held on 31 March 2023 at the Conference Hall of the Faculty of Civil Engineering, Architecture and Geodesy at 10:00, to which representatives of workplaces for practical teaching of FCEAG and a representative of the Student Union of FCEAG were invited. The conclusions of the public debate were taken into account during the development of the curriculum.

In addition to the conclusions of the public debate, the recommendations of the Expert Committee from the last institutional accreditation in 2020 were taken into account. The recommendations include practical work outside the University (where applicable), application of legal and internal acts on the minimum share of pre-examination obligations in the final grade of all courses, and the application of modern teaching methods with the student at the centre of the teaching process.

Also, during the development of the curriculum, all strategic tasks in the strategic area of education from the *University Development Strategy 2018-2023*, which relate to the curriculum and teaching process, were carried out (more in the chapter "3.1. Connection with the Development strategy of the University of Mostar“).

In addition, when making decisions on the type of changes, all relevant statistical data and survey results collected and conducted in the period since the last revision of the study programme were analysed:

- Results of student surveys;
- Monitoring the development of technologies in civil engineering;
- Monitoring the needs of the labour market.

Taking into account all the above, the following changes have been made in this revised curriculum in comparison to the existing one:

- in the course Mathematics 1, semester I, the number of ECTS credits is reduced from 10 to 9, and in the course Mathematics 2, semester II, the number of ECTS credits is increased from 10 to 11,
- in semesters V and VI, 21 ECTS credits are achieved by enrolling in core courses, and the remaining 9 ECTS credits are achieved by the student by enrolling in elective courses,

- the list of elective courses in the 3rd year of Civil Engineering is defined for each academic year in the annual curriculum.

2. GENERAL INFORMATION ABOUT THE STUDY PROGRAMME

Study programme:	Civil Engineering
Cycle:	1st (undergraduate)
Type:	University study programme
Scientific area:	Technical Sciences
Scientific field:	Civil Engineering
Academic title:	Bachelor of Civil Engineering
Abbreviation of the academic title:	univ. bacc. ing. aedif
EQF qualification level:	6
Duration of the study programme:	3 years, 6 semesters
ECTS:	180
Language:	Croatian
Mode of study:	Full time
Awarding institution:	University of Mostar
Institution administering study programme:	University of Mostar, Faculty of Civil Engineering, Architecture and Geodesy
Study programme objectives:	The main objectives of this study is to acquire basic knowledge in fundamental technical sciences and civil engineering and prepare students for further education. The objectives of the study programme can be grouped into several categories: **Technical knowledge.** Acquiring the necessary knowledge in the area of civil engineering together with knowledge in mathematics, physics and basic technical sciences. **Practical knowledge.** Acquiring the necessary practical knowledge for identifying and formulating problems, as well as solving them in specialized areas of civil engineering such as load-bearing structures, hydraulic engineering, roads, geotechnical engineering, environmental protection, construction organization and management. In addition to this, it also includes the development of creative abilities to consider problems and the ability to think critically. **Communicativeness and teamwork.** Acquiring the necessary knowledge for the active use of at least one world language, while developing the ability to present one's own results to the professional and general public, as well as developing the ability to work in a team. **Preparations for further studies.** Acquiring the necessary knowledge that will enable further education through graduate university studies, specialist and doctoral studies. One of the special goals that is in line with the goals of

	education of experts at the Faculty of Civil Engineering, Architecture and Geodesy, University of Mostar, is the development of students' awareness of the need for permanent education, development of society as a whole and protection of the environment. **Preparations for professional engagement.** Obtaining the necessary knowledge and developing awareness of a wide range of problems and obligations that occur in professional practice: safety, ethics, ecology and economy
Study programme competencies:	- Ability to identify, define and solve simple engineering problems; - Ability to apply knowledge in mathematics, mechanics, applied mechanics and other areas of fundamental technical sciences relevant to civil engineering; - Ability to apply knowledge in specialized areas of civil engineering: load-bearing structures, hydraulic engineering, roads, geotechnical engineering, environmental protection, construction organization and management; - Understanding elements of a construction design, construction organization and ability to manage construction of simpler buildings; - Ability to identify necessary research and necessary resources; - Ability to use techniques, skills and modern tools (including IT) necessary for engineering practice; - Ability of effective communication: written and oral in mother language and one foreign language for professional and non-professional public; - Understanding of professional and ethical responsibility; - Basic computer skills; - Basic knowledge in the area of study; - Respecting the ethical principles of the profession; - Ability to nurture interpersonal relationships; - Ability to work in an interdisciplinary team.
Study programme learning outcomes:	1. Identify, define and explain less complex engineering problems in civil engineering (FGAGGRB-IU-1); 2. Apply the methods of mathematical analysis, theoretical mechanics and fundamental technical sciences in solving engineering problems (FGAGGRB-IU-2); 3. Dimension (apply calculation methods) and design less complex engineering structures in civil

