



# FULL-TIME STUDY PROGRAMMES

for INTERNATIONAL STUDENTS

DIRECTORATE FOR INTERNATIONAL AFFAIRS



# UNIVERSITY of SZEGED

**T**he University of Szeged (Szegedi Tudományegyetem, SZTE) is one of the most popular universities in Hungary, and it is highly ranked internationally with its 2300 academic research and teaching staff and 21600 student body. **The University of Szeged** has been considered **one of the world's best 500 universities** for years and it is known as a **green institution**.

**SZTE** offers a broad range of educational opportunities to national and international students. We are committed to helping students make the most of their talents and abilities. The University's **research**, Development and **Innovation** activities are **internationally recognized** and SZTE is in partnership with numerous industrial partners and companies, such as the ELI-ALPS Laser Research Centre, one of the largest scientific investments in Europe.

Located in southern Hungary the University of Szeged is a leading workshop of education, science, research & innovation, and it has an **outstanding role in the region's** cultural, social and economic activities.

FULL-TIME STUDY PROGRAMMES IN ENGLISH OR IN OTHER LANGUAGES

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# MASTER'S DEGREES

# BIOLOGY

Molecular Biology–Immunology–Microbiology



## ABOUT THE PROGRAMME

The programme provides our students with a **rigorous and challenging curriculum** to help them succeed in their post-academic and professional endeavours. The first year of the 4-semester-long programme consists of lectures, seminars and **practical training** in advanced genetics, molecular biology, biotechnology, bioinformatics, immunology, cell biology, microbiology and plant biology. Both the basic and the applied/industrial science aspects of these disciplines will be studied extensively. In the second year students will have several laboratory courses in different aspects of molecular biology, cell biology, biotechnology, microbiology and plant biology. Graduates of the Faculty usually choose their **careers** in research laboratories, educational institutions, hospitals, clinics, environmental agencies, and pharmaceutical, food, agricultural and chemical industries. Successful graduates can also continue their studies and research by applying for our international Biology PhD programme at the University of Szeged. **Specialisation options:** the programme offers many more specialised lectures that are tailored to the students' individual interests.

**Social integration** of our students is important to us. Our academic and support staff, therefore, offer an all-round advisory service providing both academic and extracurricular activities. A coordination office helps the students during their entire stay in Szeged.

<b>Level of the programme:</b>	<b>Master</b>
<b>Duration of the programme:</b>	<b>4 semesters</b>
<b>Registered in:</b>	<b>EU</b>
<b>Credits:</b>	<b>120</b>

## WHO SHOULD APPLY?

The programme is open to qualified students who hold a Bachelor's degree (or equivalent degree) from an accredited university in biology, chemistry, medicine, pharmacy, agriculture, or related fields.

**Application requirements:** fully completed and signed application form, BSc degree\* from an accredited university or higher education institution, a demonstrated proficiency in English (TELC/ECL B2, TOEFL IBT – 72, PBT – 550, Cambridge FC B, IELTS – 5.5), copy of passport, 2 recommendation letters from recognised academic persons, recent medical certificate of satisfactory general health status, a CV, a motivational letter, an individual interview (online) and the payment of the 200 USD non-refundable application fee.

**Scholarship:** There are numerous scholarships available to cover the tuition fee (e.g. Stipendium Hungaricum, for details see the website of Tempus Public Foundation).

<b>Start of the programme:</b>	<b>September of each year</b>
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Tuition fee:	<b>4500 USD</b> per semester
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Other fees:	<b>200 USD</b> application fee and <b>250 USD</b> entrance exam fee
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For more information visit: [www.sci.u-szeged.hu/english/graduate-programs/biology-msc](http://www.sci.u-szeged.hu/english/graduate-programs/biology-msc)

Or contact

**Dr. Zsolt BERCZKI**

via [bereczki.zsolt@bio.u-szeged.hu](mailto:bereczki.zsolt@bio.u-szeged.hu) or call **+36 62 343 975**.

