



University of Szeged

Faculty of Medicine
Faculty of Dentistry
Faculty of Pharmacy



Szeged, Hungary

The University of Szeged is proud to be listed as one of the Top Universities according to the Academic Ranking of World Universities in nine consecutive years (2003–2011).



Doctor of
Medicine



Doctor of
Dental Medicine



Doctor of
Pharmacy

Preparatory Course

ENGLISH LANGUAGE PROGRAMS

Admission and Academic Bulletin

Albert Szent-Györgyi



1937



• Nobel Prize in Physiology or Medicine •

2012/2013

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Local Representative

UNIVERSITY OF SZEGED, HUNGARY

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|---|--|
| Rector | Prof. Gábor SZABÓ, Ph.D., D.Sc. Member of the Hungarian Academy of Sciences |
| Vice Rector for General Affairs | Prof. Béla RÁCZ, Ph.D., D.Sc. |
| Vice Rector for Science, Research Development and Innovation | Prof. András VARRÓ, M.D., Ph.D., D.Sc. |
| Vice Rector for Education | Prof. Mária HOMOKI-NAGY, LL.D., Ph.D. |
| Vice Rector for International Affairs and Public Relations | Prof. József PÁL, Ph.D., D.Sc. |
| General Director for Finance and Maintenance | Dr. Zoltán MAJÓ, Ph.D. |
| General Secretary of the University | Dr. Máté DÖMÖTÖR, LL.D. |

FACULTY OF MEDICINE

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|---|---|
| Dean | Prof. László VÉCSEI, M.D., Ph.D., D.Sc., Member of the Hungarian Academy of Sciences |
| Vice Dean for General and Scientific Affairs | Prof. Lajos KEMÉNY, M.D., Ph.D., D.Sc. |
| Vice Dean for Educational Affairs | Prof. István LEPRÁN, D.Pharm., Ph.D., D.Sc. |
| Vice Dean for Clinical Affairs | Prof. Attila PÁL, M.D., Ph.D. |
| Head of the Dean's Office | Dr. András LEDNITZKY, LL.D. |

FACULTY OF DENTISTRY

| | |
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| Dean | Prof. Katalin NAGY, D.D.S., Ph.D. |
| Vice Dean | Prof. Zoltán RAKONCZAY, Ph.D., D.Sc. |
| Head of the Dean's Office | Dr. Judit BOROS, LL.D. Dr. Róbert STOHL, Ph.D. |

FACULTY OF PHARMACY

| | |
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| Dean | Prof. Ferenc FÜLÖP, D.Chem., Ph.D., D.Sc. Corresponding member of the Hungarian Academy of Sciences |
| Vice Deans | Dr. Ildikó CSÓKA, D.Pharm., Ph.D. Dr. Róbert GÁSPÁR, D.Pharm., Ph.D. Prof. Judit HOHMANN, D.Chem., Ph.D., D.Sc. |
| Head of the Dean's Office | Dr. Ilona LANTOS, D.Pharm. |

Foreign Students' Secretariat

| | |
|--|--|
| Program Director | Prof. Gyula SZABÓ, M.D., Ph.D., D.Sc. |
| Advisor on housing affairs | Prof. Gábor TÓTH, Ph.D., D.Sc. |
| Head of the Foreign Students' Secretariat | Andrea LEHOCKI BALOG |
| Address: | H-6720 Szeged, Dóm tér 12, Hungary |
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| Home Page: | www.szote.u-szeged.hu/angoltit |

| | |
|---|---|
| Student Services Center (Entrance examinations abroad) | College International |
| Mail: | H-1406 Budapest 76, P.O. Box 51, Hungary |
| Address: | H-1071 Budapest, VII. Bethlen Gábor tér 2, Hungary |
| Phone: | (36-1) 413-3016, 413-3015 |
| Fax: | (36-1) 413-3030 |
| E-mail: | info@studyhungary.hu |
| Home Page: | www.studyhungary.hu |

General Information

Szeged – a University Town by the River Tisza

Szeged – a traditional university town with 30,000 students – is located 175 km south of Budapest. Szeged is conveniently accessible from Budapest by a 2.5-hour Intercity train journey. The second biggest river in Hungary, the Tisza provides a beautiful setting for the Hungarian “City of Sunshine”.

The University of Szeged is 430 years old 1581–2011

Before the 12th century, intellectual and scholarly life concentrated in the monasteries. With the growing professionalisation of society in the 12th and 13th centuries, the demand increased for educated professionals. Universities appeared in Europe from the 11th–12th century. The end of the Middle Ages signalled the arrival of modern universities where teaching and research met.

In **1581**, following the establishment of universities in other regions of Central and Eastern Europe, *István Báthory*, the Prince of Transylvania, issued the founding document for a higher educational institute in Kolozsvár (Cluj-Napoca). The Jesuit Academy (*Societatis Jesu Academia Claudiopolitana*) was organized with two faculties, the Faculty of Philosophy and the Faculty of Theology. The academy was meant to have the rank of a university from the beginning. Prince Báthory endowed the institute with the right to confer baccalaureate and master's degrees on its students. At that time the university held a unique place in the intellectual life of Hungary; it was the only institute for higher education in Hungary.

The academy was soon closed due to religious and political turmoil, but in the 17th century the

Jesuits re-established it and the institute gained more stability and prestige.

