

EARTH SCIENCE ENGINEERING

PROGRAM



UNIVERSITY OF MISKOLC

FACULTY OF
EARTH AND ENVIRONMENTAL
SCIENCES AND ENGINEERING



The University of Miskolc (Hungary) is one of the few higher education institutes in Central Europe where engineering training related to geology, geophysics, hydrology, environment, mining and hydrocarbon industries takes place. The Faculty has a nearly 280-year old tradition in mining education, being the legal successor of the Mining School founded in 1735 in Selmec (now Banská Štiavnica). Our Faculty is an active member of the FEMP – Federation of European Mining Programs – consortium since 2003. The Earth Science Masters program builds upon strong engineering BSc basis and focuses on exploration skills and methods in geology, geophysics and geochemistry.

The Applied Geology and Geophysics is closely linked to extractive industries and trains professionals high-level for its most important R+D activity, the explorations, on high-level. Since this industry is the most globalized one in our time, it gives a great advantage if the graduates learn and practice the subjects in the generally accepted language of professional in English. All of the courses of the curricula will be given English language.

Miskolc is a well-known centre of mining education and lies in the heart of traditional mining regions, also close to several gas- and oil-fields. It has a central position for all neighbouring countries in the north eastern segment of the Carpathians, i.e. Poland, Slovakia, Ukraine, Romania. This gives her unique opportunity to provide ample choice of field practices, partly in the nearby occurrences, partly at the cooperating industrial and institutional partners both in Hungary and in other countries. It also gives outstanding opportunity to couple the geological knowledge with information regarding to other industries and technologies downstream, like mining, mineral processing, drilling, reservoir engineering, environmental technologies.

- **Program title:** MSc in Earth Science Engineering
- **Degree awarded:** Geological and Geophysical Engineer (MSc)
- **Minor specializations:**
Geological Engineering module,
Geophysical Engineering module.
- **Number of semesters:** 4;
required number of credits to be completed: 120
- **Tuition fee (non-EU citizens):** 3500 € per semester
(reduced fee may be applied depending on academic achievement from the third semester)
- **Application deadline:** 1st of June each year
(please check at mfk.uni-miskolc.hu)
- **Scholarship offers:**
Stipendium Hungaricum
(<http://www.tka.hu/international-programmes/2966/stipendium-hungaricum/>)
Visegrad Scholarship Program (<http://visegradfund.org/scholarships/visegrad-scholarship-program/>)





About the University of Miskolc

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Campus

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Visa

For EU, USA and Canadian citizens a valid passport is sufficient to enter Hungary. As Hungary is a part of the Schengen treaty, for citizens from other, non-EU countries a Schengen visa is necessary to enter. Students should be registered at the Office of Immigration and Nationality.

ADMISSION REQUIREMENTS

- **Qualification:**
BSc in earth science or earth science engineering degree, CGPA 60% or higher
- **Language proficiency:**
C1 (advanced) level is preferred, but minimum B2 on the CEFR scale or IELTS (academic version) 6.0 minimum score or identical language exam.
BSc degree holders, if the language of instruction was English are exempt from language test requirement.

FURTHER INFORMATION

University of Miskolc, Faculty of Earth and Environmental Sciences and Engineering – Institute of Exploration Geosciences

PETROLEUM ENGINEERING

PROGRAM



UNIVERSITY OF MISKOLC

FACULTY OF
EARTH AND ENVIRONMENTAL
SCIENCES AND ENGINEERING

Petroleum Engineering is a well-paying career that offers many opportunities to use one's talent and skills in the important mission of supplying energy to the world. If you enjoy the challenges of working in different parts of the world while solving field problems, you are an ideal candidate for one of our Petroleum Engineering programs. And if you come from a country rich in petroleum you will be able to help your nation fully develop those resources. An M.S. in Petroleum Engineering degree from University of Miskolc will provide you with a leading edge and a competitive knowledge base backed by the Petroleum Engineering Department's more than 60 years of teaching and research experience. If you choose our program, you'll be making the right decision and taking the first step towards a prosperous career in the world's petroleum industry.

High demand from developing countries necessitated the establishment of this program offered for students having already earned a B.S. Degree in Petroleum Engineering. The program is completely conducted in English and lasts two academic years with the final year partly used for the compilation of the M.S. Thesis.

