

# MSC IN TECHNICAL GEOLOGY\*

AN IN-DEPTH AND PRACTICAL EXPLORATION OF THE EARTH FROM THE INSIDE OUT



◀ I work as a project manager for Geo in Aarhus. There is quite a lot of desk work preparing offers, project plans and reports, but it is also important for me to get out into the field a bit and feel the soil between my fingers. My master's really prepared me well for this job. The combination of an engineering and geological background is perfect, in my job in any case.

**OLE WEEL JENSEN**  
MSc in Technical Geology  
Geotechnical Project Manager, Geo

The MSc in Technical Geology is multidisciplinary programme, with courses shared between Aarhus University's Department of Geoscience and School of Engineering. Within the programme, students will have a chance to dig into nuanced questions about the Earth and its foundation. They will be able to pursue a specialisation in geotechnics, sedimentology, hydrology, hydrogeophysics, or soil and water chemistry.

## MIXED TEACHING

As a student of both science and engineering, don't expect to be spending too much time sitting in a classroom: classroom teaching is mixed in with lots of practical work and field research. You will have many opportunities to do your learning on field trips round Denmark or to Norway or Greenland.

The Technical Geology programme promotes an open learning environment. Plenty of time is available for group work and for close collaboration between students, researchers, and professors.

## STUDENT LIFE

As a small and highly involved programme, Technical Geology welcomes students to one of Aarhus University's most tightly knit communities – "the geologists." Similarly, much of your work in the School of Engineering will be done in groups – so you can expect to build close relationships with your fellow students, not just academically but socially as well.

Technical Geology students get to enjoy newly refurbished buildings close to the Aarhus city, housing study areas, reading rooms, wifi, computer rooms, and a classic Danish Friday bar. These new facilities are used for departmental activities, and you will be given a desk in a shared office where you can study, read, or just hang out with your fellow students. Harry's Cellar is a club for staff and students that is there for you whenever you need to take a break, grab a beer, or simply relax with friends. It has electronic darts and backgammon and live music, and regularly hosts themed events.

The university also has a number of popular Friday bars for you to enjoy, and the Tågekammeret association organises celebrations and social events for all science students.

## CAREERS

Graduating with an MSc in Technical Geology can open doors into a range of careers within the environmental, energy, construction and planning sectors both here in Denmark and internationally. Graduates can seek careers as consultants in engineering firms, in public administration, and working in construction to solve geotechnical tasks.

The practical nature of the programme ensures that graduates are equipped with the analytical and strategic skills they need to succeed in today's competitive global job market.



## PLACE OF STUDY

Aarhus

## WWW

[masters.au.dk/technicalgeology](https://masters.au.dk/technicalgeology)

## ANNUAL TUITION FEE

EU/EEA/Swiss citizens: FREE  
Others: EUR 13,500

# MSC IN TECHNICAL GEOLOGY\*

Due to changes in the general semester structure at the Faculty of Science & Technology from summer 2017, changes will occur in the programme structure and content from summer 2017 – to be announced in the spring of 2017.

## GEOTECHNOLOGY – QUATERNARY GEOLOGY, STUDY START SUMMER (60 ECTS PER YEAR)

| 1 <sup>ST</sup> SEMESTER           | 2 <sup>ND</sup> SEMESTER                    | 3 <sup>RD</sup> SEMESTER          | 4 <sup>TH</sup> SEMESTER |
|------------------------------------|---------------------------------------------|-----------------------------------|--------------------------|
| Minerals and Rocks                 | Glaciology and Glacial Geology              | Hydrogeophysical Field Course     | THESIS                   |
| Sedimentology                      | Geology of Denmark and Industrial Sediments | Environmental Geophysical Methods |                          |
| Introduction to Quaternary Geology | Project Work                                |                                   |                          |
| Quaternary Geology                 |                                             | Hydrogeophysical Field Course     |                          |
| Hydrogeology                       | Groundwater Modelling                       | Glacial Geology and Sedimentology |                          |
| 30 ECTS                            | 30 ECTS                                     | 30 ECTS                           | 30 ECTS                  |

## HYDROGEOPHYSICS, STUDY START WINTER (60 ECTS PER YEAR)

| 1 <sup>ST</sup> SEMESTER      | 2 <sup>ND</sup> SEMESTER          | 3 <sup>RD</sup> SEMESTER                                       | 4 <sup>TH</sup> SEMESTER |
|-------------------------------|-----------------------------------|----------------------------------------------------------------|--------------------------|
| Global Geophysics             | Environmental Geophysical Methods | Geoelectric and Electromagnetic Meth. App to Groundwater Expl. | THESIS                   |
| Geophysical Methods           |                                   | Ground Pollution and Groundwater Pollution                     |                          |
| Geology for Engineers         | Fourier Analysis                  |                                                                |                          |
| Hydrogeophysical Field Course | Vector Analysis                   | Project Work (Preparation for Master's Project)                |                          |
| Applied Mathematics 1         | Hydrogeology                      | Inversion Modelling                                            |                          |
| Applied Mathematics 2         |                                   |                                                                |                          |
| 30 ECTS                       | 30 ECTS                           | 30 ECTS                                                        | 30 ECTS                  |

## HYDROGEOPHYSICS, STUDY START SUMMER (60 ECTS PER YEAR)

| 1 <sup>ST</sup> SEMESTER          | 2 <sup>ND</sup> SEMESTER                                          | 3 <sup>RD</sup> SEMESTER                      | 4 <sup>TH</sup> SEMESTER |
|-----------------------------------|-------------------------------------------------------------------|-----------------------------------------------|--------------------------|
| Environmental Geophysical Methods | Global Geophysics                                                 | Fourier Analysis                              | THESIS                   |
|                                   | Geophysical Methods                                               | Vector Analysis                               |                          |
| Geology for Engineers             | Project Work<br>(Preparation for Master's Project)                | Ground Pollution and<br>Groundwater Pollution |                          |
| Hydrogeophysical Field Course     | Geoelectric and Electromagnetic<br>Meth. App to Groundwater Expl. |                                               |                          |
| Hydrogeology                      | Applied Mathematics 1                                             | Inversion Modelling                           |                          |
|                                   | Applied Mathematics 2                                             |                                               |                          |
| 30 ECTS                           | 30 ECTS                                                           | 30 ECTS                                       | 30 ECTS                  |