From **1753**, according to a decree passed by the Holy Roman Empress and Queen of Hungary and Bohemia, *Maria Theresia*, the institute functioned as a university, where teaching was carried out in German. The Empress was one of the most significant proponents of enlightened absolutism; her educational reforms were highly lauded. The year **1774** saw not only the introduction of mandatory education but also the start of changes for the University of Kolozsvár. After the Society of Jesus had been abolished, *Maria Theresia* entrusted the *Piarists* with the reorganization of the institute. As a result of the restructuring – in addition to the Faculties of Theology and Arts – two new faculties were established, the Faculty of Law (1774) and the Faculty of Medicine-Surgery (1775).

Later on these faculties served as the basis for the *Hungarian Royal University of Kolozsvár*, which was founded by King *Francis Joseph I* and the Hungarian Parliament in **1872**. In **1881**, the university was renamed after the king and bore his name until 1940.

In 1919, the university had to leave its founding place and after a brief stay in Budapest, found new home in Szeged. From **1921** until 1940 the *Ferenc József Tudományegyetem* (Francis Joseph University) gained more and more prestige. When in **1940** the university was divided and part of it moved back to Kolozsvár, the remaining staff and students, the laboratories and the library were reorganized. The university took the name of *Miklós Horthy*, who was a former Governor of Hungary. The first rector of this institute was *Albert Szent-Györgyi*, who received the most prestigious award of sciences in 1937, the Nobel Prize, for his research conducted at the university.

After World War II the institute was named University of Szeged. In **1951** the Faculty of Medicine formed an independent institution under the name *Medical University of Szeged*. Pharmaceutical education was started as an independent faculty (separate from the Medical University) in **1957**, and the Division of Dentistry as part of the Faculty of Medicine in **1962**. The English Language Program for foreign students was established in **1985**. In **1999** the Faculty of Medicine launched its German Language Program.

In **1987**, the University was renamed after its former Biochemistry Professor, Dean of the Faculty of Medicine, Rector, and Nobel Laureate, Albert Szent-Györgyi who was first to isolate vitamin C, extracted from paprika.

In **2000**, the Albert Szent-Györgyi Medical University became again an integrated part of the University of Szeged. The Faculty of Medicine and the Faculty of Pharmacy functioned as the *Albert Szent-Györgyi Medical and Pharmaceutical Center* until July 2007. The Faculty of Dentistry was founded in January **2007**.

The medical faculties obtain their basis for education by running high-level clinical and research work. The task of the faculties is represented by three different fields: education, research-work, prevention-treatment.

The University of Szeged is one of the most distinguished universities in Hungary and is proud to be considered as the intellectual successor of the University of Kolozsvár founded in 1581.

Facts and Figures

Number of students in the Foreign Language Programs

In the academic year 2011/2012 there are around 850 international students at the Faculty of Medicine (English and German Program), 111 at the Faculty of Dentistry, 76 at the Faculty of Pharmacy and 114 in the Preparatory courses.

University Libraries

In December 2004 a 14,684 m² new building for the Main University Library was opened. At present the Library has more than 1.8 million books, periodicals, manuscripts, microfilms and other documents, out of which there are about 138,000 items related to the medical field. The reading rooms of the library are spread out on 4 floors and are equipped with an open access collection of 350,000 volumes. The reading rooms are furnished with 1000 seats and approx. 300 computers with Internet access. This is the largest library in Central Eastern Europe. The building itself also functions as a conference center. It is the largest conference center in the region that hosts national and international conferences, exhibitions and other programs. It has more than 1300 seats in 6 halls, a theatre-hall with 700 seats, a video-conference room and an exhibition-hall on more than 200 m².

For further information please check the library's website: www.bibl.u-szeged.hu/index-ang.html.

University Hospital

The University Clinics with 1,790 beds form one of the regional medical centers in Hungary. The institution maintains high standards with sophisticated equipment and highly competent medical staff assuring superior therapy and training. Areas of study and major research efforts include endocrinology, immunology, cardiovascular system, neurobiology, gastroenterology, perinatal and pediatric diseases, nuclear medicine, etc.

As an indication of the impact of research conducted at the University of Szeged biomedical and clinico-pharmacological scientists are cited frequently in the scientific literature.

Clinically oriented courses on various subjects are organized periodically. Special Ph.D. programs are arranged, along with individual post-graduate training for Hungarian and foreign colleagues.

Accreditation and International Recognition of the Degrees

The Medical and Pharmacy Programs were accredited by the Hungarian Accreditation Committee (HAC) in 1998 and 2005. The Dental Medicine Program was accredited in the year 2006. The accreditation of all three programs was renewed in 2011.

The Faculty of Medicine and the Faculty of Pharmacy have been awarded the title Center of Excellence (for the period between the years 2006–2011) by the Hungarian Accreditation Committee.

The medical school is listed in the directory of the World Health Organization.

In 2011 the National Committee on Foreign Medical Education and Accreditation (NCFMEA) reaffirmed its prior determination that the standards and the processes used by the Hungarian Accreditation Council to accredit medical schools in Hungary are comparable to those used to accredit medical schools in the United States.

The Medical Program fulfilled all the criteria of a visiting committee of the New York State Educational Department in April 2002. The Faculty of Medicine is proud that its academic achievements have also been recognized by the State of California. Due to the accreditation, which was granted in September 2003, English Program students can participate in clinical clerkships in approved California training sites. Graduates of the English Program can also take part in postgraduate training programs in California and become licensed in California, provided all licensing requirements are satisfied.

In 2005 it was certified by SGS (Société Générale de Surveillance – the world's leading inspection, verification and certification company) that the healthcare system of the Albert Szent-Györgyi Clinical Center meets the requirements of the ISO 9001:2000 and KES 2.0 standards.

