

BME Doctoral School of Civil Engineering and Earth Sciences

Information for applicants

28 Aug 2021

Overview

The Faculty of Civil Engineering offers three full-time PhD programmes, in English and in Hungarian:

Two PhD programmes in Civil engineering sciences

Structural Civil Engineering, including topics such as building physics; design, diagnostics and sustainability of building materials and constructions; fire safety; field testing and computational design of bridges and building structures; fragility of structures subjected to extreme actions, including earthquakes; structural stability; topology optimization; biomechanics; masonry, cable and tent structures; geotechnics; rock mechanics and engineering geology.

Infrastructure Civil Engineering, offering research topics in hydrodynamics of rivers and lakes; ecohydraulics; hydrology of rural and urban catchments; hydrogeology and ecosystems; water and wastewater treatment infrastructure and technology; pollution and nutrient transport in natural waters; river basin management; design and monitoring of road and railway infrastructure.

One PhD programme in Earth sciences

The **PhD Programme in Earth Sciences** covers geodesy, surveying, remote sensing and geoinformatics engineering. Research topics include: GNSS positioning and remote sensing, interferometric SAR imagery, high-resolution monitoring of structural deformations, gravity field studies, big-data acquisition sensors and modelling processes, high-definition mapping for autonomous vehicles, computer vision.

Research is supported by accredited testing laboratories for building materials, structures, rocks and fluids; state-of-the-art field equipment for surveying and monitoring, as well as specialised professional software.

We are co-operating with other fields – disaster prevention, digitalisation, military, transportation, medicine, geosciences, aerospace industry, biochemistry, etc. – to create multidisciplinary research and development.

There is a single admission procedure for the three programmes. Your programme is automatically determined from the topic of your research. No part-time (i.e., correspondence) training is offered.

4-year study programme

At the end of the four years (or before) you must have completed at least 240 ECTS and submitted your PhD dissertation, a ca. 100-page monograph with new scientific contributions summarised in theses and supported by your papers published in scientific journals. You defend the dissertation publicly in front of a doctoral committee.

Besides conducting research under the mentoring of your scientific supervisor, you attend doctoral subjects (we offer all of them in English) in the first two years and gain presentation skills through directed teaching in our BSc and MSc classes.

[Further information](#) (curricula, schedules, course descriptions).

Tuition fee

The tuition fee is EUR 4500 per semester in our English PhD programmes and HUF 450,000 per semester in the Hungarian programmes. You must pay a one-time application fee of EUR 100. For up-to-date information, see:

[Further information](#)

How to enter?

You can enter our doctoral programmes in three ways: through regular admissions, through the SH or the SCYP admissions or by transferring from another doctoral school. If you reside in Hungary, then you must appear in person in front of the admissions committee, otherwise we conduct the interview/ through Skype. In any case, you must select one of the listed research topics of the doctoral school (see more information below) in your application.

Through regular admissions of the Doctoral School

You may start your studies in the fall semester (1 September) or in the spring semester (1 February). The admission exam takes place in June for the fall semester and in January for the spring semester. You must appear in person in front of the Admissions Board that will evaluate your mathematical knowledge and your preparedness for the research topic via an oral exam.

You must register for the admissions exam by submitting a filled form to the Dean's Office of the Faculty of Civil Engineering. [Further information](#)

Through the SH or the SCYP scholarship programmes

If you are an applicant without Hungarian citizenship, then you may apply to the scholarships of the **Stipendium Hungaricum** (SH) or the **Scholarship for Christian Young People** (SCYP) programmes offered by the Hungarian State. Make sure that your country is eligible before considering this option. There is a single SH and a single SCYP admission per year, in the first half of the year, independently from the regular admissions. You must submit **all documents through the online platform of SH or SCYP** and not directly through BME.

The general provisions of the scholarship (see section “Additional documents for doctoral level” of the call for applications) require that you select from the research topic proposals currently available at our Doctoral School.