The Petroleum Engineering Department of the University of Miskolc is the only institution in Hungary offering Petroleum Engineering programs. It has been training capable petroleum engineering graduates since 1951 and has awarded more than 800 M.S. degrees so far. Graduates work in all sectors of the Hungarian petroleum and gas industry and in many of the oil producing countries of the world. More than twenty five years ago the Department started offering graduate programs in English for international students. Our continuously improved curricula are comparable to those offered by leading US schools and provide students comprehensive engineering and advanced courses.



- **Program title:** MSc in Petroleum Engineering
- **Degree awarded:** Petroleum Engineer (MSc)
- **Number of semesters:** 4;
required number of credits to be completed: 120
- **Tuition fee (non-EU citizens):** 3500 € per semester (reduced fee may be applied depending on academic achievement from the third semester)
- **Application deadline:** 1st of June each year (please check at mfk.uni-miskolc.hu)
- **Scholarship offers:**
Stipendium Hungaricum (<http://www.tka.hu/international-programmes/2966/stipendium-hungaricum/>)
- Visegrad Scholarship Program (<http://visegradfund.org/scholarships/visegrad-scholarship-program/>)
- In the field of Petroleum Engineering, the University of Miskolc has been ranked 151-175 in the QS world rankings! For more than 60 years, our oil and gas engineering education has provided a solid foundation for the success of our students – now recognized worldwide!





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ADMISSION REQUIREMENTS

- **Qualification:**
BSc in petroleum engineering degree,
CGPA 60% or higher
- **Language proficiency:**
C1 (advanced) level is preferred, but minimum B2 on the CEFR scale or IELTS (academic version) 6.0 minimum score or identical language exam.
BSc degree holders, if the language of instruction was English are exempt from language test requirement.

FURTHER INFORMATION

University of Miskolc, Faculty of Earth and Environmental Sciences and Engineering – Institute of Mining and Energy

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 mfk@uni-miskolc.hu

 <http://mfk.uni-miskolc.hu/wp/en/>

PETROLEUM GEOENGINEERING

PROGRAM



UNIVERSITY OF MISKOLC

FACULTY OF
EARTH AND ENVIRONMENTAL
SCIENCES AND ENGINEERING

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The Faculty has a nearly 280-year old tradition in mining education, being a legal successor of the Mining School founded in 1735 in Selmechánya (now Banská Štiavnica).

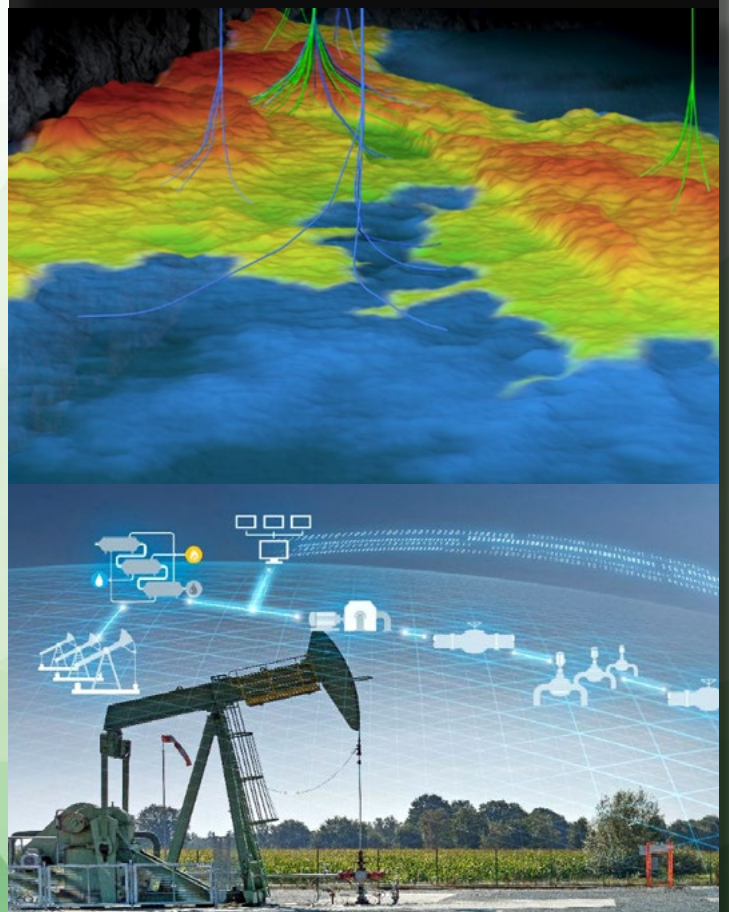
The Petroleum Geoscience Engineering Masters program builds up on strong earth sciences and petroleum engineering basis. It focuses on competencies, skills and methods applied in geology, geophysics, petrophysics and geochemistry as demanded by exploration, field development and production projects. Special attention is paid to the grey area between geology and petroleum engineering including but not limited to estimation, categorization and classification of resources and reserves as well as management of petroleum E&P projects.