\*Academic Records: an official English version OR translation of your full bachelor's transcript including an explanation of the grading system and an official English version OR translation of your bachelor's diploma.

# CHEMISTRY



## ABOUT THE PROGRAMME

There is an **optional preparatory course** to improve the linguistic abilities of the students before beginning the four-semester programme, in which theoretical studies are complemented by laboratory practical training. Students of the MSc Chemistry programme acquire an extended knowledge and understanding of the most important experimental and theoretical principles in chemistry.

The basic theoretical education contains courses in mathematics, physics and informatics. Students prepare their own short-term research projects in the second semester. This is a requirement for **laboratory training**. Presentation **skills** are also developed during this training. The programme ends with a final examination. A prerequisite for graduation is the successful defence of a Thesis work, which is the result of two semesters of research in one of the research groups at the Institute.

One of the most distinguished professor of our university was the late Albert Szent-Györgyi, who was awarded the Nobel prize in 1937.

**Specialisation options:** Pharmaceutical chemist, material science chemist, analytical chemist. Our graduates pursue careers as professional chemists in chemical and related industries, or in public service.

<b>Level of the programme:</b>	<b>Master</b>
<b>Duration of the programme:</b>	<b>4 semesters</b>
<b>Registered at</b>	<b>the Hungarian Accrediting Committee</b>
<b>Credits:</b>	<b>120</b>

## WHO SHOULD APPLY?

We expect students to be interested in the subdisciplines of chemistry, such as inorganic, organic, biological, physical and analytical.

**Application requirements:** fully completed and signed application form, BSc degree\* from an accredited university or higher education institution in Chemistry, demonstrated proficiency in English (TELC/ECL B2, TOEFL IBT – 72, PBT – 550, Cambridge FC B, IELTS – 5.5), copy of passport, 2 recommendation letters from recognised academic persons, recent medical certificate of satisfactory general health status, CV, motivation letter, individual interview (online), and payment of the 200 USD non-refundable application fee.

**Scholarship:** Scholarships are available to cover the tuition fee (Stipendium Hungaricum, for details see the website of Tempus Public Foundation)

**Start of the programme: September of each year**

<b>Tuition:</b>	<b>4000 USD</b> per semester
<b>Other fees:</b>	<b>200 USD</b> application and <b>250 USD</b> entrance exam fees

**For more information visit:** [www.sci.u-szeged.hu/english/graduate-programs/chemistry-msc](http://www.sci.u-szeged.hu/english/graduate-programs/chemistry-msc)

contact

**Prof. István Pálinkó**

via [palinko@chem.u-szeged.hu](mailto:palinko@chem.u-szeged.hu) or call **+36 62 544 288**

*\*Academic Records: an official English version OR translation of your full Bachelor transcript including an explanation of the grading system, and an official English version OR translation of your Bachelor degree.*

# COMPUTER SCIENCE



## ABOUT THE PROGRAMME

The aim of the programme is to train computer scientists who can develop, create, apply, implement and operate IT systems at an advanced level either individually or as a team member. Furthermore, our programme provides the cooperative and modelling skills required to solve and research IT related problems, and ensures the solid theoretical background necessary to pursue PhD studies.

The basic theoretical fields are Foundations of Computing, Graph theory, and Analysis. These fields are foundational for further, more practice-oriented studies, including Software technology (Advanced programming, Program systems development, Software development, Web technologies, Parallel programming), Image processing, and Artificial Intelligence (Machine learning, Data mining). Research areas cover Foundations of Computing, Algorithms, Artificial Intelligence, Image processing, Optimisation and Software engineering. Our graduates pursue careers in Information Technology.

<b>Level of the programme:</b>	<b>Master of Science</b>
<b>Duration of the programme:</b>	<b>4 semesters</b>
<b>Registered in:</b>	<b>EU</b>
<b>Credits:</b>	<b>120</b>

## WHO SHOULD APPLY?

We welcome applicants who are interested in broad topics of computer science and applied mathematics, and it is an advantage if the applicant has bachelor studies in computer science or a closely related field.

