



### Application and Admission

Applicants who fulfil one of the following requirements qualify for the programmes:

- a master's degree from a technical university in a related field
- a bachelor's degree from a technical university in a related field and a minimum of 3 years of professional experience
- a degree from a technical college and a minimum of 5 years of professional experience (for certificate programme only)
- good command of English language

Applicants have to send in the completed registration form, a CV and copies of degrees.

**Application deadline: please see [www.natm.at](http://www.natm.at)**

Admission is based on the review of the applications and if required on interviews with the candidates or a test.

### Number of participants

A maximum of 30 students per programme

### Degree

Successful participants of the university certificate programme are awarded the occupational title "Academic NATM Engineer". Participants of the master's programme are awarded the degree "Master of Engineering".

### Attendance Fee

Certificate programme: 13,900 Eur (no VAT)  
 Master's programme: 18,900 Eur (no VAT)

### Organisation & Accommodation

The courses will be held in Graz and Leoben. Both cities are lively university cities with a large number of students. Graz has an international airport and a train station. Leoben can be easily reached by train from Graz in one hour.



Jointly organized by University of Leoben and Graz University of Technology

For students from abroad, we can assist in finding adequate accommodations. There are a number of dormitories and guesthouses in Graz and Leoben, where one can stay for a longer period at a reasonable price. If you need any assistance or have additional questions, do not hesitate to contact:

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Application forms and detailed information:

► [www.natm.at](http://www.natm.at)



University Certificate Programme & Master's Programme

# NATM-Engineer

Jointly organized by Graz University of Technology and University of Leoben

### Aim of the Programmes

The university programmes „New Austrian Tunneling Method Engineering“ were created to satisfy the continuously increasing worldwide demand for qualified tunnel engineers and aim at increasing the skills of the participants in the fields of geotechnical engineering and tunnelling, with an emphasis on the “New Austrian Tunnelling Method (NATM)”.

The degree holders shall be enabled to accomplish tunnelling projects on their own in the face of geotechnical, structural, organisational, contractual and economic needs according to the latest state of the art.

### Programme Options

The university certificate programme, leading to the occupational title “Academic NATM Engineer” lasts four semesters. Optionally participants can add another two semesters and are awarded the degree “Master of Engineering” (master’s programme).

### Participants

The programmes address civil engineers, geotechnical engineers and engineering geologists who do have a distinctive technical education and aim at a specialization in tunnelling.

Future fields of work may be planning, design and consulting of underground projects for engineering offices, or construction management for contractors and owners.

### Courses

- Introduction to the „New Austrian Tunnelling Method“
- Investigation and Engineering Geological Methods
- Laboratory Methods
- Characterisation and Classification
- Geotechnical Design
- Analysis
- Tunnel Layout
- Site Organisation and Construction Management
- Construction Contract
- Risk Analysis
- Tunnel Safety
- Monitoring/Data Evaluation and Interpretation
- Instrumentation
- Grouting (master’s programme)
- Excavation by Blasting and Roadheader (master’s programme)
- Basics of TBM Tunnelling (master’s programme)

Preparation of a thesis for the master’s programme is mandatory. A final exam concludes each programme.

### Lecturers

The majority of the lectures will be held by the professors Galler, Schubert, Kieffer and Tschuchnigg. In addition lecturers from industry will contribute to special issues.

### Teaching Method and Language

At the beginning, instruction is lecture style and teacher-centred to convey basic knowledge of the subject. Field trips to construction sites complement the instructions. Students have many opportunities to practice their skills by working on projects in teams.

All courses are taught in English.

### Duration and Organisation

The university certificate programme lasts four semesters and is valid 61 ECTS credits, while the master’s programme - which includes the certificate programme - lasts six semesters and is valid 90 ECTS credits.

The courses will be held in 4, respectively 5 modules (master’s programme) lasting three weeks each, allowing participation parallel to the job. The 6th semester is reserved for the preparation of the master’s thesis (master’s programme).

Programmes start every second year.

**Preliminary schedule: please see [www.natm.at](http://www.natm.at)**