PÁZMÁNY PÉTER CATHOLIC UNIVERSITY

FACULTY OF INFORMATION TECHNOLOGY AND BIONICS

Let us engineer the future together
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Pázmány Péter Catholic University

People-oriented, high-quality education, classical knowledge, and innovation – this is what Pázmány Péter Catholic University has to offer to its students. These have formed the cornerstone of Hungary’s oldest, continuously operating university ever since it was established in 1635 in the city of Trnava, and ever since it was re-established in 1992. With its multi-faceted education system, the University serves both to convey the traditional knowledge and values necessary for the development of human personality in its entirety, and to develop our information society and adapt it to human fulfilment.

Our teachers are known and respected experts in their fields. Due to the University’s beneficial teacher to student ratio, we are always able to promote individual performance, enabling students to develop a direct, helping relationship with teachers. Our institution’s reputation bolsters a good opportunity for success on the job market.

We fundamentally strive to provide training that supports everyday life, but also to assist students in learning and recognizing the related theoretical knowledge and relationships. For decades, our range of disciplines has included the fields of theology, legal sciences, humanities, social sciences, information technology, and bionics. In addition to preserving our traditions, we also strive for continuous renewal. Our domestic and international cooperation, our internationally recognized research, and our participation in partner school networks offer serious possibilities in these fields, and our mobility programs are becoming increasingly popular.

The mentality of our Budapest-centric University is fundamentally determined by our Catholic ties and intrinsic human and social values. Our fundamental approach consists of respect for each other, building intergenerational professional and friendly communities (from secondary schools to alumni), camaraderie, and helping each other. Our social programs draw more and more students each year.

The offer of the Faculty of Humanities and Social Sciences encompasses the wide spectrum of social sciences – from psychology and teacher training to languages. The Faculty of Law and Political Sciences introduces students to the fundamental norms of human coexistence, from Roman law to today’s reality. The education provided by the Faculty of Information Technology and Bionics is referred to as the science of the third millennium. Information technology, life sciences, bionics, and engineering will all help us achieve a better quality of life. The Faculty of Theology offers students the perspective of realizing the totality of the human personality by growing in faith. All students are given the possibility of experiencing the Catholic faith at the University and participating in the related programs.

Knowledge is transferred in a people-centric environment, always taking into account the capabilities, skills, and needs of students. The University always bears in mind the importance of the high quality of science and education – even in an international comparison. We are convinced that these universally recognized internal values are responsible for allowing the degrees that we issue to hold their value and for the favorable reception of our graduates on the labor market.
Pázmány Péter Catholic University Faculty of Information Technology and Bionics (PPCU FITB) is a unique faculty in Central Europe, where electronic and computer engineering is combined with molecular and neural biology and medicine. As many innovative new products come from these interdisciplinary fields, we try to find and understand techniques and algorithms developed in biological systems, and to come up with ways to implement them in engineering environments.

Our Faculty fosters innovation, research, and exciting cooperations at all levels of education, from Bachelor’s to Doctoral degree. Our courses reflect our interdisciplinary approach and are taught by academics with leading expertise in the relevant area. With their deep academic attainments, rich teaching experience, professional dedication, attention to and care for the students, and excellent command of English as a medium of instruction, our teachers fit perfectly with the internationalized teaching and learning environments of the Faculty.

Students have access to a range of cutting-edge facilities and resources, getting the tools needed to reach their full potential. Teachers, administrative staff, laboratories, and fellow students offer collaborative support to help international students to safely and comfortably settle into life in Hungary. A range of counselling services and support facilities are also available, thus helping international students to enjoy their study abroad experience at PPCU FITB.

Internationalization is one of the key strategic goals of the Faculty. Whereas our BSc programs are offered in Hungarian, all MSc and PhD programs are run in English. With about 700 students, the size of the Faculty further emphasizes its human-centeredness.

Our research areas include artificial intelligence, bio-inspired computing, cognitive science, language technology, human-computer interaction and many more.

Kristóf IVÁN, PhD
Dean
Within our BSc programs, students acquire theoretical foundations and basic practical skills, and learn how this knowledge can be applied in real-life situations. The 210 credits needed for the degree are distributed over seven semesters. Individual laboratory practice and an internship form an integral part of our curriculum, preparing students for their Master’s studies.

The language of instruction for our Bachelor’s programs is Hungarian. Applicants must have a level of Hungarian sufficient to participate and be successful in the learning process.

**Bachelor’s Programs (Offered in Hungarian)**

- **BSc in Molecular Bionics Engineering**
  - Areas explored at both domestic and international levels include the revolution of sensors, the growth of chip complexity, ubiquitous kilo-processor chips, the facilitation of natural human communication, and human language technology.

- **BSc in Computer Science Engineering**
  - The Computer Science Engineering BSc program gives students a special insight into fields where information technology is facing new, unknown challenges such as medical sciences, human-machine contact, parallel computation, and the world of nano- and micro-electronics.
  - Areas in which we are able to explore new ground at both domestic and international levels include the revolution of sensors, the growth of chip complexity, ubiquitous kilo-processor chips, the facilitation of natural human communication, and human language technology.
Targeting international students, the goal of the preparatory semester is to level students for their Master’s program in Budapest, helping to ensure that they can complete their studies successfully. The preparatory semester helps students to recap, develop and upgrade the Bachelor-level skills needed to succeed in their Master’s program.

If the Admissions Committee evaluates an applicant to be a potential good fit with the program, but finds important elements to be missing in his/her educational background, the applicant will be eligible to start a preparatory semester.

International students are, in most cases, admitted to a compulsory preparatory semester leading to their chosen Master’s program. This five-month-long series of courses consists of four modules; each of them comprising three or four subjects and lasting for three weeks. The courses follow an intensive schedule and are concluded by a compulsory exam. Academic English language skills are also integrated in the program, as well as a compulsory beginners’ Hungarian language course.

Students will also become familiar with new learning strategies, their new study and living environment, as well as requirements and services related to their studies.

The Preparatory Semester is always organized in the fall semester. Thus, the actual commencement of the Master’s programs is February.

In response to the Covid-19 pandemic, online enrollment to the preparatory program from students’ home country is also possible.

Preparatory courses for the Master’s program in Info-Bionics:
- Academic English Prep Course
- Algebra Prep Course
- Bioinformatics Prep Course
- Calculus Prep Course
- Chemistry and Biology Prep Course
- Hungarian Prep Course
- Molecular Biology and Genetics Prep Course
- Neuroscience and Electrophysiology Prep Course
- Programming Prep Course 1-2
- Probability and Statistics Prep Course
- Signal Processing Prep Course

Preparatory courses for the Master’s program in Medical Biotechnology:
- Academic English Prep Course
- Algebra Prep Course
- Bioinformatics Prep Course
- Calculus Prep Course
- Chemistry and Biology Prep Course
- Hungarian Prep Course
- Molecular Biology and Genetics Prep Course
- Neuroscience and Electrophysiology Prep Course
- Programming Prep Course 1-2-3
- Probability and Statistics Prep Course
- Signal Processing Prep Course

Preparatory courses for the Master’s program in Computer Science Engineering:
- Academic English Prep Course
- Algebra Prep Course
- Calculus Prep Course
- Computer Architectures Prep Course
- Electronics Prep Course
- Hungarian Prep Course
- Molecular Biology and Genetics Prep Course
- Neuroscience and Electrophysiology Prep Course
- Probability and Statistics Prep Course
- Programming Prep Course 1-2-3-4
- Signal Processing Prep Course

Further information:
itk.ppke.hu/en/education
The program, which is operated jointly with Semmelweis University Budapest, allows students to gain advanced theoretical and practical knowledge at the intersection of medicine and informatics. Medical biotechnologists work in the rapidly developing bio-medicinal field where their responsibilities include research, development, application and management. They are able to model and simulate biological systems on computers, are familiar with the current methods in molecular diagnostics and therapies, as well as design, create, manage and use databases in the field of medical biotechnology. Medical biotechnologists are able to handle and interpret large-scale data sets of medical relevance. As specialists trained in science, informatics and specific fields of medicine, they can be employed in basic research, or in the fields of pharmaceutics, medical/molecular diagnostics or biotechnology.