Your home country, the Hungarian foundation and finally BME will evaluate and screen your application. You will also be required to complete an online exam on basic maths knowledge. If you pass these selection steps, then we will interview you through a video conference or (if you already reside in Hungary) in person. If you are awarded the scholarship, then you shall start your studies in September. [Further information](#)

By transferring to our school from another SH or SCYP PhD studies

You may request the transfer (from BME or any other Hungarian university) at the end of the fall or spring semester, in order to continue your studies in our school from the next semester on. First, find a suitable research topic. Then, email your request and documents to our international academic contact (see below) till 16 November or 1 May preceding your change. In the subsequent two weeks we conduct a maths exam and an interview. It will be considered favourably if you include a recommendation letter from the BME supervisor. If we admit you, then we will give you a signed and stamped declaration. With this letter of acceptance, you must request the change of school from the Tempus Public Foundation.

The regulations regarding the change of institution are only published in Hungarian currently. Please ask Tempus Public Foundation directly. The deadline for submitting applications to the Foundation is 1 December or 15 May preceding your change.

Selection criteria

Admission to our PhD programs is selective. Criteria considered for admission include:

- grades from both graduate and undergraduate studies
- relevance of applicant’s academic background to the research topic
- evidence of motivation towards research in the resume, e.g. participation in scientific projects, publications, awards
- knowledge of English (for all PhD programmes) or other foreign languages (for a Hungarian PhD programme). English language skills must be proven by TOEFL (min 500 points), IELTS (min 5.0 points) or equivalent certificates.
- recommendation from academic sources

You must hold a **Master’s degree in civil engineering or a field related to the research topic**. If your degree is not civil engineering, then the Admissions Board will evaluate whether it is acceptable.

The Admissions Board ranks the applicants and recommends admitting those who show the greatest promise for achieving the doctoral degree in their research topic. The decision is then taken by the Dean. A number of people contribute to this final decision, and non-quantifiable aspects – such as the relation of a research topic with respect to

the actual research projects of the hosting department – are also considered besides your merits. For this reason, we don't disclose the grading rules for the criteria, neither the details of the evaluation of your application.

Scholarships

If you are an EU citizen and enter one of our Hungarian PhD programmes through the regular admissions, then you may be offered the **doctoral scholarship of the Hungarian State** after the admissions exam, depending on the ranking of the Admissions Board. This entitles you to a monthly stipend (starting at HUF 140,000) and the state will fund your tuition fee. You may decline your studies if you are not offered the scholarship.

As to non-EU foreign citizens, there may be two possibilities: the **Stipendium Hungaricum** scholarship or the **Scholarship for Christian Young People** funds the tuition fee for the whole duration of the PhD studies (in English or Hungarian), gives a monthly stipend, and contributes to your accommodation and medical insurance. Due to the high number of applicants and a selection at multiple stages, the admission to our PhD programmes is competitive (less than 10% of all applicants in 2021). Please check whether your country of citizenship is eligible. [Further information](#)

The Faculty of Civil Engineering does not offer any PhD scholarship, and cannot waive or reduce the tuition fee.

How to prepare your application?

Regardless of the way you apply (regular, SH, SCYP or transfer), you must specify a research topic in your application. You may apply to one of the currently [active research topic proposals](#). The offering is updated several times a year. An advisor, a location (department) and a date of expiry is assigned to each research topic. Expect that the list of active topics will be updated only 1-2 months before admissions. Outside of admission periods, the list of research topics may not show a single active research topic because topics automatically expire after admissions, and supervisors confirm whether their topics stay on offer and they may submit new ones. Usually, most of the research topics that have not been assigned to students in the previous admissions will still be offered in the subsequent ones. Please keep this in mind when planning to apply more than one semester ahead of time.