According to the 2011 web ranking of World Universities (based on web presence of the institutions) the University of Szeged was ranked as 461st out of 12,006 institutions. The survey was conducted by

Cybermetrics Lab, a research group belonging to the Consejo Superior de Investigaciones Científicas (CSIC), the largest public research body in Spain. More information about the ranking can be found on the following site: <http://www.webometrics.info>.

According to a survey conducted by Shanghai Jiao Tong University Institute of Higher Education (in nine consecutive years: 2003–2011) the University of Szeged is listed among the Top European and Top World Universities. If you would like to find out more about the survey go to: <http://ed.sjtu.edu.cn/ranking.htm>.

International Programs

The English language Program offered for foreign students at the Faculty of Medicine and the Faculty of Pharmacy started in the academic year 1985/86 and 1986/87 respectively. In 1999 a German-language medical program was also introduced for the first two years. In the academic year 2004/05 the English language dental medicine program was launched. Except for the language of instruction, the curricula for medical, pharmacy and dental medicine students correspond in subjects and duration with those for the Hungarian students.

Medical program

The Medical Program covers six years, that is, 12 semesters. The first two years serve as the foundation of basic medical knowledge. From the third year theoretical training is extended with clinical practice, where students also take part in the work of the clinical departments and the teaching hospitals. The Faculty's excellent scientific laboratories offer the students a wide range of opportunities to join high standard scientific research activities. In the last two semesters – the clerkship year – students perform clinical rotations of 37 weeks. For proper accomplishment of clinical practice certain proficiency in Hungarian language is necessary. At the conclusion of

the program (State Board Examination) the title Doctor of Medicine (medical doctor; Dr. Med.) is granted for those who have met all the requirements of the training. The degree is accepted in several countries of the world. Citizens of the EU and EEC will receive their licence automatically within the Community. Furthermore all graduates are entitled to participate in the US Medical Licensing Examination (USMLE).

Dental Medicine program

The five-year program (10 semesters) is designed to unify the basic and clinical sciences, as it is believed that scientific and professional development cannot be sharply separated but should proceed concurrently throughout the program. In the first three years the students are taught basic sciences – medical and dental courses – which are the foundation of clinical dentistry. From the second year on more emphasis is placed on the study of dental diseases and their treatment. The last two years serve the intensive clinical study of each of the various disciplines of dentistry with emphasis on the assessment and management of patients. In the final year students furthermore participate in elective programs, clinical conferences and hospital-based practices. After the successful completion of the program, students are awarded the title Doctor Medicinae Dentariae (dentist; D.M.D.).

Teaching is performed at the departments of the Medical and Dental Faculties. The Dental Faculty, which is the regional center for dental care in the south-eastern region of Hungary, has approximately 30 graduates each year.

Pharmacy program

The Academic Program offered by the Faculty of Pharmacy leads to the degree Doctor of Pharmacy. This program extends over a period of five years (10 semesters). It begins with an introduction to the basic sciences providing a basis for further pharmaceutical studies. In the second part of the program, students take part in general and special

pharmaceutical education at the university departments, teaching pharmacies, institutes, laboratories and pharmaceutical works. The faculty seeks to educate its undergraduates by promoting their intellectual development and their progressive accumulation of competence in all fields of modern pharmacy. After the successful completion of the program the title Doctor Pharmaciae is awarded (pharmacist, Dr. Pharm.). The pharmacist degree obtained in Hungary is accepted within the European Union and in several other countries in the world. The quality of the training is outstanding compared to similar Hungarian and European pharmacist training centres. The Faculty takes part in international research activities too. The training material is continuously updated in light of the most recent research results. The lecturers are internationally respected professionals and active researchers.

B.Sc./M.D. program – Anatomy Summer Course

The tradition and teaching experience of 89 years concentrated in a 2-week long intensive gross anatomy workshop, using the world-famous human anatomy preparations of the Gellért Museum in Szeged.

Precondition for participation in the course:

B.Sc. Degree in Natural, Life, Biomedical or Neuro Sciences

Aim: to repeat the clinically most important gross anatomy knowledge in order to facilitate preclinical and clinical studies at the University of Szeged.

Schedule: gross anatomy practicals every day (except Saturday and Sunday) from 9 am to 6 pm. Dissection and demonstration sessions are tutored by the senior medical staff of the Department. Short seminars supply the necessary theoretical knowledge and histological background for gross anatomy.

Time: Mid-August 2012

Place: University of Szeged, Anatomy Department

For more information contact the Foreign Students' Secretariat or see the website.

Preparatory Courses (Foundation Year)

These courses are organized for students who require additional instruction or review in basic sciences and English language to prepare for the entrance examination for the regular degree programs of the University. Completion of these courses does not imply or assure admission to the degree programs at the University of Szeged, but it improves the chance of passing the entrance examination at the end of the course. Progress is checked on a regular basis. The language of instruction is English or German. Subjects taught are Biology, Chemistry, Chemical Calculations, Physics, Medical English, Medical Latin and Hungarian language. The duration of the course is eight months, starting in the first week of October. Approx. 80 students can be accepted to the Preparatory Courses.

According to a governmental regulation Preparatory Course students are entitled to receive student cards from the academic year 2006/2007. The student card provides the following discounts:

- 50% discount on trains and buses within Hungary
- cheaper student pass for local transport
- discounts at local shops
- cheaper fares at certain taxi companies

For more information contact the Foreign Students' Secretariat or see the website.

Statement of Non-Discrimination

The University does not discriminate on the basis of age, race, color, national or ethnic origin, religion, sex, marital status or handicap.