**Subjects of the entrance examination (written and oral):**
- Chemistry
- Biology

**Specializations offered within the program:**
- Molecular Biotechnology
- Applied Bioinformatics

Master’s Programs (Offered in English)

Our two-year MSc programs allow students to gain specialized knowledge in various disciplines, while offering a much deeper insight into the theoretical aspects of the subject. In addition to compulsory subjects, students can choose from a wide selection of elective courses, enabling MSc students to follow a study track related to their special interests. In their research projects, our MSc students might contribute to develop exciting high-tech inventions such as bioprostheses, implants, diagnostic and robotic appliances. These may seem like something from a science fiction movie, but sooner or later they will be part and parcel of our lives.

The language of instruction for our Master’s programs is English. Applicants must have a level of English sufficient to participate and be successful in the learning process.

Further information: [itk.ppke.hu/en/education](http://itk.ppke.hu/en/education)

MSc in Medical Biotechnology

The curriculum of the study program (120 credits) comprises the following modules:
- Fundamentals in Natural Sciences and Mathematics (15-25 credits)
- Economics and Humanities (5-15 credits)
- Skills in Medical Biotechnology (15-35 credits)
- Specialization (30-50 credits)
- Project Work and Thesis Work (29 credits)
- Other elective subjects (maximum 6 credits)

**Deadline for application:** April 30

The Medical Biotechnology Master’s Program starts in February each year. Note that there is an additional compulsory Preparatory Semester (in the fall semester) for international students, preceding the Master’s Program. Students may start their Master’s studies only after successful completion of the Preparatory Semester.
Many of the innovative new products today come from the interdisciplinary field of info-bionics combining computer science, electrical engineering and biotechnology (e.g.: sequencing tools, BCI, implants, sensory robotics).

Our Info-Bionsics Engineering Master’s Program aims to develop core competencies through subjects in modeling, neural sciences, electrophysiology, electronics and computer science.

The deep understanding of biological processes and measurements (e.g.: neural signals, communications, cell-cell interactions, data processing of living organisms) help us develop engineering solutions, instruments, devices, computational algorithms and models to augment or supplement a biological system. These also help in the measurement, control and operation of vital processes affecting living organisms and the quality of human life.

Application and research examples: prostheses, rehabilitation, bionic eyeglass, brain-computer interfaces, neural electrodes, limb actuation, wheelchair navigation or minimally invasive surgery tools, multimodal medical imaging, bioinformatics, intelligent or sensory-actuating robotics, nanosensors.

We welcome students to join us if they have previous training in molecular biology, electrical engineering, image processing or neuroscience.

Subjects of the entrance examination (written and oral):
- Chemistry
- Biology
- Physics and Electronics
- Computer Science

Specializations offered within the program:
- Bionic Interfaces
- Bio-nano Sensors and Imaging Devices
- Systems Biology

The curriculum of the study program (120 credits) comprises the following modules:
- Fundamentals in Natural Sciences and Mathematics (15-25 credits)
- Economics and Humanities (5-15 credits)
- Skills in Neural Sciences and Electrophysiology (11-22 credits)
- Skills in Electronics and Computer Sciences (11-30 credits)
- Specialization (30-50 credits)
- Project Work and Thesis Work (42 credits)
- Other elective subjects (maximum 6 credits)

Deadline for application: April 30

The Info-Bionsics Engineering Master’s program starts in February each year. Note that there is an additional compulsory Preparatory Semester (in the fall semester) for international students, preceding the Master’s program. Students may start their Master’s studies only after successful completion of the Preparatory Semester.
**MSc in Computer Science Engineering**

One of the strengths and a special feature of the Computer Science Engineering MSc program at PPCU FITB is the specific synergy of information technologies and life sciences. Our goal is to teach human-centered information technology with the fundamental concepts of life sciences. The essence of our Computer Science Engineering training approach is that we try to find and understand techniques developed during millions of years in biological systems, and we try to transfer them into engineered informatics environments. In this field of continuously developing technologies we provide the necessary disciplinary fundamentals to facilitate the professionals trained by our Faculty to work at the highest level. The solid theoretical foundations provide efficient support for the interpretation and handling of a generation shift in informatics, therefore our students can adapt well to the ever-changing professional environment.

Besides basic natural sciences, our students study the most relevant programming languages and their application in different environments. They become familiar with the principles of complex software systems and artificial intelligence. We emphasize a hardware-based approach, as well as kiloprocessor, and reconfigurable architectures. Through the teaching of sensory applications, we open towards the world of info-bionics. Neuromorphic calculations, digital language technology, machine learning or image processing and image analysis are also very exciting and modern fields that can be studied and explored in our Faculty.

Several experimental research laboratories operate at the Faculty, equipped with a modern and unique set of instruments; therefore, our students can explore the world of research and development as soon as they start their Master's studies. Our graduates, depending on their specialization, can deepen their theoretical and practical knowledge in the fields of software design, communication networks, intelligent systems, sensing computers, mobile applications or image processing.

**Subjects of the entrance examination (written and oral):**
- Physics and Electronics
- Mathematics
- Computer Science

**Specializations offered within the program:**
- High Performance Computational Tools and Architecture (HPCT)
- Machine Learning for Data Science (MLDS)
- Software Engineering (SE)

**The curriculum of the study program (120 credits) comprises the following modules:**
- Fundamentals in Natural Sciences (20-30 credits)
- Economics and Humanities (9-15 credits)
- Skills in Information Technology, including Specialization subjects (54-90 credits)
- Thesis Work (30 credits)
- Other elective subjects (maximum 6 credits)

**Deadline for application: April 30**

The Computer Science Engineering Master’s program starts in February each year. Note that there is an additional compulsory Preparatory Semester (in the Fall semester) for international students, preceding the Master’s program. Students may start their Master's studies only after successful completion of the Preparatory Semester.
Joint Master’s Degree in Image Processing and Computer Vision

The two-year Master’s program in Image Processing and Computer Vision (IPCV) has received the Erasmus Mundus label. It trains specialists in a field of increasing importance in our daily lives. Processing images and videos is essential in domains such as medicine, surveillance, industrial control, remote sensing, e-commerce, automation, etc. The IPCV program offers extensive theoretical and practical knowledge to train highly qualified graduates in this field.

