

BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS


BME

Heading towards the Euro-engineering title
in one of the world's "coolest places"




Budapest University of Technology and Economics | xplora.bme.hu

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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. The range of training programmes offered by BME is constantly expanding, as the university endeavours to respond to the needs signalled by the market and industry, as well as to keep abreast of the latest trends in technology. With its consistent high-ranking positions (placed between 200 and 800), our university ranks among the top universities (2-6%) globally. We are also a colourful international community with 2400 foreign students from over 100 countries. Our campus is located in the heart of Budapest, an area that was ranked as the 7th "coolest place" worldwide by Time Out magazine in 2022 due to our exciting intellectual life and the vibrant city culture that surrounds us.

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

Emília Csiszár
vice-rector for international affairs



WHY BME?

"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 metres

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

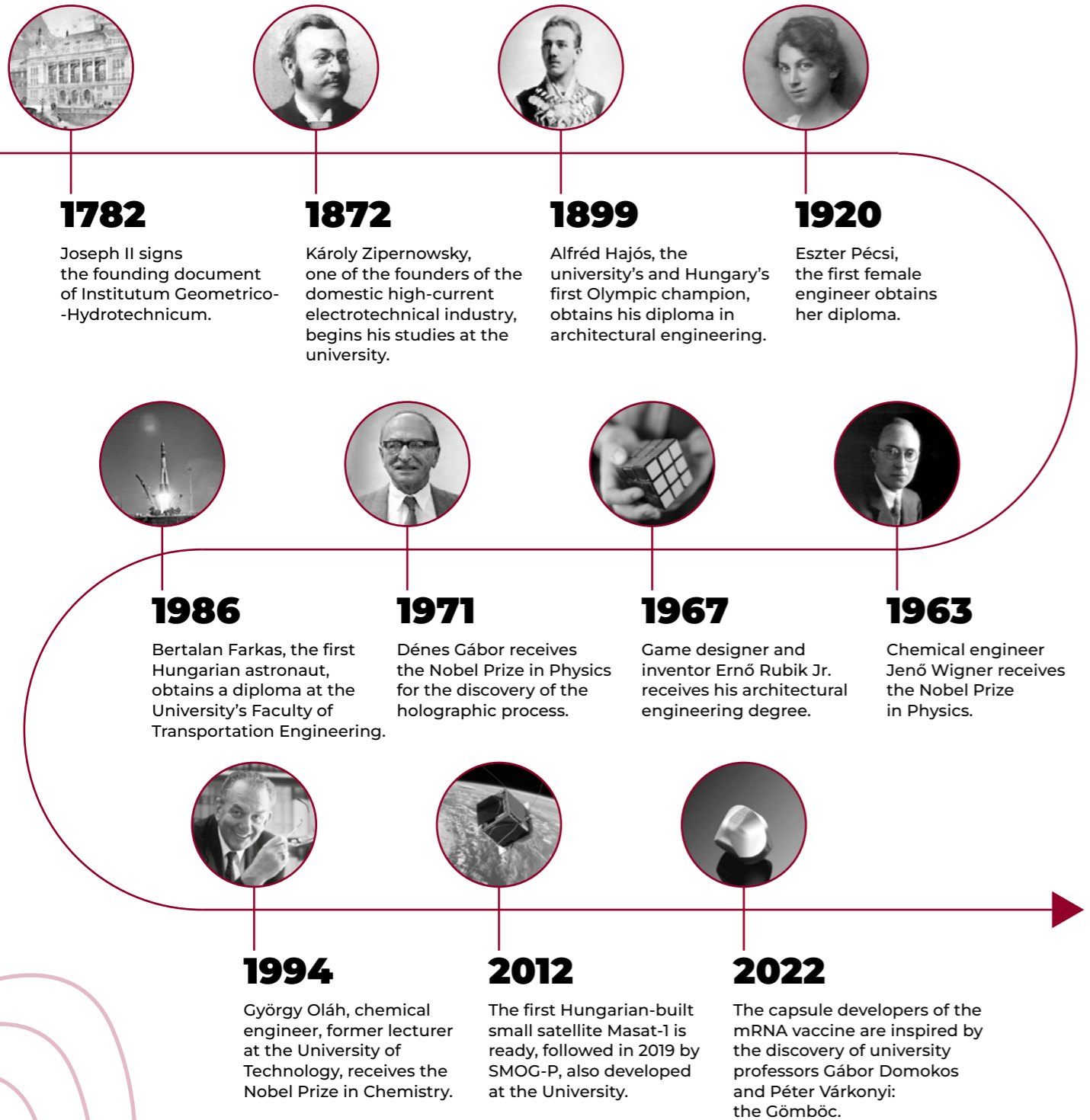
Engineering and Technology	151-200
Architecture & Built Environment	151-200
Civil & Structural Engineering	151-200
Mechanical, Aeronautical & Manufacturing Engineering	251-300
Electrical & Electronic Engineering	301-350
Computer Science and Information Systems	301-350
Chemical Engineering	301-350
Materials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



