BME

On the way to the Euroengineering title at one of the coolest places of the world.
Dear Student,

The Budapest University of Technology and Economics (BME) is Hungary’s leading higher education institution in engineering, with approximately 24,000 students. Its direct predecessor was established in 1782, 241 years ago. The University has served our country and the world since then by educating countless bright minds to shape our future. Three Hungarian Nobel Prize winners studied here, as well as countless outstanding scientists, engineers and inventors.

We have 8 faculties and 76 departments, there are as many as 1,200 lecturers and instructors teaching 5,000 subjects and 10,000 courses each semester. BME’s menu of training programmes is constantly expanding, partly by relying on the needs signalled by the market and the industries, and also by keeping abreast of the latest trends in technology. With its regular high-ranking positions (placed between 200 and 800) we are among the top universities (2-6%) globally. We are a colourful international community with 2400 foreign students from over 100 countries. BME being located in the heart of Budapest, the area is ranked as the 7th coolest place of cities worldwide (Time Out Magazine, 2022.) as a result of our exciting programs and vibrant city life around our beautiful campus.

Hungary is a member of the European Union. As a student in Budapest, you will encounter a mixture of the European and Hungarian cultures that manifests in the cuisine, fashion, folk art, and music – just to mention a few.

Emília Csiszár
vice-rector for international affairs
BME’s mission, inseparable from training and education, is to conduct scientific research which encompasses the three activities required to make up the innovation chain: fundamental and applied research, technological product and service development, and the application of research findings.

Who we are:

317128 total area in square meters
21836 number of students
4141 total number of occupants in the residence halls
2300 number of international students
76 departments
39 Master’s degree programmes – 19 in English
28 university buildings
26 Bachelor’s degree programmes – 8 in English
13 Doctoral Schools
8 faculties

BME IS THE BEST
among the Hungarian universities
in the QS Ranking of five areas of science

BME’S QS WORLD UNIVERSITY RANKINGS BY SUBJECT 2022

- Engineering and Technology: 151-200
- Architecture & Built Environment: 151-200
- Civil & Structural Engineering: 151-200
- Mechanical, Aeronautical & Manufacturing Engineering: 251-300
- Electrical & Electronic Engineering: 301-350
- Computer Science and Information Systems: 301-350
- Chemical Engineering: 301-350
- Materials Sciences: 301-350
- Mathematics: 301-350
- Physics & Astronomy: 351-400
- Chemistry: 351-400
- Business & Management Studies: 501-550
THE BRIEF HISTORY OF BME

BME is 240 years old, and being the first European civil engineering university, we have a long history to tell. Don't worry, we collected some of the highlights, won't keep you long from your studies!

The direct predecessor of the Budapest University of Technology and Economics (BME) is the Institutum Geometrico-Hydrotechnicum, founded in 1782, the first institute in Europe to train engineers in a university structure.

1782
Joseph II signs the founding document of Institutum Geometrico-Hydrotechnicum.

1872
Károly Zipernowsky, one of the founders of the domestic high-current electrotechnical industry, begins his studies at the university.

1899
Alfréd Hajós, the university's and Hungary's first Olympic champion, obtains his diploma in architectural engineering.

1920
Eszter Pécsi, the first female engineer, obtains her diploma.

1986
Bertalan Farkas, the first Hungarian astronaut, obtains a diploma at the University's Faculty of Transportation Engineering.

1971
Dénès Gábor receives the Nobel Prize in Physics for the discovery of the holographic process.

1967
Game designer and inventor Ernő Rubik Jr. receives his architectural engineering degree.

1963
Chemical engineer Jenő Wigner receives the Nobel Prize in Physics.

1994
György Oláh, chemical engineer, former lecturer at the University of Technology, receives the Nobel Prize in Chemistry.

2012
The first Hungarian-built small satellite Masat-1 is ready, followed in 2019 by SMOG-P, also developed at the University.

2022
The capsule developers of the mRNA vaccine are inspired by the discovery of university professors Gábor Domokos and Péter Várkonyi: the Gömböc.
At BME, students can choose from Bachelor, Master’s degree and PhD programmes also from Preparatories of them. The training portfolio is broadening with additional programmes which comply with new requirements posed by digitalisations such as nuclear technology management or BIM engineering programme.
FACULTIES

CIVIL ENGINEERING
It is the responsibility of the civil engineer to design, construct and maintain structures that provide healthy drinking water, and treat our wastewater in an environmentally friendly way, to construct the bridges, roads, railways, and buildings necessary for housing, trade, or industrial production.

MECHANICAL ENGINEERING
The history of the faculty spans more than a century and a half from the nearly two and a half centuries of university education in Hungarian engineering, so we can say that the Faculty of Mechanical Engineering became part of the industrial revolution, and its results went far beyond national borders.