**Application requirements:** fully completed and signed application form, BSc degree\* from an accredited university or higher education institution in Computer Science or in related field, a demonstrated proficiency in English (TELC/ECL B2, TOEFL IBT – 72, PBT – 550, Cambridge FC B, IELTS – 5.5), copy of passport, 2 recommendation letters from recognised academic persons, recent medical certificate of satisfactory general health status, a CV, a letter of intent, an individual interview (online) and the payment of the 200 USD non-refundable application fee.

**Start of the programme:** September of each year

**Tuition fee:** 3500 USD per semester

**Other fees:** 200 USD application fee and 250 USD entrance exam fee

For more information visit: [www.sci.u-szeged.hu/english/graduate-programs/computer-science-msc](http://www.sci.u-szeged.hu/english/graduate-programs/computer-science-msc)

or contact

**Dr. Tamás VINKÓ**

via [tvinko@inf.u-szeged.hu](mailto:tvinko@inf.u-szeged.hu) or call +36 62 546 193

regarding the application process or details of the programme.

\*Academic Records: an official English version OR translation of your full Bachelor's transcript including an explanation of the grading system, and an official English version OR translation of your Bachelor's degree.

# GEOGRAPHY



## ABOUT THE PROGRAMME

The aim of the Geography MSc program is to train professional geographers who have deep insight into **landscape and urban development**. Graduates of the programme are able to understand the natural, environmental, technical and social phenomena and processes, to develop research and applied science-based solutions, to demonstrate the results of their research and to plan and manage the sustainability of the natural and human environment. Successful graduates can also continue their studies and research in the Geosciences PhD program at University of Szeged.

Based on the current needs of the labour market, employers expect a comprehensive theoretical background to fulfill the requirements of various positions in relevant fields, a thorough IT knowledge, an analytical approach, and the ability to participate in development planning processes, to compile professional studies and documents and to work independently. The skills and competencies covered during this four semester programme have been developed according to these needs. Read more about the programme on our website: [www.sci.u-szeged.hu/english/graduate-programs/geography-msc](http://www.sci.u-szeged.hu/english/graduate-programs/geography-msc)

The **basic courses** cover the fields of geographical research methods, project management, regional policy and spatial development, political and social geography, landscape planning, and environmental risk assessment. The core fields of studies are spatial data collection and analysis, visualisation, environmental planning models, urban planning, rural development, place marketing, vegetation analysis, and hydrological planning. Beginning in the third semester, students start a research project which forms the basis of a qualifying thesis. All MSc candidates must also pass a final examination.

<b>Level of the programme:</b>	<b>MSc</b>
<b>Duration of the programme:</b>	<b>4 semesters</b>
<b>Registered in:</b>	<b>EU</b>
<b>Credits:</b>	<b>120-</b>

**Application requirements:** fully completed and signed application form, BSc degree\* from an accredited university or higher education institution in Geography or a related field (for details see the [www.tka.hu/international-programmes/2966/stipendium-hungaricum](http://www.tka.hu/international-programmes/2966/stipendium-hungaricum)), a demonstrated proficiency in English (TELC/ECL B2, TOEFL IBT – 72, PBT – 550, Cambridge FC B, IELTS – 5.5), copy of passport, 2 recommendation letters from recognised academic persons, recent medical certificate of satisfactory general health status, a CV, a motivational letter, an individual interview (online) and the payment of the 200 USD non-refundable application fee.

**Scholarship:** it is available to cover the tuition fee (e.g. Stipendium Hungaricum, for details see the website of Tempus Public Foundation).