	engineering (FGAGGRB-IU-3); 4. Analyse and evaluate construction principles of less complex engineering structures (FGAGGRB-IU-4); 5. Identify, classify and compare characteristics of construction materials (FGAGGRB-IU-5); 6. Differentiate geological processes and phenomena on the surface of the lithosphere, describe the occurrence of earthquakes and volcanoes and their harmful effect on engineering activity (FGAGGRB-IU-6); 7. Classify the soil and determine its physical and mechanical properties, dimension the foundations and supporting structures, and calculate the stability of the slope against sliding (FGAGGRB-IU-7); 8. Analyse problems in the area of hydromechanics, hydrology, flow in open streams and systems under pressure, and water supply and drainage systems (FGAGGRB-IU-8); 9. Develop a road design outside the settlement for road sections in simpler spatial conditions up to the level of conceptual design (FGAGGRB-IU-9); 10. Calculate the necessary resources, time and costs of construction and develop a construction management project of less complex structures (FGAGGRB-IU-10); 11. Plan, organize and manage construction works of less complex buildings and production in production facilities (FGAGGRB-IU-11); 12. Use common computer tools in civil engineering: load-bearing structures, hydraulic engineering, roads, geotechnical engineering, environmental protection, organization, technology, management and economics of construction (FGAGGRB-IU-12); 13. Describe construction regulations and basic requirements for a structure, and identify phases and participants of the construction design (FGAGGRB-IU-13); 14. Recognize the interaction between participants in a construction design and participate in the processes of design, construction, operation and maintenance and removal of the structure using the principles of teamwork (FGAGGRB-IU-14); 15. Identify and interpret the basic characteristics of certain style periods in the development of

	architecture, and critically analyse an architectural work (FGAGGRB-IU-15); 16. Critically evaluate arguments, assumptions and results when making decisions in solving engineering problems (FGAGGRB-IU-16); 17. Interpret, compare and exchange results and information in the area of the profession (FGAGGRB-IU-17); 18. Determine the location of structures in space and carry out mapping in the state geodetic reference system (FGAGGRB-IU-18).
Opportunities after graduation:	- Continuing the study, university graduate study of Civil Engineering - Employment
Accreditation:	The University of Mostar received a Decision on Institutional Reaccreditation on 14 January 2020 from the competent Ministry of Education, Science, Culture and Sports of the HNŽ on the recommendation of the Agency for Development of Higher Education and Quality Assurance of BiH, after which the University was registered in the State Register of Accredited Higher Education Institutions.

3. BASIC CHARACTERISTICS OF THE STUDY PROGRAMME

3.1. Connection with the Development strategy of the University of Mostar

In the *Development Strategy of the University of Mostar 2018 - 2023* in the strategic field of education, several strategic goals are related to the curriculum and its elements.
Objective 1 defines that the University, in cooperation with stakeholders, will develop, approve, implement and continuously monitor and improve study programmes at all levels. The following tasks arise from clearly defined learning outcomes related to labour market needs, following the European Qualifications Framework (EQF):

- task 1: clearly define the objectives and anticipated learning outcomes of each study programme and harmonize the content of the study programme with them, following the appropriate level of the European Qualifications Framework and the qualification standard
- task 2: Introduce a transparent and consistent process of revision and improvement of study programmes with the participation of students and other stakeholders
- task 5: ensure realistic allocation of ECTS credits, through a defined system of ECTS coordination at all study levels
- task 6: improve the interdisciplinarity of all study programmes by enabling elective courses at the university level.

Objective 3 refers to the development of a wide network of teaching bases, including organizations from different fields of activity, to establish cooperation that will enable the connection of practice, science, art, and higher education. The following tasks arise from it:
- task 2: increase the number of hours and the share of teaching practice in the study programmes and the share of ECTS credits acquired by it
- task 3: increase the number of bachelor/master papers related to practical work by the topic and content.