Application and Admission Requirements (Medical, Dentistry, Pharmacy and Preparatory Course Programs)

Application Requirements

Applications are accepted from graduates of accredited high schools or colleges/universities. Both oral and written competence in English language is part of the entry requirements for the University. Applicants who have studied Biology, Chemistry (General, Inorganic, Organic) and Physics in high school enjoy preference.

Holders of the following degrees can be exempted from sitting for the entrance examination in case they have completed their studies with excellent results.

1. IB (International Baccalaureate)

Applicants have to have achieved a grade of at least 5 in the following subjects:

- English

- 2 Natural Sciences subjects (Biology, Chemistry or Physics)

2. GCE (General Certificate of Education) A or A+ level with a result of at least B+ in 3 Natural Sciences subjects

3. B. Sc. (Bachelor of Science) Degree in Natural, Biomedical, Life Sciences, Chemistry, Biology, Physics

Decisions regarding exemption from the entrance examination are within the competence of the Program Director and the Academic Board of the Faculties.

Competence in English Language is also an admission requirement.

Special consideration will be given to those applicants who have been recommended by former graduates of the University.

Transfer from other Universities

Students who have successfully pursued medical, dental medicine or pharmaceutical studies at other accredited universities can apply for admission without being obliged to take an entrance examination. Subjects of previous studies identical or similar (at least 75%) to the curriculum of the University of Szeged can be approved, meaning that admission to an upper year might be possible. Precondition of transfer from other Hungarian universities is the successful completion of the basic module (first two years) with good results. Approval for admission of transfer students is the competence of the Program Director and the Academic Board of the Faculties.

Deadline for Application

The deadline for application is June 30, 2012. Applicants are asked to apply as early as possible. Please note that places are offered on a first come first served basis. If you fail to fulfill the requirements your admission will be suspended and you will be registered on the waiting list. Late applicants are considered based on place availability.

Application Procedures

To apply for a full-time program at the University of Szeged, please carefully follow the steps posted on the website of the Foreign Students' Secretariat:

<http://www.szote.u-szeged.hu/angoltit/>

The hard copy of the application has to be sent to your local representative (see the list of representatives at <http://www.studyhungary.hu>) or if there is not any in your country, directly to the

Foreign Students' Secretariat

University of Szeged

Address: H-6720 Szeged, Dóm tér 12., Hungary

Phone: +36 (62) 342-124, fax: 36 (62)-545-028

E-mail: apply.fs@med.u-szeged.hu

Please note that all the documents can be accepted only in English; furthermore, all the Transcripts and High School Diplomas have to be attested copies in English language or certificates with an authorized English translation.

The following documents have to be submitted:

- 1. Application Form.** The Application Form has to be filled in online and must be submitted online also. The printed hard copy has to be signed and attached to the application documents.
- 2. Certified photocopy of School Leaving Certificate** from an accredited high school/senior secondary school and certificates listing all the subjects you have taken and the grades you have achieved.

Please note that the school reports should include all graded results obtained during your studies.

Transfer students also have to submit their official Transcript(s) and Course Description(s). These documents should be sent directly to us by your school.

- 3. Curriculum vitae** – Download sample form from the Secretariat's website or check the following links for sample CVs: http://jobsearchtech.about.com/library/weekly/aa_resume_templates.htm
- 4. Four recent photos** (passport size) – one attached to the Application Form
- 5. Medical certificate** – Download sample form from the Secretariat's website. The certificate should include a **Hepatitis C test, Hepatitis B vaccination card, HIV test and dyslexia test.** (A declaration from the students that he/she does not suffer from dyslexia is also acceptable. – Download sample form from the Secretariat's website). After acceptance a **chest X-ray result** has to be submitted also.
- 5. USD 200 Application Fee** (non-refundable) is payable to your local representative. If you apply directly to the University payments can

be made by bank transfer in USD to the bank account to the university program or cash payment personally in any MKB Bank branch office (www.mkb.hu):

IS International Studies
 Account (IBAN) Number:
 HU43 1030 0002 1047 6764 4012 0044
 Bank Name: MKB Bank
 Bank address:
 H-1051, Budapest, Szent István tér 11., Hungary
 (main branch: H-1056, Budapest, Váci u. 38.)
 Swift / BIC code:
 MKKBHUHB

Please note: The transfer sheet should include the name of the student as it is written in the passport and remark „Szeged Uni”.

Personal checks or money orders are not accepted.

Please note that the above mentioned net amount has to arrive to the bank account – commission charges have to be paid by the applicant.

7. **Photocopy of your valid passport.** (The validity of which has to exceed of the requested VISA by at least three month.)
8. **TOEFL test results** – in case you wish to be exempted from sitting for the English language competence test – that is part of the entrance examination – or you would like to apply to the Preparatory Course, a TOEFL test can be taken in your home country. Minimum score: 81 points. *Please use the code number 5231 at the TOEFL test when indicating your institution as a score recipient.*

Entrance Examinations

Entrance examinations are held between February and July in Hungary and at different locations in Europe, Asia, Africa and the United States. Detailed information regarding the entrance examination will be sent after the receipt of the applica-

tion. If the entrance exam is taken in the applicant's home country, information about examination will be given by the representative concerned. The applicants are allowed to participate in a maximum of two examinations during one application period, if the chance is offered by the University of Szeged. The exam consists of a written and an oral part.

300 USD Examination Fee is to be paid if the examination takes place in Szeged. In case of transfer students (when the student is subject to take an evaluation examination), the examination fee is 200 USD per subject. An unsuccessful evaluation exam cannot be repeated. In case the entrance examination takes place in the home country of the applicant, information about Application and Examination Fee will be given by the representative.