The IPCV program is designed for people who are interested in sensory processing, multi-camera systems or deep learning in computer vision, and who would like to become experts in image processing, video analysis as well as image acquisition and reconstruction. The program also deals with fields like automatic video monitoring, biomedical data processing or augmented and virtual reality.

Three partner universities, with internationally recognized experience in these domains, have pooled their complementary expertise to develop this Master’s program. The result is a high-quality English-taught triple Master’s degree (120 ECTS) that is well recognized and adapted to the job market.

Program scheme:
- Duration: 2 years (120 ECTS)
- English-taught program
- Erasmus Mundus quality
- All students follow the same curriculum and spend one semester at each university.

Mobility Scheme
The Master’s program is built upon existing curricula in information technology, engineering, applied mathematics and computer science. These four fields have been integrated to propose an excellent and well-designed curriculum. Each semester has its own objective:

1st Semester
Pázmány Péter Catholic University, Budapest, Hungary (PPCU)
The objective of the first semester is to provide all students with the same fundamental and theoretical knowledge in mathematics, electronic computing, signal and image processing, sensors and parallel computing. It ensures that students from a variety of backgrounds (some with a Bachelor’s in only one of these specializations) will be ready for the following semesters.

2nd Semester
Universidad Autónoma de Madrid, Spain (UAM)
The second and third semesters are entirely focused on image processing and computer vision problems. During the second semester, students study medical image processing and analysis, biometrics, computer vision for surveillance problems, and image classification.

3rd Semester
University of Bordeaux, France (UBx)
This final semester of study provides the students with more advanced knowledge on programming and addresses video coding, satellite image processing, and multi-dimensional imaging. Finally, a project management class is mandatory.

4th Semester
Training period
The last semester is dedicated to an internship at a company or a research laboratory anywhere in the world. At the end of the 4th semester, students have to present their thesis and conclude their final examinations.

All three partners offer students an excellent scientific environment and top-quality facilities. The entire teaching staff is made up of researchers, which ensures that the courses incorporate recent advances in the field. Furthermore, students receive individual attention from the teaching and administrative staff to help them solve any problems that may arise.

Students who successfully complete the IPCV program will receive the national degree from each Partner University, namely:
- from PPCU: Master of Science in Computer Science Engineering, Specialization in Image Processing and Computer Vision
- from UAM: Erasmus Mundus Joint Master’s Degree in Image Processing and Computer Vision
- from UBx: Master’s Degree in “Informatique”, Image Processing and Computer Vision

A diploma supplement will additionally be delivered by each university.

Application deadline: beginning of February (for exact details, please see the program website).

The program starts every September (in the fall semester). There is no Preparatory Semester for the IPCV Master’s Program.

Further information: icpv.eu
Post-graduate Certificate in Biodata Analysis

The online Biodata Analysis post-graduate certificate (PgCert) program is a one-year, 60-credit program providing enhanced knowledge and skills in the analysis of large-scale molecular data from biological systems. The enormous amount of biological information coming from genomic, epigenomic and proteomic investigations of tissues and, increasingly, single cells, requires experts qualified in multiple aspects of high-throughput molecular data analysis. The specific aim of the program is to meet this demand and to equip students with the skills needed to meet the demands of academic and industrial organizations performing modern large-scale investigations in all fields of biomolecular data handling and interpretation. Specific emphasis is given to data analysis with R. Python and Java programming is also part of the curriculum. The program covers aspects of biostatistics, sequence analysis, high-throughput analysis of genomic, proteomic and transcriptomic data, as well as phylogenetics and structural bioinformatics.

The program is fully online with courses accessible through an e-learning system. The practices include substantial individual project work. Hands-on help and consultations with the lecturers are available on demand. The program is divided into building blocks with clear task assignments and deadlines and within the given time frame they can be completed at the pace most convenient for the student. The program concludes with a supervised thesis project worth 12 credits.

The lecturers are experts in various areas of bioinformatics and, as active researchers, are up to date with the latest developments in the field. They also routinely teach university courses from BSc to PhD levels. The program is run jointly by PPCU and HiDucator Ltd., a company specialized in online bioinformatics education.

Entry to the program requires a BSc degree or higher in the field of bionics, molecular biology or information technology with adequate basic knowledge of biomolecular sequence, structure and function. The Faculty reserves the right for an entry interview with the applicants to determine their level of knowledge and their suitability for the program.

The cost of the program is currently 2,000,000 HUF (approx. 6,000 EUR).

Contact: biodata@itk.ppke.hu

Further information: itk.ppke.hu/en/education
The Roska Tamás Doctoral School of Sciences and Technology was established in 2001. Our Doctoral School issues PhD degrees in three fields of science: information science and technology, electrical engineering and biology. Head of the Doctoral School: Prof. Gábor SZEDER-KÉNYI. The education and research work are organized into the following five sub-programs:

**Bionics, Bioinformatics, Bio-inspired Wave Computers, Neuromorphic Models, Systems Biology** (Head of program: Prof. Sándor PONGOR)

**Feasibility of Electronic and Optical Devices, Molecular and Nanotechnologies, Nano-architectures, Nanobionics, Diagnostic and Therapeutic Tools** (Head of program: Prof. Árpád CSURGAY)

**Computer Technology Based on Many-Core Processor Chips, Virtual Cellular Computers, Sensory and Motoric Analog Computers** (Head of program: Prof. Péter SZOLGAY)

**Natural Language Technologies, Artificial Understanding, Tele-presence, Communication** (Head of program: Prof. Gábor PRÓSZÉKY)

**On-board Advanced Driver Assistance Systems** (Head of program: Prof. Ákos ZARANDY)

Our extensive cooperation network, together with the Faculty’s outstanding resources, gives students access to a state-of-the-art research infrastructure and opportunities for scientific discussion. Graduates either pursue an academic career or become involved in applied research through spin-off companies. A number of successful spin-off companies have been launched from research projects at our Faculty.

Further information: itk.ppke.hu/en/phd
Admissions

Master's Programs

Qualification requirements
To ensure an optimal match with the Master's programs, applicants should be holders of a Bachelor's degree or Master's degree in a related subject area (with a result of 75% or above):

- MSc in Computer Science Engineering: BSc degree in Computer Engineering, Computer Science or Electrical Engineering
- MSc in Info-Bionics Engineering: BSc degree in Molecular Bionics, Biomedicine, Electrical Engineering, Engineer in Informatics, Chemical Engineering, Biology or Chemistry
- MSc in Medical Biotechnology: BSc degree in Molecular Bionics, Biomedicine, Chemical Engineering, Medical Laboratory and Imaging Diagnostic Analysis, Biology or Chemistry

Holders of other Bachelor's degrees will first go through a validation process by the Credit Transfer Committee.

Language requirements
A good knowledge of the English language is essential to successfully participate in the program. You will be asked to submit a TOEFL (altogether at least 90 points) or IELTS (with an average score of 6.0 points) certificate. If you have already completed an academic program in English, your degree will be considered sufficient proof of your English proficiency.

Application procedure
An application fee of HUF 30,000 is to be paid along with the application (non-refundable). Application deadline (for self-funded students): 30 April.