A BRIEF HISTORY OF BME

BME is 240 years old, and as the first European civil engineering university, we have a long history. But don't worry! Just now we only plan to share the highlights. We won't keep you for long!

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

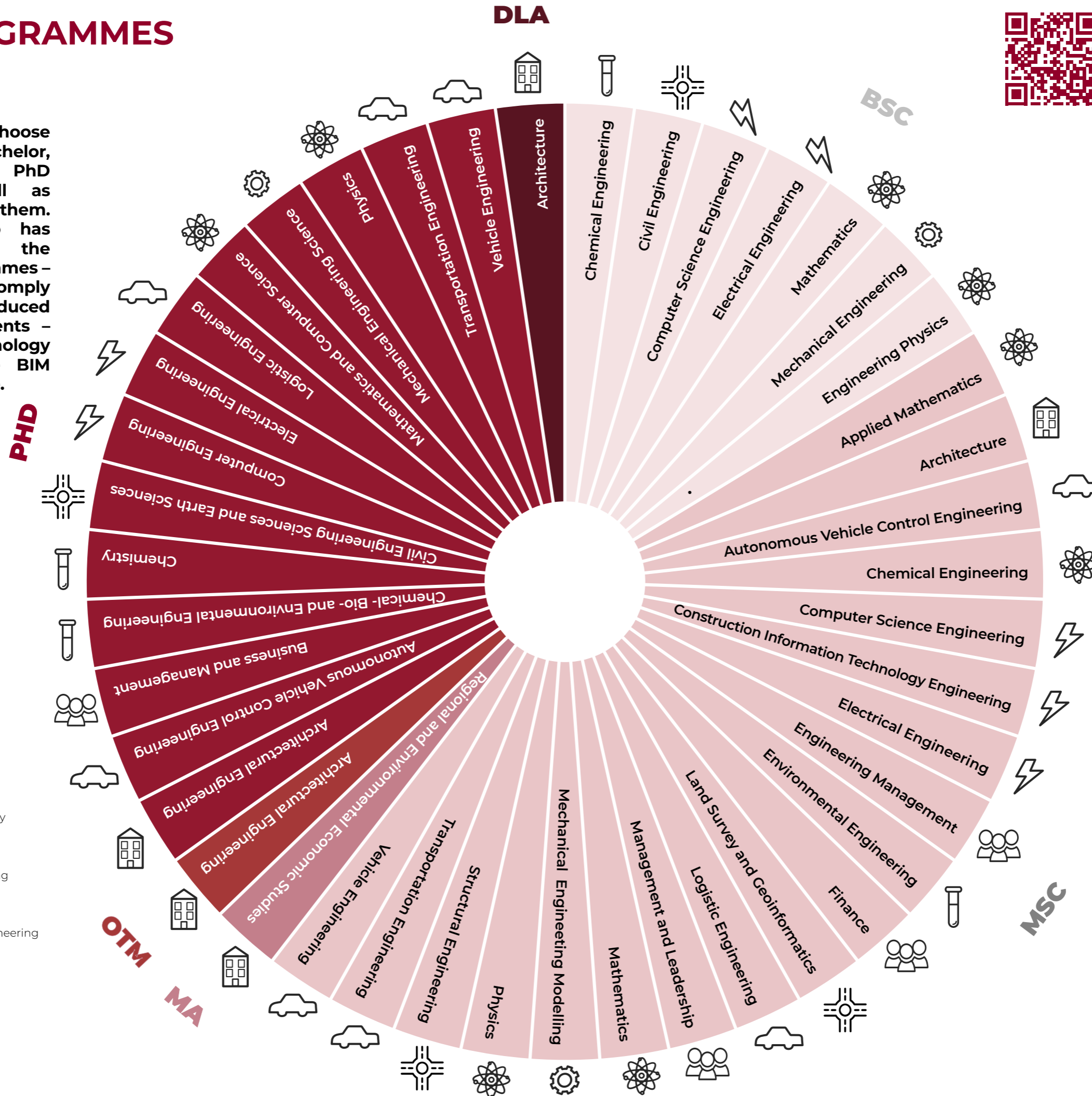


STUDY PROGRAMMES

At BME, students can choose from a range of Bachelor, Master's degree, and PhD programmes, as well as courses preparatory to them. The training portfolio has been broadened by the addition of new programmes – which also happen to comply with recently introduced digitalisation requirements – such as nuclear technology management and the BIM engineering programme.