ARCHITECTURE
Architecture connects the social, artistic, and engineering points of view, from the shaping of the built environment, through its integration into urban living, to the design and construction of its structures and equipment.

CHEMICAL TECHNOLOGY AND BIOTECHNOLOGY
Chemical industry is an outstanding branch of industry worldwide, offering a variety of jobs and encompassing fields ranging from synthetic chemistry to certification, production development and optimization.
ELECTRICAL ENGINEERING AND INFORMATICS

The faculty offers high-quality research activities in electrical engineering, microelectronics and nanotechnology, embedded systems and robotics, networking, quantum communications, signal processing, medical informatics, space technology and wireless systems, software systems development and security, artificial intelligence and data science.

NATURAL SCIENCES

In addition to mathematicians and physicists in exploratory sciences, the faculty also trains professionals who can be relied on by companies that are revolutionizing the semiconductor industry, digital finance, nanotechnology, cybersecurity or data science technologies.

TRANSPORTATION ENGINEERING AND VEHICLE ENGINEERING

The field is diverse and one of the fastest growing in the world: encompassing public road, rail, water and air transportation, design of transport and logistics systems, development, production, maintenance and repair of vehicles and material handling equipment as well as the construction, and testing of self-driving vehicles.

ECONOMIC AND SOCIAL SCIENCES

We are proud to be a leading international institution in organizational development, environmental sustainability, financial and industrial digitalization, and management research based on the publications and the research programmes of our faculty.
STUDENT SERVICES

The Directorate of Student Services (HSZI) can help students in their personal growth and in achieving their individual goals from the start of the university to the entrance to the labour market. Our International Mentor Team will help you with all of your questions. We provide student services to make your life easy and happy! Counselling and trainings, private health insurance, accommodation and administrative tasks, medical help, international events, library, sport possibilities, language centre and other programmes or services are for you free of charge.
LIVING IN THE HEART OF CENTRAL EUROPE

The university is located in Budapest, the area is ranked as the 7th coolest place of cities worldwide (Time Out Magazine, 2022.) as a result of our exciting programs and the vibrant city life. There are many pleasant sites waiting for you, whether you are obsessed with calm locations, nature-loving, gastro crazy or a real party animal, here you will find everything in one place.

BME has a beautiful Campus, with gorgeous historical buildings and large parks and we have new sport centres and dozens of famous Olympic medallists. According to the R+D projects and the number of publications BME is the most innovative university in Hungary. Our Science Park is located right next to the BME campus, where the offices of many large international companies can be found. We also have a new Knowledge Centre in Balatonfüred just next to the largest lake of Central Europe.

SMOG-1, the world’s smallest operating picosatellite was developed at BME.
**BME RACING TEAMS**

BME has many student formations, the most populars are BME’s racing teams. They tend to rank very high at engineering competitions with their self-built vehicles. Innovation, cooperation, sponsorship, friendship, team working, professional experience – many reasons why it is worth joining and following them.

- Formula Racing Team
- BME Motorsport Team
- BME Pneumobil Team
- BME Suborbitals
- BME Aerospace
- BME Solar Boat Team

**SUSTAINABLE UNIVERSITY**

In the QS Sustainability Rankings, released for the first time, BME is ranked 198th worldwide and as the best Hungarian institution in Environmental Impact category. BME was the best in the Sustainable Institution indicator, ranking 23rd out of 700 institutions. QS assessed institutions on nearly 40 criteria, such as whether the institution has a sustainability research site, records its annual water and energy consumption, or if they have Climate Change Strategy and Gender Equality Plan – BME has both.

BME trains experts in both technical and economic fields in the MA programmes of Environmental Engineering and Regional and Environmental Economics. The institution’s management has made it a priority to explore, implement, support and promote sustainable operation and environmental solutions. A work group on the “Sustainable BME” programme brings university citizens together, the initiative is supported by events like “BME for Sustainability”.
BME was the alma mater of Nobel Prize-winners and countless other scientists, who have made significant contributions to our scientific knowledge, radically reshaping the technological environment of their time, and laying the foundations for future development trends. We are now proudly presenting them to you.

In 1963, Jenő Wigner (1902-1995) was awarded the Nobel Prize in Physics for his work on the dispersion theory of nuclear reactions. From 1920 to 1921 he was a student in the Department of Chemical Engineering at the Royal University of Technology*, and then in the Technical College of Berlin-Charlottenburg.

In 1971, Dénes Gábor (1900-1979) was awarded the Nobel Prize in Physics for the discovery of the holographic process. He studied in the Department of Mechanical Engineering at the Royal University of Technology* for three years, then in 1924 he graduated from the Technical College of Berlin-Charlottenburg with a degree in electrical engineering.