**Start of the programme:** September of each year

<b>Tuition fee:</b>	<b>3000 USD</b> per semester
<b>Other fees:</b>	<b>200 USD</b> application fee and <b>250 USD</b> entrance exam fee

For more information please visit: [www.sci.u-szeged.hu/english/graduate-programs/geography-msc](http://www.sci.u-szeged.hu/english/graduate-programs/geography-msc)

or contact

**Viktória BLANKA**

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\*Academic Records: an official English version OR translation of your full bachelor's transcript including an explanation of the grading system, and an official English version OR translation of your bachelor's degree.

FULL-TIME STUDY PROGRAMMES IN ENGLISH OR IN OTHER LANGUAGES

# DOCTORAL DEGREES



# BIOLOGY



## ABOUT THE PROGRAMME

PhD studies are possible in all biology disciplines currently pursued in the biology departments of the Faculty of Science of the University of Szeged and at the Biological Research Centre of HAS Szeged, with special emphasis on molecular and experimental fields. The major fields are **anthropology, biochemistry, biotechnology, cell biology, ecology, genetics, microbiology, molecular biology, neurobiology, and plant biology**

A four-year scholarship for the PhD studies is sponsored by governmental and non-governmental organisations.

The Departments of the University of Szeged and the research groups of the Biological Research Centre maintain close cooperation with laboratories both in Europe and overseas.

**Some research areas:** Biochemistry and Molecular Biology; Biotechnology; Physiology and Neurobiology; Genetics; Microbiology; Plant Biology; Human Biology; Ecology and Evolution; For more research topics please consult the programme [website](#).

<b>Level of the programme:</b>	<b>PhD</b>
<b>Duration of the programme:</b>	<b>4+4 semesters</b>
<b>Registered in:</b>	<b>EU</b>
<b>Credits:</b>	<b>240</b>

## WHO SHOULD APPLY?

We expect applicants to be interested in the research programmes published on our [website](#).

**Application requirements:** submitted online application form, MSc degree in a related field, demonstrated proficiency in English (TELC/ECL B2, TOEFL IBT – 72, PBT – 550, Cambridge FC B, IELTS – 5.5), CV in English, individual interview in person or online during which the applicant's motivation and research proposal will be examined, and a recent medical certificate of satisfactory general health status (not older than 1 month).

**Scholarship:** Scholarships are available to cover the tuition fee (e.g., Stipendium Hungaricum, for details see the [website](#) of Tempus Public Foundation).

<b>Start of the programme:</b>	<b>February &amp; September of each year</b>
<b>Tuition fee:</b>	<b>4600 USD</b> per semester
<b>Other fees:</b>	<b>200 USD</b> application fee and <b>250 USD</b> entrance exam fee

For further information visit: [www.u-szeged.hu/doctoral/biology-phd](http://www.u-szeged.hu/doctoral/biology-phd)

or contact

**Prof. Csaba VÁGVÖLGYI**

at [csaba@bio.u-szeged.hu](mailto:csaba@bio.u-szeged.hu) or call **+36 62 544 822**

*\*Academic Records: an official English version OR translation of your full Master's transcript including an explanation of the grading system, and an official English version OR translation of your Master's degree.*

# CHEMISTRY



## ABOUT THE PROGRAMME

This postgraduate curriculum is for students who have a graduate degree (MSc) in chemistry, chemical engineering, high school chemistry teaching or pharmacy.

**The major fields are:** Analytical Chemistry, Bioorganic Chemistry, Catalysis Surface-Colloid and Material Science, Chemistry of Coordination Compounds, Physical Chemistry, Synthetic Organic Chemistry, and Theoretical Chemistry.

**Sample research areas:** Synthesis of post-translationally modified peptides; Development of new separation methods for proteomics; Surface photochemistry; Nanoscale self-organisation processes in hetero-epitaxial systems; Heterogeneous catalysis at the nanoscale; Chemistry and biochemistry of anticarcinogenic and antidiabetic metal complexes; Electrochemistry of conducting polymers; Photoelectrochemistry for solar energy conversion; Cyclisation reactions of D-secosteroids; Quantum chemical applications in the area of vibrational spectroscopy and structure research. For more research topics please consult the programme [website](#).