3.2. Compliance with the achievements of a certain scientific/artistic area and labour market and connection with the standards of occupations/qualifications

Objectives, competences and learning outcomes of the study programme for the undergraduate university study of Civil Engineering at the Faculty of Civil Engineering, Architecture and Geodesy, University of Mostar are developed on the basis of available documents at complementary public faculties of civil engineering, architecture and geodesy in BiH and abroad as well as other available publications, specifically:

- Development plan of the study programme of the undergraduate university study of Civil Engineering at the Faculty of Civil Engineering, Architecture and Geodesy, University of Split from 2022;
- Excerpt from the study programme (approved in 2005, amended in 2009, 2013, 2015) of the university undergraduate study of civil engineering at the Faculty of Civil Engineering and Architecture in Osijek, Josip Juraj Strossmayer University in Osijek;

- Study programmes with learning outcomes of undergraduate and graduate university study of civil engineering of the Faculty of Civil Engineering at the University of Zagreb from 2013;
- Plan and programme of the undergraduate university study of civil engineering of the Faculty of Civil Engineering at the University of Rijeka from 2018;
- I. Domljan, I. Lovrić, ''Kompetencije građevinskih inženjera'' ("Competencies of civil engineers"), Faculty of Civil Engineering, University of Mostar, 2016.

Since no occupational standard or qualification standard has been defined at any level in BiH, the following documents have been taken into account:
Decision on the standard classification of occupations in the FBiH (Official Gazette of the FBiH, Vol. XI, No. 40, No. 8, 2004), which lists occupations under the category "*Gender 2. Experts and Scientists*" civil engineer whose duties include:

- conducting research, consulting, planning and designing spatial planning, of traffic, water management, energy and other systems, and conducting and monitoring their realisation;
- implementation of technical, technological and other procedures for the improvement and protection of the environment;
- consulting, conceiving, forming, designing and managing the construction and maintenance of all types of structures and other industrial systems and electrical and electronic products and systems, as well as machines, facilities and industrial plants;
- improvement and application of commercial chemical processes in the production of various substances and materials;
- improvement and application of commercial chemical methods in the production of water, petroleum, gas and other minerals from the earth or metals from ores, and extraction of new materials;
- measurement of land, sea and other space to determine and monitor the position of structures in space;
- study of technological aspects of certain materials, products and procedures, effectiveness of production and work organization, consulting on them;
- preparation of scientific papers.

These tasks may also include supervision of other workers.

Jobs/competencies/learning outcomes from all the above documents are implemented in the competencies and learning outcomes at the level of the study programme listed in chapter "2. General information about the study programme". They are realised in core courses, in order to ensure that all students achieve them with the acquired qualification. The coverage of these learning outcomes at the level of the study programme with the learning outcomes at the level of core courses is presented in the chapter “3.12. Matrix of learning outcomes”.

3.3. Comparability with the study programmes in the country and abroad

The curriculum is comparable to complementary public faculties of civil engineering, architecture and geodesy in BiH and abroad.

Comparability is reflected exclusively in the competencies and learning outcomes at the level of study programmes and in the duration of studies, while the study programme retains its specifics mainly through the structure, course names, and ECTS credits.

3.4. Openness to student mobility

Student mobility is defined by the *Rulebook on international mobility*, which refers to administrative support for students, student mobility documents, insurance, method of application, the procedure for recognizing mobility and information package. The unique recognition methodology is defined at the university level by the Senate Decision on the adoption of a single form for the *Decision on recognition of courses, ECTS credits, grades, and professional practice during student mobility*, which is recorded in the diploma supplement. Students can find information on mobility programmes and accompanying forms on the University's website and on the website of the Faculty of Civil Engineering, Architecture and Geodesy in the section International Cooperation, and through the assistant for international cooperation who forwards information from the university's International Relations Office to student representatives.

3.5. Conditions for enrolment in the study programme and transfer from other study programmes

The *Rulebook on study* of the University of Mostar defines the right to enrol in undergraduate, graduate, and integrated study programmes, which is done through a public competition. The Senate, at the proposal of the scientific-teaching council of the Faculty of Civil Engineering, Architecture and Geodesy, and with the consent of the Governing Board of the University and the competent Ministry of Education, Science, Culture and Sports of HNŽ, announces a public tender. It is published in the daily press, on the website and bulletin board of the Faculty of Civil Engineering, Architecture and Geodesy, and it contains information on the conditions for enrolment, entrance examination, tuition fees, criteria for selecting candidates, and other information.
When transferring from other study programmes, a request is submitted to the dean of the Faculty of Civil Engineering, Architecture and Geodesy, and the appropriate committee decides on the possibilities and conditions for enrolment.