The following documents are required when applying:
- Application form
- BSc degree (with a result of over 75%)
- Transcript of academic records
- English language proficiency certificate
- Motivation letter
- Reference letter (from a university lecturer or other professional)
- Copy of passport (or ID card for EU nationals)
- Proof of application fee transfer.

In the first round, applicants will have to go through an online test. Based on the test result, the best applicants take an online interview upon the decision of the Admission Committee.

Applicants are informed about their application result in June. If the Admission Committee evaluates the applicant to be a potential good fit with the program, but finds important elements to be missing in his/her educational background, the applicant will be eligible to start a preparatory semester.

Please note that for applications through the Scholarship Program for the Hungarian Diaspora, Stipendium Hungaricum or the Scholarship Program for Christian Young People, different deadlines and criteria may apply.

Further information: itk.ppke.hu/en/admissions

IPCV Program

Applicants must fulfill the following requirements:
- Bachelor's degree or equivalent in engineering science, mathematics, computer science or signal processing
- Average grade of at least "Good" according to local criteria in the courses concluded.
- Adequate knowledge of English, equivalent to B2 according to the CEFR B2 (e.g. IELTS score of 6.5 or TOEFL of 90).

Further information: ipcv.eu

1 Special requirements apply to the IPCV Joint Master's Degree program.
PhD Programs
Application procedure
The admission procedure is organized twice a year, in July and in January.

The results of the applicants are ranked on a 100-point scale by the Admission Committee:
- Diploma and results of the final exams: max. 35 points
- Language skills: max. 15 points
- Previous scientific activity: max. 20 points
- Personal competence: max. 30 points.

The Admission Committee ranks the applicants based on their results. The Board of the Doctoral School decides on the acceptance, including details of possible financial support.

Application documents required
- Application Form
- Transcript of academic records
- English language proficiency certificate (min. B2 level according to CEFR)
- MSc degree in Electrical Engineering, Biology or Information Technology (with a result of 75% or above)
- Research plan (2-3 pages) describing the applicant’s results, projects and the proposed research topic
- Reference letter from the applicant’s mentor (previous supervisor or other mentor)

Language requirements
A good knowledge of the English language is essential to successfully participate in the PhD program. A language proficiency certificate – equivalent to B2 according to the CEFR or any of the following - should be presented upon application to the program:
- IELTS with an average score of 6.0 points
- Internet-based TOEFL (altogether at least 90 points)

Further information:
itk.ppke.hu/en/phd

Biodata Analysis
PgCert
Entry to the program requires a BSc degree or higher in the field of chemistry, medical sciences, bionics, molecular biology, information technology or similar, with adequate basic knowledge of biomolecular sequence, structure and function.

The Faculty reserves the right for an entry interview with the applicants to determine their level of knowledge and their suitability for the program.

Further information:
itk.ppke.hu/en/admissions

Erasmus+ mobility
We welcome students for an Erasmus+ mobility with Computer Engineering, Bionic Engineering or similar study backgrounds from our 30+ partner universities (list available on page 48). We offer a wide range of courses taught in English at MSc level. BSc-level courses in English are offered in the fall term only.

We welcome students for an Erasmus+ traineeship in our well-equipped laboratories from our partner Universities and also from other Universities throughout Europe. It is also possible to write a thesis during the exchange period. Students should contact their supervisor in advance in order to verify their project or research topics with a local lecturer or researcher at PPCU FITB.

Application Procedure
- Step 1: Nomination (by institution)
- Step 2: Confirmation of nomination
- Step 3: Application (by student)
- Step 4: Final acceptance

Further information:
itk.ppke.hu/en/admissions
Scholarship Programs

Scholarship Program for the Hungarian Diaspora

The main aim of the Scholarship Programme for the Hungarian Diaspora is to give support to foreign students with Hungarian identity to pursue their studies in Hungarian higher education institutions. The Programme includes members of the Hungarian diaspora communities in every country in the world, except in the Member States of the European Union, the Republic of Serbia and the Zakarpatska Oblast part of Ukraine.

Study programs available within the framework of the scholarship:
- BSc in Computer Science Engineering (in Hungarian)
- BSc in Molecular Bionics (in Hungarian)
- MSc in Computer Science Engineering (in English)
- MSc in Info-Bionics Engineering (in English)
- MSc in Medical Biotechnology (in English)
- PhD in Biological Sciences (in English)
- PhD in Information Science (in English)
- PhD in Electrical Engineering Sciences (in English)

For study programs in Hungarian, an opportunity to participate in a Hungarian language preparatory course will be provided. In the case of study programs in English, students must participate in Hungarian as a foreign language course during their period of studies.

Provisions covered by the scholarship:
- exemption from the payment of tuition fee,
- health insurance (social security card),
- monthly stipend and contribution to accommodation costs (on request).

Main application criteria:
- Hungarian identity and connection to a diaspora community,
- residency in one of the supported regions,
- applicant undertakes to learn Hungarian as a foreign language and Hungarian culture during his/her whole study period and undertakes to pass a Hungarian as a foreign language exam at CEFR B2 level minimum,
- applicant undertakes to help the local Hungarian diaspora organisation in a foreign country with community work for a specified period after graduation.

The admission process is managed by the university online. The award of the scholarship is based on the results of the admission procedure and the proposal of the Evaluation Committee.

Further information: tka.hu/international-programmes

The detailed application criteria and selection procedure is set out in the Call for Applications on the programme website.
Scholarship Program for Christian Young People

The core mission of the program is to give young Christian students, coming from crisis regions around the world and those threatened in their country because of their faith, the opportunity to study in Hungary. After completing their studies, scholarship holders will return home to help their home communities.

Currently, the scholarship is announced for the citizens of the following countries: Egypt, Lebanese Republic, Republic of Iraq, State of Israel, Palestine, Islamic Republic of Pakistan, Syrian Arab Republic, The Hashemite Kingdom of Jordan, Republic of Kenya, Federal Democratic Republic of Ethiopia and Nigeria. Applicants must not have a Hungarian citizenship.

Study programs available within the framework of the scholarship:

- MSc in Computer Science Engineering
- MSc in Info-Bionics Engineering
- MSc in Medical Biotechnology
- PhD in Biological Sciences
- PhD in Information Science
- PhD in Electrical Engineering Sciences

Provisions covered by the scholarship:

- Tuition-free education: exemption from tuition fees
- Monthly stipend: contribution toward living expenses in Hungary
- Accommodation: dormitory place or a contribution towards accommodation costs
- Medical insurance: health care services according to the relevant Hungarian legislation and supplementary medical insurance
- Reimbursement of travel costs

Further information: tka.hu/international-programmes

Stipendium Hungaricium Scholarship Program

Being the most prestigious higher education program of the Hungarian Government, Stipendium Hungaricum offers a wide range of tuition-free education to international students of excellent academic track record. Thousands of students from all over the world apply each year to study in Hungary. Currently 68 partner countries are engaged in the program. Both the number of Stipendium Hungaricum applicants and the number of available scholarship places are continuously increasing.