<b>Level of the programme:</b>	<b>PhD</b>
<b>Duration of the programme:</b>	<b>4+4 semesters</b>
<b>Registered in:</b>	<b>EU</b>
<b>Credits:</b>	<b>240</b>

## WHO SHOULD APPLY?

**Application requirements:** submitted online application form; attached documents of MSc degree in related fields (chemistry, chemical engineering, pharmacy or other relevant subject)\*, English proficiency (TELC/ECL B2, TOEFL IBT – 72, PBT – 550, Cambridge FC B, IELTS – 5.5), proof of previous scientific achievements (publications, posters, etc.) motivation letter, individual interview online.

**Scholarship:** Scholarships are available to cover the tuition fee (e.g. Stipendium Hungaricum, for details see the [website](#) of Tempus Public Foundation).

**Start of the programme:** February and September of each year

**Tuition fee :** 4000 USD per semester

**Other fees :** 200 USD application fee and 250 USD entrance exam fee (if applicable)

**For further information visit:** [www.u-szeged.hu/doctoral/chemistry-phd](http://www.u-szeged.hu/doctoral/chemistry-phd)

or contact

**Prof. Tamás KISS DSc**

at [tkiss@chem.u-szeged.hu](mailto:tkiss@chem.u-szeged.hu) or call +36 62 544 337.

\*Academic Records: an official English version OR translation of your full Bachelor's transcript including an explanation of the grading system, and an official English version OR translation of your Bachelor's degree.

# COMPUTER SCIENCE



## ABOUT THE PROGRAMME

This PhD educational programme requires active and productive research work under the supervision of the thesis adviser, the completion of five courses, and active participation in seminars at the Institute of Informatics. The courses embrace a number of fields in computer science.

**Educational programmes** of the Doctoral School: Theoretical Computer Science, Operations Research and Combinatorial Optimisation, Software engineering, Artificial intelligence, Image processing, Electrical and computer engineering.

**Sample research areas:** Theory of automata and formal languages; Theory of economic decisions; Advanced programming paradigms; Machine learning algorithms; Natural language processing; Discrete tomography; Medical image analysis; Noise and fluctuations in various systems; Pneumatic artificial muscles.

For more research topics please consult the programme [website](#).

<b>Level of the programme:</b>	<b>PhD</b>
<b>Duration of the programme:</b>	<b>4+4 semesters</b>
<b>Registered in:</b>	<b>EU</b>
<b>Credits:</b>	<b>240</b>

## WHO SHOULD APPLY?

We expect applicants to be interested in the research programmes published on our [website](#).

**Application requirements:** submitted online application form, MSc degree in a related field, demonstrated proficiency in English (TELC/ECL B2, TOEFL IBT – 72, PBT – 550, Cambridge FC B, IELTS – 5.5), CV, 2 letters of recommendation submitted in a signed and sealed envelope or directly sent to the Dean's Office, individual interview online, during which the applicant's motivation and research proposal will be examined, and a recent medical certificate of satisfactory general health status (not older than 1 month).

**Start of the programme: September and February of each year**

**Tuition fee:** **4000 EUR** per semester

**Other fee:** **200 EUR** application fee and **250 EUR** entrance exam fee

**For further information visit: [www.u-szeged.hu/doctoral/computer-sciences-phd](http://www.u-szeged.hu/doctoral/computer-sciences-phd)**

or contact

**Dr. Tamás VINK/**

at [tvinko@inf.u-szeged.hu](mailto:tvinko@inf.u-szeged.hu) or call **+36 62 546 193**

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# ENVIRONMENTAL SCIENCES



## ABOUT THE PROGRAMME

**E**nvironmental education at the University of Szeged has been internationally acknowledged for decades. The doctoral school carries out activities concerning the environmental aspects of the fields of chemistry, biology, physics, and geography, among others. Due to the interdisciplinary aspects of environmental science, PhD students of the programme have to choose at least one basic course that is not related to their own research topic and a minimum of four courses related to the research topic of the PhD student. Rigorous coursework develops abilities concerning environmental sciences and specific knowledge in the research fields related to the research programme of the Doctoral School.