3.6. Conditions for enrolment in the next semester and year of study and graduation

Conditions for enrolment in the next semester and higher year of study are defined by the *Rulebook on study* of the University of Mostar and the Rulebook on study of the Faculty of Civil Engineering, Architecture and Geodesy.

The study programme ends with writing and defending a Bachelor's thesis that carries 5.0 ECTS credits. The manner and procedure of defending the Bachelor's thesis and the methodology of its preparation are defined in the Rulebook on writing and defending the Bachelor's Thesis of the Faculty of Civil Engineering, Architecture and Geodesy.

3.7. Organization of study programme

The study programme is organized through a total of six semesters (two semesters per academic year), and classes are conducted according to the schedule of classes through fifteen weeks per semester.

Introduction of distance learning in individual courses can be approved by the head of the department with adequate argumentation of the need to introduce online teaching in a particular course.

3.8. Structure of the study programme

The structure of the study programme is reflected in the number of hours of each type of teaching and teaching in total, the number of hours of practice, and the number of hours of independent student work in the total student workload of 180 ECTS credits, or 180 x 30 = 5400 hours of work.

According to the *Rulebook on the procedure for adopting new and revisions of existing study programmes* (No. 01-993-1/22), only core courses are listed in the curriculum, while electives are adopted in the annual curriculum for each academic year. Therefore, the table will show the number of hours of each type of teaching and teaching in total, the number of hours of practice, and the number of hours of independent work only in core courses.

In relation to the total number of ECTS credits, a sum of ECTS credits acquired in elective courses is 20, and the student can choose a total of 5 elective courses.

Besides core and elective courses at the level of the study programme and at the level of the Faculty of Civil Engineering, Architecture and Geodesy, i.e., in addition to 30 ECTS credits per semester, a student can choose university elective courses from the list adopted by the Senate each academic year, which are recorded in student's diploma supplement.

The purpose of elective courses at the study programme level is a more detailed elaboration of learning outcomes already acquired in core courses but following student preferences. The purpose of university elective courses is to acquire competencies not provided by the study programme, but that can help students achieve competitiveness in the market and contribute to building one’s personality through education.

Structure of the study programme including certain types of teaching, practice and independent work is presented below.

Year of study: 1									
Winter semester									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		l	t	S					
FGAGGRB101	Mathematics I	60	60	0	120	0	150	270	9.0
FGAGGRB102	Physics	30	30	0	60	0	90	150	5.0
FGAGGRB103	Descriptive Geometry	45	45	0	90	0	120	210	7.0
FGAGGRB104	Fundamentals of Geology and Petrography	30	15	0	45	0	60	105	3.5
FGAGGRB105	Informatics	15	45	0	60	0	45	105	3.5
FGAGGRB106	Introduction to Architecture	30	0	0	30	0	30	60	2.0
In total		210	195	0	405	0	495	900	30.0
ECTS for core courses									30.0
ECTS for elective courses									0.0
ECTS IN TOTAL									30.0

Year of study: 1									
Summer semester									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		l	t	S					
FGAGGRB207	Mathematics II	60	60	0	120	0	210	330	11.0
FGAGGRB208	Probability and Statistics	30	30	0	60	0	90	150	5.0
FGAGGRB209	Basics of Programming	15	30	0	45	0	45	90	3.0
FGAGGRB210	Mechanics I	30	45	0	75	0	105	180	6.0
FGAGGRB211	Geodesy	30	30	0	60	0	90	150	5.0
In total		165	195	0	360	0	540	900	30.0
ECTS for core courses									30.0
ECTS for elective courses									0.0
ECTS IN TOTAL									30.0

Year of study: 2									
Winter semester									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		l	t	S					
FGAGGRB312	Mechanics II	45	30	0	75	0	105	180	6.0
FGAGGRB313	Strength of Materials I	45	30	0	75	0	105	180	6.0
FGAGGRB314	Engineering Statics I	30	30	0	60	0	90	150	5.0
FGAGGRB315	Building Materials I	60	30	0	90	0	120	210	7.0
FGAGGRB316	Soil Mechanics and Foundations	45	30	0	75	0	105	180	6.0
In total		225	150	0	375	0	525	900	30.0
ECTS for core courses									30.0
ECTS for elective courses									0.0
ECTS IN TOTAL									30.0