Study programs available within the framework of the scholarship:

- MSc in Computer Science Engineering
- MSc in Info-Bionics Engineering
- MSc in Medical Biotechnology
- PhD in Biological Sciences
- PhD in Information Science
- PhD in Electrical Engineering Sciences

Provisions covered by the scholarship:

- Tuition-free education: exemption from tuition fees
- Monthly stipend: contribution toward living expenses in Hungary
- Accommodation: dormitory place or a contribution towards accommodation costs
- Medical insurance: health care services according to the relevant Hungarian legislation and supplementary medical insurance

Further information: tka.hu/international-programmes
Student experience

My time in Budapest was probably the best period of my life. I will never forget the view of the great Danube from Margit Bridge. Once you’ve seen it, it will stay in your mind for the rest of your life. PPCU is very nice and very small compared to the university I came from. The atmosphere is very friendly and one of the best things is that professors know you, just like in high school! I never felt embarrassed for asking anything and I received all the help and support I needed. This was the first (and probably the last) time when reality exceeded my expectations... and expectations for an Erasmus experience are always very high!

Fabio Marcuccio, Italy
(former Erasmus student)

My time here at Pázmány Péter Catholic University has been characterized by immense knowledge acquisition. The university is like a big family where, irrespective of your nationality, there is always a strong bond and we are a team in all activities carried out at the university, whether academic or recreational. I appreciate that the university has such wonderful administrative staff and lecturers and that it offers such a conducive environment.

Chidiebere Edwin Nwagu, Nigeria
(MSc graduate)

PPCU FITB is a very welcoming place and I have felt at home here since my very first day. The community consists of both international and Hungarian students, top academics and lovely staff. When I started my second MSc year, I began to see things from a different perspective, more as an engineer, thanks to our professional teachers at the university who did their best to enlighten us in a comprehensive manner.

Nawar Sheer, Iraq
(MSc graduate)

What is it like studying at PPCU? It is located in the heart of Budapest, one of the most beautiful capitals in Europe. You have the opportunity to meet new friends from all over the world, very cooperative teachers and supervisors, and you can get involved in many new activities, aside from struggling with a very special language containing 14 vowels which helps you to expand your melodic skills. In short, I like it :)

Sam Khozama, Syria
(PhD student, MSc graduate)

I really enjoyed my stay here as an Erasmus student. Before my period abroad, I was looking for a pleasant and well-equipped place to go with professional teachers and an awesome student community. PPCU FITB was perfect. Coming to Pázmány was definitely one of the best decisions of my life. It gave me useful experience and left me with unforgettable memories.

Yvett-Nikolett Krilek, Romania
(former Erasmus student)

The last two years were a blessing being at this amazing university. I was very lucky to be able to work with my supervisor who is the best professor ever who was kind enough to trust me with his original ideas. You will belong at our university, regardless of your religion, ethnicity, nationality, gender or beliefs. The students here are like a big family and you can ask anyone for their help.

Jalal Alafandi, Syria
(PhD student, MSc graduate)
**Student services**

**Student mentors**

Student mentors welcome international students and help them throughout their studies. The active community life, developed via the mentor system, is complemented by several cultural programs and sports activities where students have the opportunity to get to know one another better.

**Hungarian language and culture courses**

We support international students with free language courses in Hungarian, as well as courses about Hungarian culture and history. This is a great opportunity to get closer to the locals, get around the city, get to know Hungarian culture and even talk to locals.

**Intercultural events**

Various intercultural events are organized throughout the academic year, including trips, hikes, intercultural evenings (e.g. cooking together). The events provide opportunities to meet international and Hungarian people, get to know one another and make friends.

**Accommodation**

Incoming international students have two basic options. They may stay in a dormitory or seek for alternative accommodation. Mentors may help students find accommodation in private apartments, if they prefer staying in more home-like circumstances.

**Dining in and around the Faculty**

Budapest is considered a relatively cheap city; prices match the budget of students. A two-course lunch would cost 750-1500 HUF, the price of beverages is around 350 HUF, whereas a glass of beer can be purchased for 400-1000 HUF in pubs.

The Faculty has a cafeteria, offering snacks, simple meals and drinks. There are several self-service restaurants and cafeterias in the area offering a wide range of meals from pizza to kebab, as well as traditional Hungarian meals.

There are two big food stores near the Faculty. Corvin Shopping Mall is a five-minute walk from our building.

**Sport**

The Faculty offers facilities for various sports such as badminton, basketball, football, gymnastics, table tennis and volleyball. Sports classes are free, but students must register in advance. There are also many sports and fitness facilities nearby.

**Student ID**

The student ID (in Hungarian: diákigazolvány) is an official proof of being a student at PPCU. With this card, you can get student discounts when using public transport, but also at cinemas, museums, or certain restaurants.

You can apply for a student ID for free if you are officially registered as a student at PPCU either as an exchange student or as a degree student, and your current semester is active.

**Students with families**

Students arriving with their families receive extra administrative and practical assistance.

**Services for students with special needs**

At the beginning of their studies, the Equal Opportunities Coordinator of the Faculty will help students with special needs to find student mentors who provide individualized assistance to students. The mentors study together with the students with special needs and help them prepare for everyday life at the university. The Faculty offers additional opportunities for digitalization and the possibility to buy special tools and software. The Faculty building is wheelchair accessible.

**Further information:**

In our Faculty, students learn in an academically stimulating environment and are especially nurtured with regards to personal development. All academic staff at the PPCU FITB are selected based on their excellence in teaching and research. The relatively small size of our student body (about 700 students altogether) with an excellent average staff-student ratio of 1:9, allows for a highly personal teaching and learning experience, with academics readily approachable to provide further one-on-one support whenever needed.

Interdisciplinarity and diversity are key elements of our strength. Apart from teaching, our highly qualified academic staff members are required to be active in research and publication and are involved in international engagement.

We offer a comprehensive range of programs from undergraduate level through Master’s to PhD. Our BSc and MSc programs are based on strategic and innovative delivery and assessment mechanisms, as well as traditional ones such as lectures, seminars and labs. Students complete compulsory core modules but also have the opportunity to select from interesting specializations, including a number of optional modules.

Our teaching is formed by the very latest research findings, and our curricula constantly evolve to incorporate new research developments, with many delivered by research scholars. We also regularly consult with industrial partners to ensure our programs are structured with the opportunity to develop key transferable skills for employment.

PPCU welcomes students of all religions and backgrounds, as well as those with no religious affiliation.

The university’s Catholic nature is basically reflected in the values of its lecturers and staff, and in its community-based organizational structure. For Catholic students, a Catholic university will provide a place that is familiar and welcoming: it is certainly a bonus to study at a university reflecting their own values, and to practice their religion in various ways. The Faculty offers a wide range of programs to help students experience a loving community, deepen their relationship with God, and clarify their values. Mass is held in the chapel every week. The chaplain is happy to answer your questions and he is at students’ disposal for spiritual conversations and confessions. The Faculty psychologist is also at the students’ disposal for mental counselling. The Christian Youth Club welcomes all students of the Faculty on their regular ecumenical meetings. There are various courses about the Bible and about Christian values for those who are interested. In addition, the Faculty psychologist is also at the students’ disposal for mental counselling.

