

UNDERGRADUATE PROGRAMME

• **Geoengineering**

The undergraduate study program in Geo-engineering (180 ECTS) has been conducted at the Faculty of Geotechnical Engineering as of the 2005/2006 academic year. In the third year the students choose one of the courses: Geotechnical engineering, Hydrotechnical engineering or Environmental engineering. This program gives the students basic theoretical preparation and an adequate command of general scientific methods and contents, in addition to the acquisition of specific professional know-how. Students who have completed the undergraduate study program of *Geo-engineering* is authorised to use the lawfully protected academic title University Bachelor of Geoengineering.

• **Environmental engineering**

The experience of implementing the undergraduate and graduate study programmes in Geo-engineering has made manifest the need for its improvement and for the adaptation of exit competences to the need of the labour market for experts in the area of environmental protection. For this reason, an undergraduate study program in **Environmental engineering** has been prepared and approved, with changes to the existing programme of Geoengineering not exceeding 40%. In the academic year 2012./2013. 120 students are enrolled in this programme.

UNDERGRADUATE STUDY PROGRAMME ENVIRONMENTAL ENGINEERING

1st TERM

Course	Hours per week		<i>ECTS</i>
	lectures	exercises	
Mathematics I	4	3	8
Geology I	2	1	4
Environmental protection	3	2	6
Descriptive geometry	2	2	5
Chemistry	2	2	5
Physical training	0	2	
Foreign language I	0	2	2

2nd TERM

COURSE	Hours per week		<i>ECTS</i>
	lectures	exercises	
Mathematics II	4	3	8
Physics I	2	1	4
Computer aided design	1	2	4
Geology II	2	1	4
General ecology	3	0	4
Environmental geochemistry	2	1	4
Physical training	0	2	
Foreign language II	0	2	2

3rd TERM

Course	Hours per week		<i>ECTS</i>
	lectures	exercises	
Air pollution protection	2	1	4
Technical mechanics	2	2	5
Chemical lab	0	2	3
Environmental law	3	0	4
Applied statistics	2	2	5
Physics II	2	2	5
Physical training	0	2	
*Optional courses			
* Environmental sociology	2	1	4
* Computer lab	1	2	4

Students enrol in one optional course.

4th TERM

Course	Hours per week		<i>ECTS</i>
	lectures	exercises	
Geodesy	2	2	5
Geophysics	2	2	5
Engineering geology	3	2	6
Strength of materials	2	2	5
Fluid mechanics	2	2	5
Physical training	0	2	
*Optional courses			
* Elements of construction	2	1	4
* Environmental sanitation	2	1	4

Students enrol in one optional course.

5th TERM

Course (compulsory)	Hours per week		<i>ECTS</i>
	lectures	exercises	
Geotechnical lab I	1	2	4
Hydrology	2	2	5
Soil mechanics I	3	2	6
GIS	2	2	5
Waste management	2	2	5
*Optional courses			
* Geotechnical structures	2	2	5
* Geotechnical and hydrotechnical machinery	2	2	5
* Hydrotechnical structures	2	2	5
* Drilling structures	2	2	5

Students enrol in one optional course.

6th TERM

Course (compulsory)	Hours per week		<i>ECTS</i>
	lectures	exercises	
Geoenvironmental engineering	2	2	5
Hydrogeology	2	2	5
Environmental analytic chemistry	2	2	5
Exploitation of mineral resources	2	2	5
*Optional courses			
* Environmental emissions	2	2	5
* Building management	2	2	5
* Traffic roads	2	2	5
* Geotechnical field research	2	2	5
Final project			5

Students enrol in one optional course.