Year of study: 2									
Summer semester									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		l	t	S					
FGAGGRB417	Strength of Materials II	30	30	0	60	0	90	150	5.0
FGAGGRB418	Engineering Statics II	45	30	0	75	0	105	180	6.0
FGAGGRB419	Hydrology	30	30	0	60	0	90	150	5.0
FGAGGRB420	Hydromechanics	45	45	0	90	0	120	210	7.0
FGAGGRB421	Elements of Building Construction	30	30	0	60	0	90	150	5.0
In total		180	165	0	345	0	495	840	28.0
ECTS for core courses									28.0
ECTS for elective courses									2.0
ECTS IN TOTAL									30.0

Year of study: 3									
Winter semester									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		l	t	S					
FGAGGRB522	Basics of Concrete Structures	45	45	0	90	0	120	210	7.0
FGAGGRB523	Construction Production	30	15	0	45	0	75	120	4.0
FGAGGRB524	Construction Management	30	30	0	60	0	90	150	5.0
FGAGGRB525	Introduction to Timber Structures	30	30	0	60	0	90	150	5.0
In total		150	105	0	255	0	375	630	21.0
ECTS for core courses									21.0
ECTS for elective courses									9.0
ECTS IN TOTAL									30.0

Year of study: 3									
Winter semester									
Course code	Course title	Hours of teaching			I. Teaching, in total	II. Hours of practice	III. Independent work	Workload hours, in total (I.+II.+III.)	ECTS
		l	t	S					
FGAGGRB626	Introduction to Metal Structures	45	30	0	75	0	105	180	6.0
FGAGGRB627	Highways	30	30	0	60	0	90	150	5.0
FGAGGRB628	Water Supply and Waste Management in Urban Areas	30	30	0	60	0	90	150	5.0
FGAGGRB629	Bachelor's Thesis	0	15	0	15	0	135	150	5.0
In total		120	105	0	225	0	405	630	21.0
ECTS for core courses									21.0
ECTS for elective courses									9.0
ECTS IN TOTAL									30.0

3.9. The optimal number of enrolled students concerning space, equipment, and number of teachers

Enrolment quotas before the beginning of each academic year are adopted by the Governing Board of the University, at the proposal of the Senate, and with the consent of the competent ministry.

Students can study as full-time students. Full-time students are those who study according to the programme with a full teaching schedule. Full-time students pay their costs by themselves through a linear system.

3.10. Resources required to conduct the study programme

Teachers from the University and teachers from reference higher education institutions in academic ranks from the relevant scientific area, field, and branch participate in the implementation of the study programme. Data on the structure of teaching staff by rank and education, gender and age structure, scientific research productivity, mobility, and project activities of teaching staff are regularly monitored through the bodies from the quality assurance system. These data are processed at the level of the study programme and organizational unit, and are published in annual reports.

The building of the Faculty of Civil Engineering, Architecture and Geodesy has a total of 3641,37 m^2 of physical resources required for the implementation of study programmes, of which:
lecture rooms:

- "A" (75.5 m^2), 68 seats,
- "B" (75.5 m^2), 68 seats,
- "C" (75.5 m^2), 68 seats,
- "STUDIO" (140.5 m^2), 72 seats,
- "F" (50.3 m^2), 32 seats,
- "G" (50.3 m^2), 32 seats,
- "H" (50.3 m^2), 32 seats,
- "AMPHITHEATRE" (150.8 m^2), 126 seats,
- "GAMMA" (41.7 m^2), 22 seats,
- "DELTA" (47.6 m^2), 30 seats,
- "Computer room 1" (50.3 m^2), 30 seats, 18 computers,
- "Computer room 2" (49.0 m^2), 30 seats, 10 computers.

laboratories:

- Hydraulic and geotechnical engineering (63.9 m^2),
- Roads, construction management (63.6 m^2),
- Mechanics, materials and structures (61.9 m^2).

Teachers' offices

- 21 teachers' offices with an average area of 35.0 m^2, about 735.0 m^2 in total

Atelier: 47.7 m^2
Library: 160.0 m^2

Based on the signed cooperation agreements for field classes in the study programme, the resources of the workplaces for practical teaching and other institutions listed below are used:

- Zagrebinspekt d.o.o. Mostar,
- GEO-DATA d.o.o. Mostar,
- B krug Livno,
- Markota projektiranje d.o.o. Metković.

3.11. Study programme quality assurance system

The purpose, goal, structure, operation and areas of evaluation of the quality assurance system of the University of Mostar are defined by the *Rulebook on the structure and operation of the quality assurance system of the University of Mostar*.