Read more about study programmes at xplora.bme.hu



FACULTIES

- Faculty of Civil Engineering
- Faculty of Mechanical Engineering
- Faculty of Architecture
- Faculty of Chemical Technology and Biotechnology
- Faculty of Electrical Engineering and Informatics
- Faculty of Transportation Engineering and Vehicle Engineering
- Faculty of Natural Sciences
- Faculty of Economic and Social Sciences

FACULTIES

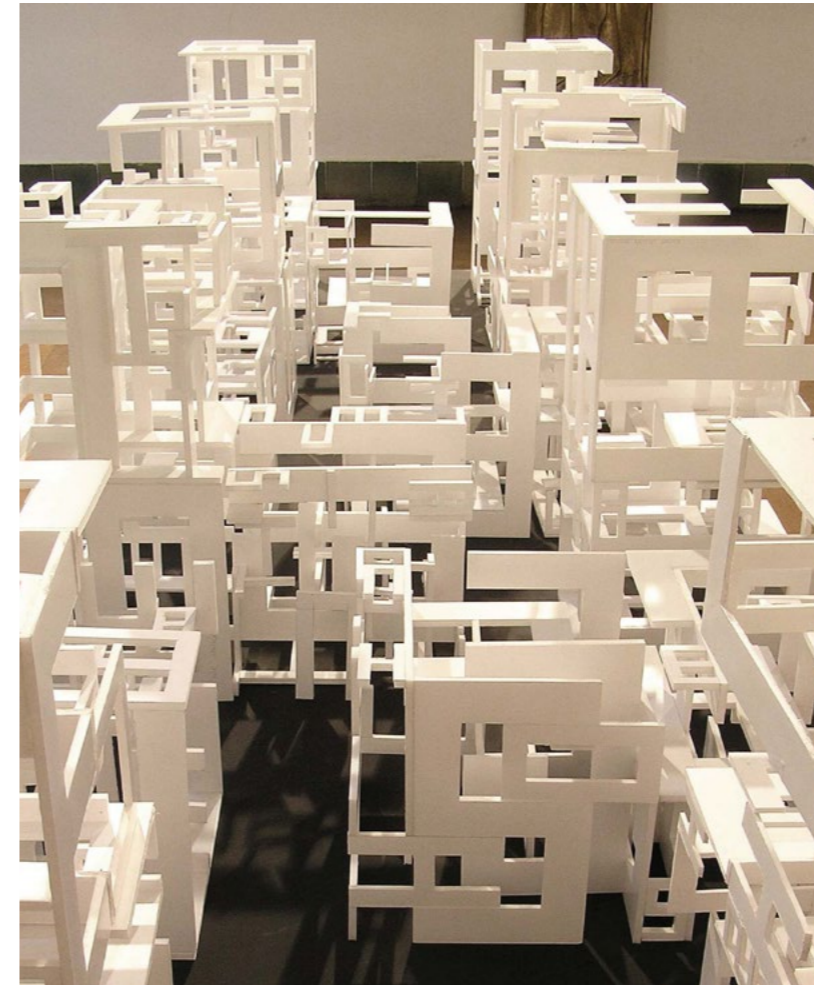


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CIVIL ENGINEERING

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, as well as to construct the bridges, roads, railways, and buildings necessary for housing, trade, or industrial production.