As a tolerant and welcoming atmosphere pervades our campus, non-religious students or students of other denominations are asked to respect the values of the Catholic Church and accept the culture and symbols present at campus. We respect your belief system but at the same time we kindly ask you to respect ours, even if you do not agree with it. This is the way how we can work and live together in peace and harmony.
Research highlights

Algorithmic combination of logical, analogue and noise signals; application of spatial temporal metrics and commands for solving non-linear wave equations on cellular wave computer chips

Research Work and Environment

Research work at the Faculty predominantly focuses on the interdisciplinary area between life sciences, computer science and engineering, and on strengthening the convergence paradigm of these fields. The organizational structure of the Faculty makes cooperation between different research groups particularly straightforward.

Our outstanding capacities in computing and dedicated hardware architecture design help to solve complex computational problems that arise in engineering design or biological data analysis.

Research and education are closely linked at the Faculty, which was awarded the title of ‘Research University Faculty’ (a title given to only 4 faculties out of 115 in Hungary) by the Hungarian Government in 2013.

Students take an active part in research during their university years. They can work individually or in teams on a chosen topic with the assistance of a researcher or professor as part of the Research Experiences for Undergraduates Program, and later join one of the research groups at the Jedlik Laboratories.

Design and development of a bionic eyeglass for visually impaired people

Development of new methods for the modeling of molecular dynamics on supercomputers

Lab-on-a-chip development with microfluidic laboratory background

Development of ultrasound technologies for diagnostic purposes (e.g. for cancer detection)

Algorithmic combination of logical, analogue and noise signals; application of spatial temporal metrics and commands for solving non-linear wave equations on cellular wave computer chips

Development of bio-inspired devices and algorithms in sensory robotics to solve high-level tasks requiring intelligence

Designing and characterizing MEMS electrode for cerebral bionic interfaces

Electronic phonendoscope as a sensing-computing device for newborn phonocardiography and diagnostics

Developing new hardware/software tools for medical image analysis

New language technological devices for Hungarian and foreign language text analysis and computer-aided translation (CAT)
Jedlik Laboratories

Jedlik Laboratories is the center of scientific activity at the Faculty, where professors and researchers are joined by PhD and Master’s students. Study and innovation are linked through major research laboratories and state-of-the-art SMEs, from both Hungary and abroad. Jedlik Laboratories was established in cooperation with the Semmelweis Medical University, major start-up companies, and five research institutes:

- Institute for Computer Science and Control,
- Institute of Experimental Medicine,
- Institute of Enzymology,
- Institute of Technical Physics and Materials Science,
- Institute of Cognitive Neuroscience and Psychology.

Whereas the fundamental research directions have remained essentially the same in the last few years, the research infrastructure has significantly improved, primarily in the form of new laboratories and groups equipped with state-of-the-art instruments. The recently obtained research grants, student prizes and individual scholarships clearly justify that Jedlik Laboratories is a key organizational unit at PPCU FITB for maintaining the close connection between research and education - which has been one of the most important objectives of the Faculty since the beginning.

Further information: itk.ppke.hu/en/research-1/the-anyos-jedlik-laboratories

Info-Bionics Research Groups

- Analysis and Control of Dynamical Systems
- Bioinformatics
- Biomicrofluidics
- Hungarian Bionic Vision Center
- Integrative Neuroscience
- Movement Analysis and Motor Control
- Multi-photon Microscopy
- Neuromodulation
- Sensing-actuating Robotics
- Superresolution in Optical and Ultrasonic Detection (SOUND)
- Structural Biology and Proteomics
- Systems Biology of Molecular and Cellular Networks

Informatics Research Groups

- Applications of Kiloprocessor Arrays
- Artificial Intelligence and Spatial-temporal Semantics
- Data.Media.Community
- Cellular Wave Computing and High Speed Image Processing
- Experimental Mathematics
- High Performance Computing
- Microelectronic Systems and Integrated Circuits
- Mobile Sensor Platforms and Multimodal Sensing Networks
- MTA-PPKE Hungarian Natural Language Processing
- Software Defined Electronics and Virtual Instrumentation
- Simulations of Electromagnetic Fields and Field-matter Interactions
- Smart Sensory Computing
- Spintronic and Nanocomputing
Insight to Labs

Sensing-actuating Robotics Lab

György CSEREY

Non-intrusive human recognition techniques allow people to be distinguished by their biological traits without their active participation. The technique pursued in this research is gait recognition, i.e. identifying someone by the unique way he or she walks. This is obviously of particular interest in security applications, but other areas also stand to benefit from an increased access to information about gait. Examples include walking rehabilitation and shoe design.

It is difficult to measure the continuous arterial blood pressure waveform in an accurate, non-invasive manner and innovative blood pressure measurement technology is urgently needed. Our system uses a new measurement strategy provided by the OptoForce 3D force sensor, which is attached to the wrist at the radial artery.

The lab has produced preliminary results in two areas. The first one is the pure simulation of a robotic arm playing table tennis. The machine-learning part is based on reinforcement learning and combined with the modified versions of DDPG and Prioritized Experience Replay algorithms. The second is a robotic arm to reach and grasp objects.

With the Anatomically Correct Biomechatronic Hand, our aim is to restore not just basic hand functionality (like the ability to produce simple grasps and gestures), but to mimic the delicate dexterity of the human hand in order to facilitate the development of a prosthetic device. While the model is still under development, the current version is already able to perform movements in a natural and human-like manner, preserving the “feel” and behavior of the human hand.

Applications of Kiloprocessor Arrays Research Group

Péter SZOLGAY, Zoltán NAGY, András KISS, István REGULY

Many-core computers are used nowadays to solve computationally intensive problems. Many-core may currently mean 1000 processing elements, but soon several hundreds of thousands of processing elements will be available on a desktop machine. New ideas and new methods are required in algorithm development for these types of architectures. A new kind of parallel algorithms have to be developed using the cellular architecture of processors and memories.

The aim of our lab is to develop new, algorithmic and implementation-centered thinking in our students. We also plan to advance some structurally new algorithms for the algorithmic assignment categories and to establish connected software-development methods in the lab projects.

Typical assignment categories:
- spatiotemporal dynamic system-analysis,
- real-time, low power image and signal processing.
Integrative Neuroscience Research Group

István ULBERT, György KARMOS

The Laboratory incorporates several disciplines including electrophysiology, materials science, chip- and micro electromechanical systems (MEMS) research, computational research, neurology research and optical imaging research in order to investigate the physiological and pathological functions of the central nervous system.

Since 2014 the Laboratory has been involved in the Hungarian Brain Research Program.

Our main research interests include:

- bionic probe research by designing and validating various probe structures
- investigation of the cortical generators of event-related potentials, spontaneous and epileptic activity
- functional characterization of the thalamo-cortical neural networks responsible for sensory information processing
- brain computer interface studies for registration, and intervening EEG, EOG, EMG and eye movement following algorithms.

Smart Sensory Computing Lab

András HORVÁTH, Kristóf KARACS

In the Smart Sensory Computing Lab, we have a special focus on machine vision and artificial intelligence.