According to the *Rulebook*, the quality assurance system at the University of Mostar consists of permanent bodies of the quality assurance system at the university level: the Quality Assurance and Improvement Committee and the Quality Assurance and Improvement Office. The Faculty of Civil Engineering, Architecture and Geodesy is operated by the Quality Assurance and Improvement Committee, which consists of the Vice-Dean for Academic Affairs, the Quality Coordinator, the representative of the teaching staff, the student representative, and the representative of the administrative and technical staff. The Quality Coordinator of the Faculty of Civil Engineering, Architecture and Geodesy is also a member of the university's Quality Assurance and Improvement Committee.

The *Rulebook* defines the competencies and activities of each body from the quality assurance system. Bodies from the quality assurance system carry out regular activities defined by the University *Quality Assurance Manual at the University of Mostar*, which relate to conducting surveys and monitoring and data processing. Based on the implemented activities, annual reports are prepared at the level of the study programme, organizational unit, and the University.

3.12. Matrix of learning outcomes

IU-Study programme / IU-Course	FGAGGRB-IU-1	FGAGGRB-IU-2	FGAGGRB-IU-3	FGAGGRB-IU-4	FGAGGRB-IU-5	FGAGGRB-IU-6	FGAGGRB-IU-7	FGAGGRB-IU-8	FGAGGRB-IU-9	FGAGGRB-IU-10	FGAGGRB-IU-11	FGAGGRB-IU-12	FGAGGRB-IU-13	FGAGGRB-IU-14	FGAGGRB-IU-15	FGAGGRB-IU-16	FGAGGRB-IU-17	FGAGGRB-IU-18
IU-FGAGGRB101-1		x																

IU-Study programme / IU-Course	FGAGGRB-IU-1	FGAGGRB-IU-2	FGAGGRB-IU-3	FGAGGRB-IU-4	FGAGGRB-IU-5	FGAGGRB-IU-6	FGAGGRB-IU-7	FGAGGRB-IU-8	FGAGGRB-IU-9	FGAGGRB-IU-10	FGAGGRB-IU-11	FGAGGRB-IU-12	FGAGGRB-IU-13	FGAGGRB-IU-14	FGAGGRB-IU-15	FGAGGRB-IU-16	FGAGGRB-IU-17	FGAGGRB-IU-18
IU-FGAGGRB101-2		x																
IU-FGAGGRB101-3		x																
IU-FGAGGRB102-1		x																
IU-FGAGGRB102-2		x																
IU-FGAGGRB102-3		x																
IU-FGAGGRB102-4		x																
IU-FGAGGRB102-5		x																
IU-FGAGGRB102-6		x																
IU-FGAGGRB103-1		x																
IU-FGAGGRB103-2		x																
IU-FGAGGRB103-3		x																
IU-FGAGGRB103-4		x																
IU-FGAGGRB103-5		x																
IU-FGAGGRB103-6		x																
IU-FGAGGRB104-1						x												
IU-FGAGGRB104-2						x												
IU-FGAGGRB104-3						x												
IU-FGAGGRB104-4						x												
IU-FGAGGRB105-1												x						
IU-FGAGGRB105-2												x						
IU-FGAGGRB105-3												x						
IU-FGAGGRB106-1															x			
IU-FGAGGRB106-2															x			
IU-FGAGGRB207-1		x																
IU-FGAGGRB207-2		x																
IU-FGAGGRB207-3		x																
IU-FGAGGRB208-1																	x	
IU-FGAGGRB208-2																	x	
IU-FGAGGRB208-3																x		
IU-FGAGGRB208-4																x		
IU-FGAGGRB209-1												x						
IU-FGAGGRB209-2												x						
IU-FGAGGRB209-3												x						