The 1994 Nobel Prize in Chemistry went to György Oláh (1927-2017) for his achievements in the research of carbocations. He studied at the Department of Chemical Engineering of the Royal Hungarian József Nádor University of Technology and Economics* between 1945-1949. After graduating with a degree in chemical engineering, he worked as a teaching assistant in the Department of Organic Chemistry at the Technical University until 1953.

*predecessors of BME

Within the walls of our university, many scientists and engineers have studied, taught and researched. Their world famous results have been achieved, may those be natural, technical, economic and social related topics. Among our world-famous scientists and discoveries are:

**ÖDÖN LECHNER (1845-1914)**
architect, pioneer of Hungarian-style Art Nouveau

**KÁROY ZIPERNOWSKY (1853-1942)**
mechanical and electrical engineer, one of the patenters of the transformer

**DONÁT BÁNKI (1859-1922)**
mechanical engineer, developer of the carburetor and the Bánki turbine

**KÁLMÁN KANDÓ (1869-1931)**
railway engineer, developer of the phase changer and pioneer of railway electrification

**FARKAS HELLER (1877-1955)**
economist, theoretical administration, money theory, foreign trade theory research

**TÓDOR KÁRMÁN (1881-1963)**
physicist, mathematician, aeronautical engineer, pioneer of supersonic aviation, rocket technology and hypersonic spacecraft

**LEO SZILÁRD (1898-1964)**
a physicist, he recognized the possibility of a nuclear chain reaction

**EDE TELLER (1908-2004)**
physicist, the "father of the hydrogen bomb"

**IFJ. ERNŐ RUBIK (1944-)**
architect, inventor of the Rubik's Cube (originally called the Magic Cube).
BME has joined the EELISA (European Engineering Learning Innovation and Science Alliance) community with nine other leading universities to reform European engineering system and re-inventing the “European engineer”.

We can say that joining the BME opens the gate to nine different universities. Our students have excellent opportunities by EELISA mobility programmes to travel around Europe, gain professional experiences and connect their ambitions with EELISA aims: to transform European higher education while strengthening links between engineering and society.

Join BME and be a student of nine different European universities!
BME IS AN INTERNATIONAL UNIVERSITY

We are an international university. We have around 2300 foreign students from over 100 countries. One in every eight student comes from abroad.
MOBILITY PROGRAMMES
ALL AROUND THE WORLD

BME offers its students the opportunity to travel the world and gain a wealth of useful knowledge throughout their studies through a range of scholarship programmes.

<table>
<thead>
<tr>
<th>PROGRAMME</th>
<th>LOCATION</th>
<th>DURATION</th>
<th>RECOMMENDED PERIOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATHENS intensive course</td>
<td>12 countries in the EU + Turkey</td>
<td>1 week</td>
<td>BSc from year 1, MSc during full course</td>
</tr>
<tr>
<td>ERASMUS+ Mobility for Studies</td>
<td>EU27+Turkey, Australia, South Korea, Japan, China, Mexico, Singapore, Norway, Serbia, Jordan, Azerbaijan, Taiwan, Vietnam</td>
<td>3-12 months</td>
<td>BSc from year 2, MSc during full course, PhD during full course</td>
</tr>
<tr>
<td>ERASMUS+ Mobility for Traineeship</td>
<td>EU27+Serbia, Turkey</td>
<td>2-12 months</td>
<td>BSc, MSc, PhD</td>
</tr>
<tr>
<td>CEEPUS mobility program</td>
<td>Carpathian-Balkan region</td>
<td>1-5 months</td>
<td>BSc from 2nd year, MSc during full course, PhD during full course</td>
</tr>
<tr>
<td>Makovecz Students Scholarship</td>
<td>Romania, Serbia, Slovakia, Ukraine</td>
<td>1 week - 5 months</td>
<td>BSc, MSc, PhD</td>
</tr>
<tr>
<td>Suzuki Foundation Program</td>
<td>Japan</td>
<td>3-12 months</td>
<td>MSc final year, PhD during full course</td>
</tr>
<tr>
<td>Pan-European Seal Traineeship Program</td>
<td>Germany, Spain</td>
<td>12 months</td>
<td>After BSc, during MSc full course, during PhD full course</td>
</tr>
</tbody>
</table>

BME is an active member of the Erasmus, the European Union’s student exchange program.

1576 ✨ inbound
3055 🌎 outbound
TO EXPLORE MORE ABOUT BME, PLEASE VISIT XPLOR.E.BME.HU

WATCH THE VIDEO ABOUT THE CAMPUS LIFE AT BME

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