**The major fields are:** Environmental Biochemistry and Biotechnology, Conservation Ecology, Environmental Physics, Environmental Geography, Environmental Geology, Environmental Chemistry and Analytics, Environmental Chemical Technology and Material Science, Environmental Engineering

**Sample research areas:** Biotechnology as green chemistry, Population and conservation genetics of arthropods, Photoacoustic spectroscopic gas detection, Evaluation of environmental changes by geographical methods, The role of sulphur in petroleum formation and in coalification processes, Adsorption and photocatalytic decomposition of hydrocarbons derivatives. For more research topics please consult the programme [website](#).

<b>Level of the programme:</b>	<b>PhD</b>
<b>Duration of the programme:</b>	<b>4+4 semesters</b>
<b>Registered in:</b>	<b>EU</b>
<b>Credits:</b>	<b>240</b>

## WHO SHOULD APPLY?

**Application requirements:** fully completed online application form with the necessary documents attached; MSc degree and good university marks in the field of any environmental sciences including chemistry, biology, geography, physics and environmental engineering. Certificates of language proficiency in English: at least intermediate level certified by internationally accredited language examination (TELC B2, ECL B2, TOEFL iBT test score of at least 72, or PBT score at least 550; Cambridge First Certificate at least "B"; IELTS score of at least 5.5) Specific expectations: students having previous scientific work in these fields. We expect students to be interested in one of the themes of the supervisors (members of the Doctoral School of Environmental Sciences) published on the [webpage](#) of the Doctoral School. Applicants should contact the relevant professor of the Doctoral School and agree on the given research theme.

**Start of the programme: February & September of each year**

<b>Tuition fee :</b>	<b>5000 EUR</b> per semester
<b>Other fees :</b>	200 USD application fee and 250 USD entrance exam fee
<b>Scholarship:</b>	Scholarships are available to cover the tuition fee (e.g.: Stipendium Hungaricum, for details see the website of Tempus Public Foundation)

**For further information visit: [www.u-szeged.hu/doctoral/environmental-sciences-phd](http://www.u-szeged.hu/doctoral/environmental-sciences-phd)**

or contact

**Prof. Zoltán K/ NYADSC** at [konya@chem.u-szeged.hu](mailto:konya@chem.u-szeged.hu) or call **+36 62 544 620**

*\*Academic Records: an official English version OR translation of your full Bachelor's transcript including an explanation of the grading system, and an official English version OR translation of your Bachelor's degree.*

# GEOSCIENCES



## ABOUT THE PROGRAMME

Geography education and research have a long and internationally acknowledged tradition at the University of Szeged. The Doctoral School offers a **broad range of research topics and courses**. The Doctoral School ensures the appropriate **infrastructural background** for the work of the students: **well-equipped laboratories** with state-of-the-art laboratory and field equipment and **IT facilities**. The Institute of Geography and Geology is committed to **high standards of research**, and the research fields are continuously evolving in response to new challenges in the subject.

**Educational Programmes** and sample **research areas** of the Doctoral School: **Spatial Changes and Forms of Human-Economic Processes** (e.g. Political geography, Population geography and migration studies, Urbanisation, Health geography, Environmental justice, Geography of tourism, Transportation geography), **Geology** (e.g. Geochemistry, Petrology, Modelling of fractured fluid reservoirs, Microtectonics, Geothermal systems, Hydrogeology, Applied geomathematical modelling, Stochastic simulations, Geoarcheology, Quaternary geology and paleoenvironment), **Geomorphology** (e.g. Fluvial geomorphology, Aeolian processes, Hydrogeography, Geomorphological hazards, Geochronology, Shallow geophysics, Applied remote sensing and geoinformatics, Applied geographical modelling) and **Geocology** (e.g. Soil Science, Vegetation dynamics, Biogeography, Environmental/landscape changes, Environmental risks and hazards, Climate change, Urban climatology, Human bioclimatology).