If you apply **through the regular admissions**, you need to submit the following documents to the Dean's Office:

- 1) Filled application form,
- 2) CV,
- 3) Copies of the university degree certificates,
- 4) Transcript of Records for these university studies,
- 5) Certificate of language exams,
- 6) Proof of payment of the application fee,

- 7) Any other document that you consider relevant, e.g. a copy of publications of preliminary scientific works, recommendation letters from former academic supervisors or future doctoral supervisor.

If you apply **through SH or SCYP**, you need to submit these documents, in addition to the language certificates, health certificates, etc.:

- 1) *Two letters of recommendation*: From former or current academic supervisors that really know you.
- 2) *Optional preliminary acceptance letter by the future supervisor*: You may ask this from the prospective supervisor at BME. This letter will specify the research topic and the hosting university department. Email all relevant documents (e.g. cv, transcript, scientific papers) to convince them. Simply asking for a recommendation letter does not grant you one automatically. Be aware that the style of your communication is an important aspect in the judgment. Leave enough time (at least 15 days) before the submission deadline for securing this letter.
- 3) *Research plan*: We recommend that you write your research plan by extending the published description of the topic for which you apply with a time plan and other details that show your preparedness and knowledge, e.g. refer to scientific literature, come up with alternative methods.

Some applicants choose to submit a single research plan even if they apply to several doctoral programmes. However, the programmes have different topic offerings. A good strategy is to write a research plan specifically for BME Civil Engineering and Earth Sciences, clearly marking our doctoral school in the subtitle. You may write other research plans for the other programmes.

If, upon reviewing your application, we find that none of your research plans correspond to any of our research topics, then we may ask you to select one from our actual offering, but only if you qualify otherwise.

- 4) *Motivation letter*: This should prove your interest and suitability. Why would you dedicate 4 years to that research topic? Why are you seeking a PhD degree? What tangible evidence do you have to demonstrate your curiosity towards scientific research? Why would we choose you over other good applicants?
- 5) *Master's degree certificate*: If you are still completing your last master's semester, then obviously you won't be able to upload your master's degree certificate with your application. Not a problem. We will proceed with the admissions regardless, and if you are awarded the scholarship, you shall upload your certificate till a later deadline (August 1 in 2021). You will definitely have to show your degree certificate upon registration at BME in September.

You may want to contact the advisor of the research topic through the email you find in the [directory of BME](#) to let him know about your interest and academic background,

propose a new research topic or ask for a letter of recommendation to be attached to your PhD application.

Our faculty **will not issue preliminary acceptance letters**, so please, don't request one. You should ask it from the prospective supervisor.

The documents to be attached to your application are listed in the respective application form.

Application dates

Regular admissions:

For starting in the spring semester 2022, register at the Faculty of Civil Engineering till December 2021.

Please consult the [Doctoral School's website](#).

Stipendium Hungaricum:

The call for the academic year 2022/23 is expected to be announced in November 2021.

Please consult the [SH website](#).

Scholarship for Christian Young People:

The call for the academic year 2022/23 is expected to be announced in November 2021. Please consult the [SCYP website](#).

The application deadlines and the dates of the interviews change from year to year. Last year's dates are only indicative.

Contacts

Please contact the appropriate person specified on the [data sheet of our PhD programme](#).

Visa, arrival, accommodation:

Regular (fee-paying) students: Valéria BALOGH

Office of International Education

admission@mail.bme.hu

+36-1-463-3981

SH applicants: Dr. Sarolta KÓBORI

Department of Academic Affairs for Education in Foreign Languages, Rector's

Office

international@mail.bme.hu

Application procedure, contact to supervisors and other academic issues:

Dr. Balázs KÖVESDI
vice-dean for science, Faculty of Civil Engineering
kovesdi.balazs@emk.bme.hu

Dr. Olivér FENYVESI
Course Director, Faculty of Civil Engineering
fenyvesi.oliver@emk.bme.hu

When contacting us, please, clearly state your name, country, the study programme, whether you are an SH or SCYP applicant, and refer to any previous correspondence.