

SYLLABUS

STUDY YEAR 2024/2025

Master Programme in Civil Engineering, with specialization in mining and Geotechnical Engineering

Enrollment semester Autumn 2024

DATE

2020-11-10

REFERENCE NO.

LTU-3825-2020

DECISION MAKER

Dean of the Faculty of Science and Technology

Programme content and structure

For a Master of Science degree with Major in Civil Engineering, with specialization in mining and Geotechnical Engineering (120 ECTS), the requirements comprise a minimum of 90 ECTS of mandatory courses on advanced level of which 15 ECTS is from selectable courses, and a Master thesis of 30 ECTS within Civil Engineering.

Swedish for beginners is offered to overseas students. The course is not included in the degree, and is read in addition to the obligatory courses

Credits

120 credits

Degree

- Degree of Master of Science (120 credits) - Major; Civil Engineering with specialisation Mining and Geotechnical Engineering

Entry requirements

Bachelors degree of minimum 180 ECTS with at least 60 ECTS in one or several of the areas of mining technology, civil engineering, or geology. At least 22,5 ECTS in Mathematics at university level is required. Good knowledge in English, equivalent to English 6

Selection

The selection procedure is based on academic qualifications, quality and quantity aspects

Selection group

Academic: 100%

Compulsory courses

Compulsory courses 105 credits

Course code	Course	Cr	Level	Comment
D7001B	Mine Automation	7.5	Master's level	
D7004B	Operation and Maintenance Engineering	7.5	Master's level	
G7003B	Environmental Geotechnics	7.5	Master's level	
G7006B	Foundation Engineering	7.5	Master's level	
G7008B	Soil Mechanics, Advanced Course	7.5	Master's level	
O7022K	Mining Geology	7.5	Master's level	
T7001B	Fundamentals of Rock Mechanics	7.5	Master's level	
T7002B	Design of Rock Constructions	7.5	Master's level	
T7008B	Open Pit and Underground Mining	7.5	Master's level	
T7025B	Project Course in Rock and Soil	7.5	Master's level	
X7003B	Degree project in Civil Engineering, Master	30	Master's level	

Compulsory courses 15 credits

Selective space is 15 credits. It is mandatory to select elective courses up to the given number of credits. The given number of credits of elective courses listed must be met for degree.

Course code	Course	Cr	Level	Comment
G7004B	Dam II - Dam and Dam Safety	7.5	Master's level	Selectable
G7010B	Soil modelling with the finite element program PLAXIS	7.5	Master's level	Selectable
T7006B	Applied Blasting	7.5	Master's level	Selectable
T7026B	Mine Design and Mining Economy	7.5	Master's level	Selectable

Course offered outside the obligatory courses - not compulsory - For non Scandinavian students 3 credits

Selective space is 3 credits. It is mandatory to select elective courses up to the given number of credits. The given number of credits of elective courses listed must be met for degree.

Course code	Course	Cr	Level	Comment
S0046P	Swedish for International Students 1	3	Bachelor's level	Selectable

Study schedule

Year of study 1 Enrollment semester Autumn 2024, Is offered in 2024/2025

Study-period	Course code	Course	Cr	Comment
1	S0046P	Swedish for International Students 1	3	Selectable
1	T7001B	Fundamentals of Rock Mechanics	7.5	
1	T7008B	Open Pit and Underground Mining	7.5	
2	D7001B	Mine Automation	7.5	
2	G7003B	Environmental Geotechnics	7.5	
3	G7004B	Dam II - Dam and Dam Safety	7.5	Selectable
3	T7002B	Design of Rock Constructions	7.5	
3	T7026B	Mine Design and Mining Economy	7.5	Selectable
4	G7006B	Foundation Engineering	7.5	
4	G7010B	Soil modelling with the finite element program PLAXIS	7.5	Selectable
4	T7006B	Applied Blasting	7.5	Selectable

Year of study 2 Enrollment semester Autumn 2024, Is offered in 2025/2026, planned study schedule

Study-period	Course code	Course	Cr	Comment
1	D7004B	Operation and Maintenance Engineering	7.5	
1	G7008B	Soil Mechanics, Advanced Course	7.5	
2	O7022K	Mining Geology	7.5	
2	T7025B	Project Course in Rock and Soil	7.5	
3-4	X7003B	Degree project in Civil Engineering, Master	30	Entry requirements