**For more research topics please consult the website.**

<b>Level of the programme:</b>	<b>PhD</b>
<b>Duration of the programme:</b>	<b>4+4 semesters</b>
<b>Registered in:</b>	<b>EU</b>
<b>Credits:</b>	<b>240</b>

## WHO SHOULD APPLY?

The Doctoral Programme is open to MSc graduates, who are interested in the research programmes published on our [website](#).

**Application requirements:** submitted online **application form**, **MSc degree** in related fields, a demonstrated **proficiency in English** (TELC/ECL B2, TOEFL IBT – 72, PBT – 550, Cambridge FC B, IELTS – 5.5), CV, **2 recommendation letters** from recognised academic persons, and a recent medical certificate of satisfactory general health status (not older than 1 month); individual interview online, where the applicant's motivation and research proposal will be examined.

**Start of the programme: February & September of each year**

<b>Tuition fee:</b>	<b>5000 EUR</b> per semester
<b>Other fees:</b>	<b>200 USD</b> application fee and <b>250 USD</b> entrance exam fee
<b>Scholarship:</b>	Scholarships are available to cover the tuition fee (e.g. Stipendium Hungaricum, for details see the website of Tempus Public Foundation).

**For further information visit: [www.u-szeged.hu/doctoral/geosciences-phd](http://www.u-szeged.hu/doctoral/geosciences-phd)**

or contact **Prof. Gábor MEZŐSI** at [mezosi@geo.u-szeged.hu](mailto:mezosi@geo.u-szeged.hu) or call **+36 62 544 155**

*\*Academic Records: an official English version OR translation of your full Master's transcript including an explanation of the grading system, and an official English version OR translation of your Master's degree.*

# MATHEMATICS



## ABOUT THE PROGRAMME

The duration of this PhD educational programme is 2+2 years. The students have to complete at least 5 courses. The Bolyai Institute offers 5 general courses (**Algebra, Theory of Measure and Integral, Topology, Discrete Mathematics, Probability Theory**), 27 basic courses and several dozens of specialised courses. Most lectures are given by members of the Bolyai Institute or, occasionally, by invited experts.

**Educational programmes** of the Doctoral School include Algebra, Analysis, Dynamical Systems, Geometry, Combinatorics and Theoretical Computer Science, and Stochastics.

**Sample research areas:** Semigroup theory, Approximation theory and orthogonal polynomials, Numerical solutions, computer simulation of dynamical systems, Theoretical computer science, Asymptotic distributions in probability theory: domains of attraction and partial attraction. For more research topics please consult the programme [website](#). \*

<b>Level of the programme:</b>	<b>PhD</b>
<b>Duration of the programme:</b>	<b>4+4 semesters</b>
<b>Registered in:</b>	<b>EU</b>
<b>Credits:</b>	<b>240</b>

## WHO SHOULD APPLY?

We expect applicants to be interested in the research programmes published on our [website](#).

**Application requirements:** fully completed MSc degree in mathematics; proof of English proficiency (TELC B2, ECL B2, TOEFL- iBT:72, or -PBT - 550; Cambridge First Certificate at least "B"; IELTS - 5.5); scanned transcripts\* of previous studies, letters of recommendation from two mathematics professors. Applicants should choose an educational program when applying for PhD training.

**Application procedure:** evaluation of attached documents (in pdf format; diploma, transcripts, certificate of proficiency in English, two letters of recommendation, earlier creative work in mathematics if any, the applicant's ideas about possible research fields) and a Skype interview.