After Acceptance

If you get admitted to one of our programs you will receive a **Letter of Admission** and a **Welcome Package** which contains useful information regarding your studies and your stay in Hungary. The documents will be sent to you first as an e-mail attachment. The hard copy will be mailed to you either by your representative or directly by our University.

This is what you have to do after having received the Letter of Admission:

1. Send us the filled out and signed Proof of Enrollment and 2 copies of the Study Agreement.
2. Transfer the deposit or tuition fee (provided in your letter) to the given bank account.
3. Submit the missing application documents (if any).

Should you fail to fulfill the above requirements till the deadline indicated in your Letter of Admission, your admission will be suspended and you will be registered on the waiting list.

Entrance Examination Topics

Physics

- Describing motion (distance, speed and acceleration)
- Newton's laws of motion
- Scalar and vector quantities
- Mechanical work, kinetic and potential energy
- Elastic and inelastic collisions, conservation of linear momentum
- Uniform circular motion, centripetal force
- Mechanical advantage, simple mechanical tools (the inclined plane, the screw, the pulley)
- Pressure in fluids (Pascal's principle), Archimedes' principle, The hydraulic press
- Harmonic motion, Hooke's law
- Wave motion, longitudinal and transverse waves, resonance
- Kinetic theory of gases, the temperature
- The first and second laws of thermodynamics
- The electric field, Coulomb's law
- The electric current, Ohm's law
- Simple electric circuits. Kirchhoff's laws
- Electromagnetic induction, the transformer
- Propagation of light, reflection and refraction, optical lenses mirrors
- The structure of atoms, the electron shell and the atomic nucleus
- X-rays
- Radioactivity

Textbook

Modern technical Physics by Arthur Beiser, publisher: Benjamin-Cummings Publishing Company 4th edition, (January 1983), ISBN: 080530682X

Chemistry

General Chemistry

- Atomic theory. Classification of matter. Elements and compounds
- Basic terms: atomic and mass numbers, isotopes, the mole concept, atomic and molar masses
- Basic structure of atoms. Electronic structure of atoms: quantum numbers and atomic orbitals
- The periodic table. Periodic properties
- Chemical bonding: ionic, covalent and metallic bonding
- Intermolecular forces
- Naming of molecular and ionic substances
- States of matter; changes of state. Properties of gases and liquids
- Properties of solids. Types of crystal lattice
- Lewis structures. Geometry of molecules
- Solutions, solubility. Ways of expressing concentration
- Chemical reactions: types of inorganic chemical reactions. Stoichiometry
- Chemical reactions: rate of chemical reactions. Catalysts
- Thermochemistry. Heat of chemical reactions. Hess's law
- Chemical equilibrium. Law of mass action
- Acids and bases. The pH
- Electrochemistry: electrode potential, electrochemical cells
- Electrolysis

Inorganic Chemistry

- Non-metals
- Metals
- d-Block elements

Organic Chemistry

- Properties of carbon. Functional groups. Types of organic chemical reactions
- Alkanes. Alkyl groups
- Alkenes and alkynes
- Aromatic hydrocarbons
- Alkyl halides
- Alcohols
- Ethers and phenols
- Aldehydes and ketones
- Carboxylic acids. Substituted carboxylic acids
- Amines
- Heterocyclic compounds
- Stereochemistry. Isomerism. Optical activity
- Carbohydrates. Conformation of monosaccharides
- Monosaccharides, disaccharides and oligosaccharides

- Amino acids, peptides and proteins
- Carboxylic acid derivatives. Lipids
- Nucleic acids

Textbook

McMurry, J., Fay, R.C.: Chemistry, 4th edition, Ed.: Prentice-Hall International, Inc., Englewood Cliffs, New Jersey, 07458, 2001

Biology

1. The Living World

- Classification
- Levels of organization

2. Cell Biology

- Chemical Components of a Cell
- Elements and inorganic compounds
- Lipids, carbohydrates, proteins and nucleic acids colloidal systems
- Cellular Metabolism
- Enzymes
- Energy production in glycolysis, Krebs cycle and terminal oxidation Photosynthesizes
- The biosynthesis of lipids, carbohydrates, proteins and nucleic acids
- Cellular Ultrastructure (Organelles), Cellular physiology, Membrane transport
- Endocytosis and exocytosis
- The action potential cellular movements

3. Organic Biology

- Nutrition
- Respiration
- Excretion
- Circulation Locomotion
- Reproduction
- Sexual and asexual reproduction growth and development
- Regulation
- Homeostasis and regulation by hormones
- Nervous regulation
- The nervous system
- The synapse and neurotransmitters
- Autonomic nervous system
- The spinal cord
- The brain
- Memory and sleep

- Perception
- Receptors and perceptive organs
- The evolution of the systems listed above
- Structure and function of the corresponding human-organs
- Animal behavior
- Innate and learned behavior

4. The Environment

- Ecology, ecosystems
- Food chains, limiting factors, cycles in nature
- Populations and communities

5. Genetics

- Molecular genetics
- Properties of the genetic material
- Mutation, recombination
- The genetic code
- The operon
- Classical genetics
- Modes of inheritance (discontinuous traits)
- Linkage
- Sex chromosomes
- Continuous traits genetic counselling

6. Evolution

- Population genetics
- Chemical and biological evolution
- Human evolution

Textbook

John H. Postlethwait and Janet L. Hopson: The Nature of Life 3rd edition. McGraw-Hill, Inc. 1995. ISBN 0-07-113600-2

Useful websites for students studying

Molecular and cell biology

- <http://www.cellbio.com>
- <http://www.cellbioed.org>
- <http://www.cellsalive.com>
- <http://www.bioanim.com>
- http://www.steve.gb.com/science/cell_biology.html

Useful websites for students studying

Genetics

- <http://www.doegenomes.org>
- <http://www.KoshlandScienceMuseum.org>
- <http://www.synapses.co.uk/genetics>
- <http://www.clcbio.com>

After Acceptance

Welcome Package

The University of Szeged welcomes all international students wishing to study in Hungary.