IU-Study programme / IU-Course	FGAGGRB-IU-1	FGAGGRB-IU-2	FGAGGRB-IU-3	FGAGGRB-IU-4	FGAGGRB-IU-5	FGAGGRB-IU-6	FGAGGRB-IU-7	FGAGGRB-IU-8	FGAGGRB-IU-9	FGAGGRB-IU-10	FGAGGRB-IU-11	FGAGGRB-IU-12	FGAGGRB-IU-13	FGAGGRB-IU-14	FGAGGRB-IU-15	FGAGGRB-IU-16	FGAGGRB-IU-17	FGAGGRB-IU-18
IU-FGAGGRB209-4												x						
IU-FGAGGRB209-5												x						
IU-FGAGGRB210-1		x																
IU-FGAGGRB210-2		x																
IU-FGAGGRB210-3		x																
IU-FGAGGRB211-1																		x
IU-FGAGGRB211-2																		x
IU-FGAGGRB211-3																		x
IU-FGAGGRB211-4																		x
IU-FGAGGRB211-5																		x
IU-FGAGGRB211-6																		x
IU-FGAGGRB312-1	x	x																
IU-FGAGGRB312-2	x	x																
IU-FGAGGRB312-3	x	x																
IU-FGAGGRB312-4	x	x																
IU-FGAGGRB313-1	x	x																
IU-FGAGGRB313-2	x	x	x															
IU-FGAGGRB313-3		x	x	x														
IU-FGAGGRB313-4		x	x	x														
IU-FGAGGRB313-5		x	x	x														
IU-FGAGGRB313-6		x	x	x														
IU-FGAGGRB314-1	x																	
IU-FGAGGRB314-2		x																
IU-FGAGGRB314-3				x														
IU-FGAGGRB314-4												x						
IU-FGAGGRB315-1					x											x	x	
IU-FGAGGRB315-2					x											x	x	
IU-FGAGGRB315-3																x	x	
IU-FGAGGRB315-4																x	x	
IU-FGAGGRB316-1		x																
IU-FGAGGRB316-2							x											
IU-FGAGGRB316-3							x											
IU-FGAGGRB417-1	x	x	x															

IU-Study programme / IU-Course	FGAGGRB-IU-1	FGAGGRB-IU-2	FGAGGRB-IU-3	FGAGGRB-IU-4	FGAGGRB-IU-5	FGAGGRB-IU-6	FGAGGRB-IU-7	FGAGGRB-IU-8	FGAGGRB-IU-9	FGAGGRB-IU-10	FGAGGRB-IU-11	FGAGGRB-IU-12	FGAGGRB-IU-13	FGAGGRB-IU-14	FGAGGRB-IU-15	FGAGGRB-IU-16	FGAGGRB-IU-17	FGAGGRB-IU-18
IU-FGAGGRB417-2		x	x	x														
IU-FGAGGRB417-3		x	x	x														
IU-FGAGGRB417-4	x	x	x															
IU-FGAGGRB417-5		x	x	x														
IU-FGAGGRB417-6		x	x	x														
IU-FGAGGRB418-1	x																	
IU-FGAGGRB418-2		x																
IU-FGAGGRB418-3				x														
IU-FGAGGRB418-4												x						
IU-FGAGGRB419-1								x										
IU-FGAGGRB419-2								x										
IU-FGAGGRB419-3								x										
IU-FGAGGRB419-4								x										
IU-FGAGGRB419-5								x										
IU-FGAGGRB419-6								x										
IU-FGAGGRB420-1	x																	
IU-FGAGGRB420-2		x																
IU-FGAGGRB420-3			x															
IU-FGAGGRB420-4								x										
IU-FGAGGRB420-5												x						
IU-FGAGGRB420-6																	x	
IU-FGAGGRB421-1			x	x														
IU-FGAGGRB421-2			x															
IU-FGAGGRB522-1					x													
IU-FGAGGRB522-2	x	x	x									x						
IU-FGAGGRB522-3	x	x	x									x						
IU-FGAGGRB522-4	x			x								x						
IU-FGAGGRB523-1										x	x					x		
IU-FGAGGRB523-2											x					x		
IU-FGAGGRB523-3	x									x	x					x		
IU-FGAGGRB523-4											x					x		
IU-FGAGGRB523-5	x									x	x					x		
IU-FGAGGRB524-1	x										x							

IU-Study programme / IU-Course	FGAGGRB-IU-1	FGAGGRB-IU-2	FGAGGRB-IU-3	FGAGGRB-IU-4	FGAGGRB-IU-5	FGAGGRB-IU-6	FGAGGRB-IU-7	FGAGGRB-IU-8	FGAGGRB-IU-9	FGAGGRB-IU-10	FGAGGRB-IU-11	FGAGGRB-IU-12	FGAGGRB-IU-13	FGAGGRB-IU-14	FGAGGRB-IU-15	FGAGGRB-IU-16	FGAGGRB-IU-17	FGAGGRB-IU-18
IU-FGAGGRB524-2											x		x	x		x		
IU-FGAGGRB524-3										x								
IU-FGAGGRB524-4										x								
IU-FGAGGRB524-5										x								
IU-FGAGGRB525-1					x													
IU-FGAGGRB525-2		x	x									x						
IU-FGAGGRB525-3	x	x	x															
IU-FGAGGRB525-4	x		x	x														
IU-FGAGGRB525-5	x			x								x						
IU-FGAGGRB626-1	x																	
IU-FGAGGRB626-2		x																
IU-FGAGGRB626-3				x														
IU-FGAGGRB626-4												x						
IU-FGAGGRB626-5																	x	
IU-FGAGGRB627-1	x		x						x			x		x		x		
IU-FGAGGRB627-2	x		x						x			x		x		x		
IU-FGAGGRB627-3	x		x						x			x		x		x		
IU-FGAGGRB627-4	x		x						x			x		x		x		
IU-FGAGGRB627-5	x		x						x			x		x		x		
IU-FGAGGRB628-1								x										
IU-FGAGGRB628-2								x										
IU-FGAGGRB628-3								x										
IU-FGAGGRB628-4								x										
IU-FGAGGRB628-5												x						
IU-FGAGGRB629-1																		
IU-FGAGGRB629-2																		
IU-FGAGGRB629-3																		
IU-FGAGGRB629-4																		