**Start of the programme:** **February & September** of each year

**Tuition fee:** **5000 EUR** per semester

**Other fees:** **200 USD** application fee and **250 USD** entrance exam fee

**Scholarship:** financial assistance is available to cover the tuition fee (e.g.: Stipendium Hungaricum, for details see the [website](#) of Tempus Public Foundation)

**For further information visit:** [www.u-szeged.hu/doctoral/mathematics-phd](http://www.u-szeged.hu/doctoral/mathematics-phd)

or contact

**Prof. Gábor CZÉDLI DSc**

at [czedli@math.u-szeged.hu](mailto:czedli@math.u-szeged.hu) or call **+36 62 544 093**

\*Academic Records: an official English version OR translation of your full Bachelor's transcript including an explanation of the grading system, and an official English version OR translation of your Bachelor's degree.



# PHYSICS



## ABOUT THE PROGRAMME

The Doctoral School of Physics is based on the research fields of **astrophysics, biophysics, laser physics, optics, radiology and nuclear medicine, solid state physics and laser-matter interaction, theoretical and mathematical physics**. The School offers graduate courses in a broad range of physics, including atomic and molecular physics, optics and laser physics, material science, mathematical physics, astrophysics, biophysics, clinical radiology and nuclear medicine. Well-equipped laboratories are available for experimental research projects. Facilities include several high intensity and ultrashort-pulse lasers; atomic force, optical and electron microscopes; spectrographs; vacuum chambers; clinical CT, MR and SPECT equipment; a computer network, and an astronomical observatory. The research projects are funded by national (OTKA, NFÜ) and international (mainly EU) agencies.

**Educational programmes of the Doctoral Schools:** astrophysics, biophysics, laser physics, optics, radiology and nuclear medicine, solid state physics and laser-matter interaction, theoretical and mathematical physics.

**Sample research areas:** UV photoablation of polymers and biological materials; Computational modelling of biomolecules; Laser-plasma interactions; Harmonic generation; Spectroscopy of biomembranes and membrane proteins; Nuclear medicine; Extrasolar planets, optical photometry and time series analysis of astronomical objects; Black holes; Cosmology; Gravitational waves. For more research topics please consult the programme [website](#).

<b>Level of the programme:</b>	<b>PhD</b>
<b>Duration of the programme:</b>	<b>4+4 semesters</b>
<b>Registered in:</b>	<b>EU</b>
<b>Credits:</b>	<b>240</b>

## WHO SHOULD APPLY?

We expect applicants to be interested in the research programmes published on our [website](#).

**Application requirements:** fully completed and signed **application form, BSc degree\*** from an accredited university or higher education institution in Physics, demonstrated **proficiency in English** (TELC/ECL B2, TOEFL IBT – 72, PBT – 550, Cambridge FC B, IELTS – 5.5), **copy of passport, 2 recommendation letters** from recognised academic persons, recent medical certificate of satisfactory general health status, **CV, motivation letter**, individual **interview** (online), and payment of the 200 USD non-refundable **application fee**.

<b>Start of the programme:</b>	<b>February &amp; September of each year</b>
<b>Tuition fee :</b>	<b>5000 EUR</b> per semester
<b>Other fees</b>	<b>200 USD</b> application fee and <b>250 USD</b> entrance exam fee
<b>Scholarship:</b>	Scholarship is available to cover the tuition fee (e.g.: Stipendium Hungaricum, for details see the <a href="#">website</a> of Tempus Public Foundation)

**For further information visit:** [www.u-szeged.hu/doctoral/physics-phd](http://www.u-szeged.hu/doctoral/physics-phd)

or contact assistant professor

**dr Zoltán KERESZTES** at [zkeresztes.zk@gmail.com](mailto:zkeresztes.zk@gmail.com) or call **+36 62 544 813**.

\*Academic Records: an official English version OR translation of your full Master's transcript including an explanation of the grading system, and an official English version OR translation of your Master's degree.