A Welcome Package will be automatically sent to you after acceptance in order to insure your safe arrival and a smooth adaptation to your new environment. The Welcome Package includes all the necessary information on services regarding visa, transfer to Szeged, arrangement of temporary and final accommodation, purchase and order of textbooks, health insurance.

For arrangement of flight tickets contact your local representative.

The Foreign Students' Secretariat also provides help with the arrangement of temporary accommodation (booking rooms at hotels or guest houses).

Useful links

Hungary: www.fsz.bme.hu/hungary/homepage.html

Szeged: http://tip.szegedvaros.hu/start_en.php

Ministry of Foreign Affairs: www.mfa.gov.hu

Airlines worldwide: www.wegolo.com

Timetable of trains: www.mav-start.hu

University of Szeged: www.u-szeged.hu

Students Service Center: www.studyhungary.hu

Passport, visa and residence permit

On the website of the Ministry of Foreign Affairs (http://www.kulugyminiszterium.hu/kum/en/bal/consular_services/Entry_of_Foreigners_to_Hungary/visa_exemption) you can find a list of those countries whose citizens are exempted from the visa obligation if they are travelling to Hungary and hold a valid travel document entitling them to visa-free travel.

However, 3–5 days after entering the country they need to contact the Immigration Office and apply for their residence permit. Citizens of other

states are required to have a student visa which authorizes them to a single entry for receiving a residence permit and to stay for maximum 30 days in Hungary.

When applying for a visa, students need a valid passport (the validity of which has to exceed that of the requested visa by at least three months). 3–5 days after entering the country they need to contact the Immigration Office and apply for their residence permit. For details regarding the visa and downloading the application form visit: www.kulugyminiszterium.hu/kum/en/bal

Accommodation

The University offers hostel facilities for international students in one-, two- or three-person units equipped with kitchen and bathroom. The hostel accommodation is provided on a first come, first served basis. Hostel monthly rent: 170–250 USD; monthly utilities: 90–160 USD.

Apartments for rent are also available for international students. The University will assist students free of any charge in finding accommodation and signing the contract with the landlords.

Health Insurance

A general health insurance valid for Hungary is a requirement for registration for each semester at the University of Szeged.

Generali-Providencia Insurance: The Generali-Providencia Insurance Company offers students a health insurance plan. Medical care is provided by the University doctors on campus. Conditions are available at registration. The insurance is valid only in Hungary.

International health insurance: International health insurances are only acceptable if they offer full coverage in Hungary. The insurance is usually contracted in the student's home coun-

try. The costs of medical treatments have to be paid by the student. A refund of the costs is to be claimed retrospectively from the insurance company.

European Health Insurance Card: According to the European Union law, citizens from EEA countries are subjects of free medical care in emergency cases, provided they have a valid European Health Insurance Card (EHIC) at hand from an EEA member home country. However, an appropriate insurance is still needed to ensure one is fully covered for all eventualities. The EHIC can only be used in the framework of public health care provision.

Cost of Living

Cost of living (including board and lodging) in Szeged is about USD 600–700/month.

Required Textbooks

The list of textbooks can be downloaded from the University's website. Students can purchase the books in their home country or they have the opportunity to buy or order them in Hungary. To assist students' work, the University issues handouts.

Open Days

Open days are organized on request for a minimum number of 10 participants. For details please contact your local representative.

Individual visitors cannot be offered the opportunity to take part in a guided campus tour.

However, if you are coming to a visit and would like to meet one of our admission officers, please contact us in advance by e-mail or phone.

Fees and Costs*

| Tuition fee in USD | | | | | Additional fees in USD | | | | |
|--------------------|------|------------------|------------------|----------------------|--------------------------------|---|------------------|---------------------|--|
| Faculty | Year | 1st semester fee | 2nd semester fee | Total | Application fee ⁽²⁾ | Entrance examination fee ⁽³⁾ | Registration fee | Annual material fee | Summer practice if spent in Hungary |
| Medicine | 1 | 8,200 | 6,700 | 14,900 | 200 | 300 | 220 | – | 500 ⁽⁴⁾ |
| | 2–5 | 7,450 | 7,450 | 14,900 | – | – | – | – | 1,000 ⁽⁴⁾ |
| | 6 | | | 7,450 ⁽¹⁾ | – | – | – | – | – |
| Dentistry | 1 | 7,500 | 6,100 | 13,600 | 200 | 300 | 220 | 600 | 500 ⁽⁵⁾ |
| | 2 | 6,800 | 6,800 | 13,600 | – | – | – | 600 | 600 ⁽⁵⁾ |
| | 3–5 | 6,800 | 6,800 | 13,600 | – | – | – | 1,500 | 600 ⁽⁵⁾ 800 ⁽⁵⁾ |
| Pharmacy | 1 | 5,700 | 3,800 | 9,500 | 200 | 300 | 220 | – | – |
| | 2–3 | 4,500 | 4,500 | 9,000 | – | – | – | – | 300 ⁽⁶⁾ |
| | 4 | 4,500 | 4,500 | 9,000 | – | – | – | – | 600 ⁽⁶⁾ |
| | 5 | 4,500 | 4,500 | 9,000 | – | – | – | – | – |
| Tuition fee in EUR | | | | | Additional fees in EUR | | | | |
| Preparatory Course | | 3,300 | 2,200 | 5,500 | 200 | – | 220 | – | – |