4. STUDY PLAN

Year of study: 1							
Winter semester							
Course code	Course title	Course status	Hours of teaching			Hours of practice	ECTS
			l	t	s		
FGAGGRB101	Mathematics I	core	60	60			9.0
FGAGGRB102	Physics	core	30	30			5.0
FGAGGRB103	Descriptive Geometry	core	45	45			7.0
FGAGGRB104	Fundamentals of Geology and Petrography	core	30	15			3.5
FGAGGRB105	Informatics	core	15	45			3.5
FGAGGRB106	Introduction to Architecture	core	30	0			2.0
ECTS for core courses							30.0
ECTS for elective courses							0.0
ECTS IN TOTAL							30.0

Year of study: 1							
Summer semester							
Course code	Course title	Course status	Hours of teaching			Hours of practice	ECTS
			l	t	s		
FGAGGRB207	Mathematics II	core	60	60			11.0
FGAGGRB208	Probability and Statistics	core	30	30			5.0
FGAGGRB209	Basics of Programming	core	15	30			3.0
FGAGGRB210	Mechanics I	core	30	45			6.0
FGAGGRB211	Geodesy	core	30	30			5.0
ECTS for core courses							30.0
ECTS for elective courses							0.0
ECTS IN TOTAL							30.0

Year of study: 2							
Winter semester							
Course code	Course title	Course status	Hours of teaching			Hours of practice	ECTS
			l	t	s		
FGAGGRB312	Mechanics II	core	45	30			6.0
FGAGGRB313	Strength of Materials I	core	45	30			6.0
FGAGGRB314	Engineering Statics I	core	30	30			5.0
FGAGGRB315	Building Materials I	core	60	30			7.0
FGAGGRB316	Soil Mechanics and Foundations	core	45	30			6.0
ECTS for core courses							30.0
ECTS for elective courses							0.0
ECTS IN TOTAL							30.0

Year of study: 2							
Summer semester							
Course code	Course title	Course status	Hours of teaching			Hours of practice	ECTS
			l	t	s		
FGAGGRB417	Strength of Materials II	core	30	30			5.0
FGAGGRB418	Engineering Statics II	core	45	30			6.0
FGAGGRB419	Hydrology	core	30	30			5.0
FGAGGRB420	Hydromechanics	core	45	45			7.0
FGAGGRB421	Elements of Building Construction	core	30	30			5.0
ECTS for core courses							28.0
ECTS for elective courses							2.0
ECTS IN TOTAL							30.0

Year of study: 3							
Winter semester							
Course code	Course title	Course status	Hours of teaching			Hours of practice	ECTS
			l	t	s		
FGAGGRB522	Basics of Concrete Structures	core	45	45			7.0
FGAGGRB523	Construction Production	core	30	15			4.0
FGAGGRB524	Construction Management	core	30	30			5.0
FGAGGRB525	Introduction to Timber Structures	core	30	30			5.0
ECTS for core courses							21.0
ECTS for elective courses							9.0
ECTS IN TOTAL							30.0

Year of study: 3							
Summer semester							
Course code	Course title	Course status	Hours of teaching			Hours of practice	ECTS
			l	t	s		
FGAGGRB626	Introduction to Metal Structures	core	45	30			6.0
FGAGGRB627	Highways	core	30	30			5.0
FGAGGRB628	Water Supply and Waste Management in Urban Areas	core	30	30			5.0
FGAGGRB629	Bachelor's Thesis	core	0	15			5.0
ECTS for core courses							21.0
ECTS for elective courses							9.0
ECTS IN TOTAL							30.0