Many aspects of our comprehensive research are related to real-life applications, such as

- intelligent analysis of medical images (e.g., recognizing cancer cells on microscopic images, automatic eye diagnosis using fundus cameras)
- an internally developed face recognition-based access control system,
- a cell phone app helping visually impaired people to get around,
- vision systems for smart cities that identify vehicles and pedestrians as well as predict dangerous situations.

In our theoretical research we primarily focus on understanding the principles of learning and vision. A key challenge is to improve the generalization ability of learning algorithms and, more specifically, neural networks. We can learn a great deal from the human nervous system in this regard, and our goal is to avoid the necessity of huge datasets and to enable sensible inference based on just a few samples.
Superresolution in Optical, Ultrasonic, and Nanomagnetic Detection (SOUND) Lab

Miklós GYÖNGY, György CSABA

This laboratory hosts two research groups: the Imaging group, led by Miklós GYÖNGY, and the Optics, Nanomagnet ics group, led by György CSABA.

Imaging

The aim of the imaging group is to understand various wave processes and phenomena in order to map the properties of various objects, including biological tissue. Primarily ultrasound is used, however other methods, such as optics and CT, are also of interest. We are developing a portable ultrasound device, which takes images of skin using high frequencies (~20 MHz) in order to provide high-resolution (<1 mm) images. Our research into image resolution enhancement also covers CT imaging, where our recent results suggest the potential superiority of CNN approaches over classical deconvolution methods.

Optics, Nanomagnetics

Our group works on nanomagnet and spin-wave-based computing devices. These emerging computing architectures replace electrical signals by magnetic (spin-based) signals and may allow ultra-low energy and fast electronic circuits. In our lab, we are currently building a unique time-resolved magneto-optical Kerr effect (TR-MOKE) setup. The samples will be produced by our colleagues at the University of Notre Dame, USA, and the Technical University of Munich, Germany.

Systems Biology of Molecular and Cellular Networks

Attila CSIKÁSZ-NAGY

The lab combines computational system biology modelling techniques with experiments to investigate the dynamics of molecular and cellular interaction networks.

We translate the wiring diagrams of molecular interaction networks into mathematical forms and analyze the equations to understand the physiological responses the system might give. Our main research lines are broadly in the topics of cell growth and cell division. We collaborate with multiple experimental groups, who provide data for our models and platform to test our predictions. As a further step, recently we have established an experimental laboratory where we test the effects of cell-cell communication in yeast colonies and combine these with our newest computational models. We also work on theoretical ideas related to effective simulation, simulation methods and noise filtering.

Biological topics we investigate:

- Cell cycle, cell size, cell polarity and cell growth regulation
- Protein aggregation and its effect on ageing
- Evolution of biological switches and clocks
- Biocomputation
- Cell-cell communication
- Protein complex composition and abundance predictions
- Coupling between the circadian clock, cell cycle and DNA damage
Erasmus+ and Other

**Austria** University of Applied Sciences WIEN

**Belgium** Catholic University of LEUVEN

**Bulgaria** Technical University of SOFIA

**Croatia** Catholic University of Croatia, ZAGREB

**Estonia** TalTech, TALLINN

**Finland** TAMPERE University | University of JYVÄSKYLÄ

**France** University of BORDEAUX | EPITECH, PARIS | ISEP, PARIS
University of TOULOUSE III - Paul Sabatier | Catholic University of LYON

**Germany** Technical University DRESDEN | Technical University MÜNCHEN

**Italy** University of CAGLIARI | University of SIENA | University of CATANIA
Technical University of TORINO

**Netherlands** Radboud University, NIJMEGEN

**Poland** Jagiellonian University, KRAKOW | Adam Mickiewicz University, POZNAŃ

**Portugal** Catholic University of Portugal, PORTO

**Romania** University of BUCHAREST | University Babes-Bolyai, CLUJ-NAPOCA
University of ORADEA | University of TIMISOARA

**Slovenia** University of LJUBLJANA

**Spain** Ramon Llull University, BARCELONA | University of Deusto, BILBAO
Autonomous University of MADRID

**Turkey** İşık University, ISTANBUL | ISTANBUL Technical University

**Japan** National Institute of Technology, TOYAMA College

**South Korea** Catholic University of Korea (CUK), SEOUL
SEOUL National University of Science and Technology (SeoulTech)

**USA** BERKELEY University of California, CA | University of NOTRE DAME, IN
Why Choose Pázmány University...

... for your full-time study program?

As a multidisciplinary research faculty, many of our degree programmes are closely linked to research efforts that are a key to building a better world. Our philosophy is that all teachers are researchers, whereas all researchers teach as well. Students and researchers work in close cooperation at the Faculty. Our professors are easily approachable for discussions and informal consultations. You may learn from world-class scientists and are able to build networks in an international environment.

Beside our teaching excellence, Budapest is a city that suits the student lifestyle very well. During the day you can find students filling libraries, cafes and eateries, or having an afternoon beer, while at night Budapest really comes to life. The cost of living in Hungary is pretty reasonable, making it a great destination for students on a tight budget. It is a city in a stunning natural setting with a rich architectural and historical heritage, offering an unmatched combination of culture, arts, history, education, science, commerce, fine cuisine and thermal baths.

Studying in Budapest promises to be the experience of a lifetime!

... for your Erasmus+ mobility?

We welcome students for an Erasmus+ mobility with Computer Engineering and Bionic Engineering study backgrounds. We offer a wide selection of courses taught in English. BSc-level courses in English are offered in the fall term only.

Research and education are closely linked at the Faculty, and students have the opportunity to take an active part in our research work. During your exchange period, you can join a research group that is close to your interest, and you can widen your research expertise during your time here.

The Faculty offers beginners Hungarian language courses for Erasmus students for free. You’ll end up impressing your friends and family when they drop in for a visit, and you’ll be able to add that to your CV.

Mentors provide help for incoming students before arrival (e.g. in finding accommodation) as well as during the whole exchange period. A great variety of enjoyable cultural programs (from folk dance evening to walking tours) and sports activities (including hiking in the mountains) are organised by them, where exchange students have the opportunity to get to know one another better.

There is no place like Hungary. Situated in the very heart of Europe, the country is one of the 15 most popular tourist destinations in the world, and despite its relatively small size, Hungary is home to numerous World Heritage Sites.

Budapest is a relatively inexpensive city, with a vibrant student life and plenty of other students to share your experience with. There’s plenty to see in the whole region, so if you have a spare weekend or want to venture into regional Hungary, there are limitless options.

Don’t forget: gaining experience abroad is both a marketable knowledge and a lifelong experience!
Practical Information

General structure of the academic year
Semester 1 (Fall)
- Registration period: early September
- Study period: early September to mid-December
- Examination period: mid-December to the end of January

In semester 1 (Fall) there is a one-week Fall break around All Saints’ Day (the turn of October and November).

In semester 2 (Spring) there is a one-week Spring break around Easter (in March or April).

Summer holiday is normally two months (July and August), from the end of semester 2 (Spring) until the beginning of semester 1 (Fall).

Financial matters
The Hungarian currency is the Forint (Ft), the international abbreviation being HUF. Prices in shops and restaurants are uniformly quoted in forint. Credit/debit cards (especially MasterCard and Visa) are widely accepted in Hungary, and you’ll be able to use them virtually anywhere. Always check doors for logos of the credit card companies that are accepted in a particular shop. ATMs are plentiful, particularly in Budapest and larger towns. The most widely accepted international currency is euro, but US dollars are also welcome.