- (1) The student is entitled to spend half of the sixth year practices at the University hospitals. If the student would like to accomplish more than half of the internships at the University, the fee has to be paid on a *pro rata* basis.
- (2) If you apply only to the University of Szeged. In case of multiple applications, please contact your representative. **For payment details please see page 7, point 6.**
- (3) If the examination takes place in Szeged. If the examination is taken at other locations, information about the Examination Fee will be given by the official representative. In case of transfer students who have to take an evaluation examination the examination fee is 200 USD per subject.
- (4) Fees of: Nursing Practice (after 1st year), Internal Medicine Practice (after 3rd year), Surgery Practice (after 4th year)
- (5) Fees of: Nursing Practice (after 1st year), Odontotechnology Practice (after 2nd year), Oral Surgery Practice (after 3rd year), Basic Treatment in Dental Medicine Practice (after 4th year)
- (6) Fees of 1 month summer practice (after 2nd and 3rd year), 2 month summer practice (after 4th year)

Deadlines for Payment

Faculty of Medicine, Dentistry, Pharmacy

Year 1

1st semester: as indicated in the Letter of Admission

2nd semester: till the end of the course registration period

Years 2–5(6)

1st and 2nd semester: till the end of the course registration period

Mode of Payment

For details please see your Letter of Admission.

Refund Policy

For details please see your Letter of Admission.

* These fees are subject to change in case the student's academic progress does not follow the suggested study plan.

Academic Calendar, Academic Policies, Curricula

Structure of Studies

Teaching is performed under the credit system in modules. Students have to fulfill all the requirements of a certain module in order to enter the next module. This means that a given number of credits has to be acquired and the **Criteria Subjects** have to be completed (*Physical Training, Summer practices, Hungarian Language*).

Required number of credits to be eligible to sit for the Final (State Board) Examination:

Doctor of Medicine 360 credits

Doctor of Dental Medicine 300 credits

Doctor of Pharmacy 300 credits

Students are provided a detailed suggested study plan on registration.

Types of Evaluation

Term Mark (gyakorlati jegy) – continuous testing of practical knowledge, 5-grade system

Qualification (3) (beszámoló [3]) – evaluation of the subject matter in 3-grade system

Evaluation (5) (beszámoló [5]) – evaluation of the subject matter of one semester in 5-grade system

Examination (kollokvium) – evaluation of the subject matter of one semester in 5-grade system

Comprehensive Exam (szigorlat) – evaluation of the subject of one, two or more semesters in 5-grade system

Grading System

Five-grade system

| | |
|---------------|-----------|
| 5 (jeles) | Excellent |
| 4 (jó) | Good |
| 3 (közepes) | Accepted |
| 2 (elégséges) | Passed |
| 1 (elégtelen) | Failed |

Three-grade system

| | |
|--------------------|-------------------------|
| Kiválóan megfelelt | Highly met requirements |
| Megfelelt | Met requirements |
| Nem felelt meg | Not met requirements |

Academic Calendar

Fall Semester: beginning of September 2012, through end of January 2013.

Spring Semester: beginning of February 2013, through beginning of July 2013.

Suggested Study Plans* at the Faculty of Medicine

First Year

| Compulsory Subjects | 1 st semester | | | | 2 nd semester | | | |
|-------------------------------------|--------------------------|--------|---------|-----------|--------------------------|--------|---------|-----------|
| | Weekly hours | | Credits | Exam form | Weekly hours | | Credits | Exam form |
| | Theory | Pract. | | | Theory | Pract. | | |
| Anatomy, Histology and Embryology | 2 | 5 | 7 | Exam | 2 | 5 | 7 | Exam |
| Cell Biology and Molecular Genetics | 2 | 2 | 6 | Exam | 2 | 2 | 6 | Exam |
| Medical Chemistry | 3 | 3 | 6 | Exam | 3 | 3 | 6 | Exam |
| Medical Physics and Statistics | 3 | 2 | 4 | Exam | 2 | 2 | 4 | Exam |
| First Aid and Resuscitation | – | 2 | 2 | Eval(5) | – | – | – | – |

Abbreviations: **Exam** – Examination, **Eval(5)** – Evaluation

Compulsory Elective Subjects: Basics in Molecular Biology, Bioinorganic Chemistry, Biostatistical Calculations, Cytomorphology and Microtechnics, Developmental Genetics, Frontiers of Molecular Biology, Genetical Analysis, Introduction to Analytical Chemistry, Introduction to Chemistry, Introduction to Medical Informatics, Introduction to Medicine, Introduction to Psychology, Communication, Modern Instrumental Analysis and Separation Methods, Neurocytology, Steric Structure of Biopolymers.

Elective Subject: Latin Language.

Criteria Subjects: Hungarian Language, Physical Training, Nursing Summer Practice.

Second Year

| Compulsory Subjects | 1 st semester | | | | 2 nd semester | | | |
|-----------------------------------|--------------------------|--------|---------|-----------|--------------------------|--------|---------|-----------|
| | Weekly hours | | Credits | Exam form | Weekly hours | | Credits | Exam form |
| | Theory | Pract. | | | Theory | Pract. | | |
| Anatomy, Histology and Embryology | 2 | 5 | 8 | Exam | 2 | 5 | 8 | ComEx |
| Biochemistry | 3 | 2 | 6 | Exam | 4 | 2 | 6 | ComEx |
| Medical Physiology | 6 | 2 | 9 | Exam | 4 | 2 | 9 | ComEx |

Abbreviations: **Exam** – Examination, **ComEx** – Comprehensive Examination

Compulsory Elective Subjects: Biochemical Basics of Preventive Medicine, Cardiac Electrophysiology as a Basic Property of Cardiac Function, Biochemistry Seminar, Medical Anthropology, Medical Physiology (Seminar), Medical Sociology, Molecular Cytology and Histology, Molecular Developmental Biology.