Crude oil and natural gas remain the most important, hardly replaceable energy resource for our century. On the other hand new frontier oil and gas provinces will require large number of well trained professionals. Thus the demand for earth science engineers playing key roles in exploration development and production of the hydrocarbon fields will not decline at all for a long time to come.

PG Engineers should have strong and integrated background in earth science (geology, geophysics, geoinformatics, hydrogeology) disciplines and also basic skills in petroleum engineering segment of development, production, of hydrocarbons. In this sense petroleum geoscience engineers have an overview of the whole upstream part of the petroleum industry. All of the courses of the curricula will be given English language. As the petroleum industry is a heavily globalized it gives a competitive edge if the graduates learn and practice the subjects in English.

Miskolc is a well-known centre of education for extractive industries and lies in the heart of traditional mining regions, also close to several gas- and oil-fields. It has a central position for all neighbouring countries in the north eastern segment of the Carpathians, i.e. Poland, Slovakia, Ukraine, Romania. This gives her unique opportunity to provide ample choice of field practices, partly in the nearby occurrences, partly at the cooperating industrial and institutional partners both in Hungary and in other countries.

- **Program title:** MSc in Petroleum Geoscience Engineering
- **Degree awarded:** Petroleum Geoscience Engineer (Msc)
- **Number of semesters:** 4;
required number of credits to be completed: 120
- **Tuition fee (non-EU citizens):** 3500 € per semester
(reduced fee may be applied depending on academic achievement from the third semester)
- **Application deadline:** 1st of June each year
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- **Scholarship offers:**
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ADMISSION REQUIREMENTS


- **Qualification:**
BSc in earth science or earth science engineering or Petroleum Engineering degree, CGPA 60% or higher
- **Language proficiency:**
C1 (advanced) level is preferred, but minimum B2 on the CEFR scale or IELTS (academic version) 6.0 minimum score or identical language exam.
BSc degree holders, if the language of instruction was English are exempt from language test requirement.

FURTHER INFORMATION

University of Miskolc, Faculty of Earth and Environmental Sciences and Engineering – Exploration Geosciences

 +36 46 565-062

 mfk@uni-miskolc.hu

 <http://mfk.uni-miskolc.hu/wp/en/>

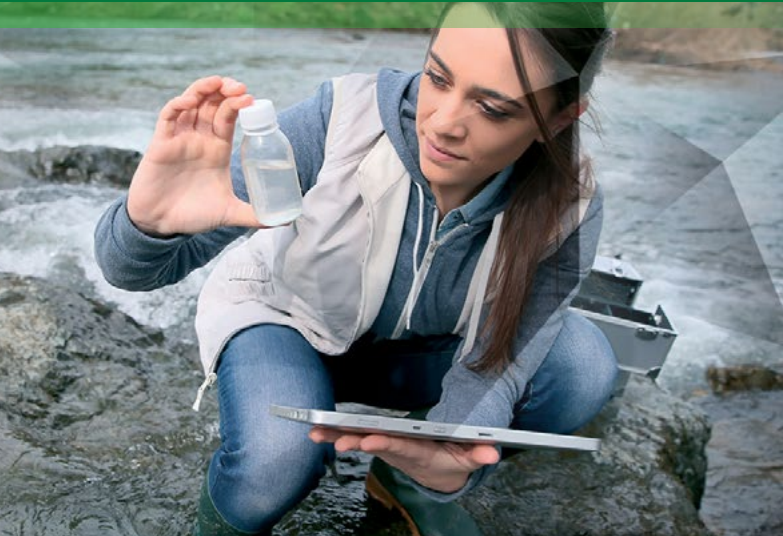
HYDROGEOLOGY ENGINEERING

PROGRAM



UNIVERSITY OF MISKOLC

FACULTY OF
EARTH AND ENVIRONMENTAL
SCIENCES AND ENGINEERING



- **Program title:** MSc in Hydrogeology Engineering
- **Degree awarded:** Hydrogeologist Engineer (MSc)
- **Number of semesters:** 4;
required number of credits to be completed: 120
- **Tuition fee (non-EU citizens):** 3500 € per semester
(reduced fee may be applied depending on academic achievement from the third semester)
- **Application deadline:** 1st of June each year
(please check at mfk.uni-miskolc.hu)
- **Scholarship offers:**
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Visegrad Scholarship Program (<http://visegradfund.org/scholarships/visegrad-scholarship-program/>)