Health insurance
When you arrive in Hungary, make sure that you have a health insurance with you that you can use for health care services during your stay in Hungary.

If you are an EEA student, it is advisable to apply for a European Health Insurance Card (EHIC) in your home land before you leave. EU citizens are insured on the basis of their EHIC card when they are in another member state and are, from the point of view of social security, entitled to the same rights as citizens of that given member state.

If you come from outside of the European Economic Area, you should consider what kind of health insurance suits your situation the best. If you are Stipendium Hungaricum or a Scholarship Program for Christian Young People or Hungarian Diaspora scholarship holder, you are eligible for health care services in Hungary.

Climate
Hungary has a continental climate. Winters are usually cold, cloudy and humid (average temperature between 0 and −15 °C / 32 and 5 °F), summers are warm (average temperature between 27 and 32 °C / 81 and 90 °F). The average yearly rainfall is approximately 600 mm / 24 in.

Public holidays in Hungary
- 01 January: New Year’s Day
- 15 March: 1848 Revolution Memorial Day
- Good Friday, Easter Sunday and Easter Monday
- 1 May: International Labor Day
- Pentecost: Whit Sunday and Whit Monday
- 20 August: Saint Stephen’s Day
- 23 October: 1956 Revolution Memorial Day
- 1 November: All Saints’ Day
- 25-26 December: Christmas
Public transport

Budapest has an extensive public transport network of buses, trolleybuses, trams, suburban trains and subway lines. Public transport operates both during the day and at night. Monthly student passes are available for students with valid student IDs at a reduced price. The website and the app of the public transport company provide easy access to all information on daytime and night transportation services in English, and help you plan your itinerary around the city: https://futar.bkk.hu/en

Electricity

All power sockets in Hungary provide a standard voltage of 230V with a standard frequency of 50Hz. You can use all your equipment in Hungary if the outlet voltage in your own country is between 220V-240V. (This is the case in most of Europe, Australia, the United Kingdom and most countries in Africa and Asia.) If the standard voltage in your country is in the range of 100V-120V (which is most common in the US, Canada and countries in South America) you might need a voltage converter in Hungary.

Power plugs and sockets are of type C and F.

Internet Access

Hungary is ranked one of the 10 fastest countries in the world in terms of internet network speed. Free wireless (wi-fi) access is widely available throughout the country: you can find wi-fi on the premises of the university, but most shopping malls, eateries, libraries, hotels, museums etc. also offer free access to the internet.

Useful Phone Numbers

- Emergency 112
- Police 107
- Ambulance 104
- Fire Department 105
- Phone Directory Hungary 198

Estimated living costs

The information in this section outlines the estimated cost of living for a student living in Budapest. Prices are given in EUR and are on a monthly basis.

Accommodation:
- dormitory or hostel: 120-180
- room or small flat (private accommodation): 200-300

Utilities: 50-80
Laundry/Toiletries: 50
Meals: 100
Public transport (monthly student pass): 10

Further information: itk.ppke.hu/en/stay-in-pazmany

International Student Identity Card (ISIC)

With the International Student Identity Card you may travel and visit sites for a reduced price (it has to be issued in your home country). Once you start studying at a Hungarian university, you get a Hungarian Student Card (diákígazolvány), which allows you to get a discount on public transport, in museums and cinemas.

Further information: www.isic.org

Tourinform (Hungarian Tourism Agency)

Tourinform offices provide tourist information service, distribute local, regional and national tourist information publications, and also offer the national tourist publications and recommendations of Magyar Turizmus Zrt. to tourists arriving in their area.

Further information: wowhungary.com/en
A Short Guide to Hungarian Etiquette

Hungarians follow similar etiquette to many Europeans. They often pride themselves on using proper etiquette and expect others to do the same. They are usually very polite in their social interactions, and the language can be very courtly.

Status is very important in Hungarian society, and thus proper respect should be given to your colleagues, teachers and the staff of the university, too. Approaching your fellow students, your teachers or members of the staff should be done out of respect and courtesy, which are highly valued traits in Hungarian society. It is also important for Hungarians to respect and trust their superior.

Hungarians consider punctuality to be extremely important. If you expect to be delayed, notice your partner by all means, and offer an explanation. It is considered very rude to cancel a meeting at the last minute.

Hungarians enjoy socializing at home, but they also often meet at restaurants, coffee houses and pubs. Eating in a group begins when everyone’s food is served. Tipping is normal in restaurants, between 10% and 15% of the cost of the meal. If invited to a Hungarian home for a meal, bring flowers or chocolate to women, drinks to men. To indicate that you have finished eating, place your knife and fork parallel across the plate. The host will often refill an empty glass. Thus, if you do not want more to drink, leave your glass half full.

On public transportation, disembarking takes place before new passengers get on. The young and the men are supposed to cede their seats to the elderly and women, especially pregnant women or women with young children. Bodily contact is rather intimate on public transportation, as well as in shopping centers.

Courtesy towards a woman in general is considered very important. Women should be allowed to go through a door or enter a lift before men, except when entering a restaurant or pub.

Friends, family members, and close acquaintances greet and part from one another with pecks on both the left and right cheeks. A handshake is a normal greeting, but a man must always wait for the woman to offer her hand first. Informal styles of greeting and terms of address are used among younger people from the moment of initial meeting. In the university context, it is safer to address people by their titles and surnames. Calling someone by their first name before being invited to do so is considered rude.
Experience
Budapest

The capital of Hungary is full of surprises. This small country in the center of Europe has a capital that is both captivating and elegant. Coming here to study is an excellent opportunity. With its long and rich history, the city is the perfect destination for those who wish to study abroad, as it allows you to combine excellent education with quality free time. You might be very excited to see the beautiful architecture, experience the famous thermal baths, enjoy the favorable climate, immerse in the culinary delights of the Hungarian cuisine, and make a lot of amazing local and international friends. An endless number of pubs, bars and festivals make Budapest a city that never sleeps. The fact that so many Hollywood movies are filmed here is a testament to its beauty. The heart of downtown Budapest is also a UNESCO world heritage site. Budapest is also known for its many thermal baths. Their tranquil atmosphere will take you back in time to Hungary’s imperial past as part of the Austro-Hungarian Empire.

Budapest is also an excellent base for exploring other parts of Europe. Hungary is located in the heart of Europe; this way you are able to combine your studies with a fair amount of traveling. Living in Budapest is relatively cheap compared to many other EU capitals.

Recently, Budapest has been voted the best place to travel in Europe, and (together with Prague and Krakow) is one of the three cities in Central Europe regularly ranked among the top 50 most beautiful in the world. If you want to experience living in a city where East meets West, where you enjoy challenges, if you are ready to be surprised and captivated by Budapest, then this is the best place for you. Budapest is a great place to live and an even better place to study!
Pázmány Péter
Catholic University

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Faculty of Information Technology and Bionics

Budapest, Hungary
H-1083 Budapest, Práter u. 50/a., Hungary
international.office@itk.ppke.hu
(+36 1) 886 4706

www.itk.ppke.hu/en
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