ARCHITECTURE

Architecture bridges the social, artistic, and engineering perspectives, ranging from shaping the built environment to integrating it into urban life, as well as designing and constructing its structures and equipment.

MECHANICAL ENGINEERING

The history of the faculty spans more than a century and a half of the nearly 250 years of university education in Hungarian engineering. As such, the faculty was part of the industrial revolution, and its impact has extended far beyond the country's borders.



CHEMICAL TECHNOLOGY AND BIOTECHNOLOGY

The chemical industry is a major sector of the global economy, providing a wide range of jobs and encompassing fields such as synthetic chemistry, certification, production development, and optimisation.



FACULTIES

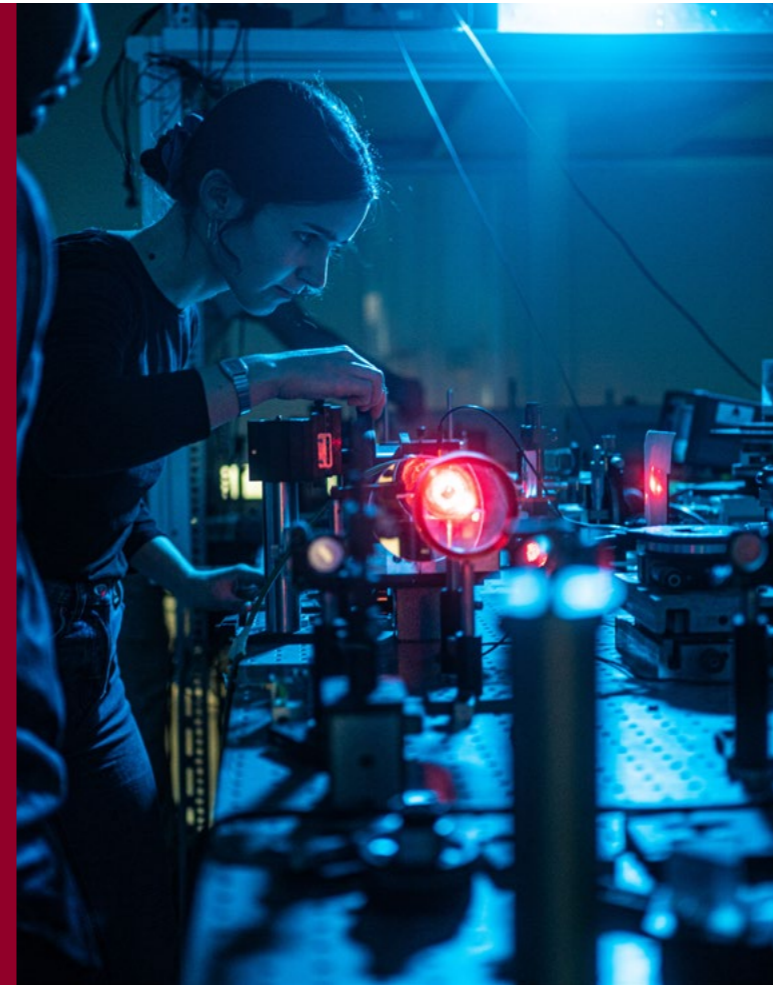


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ELECTRICAL ENGINEERING AND INFORMATICS

The faculty conducts high-quality research in the fields of 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.

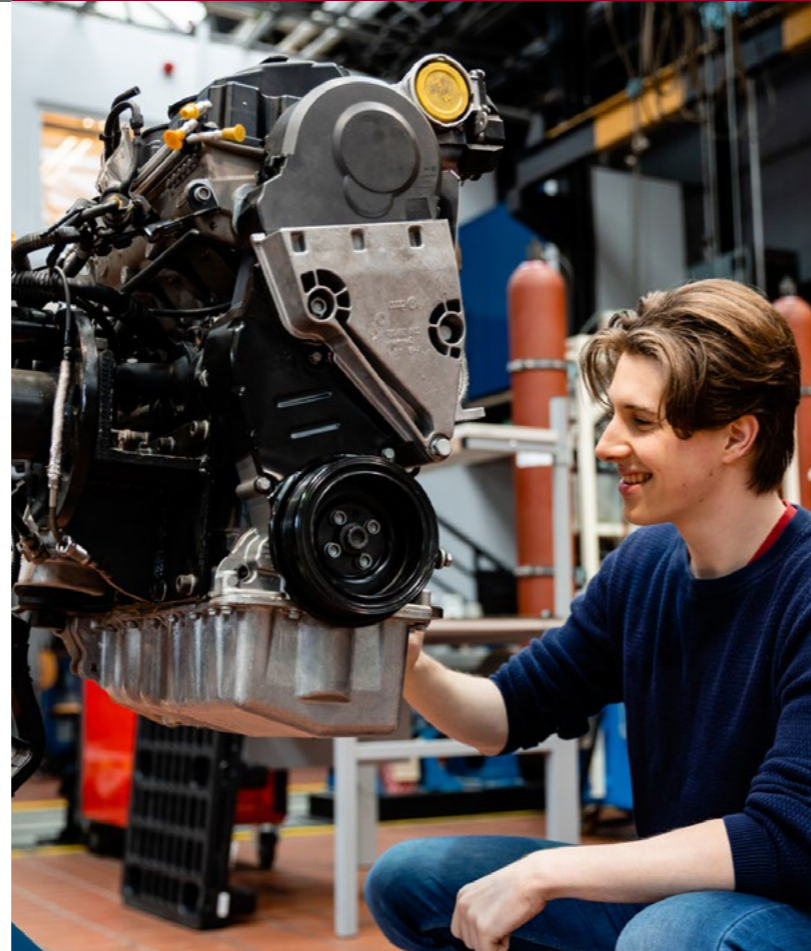


NATURAL SCIENCES

The faculty trains mathematicians and physicists in exploratory sciences, as well as future professionals in the semiconductor industry, digital finance, nanotechnology, cybersecurity, and data science.

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

BME is proud to be a leading international institution in terms of its contribution to organisational development, environmental sustainability, financial and industrial digitalisation, and management research based on the publications and research programmes of our faculty.



STUDENT SERVICES

The Directorate of Student Services (HSZI) can help students achieve personal growth as well as their individual goals throughout their time at BME. 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 training workshops, private health insurance, accommodation and administrative tasks, medical help, international events, library, sport possibilities, language tuition and other programmes or services are for you free of charge.



LIVING IN THE HEART OF CENTRAL EUROPE

The university campus is located in Budapest, an area ranked as the 7th "coolest place" among cities worldwide by Time Out Magazine (2022) due to our exciting intellectual life and the vibrant culture that surrounds us. Many magical places are waiting to be discovered by you, whether you prefer calm locations, natural scenery, gastronomy or partying, everything is close by.

BME has a beautiful campus, with gorgeous historical buildings and large parks and we have new sport centres and dozens of famous Olympic medallists. In terms of its research and development footprint and the number of its 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 popular of which are its racing teams. They tend to rank very high at engineering competitions with their self-built vehicles. Innovation, cooperation, sponsorship, friendship, teamwork, professional experience – there are many good reasons to join and/or follow 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 is rated as the best Hungarian institution in the Environmental Impact category. Moreover, it is also the best according to the Sustainable Institution indicator, ranking 23rd out of 700 institutions. QS assessed institutions on nearly 40 criteria, such as whether an institution has a sustainability research site, records its annual water and energy consumption, or if it has Climate Change Strategy or 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".



REVOLUTIONARY BREAKTHROUGHS AND WORLD-FAMOUS SCIENTISTS FROM BME

BME is the alma mater of Nobel Prize-winners and countless other scientists, who continue to make significant contributions to scientific knowledge, radically reshaping the technological environment, and laying the foundations for future development trends. We now proudly present 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.

The 2023 Nobel Prize in Physics was shared equally between Anne L'Huillier, Pierre Agostini and Ferenc Krausz. Ferenc Krausz graduated from BME in 1985 as an electrical engineer. He began his research work at BME Institute of Physics, and spent three years researching in the university's laser laboratory. In 2005, at the suggestion of the Faculty of Natural Sciences, he was awarded an honorary doctorate by the BME.

**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

KÁROLY 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)

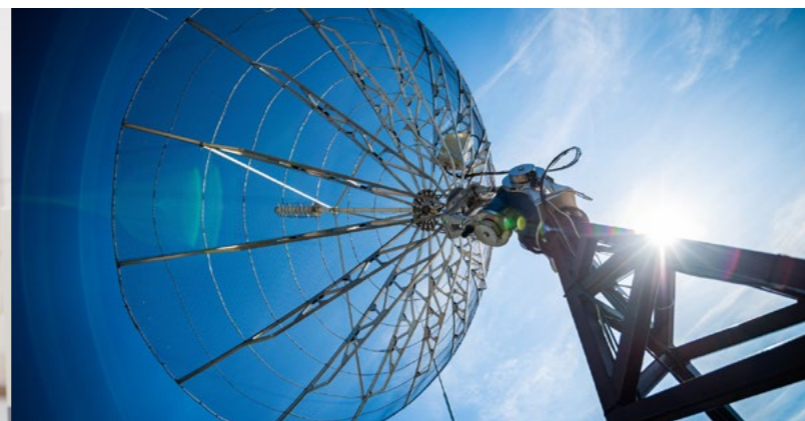
a physicist, he recognized the possibility of a nuclear chain reaction

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).



BE A STUDENT OF NINE DIFFERENT EUROPEAN UNIVERSITIES!

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 you can be a student of nine different European universities!

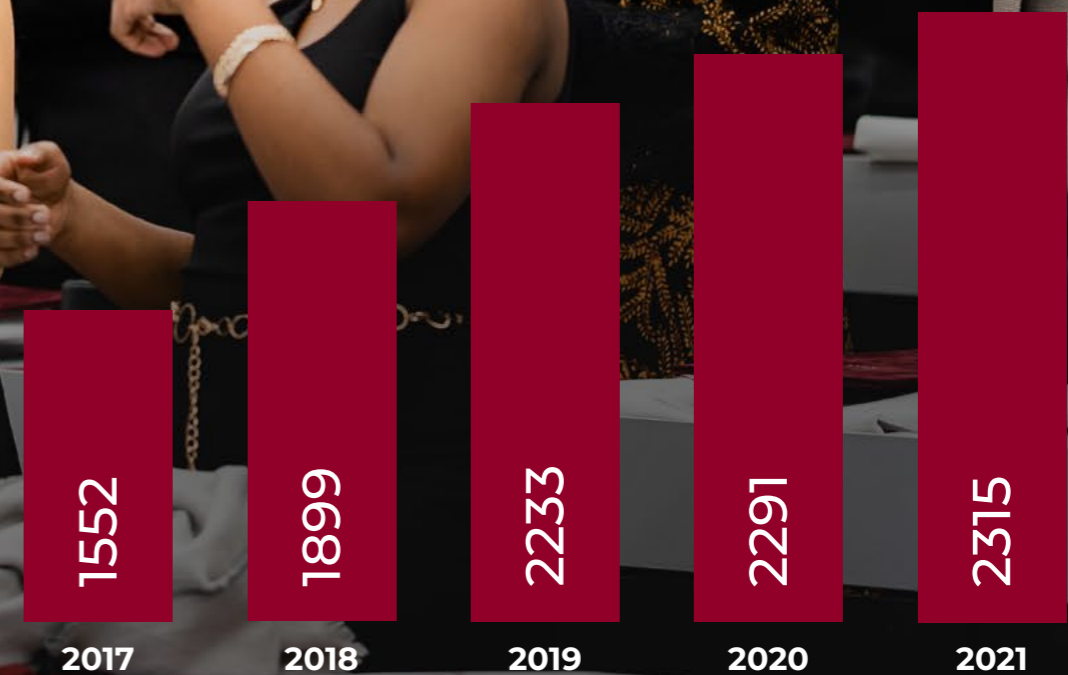


EELISA



BME IS AN INTERNATIONAL UNIVERSITY

We are an international university. We have around 2300 foreign students from over 100 countries. One student in eight comes from abroad.



GROWING NUMBER OF FOREIGN STUDENTS AT BME

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 via a range of scholarship programmes.

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

ERASMUS AND ERASMUS+

BME is an active member of Erasmus, the European Union's student exchange programme.

1576  inbound

3055  outbound

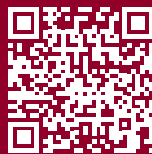




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TO EXPLORE MORE ABOUT BME,
PLEASE VISIT **XPLORE.BME.HU**

WATCH THE VIDEO
ABOUT THE CAMPUS LIFE AT BME



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