Elective Subjects: Animal Experiments in Medicine, Mathematical and Statistical Modelling in Medicine, Body Development and Diseases and a Molecular Biological Background.

Criteria Subjects: Hungarian Language, Physical Training.

Third Year

| Compulsory Subjects | 1 st semester | | | | 2 nd semester | | | |
|--|--------------------------|--------|---------|-----------|--------------------------|--------|---------|-----------|
| | Weekly hours | | Credits | Exam form | Weekly hours | | Credits | Exam form |
| | Theory | Pract. | | | Theory | Pract. | | |
| Pathology | 3 | 3 | 6 | Exam | 2 | 4 | 6 | ComEx |
| Pathophysiology | 3 | 2 | 5 | Exam | 3 | 2 | 5 | ComEx |
| Microbiology and Immunology | 3 | 2 | 5 | Exam | 3 | 2 | 5 | ComEx |
| Internal Medicine | – | – | – | – | 3 | 2 | 3 | Exam |
| Clinical Diagnostics (Internal Medicine) | 2 | 2 | 3 | Exam | – | – | – | – |
| Clinical Diagnostics (Surgery) | – | – | – | – | 2 | 2 | 3 | Exam |
| Ethics in Medicine | – | – | – | – | 1 | 2 | 2 | Exam |
| Medical Psychology | – | – | – | – | 1 | 1 | 2 | TMark |

Abbreviations: **Exam** – Examination, **ComEx** – Comprehensive Examination, **TMark** – Term Mark

Compulsory Elective Subjects: Basic Medical Skills, Advanced Medical Skills, Gerontology, Microbiological Problems in Medical Practice, Microsurgery, Molecular Medicine, Pathophysiological Aspects of Laboratory Medicine, Surgical Techniques, Pathophysiology of Sepsis at the Bedside, Body Development and Diseases and a Molecular Biological Background.

Elective Subjects: Animal Experiments in Medicine, Basic Immunopathology, Cerebral Blood flow and Metabolism, Mathematical and Statistical Modeling in Medicine.

Criteria Subjects: Hungarian Language, Internal Medicine Summer Practice, Physical Training.

Fourth Year

| Compulsory Subjects | 1 st semester | | | | 2 nd semester | | | |
|----------------------------|--------------------------|--------|---------|-----------|--------------------------|--------|---------|-----------|
| | Weekly hours | | Credits | Exam form | Weekly hours | | Credits | Exam form |
| | Theory | Pract. | | | Theory | Pract. | | |
| Public Health | 2 | 2 | 3 | Exam | 2 | 2 | 3 | Exam |
| Orthopedics | 2 | 2 | 3 | Exam | – | – | – | – |
| Pharmacology | 3 | 2 | 5 | Exam | 4 | 2 | 5 | ComEx |
| Pulmonology | 1 | 2 | 2 | Exam | – | – | – | – |
| Radiology | 1 | 1 | 2 | Qual(3) | 1 | 1 | 2 | Exam |
| Surgery | 2 | 2 | 3 | Qual(3) | 2 | 2 | 3 | Exam |
| Obstetrics and Gynaecology | 3 | 2 | 4 | Exam | 3 | 2 | 4 | Qual(3) |
| Delivery-Room | total 3 days | | – | S | – | – | – | – |
| Internal Medicine | 4 | 2 | 5 | Exam | 5 | 2 | 5 | Exam |
| Clinical Oncology | 2 | – | 2 | Exam | – | – | – | – |
| Medical Psychology | 1 | 1 | 1 | Eval(5) | – | – | – | – |

Abbreviations: **TMark** – Term Mark, **Exam** – Examination, **ComEx** – Comprehensive Examination, **Qual(3)** – Qualification (3), **Eval(5)** – Evaluation (5), **S** – Signature

Compulsory Elective Subjects: Advanced Biostatistics, Basic Biostatistics, Cases in Medical Microbiology and Infectious Diseases, Child and Adolescent Psychiatry and Mentalhygiene, Clinical Immunology, Family Medicine, Health and Social Policy, Hungarian Language, Introduction to Health Economics, Laboratory Diagnostics in Clinical Practice, Medical Informatics, Microsurgery, Non-Conventional Medical Propedeutics, Nuclear Medicine, Pharmacology Cases, Pharmacotherapy, Physiotherapy, Rehabilitation, Rheumatology, Stomatology, Tropical Diseases.

Elective Subjects: Animal Experiments in Medicine, Clinical Pharmacology, Global Perspectives of Modern Management of Acute Bleeding in Obstetrics, Modern Approach of the Gynecological Laparoscopy, Sexual Disorders-Gynecological Aspects.

Criteria Subjects: Examination in Behavioural Sciences, Surgery Summer Practice, Physical Training.

Fifth Year

| Compulsory Subjects | 1 st semester | | | | 2 nd semester | | | |
|--|--------------------------|--------|---------|-----------|--------------------------|----------|---------|-----------|
| | Weekly hours | | Credits | Exam form | Weekly hours | | Credits | Exam form |
| | Theory | Pract. | | | Theory | Pract. | | |
| Dermatology | 3 | 2 | 4 | Exam | – | – | – | – |
| Forensic Medicine | 1 | 2 | 3 | