BUDAPEST UNIVERSITY OF TECHNOLOGY AND ECONOMICS

BME

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





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



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



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 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		
88	. 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

Dénes 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.





5

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

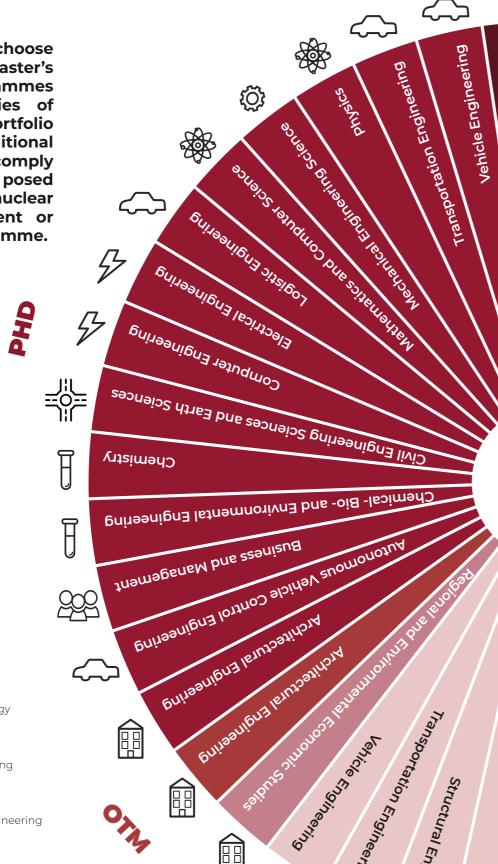
The capsule developers of the mRNA vaccine are inspired by the discovery of university professors Gábor Domokos and Péter Várkonyi: the Gömböc.

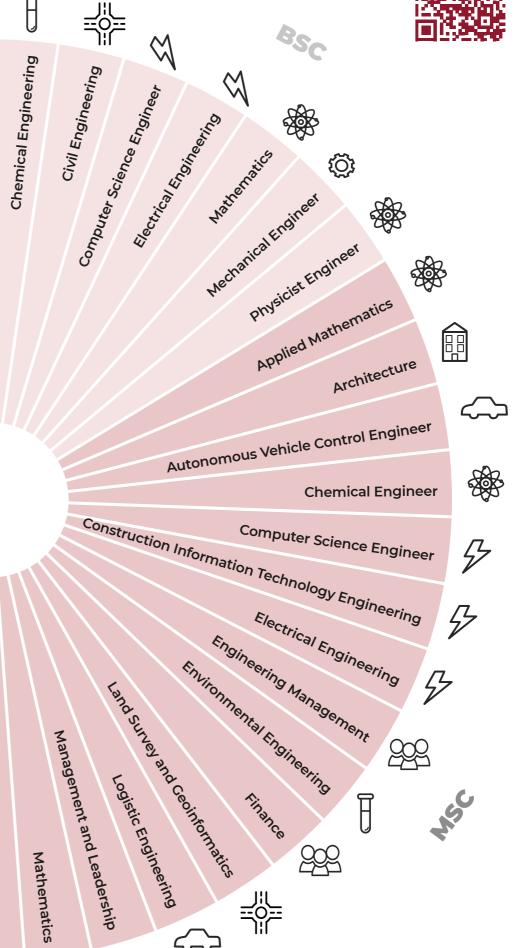


STUDY PROGRAMMES

Read more about study programmes at xplore.bme.hu

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 digitalisation such as nuclear technology management or BIM engineering programme.





FACULTIES



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

Mechanical Engineeting Modelling

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.



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.

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.



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.



FACULTIES





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.

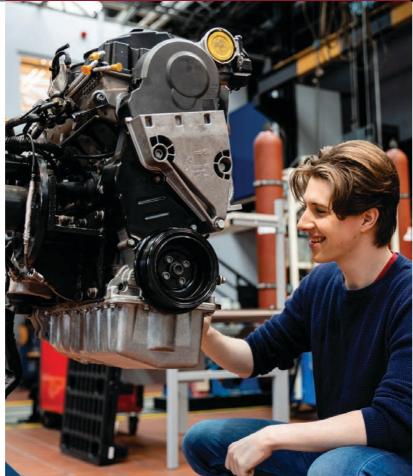


NATURAL SCIENCES

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.



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



LIVING IN THE HEART OF CENTRAL EUROPE



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, fiendship, 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 world-wide 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".



REVOLUTIONARY BREAKTHROUGHS AND WORLD FAMOUS SCIENTISTS FROM BME

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-Charlettenburg 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

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 be a student of nine different European universities!





























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.

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 the Erasmus, the European Union's student exchange program.







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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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