The aim of this MSc program is to train highly qualified engineers who are competent in dealing with geological and environmental issues concerning surface and underground waters, the protection of water, water quality and -resources, and water remediation tasks. The main focus of the four-semester-long education is placed on groundwater resources, which play more and more significant role in drinking water supply, mineral and medicinal water utilization and geothermal energy production. Flow and transport modeling, groundwater management and well hydraulics are also very strong parts of this internationally acknowledged MSc program. We anticipate that the career prospects for the students with an MSc in Hydrogeology will be good for the foreseeable future.

Graduated hydrogeologists will be capable of solving problems related to the construction of various engineering structures (water supply systems, buildings, tunnels, railways, underground transports, reservoirs, earthworks, roads, surface mines, underground mines, dewatering systems, etc.) and of carrying out and coordinating tasks related to research and development in their academic fields, as well as of continuing their studies in the doctoral program.

The utilization of geothermal energy is sure to play an important role in increasing demand for renewable energy resources. However, the longterm use of geothermal energy also requires the protection of groundwater supplies. Due to the increasing number of various types of surface and underground contamination, an increasingly important task facing our experts in the future is that of meeting the demand for water and groundwater, in both quantity and quality.

The Department of Hydrogeology and Engineering Geology was founded in 1987 and represents an important flagship of higher education and research in hydrogeology, water resources management, geological engineering, geotechnics and geo-environmental engineering. This department is the largest research centre in Hungary concerning groundwater resources.





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Visa

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ADMISSION REQUIREMENTS

- **Qualification:**
BSc in earth science, earth science engineering or environmental engineering degree, CGPA 60% or higher
- **Language proficiency:**
C1 (advanced) level is preferred, but minimum B2 on the CEFR scale or IELTS (academic version) 6.0 minimum score or identical language exam.
BSc degree holders, if the language of instruction was English are exempt from language test requirement.

FURTHER INFORMATION

ENVIRONMENTAL ENGINEERING

PROGRAM



UNIVERSITY OF MISKOLC

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The aim of this Environmental Engineering MSc program is to train environmental engineers with up-to-date knowledge in natural sciences, ecology, engineering, economics and management who are capable to identify and evaluate potential environmental hazards and of prevent or reduce the impact of environmental harm, as well as manage the damage control projects. They will be able to work out at advanced level technical solutions and apply them in order to prevent contamination of the environment.

Graduates will be capable of design and operating waste management and treatment systems, planning and implementing tasks related to waste treatment and disposal, design landfills and waste recycling facilities, carrying out tasks related to their operation, dealing with recycling, landfills, contaminated site remediation, planning and operating monitoring systems, managing after-care, investigating, excavating and assessing polluted areas, determining the need for and methods of remediation, participating in and managing implementation, creating groundwater flow and contaminant transport models of underground flow systems, carrying out impact assessments and environmental protection reviews and producing impact studies.

The Institute of Environmental Management and the Institute of Raw Material Preparation and Environmental Processing share responsibility for the up-to-date education in two modules of the program (Waste management, remediation and Environmental Processing). Both institute has a dynamic and young teaching and research staff with remarkable R+D portfolio and excellent reputation in H2020 research programs. The two institutes share and integrate a well-equipped research infrastructure and laboratory and have leading role in waste management, contaminated site remediation and waste processing and recycling technologies in Hungary.

- **Program title:** MSc in Environmental Engineering
- **Degree awarded:** Environmental Engineer (Msc)
- **Number of semesters:** 4;
required number of credits to be completed: 120
- **Tuition fee (non-EU citizens):** 3500 € per semester (reduced fee may be applied depending on academic achievement from the third semester)
- **Application deadline:** 1st of June each year (please check at mfk.uni-miskolc.hu)
- **Scholarship offers:**
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ADMISSION REQUIREMENTS

- **Qualification:**
BSc in earth science or earth science engineering, environmental engineering, environmental science, chemical engineering degree, CGPA 60% or higher
- **Language proficiency:**
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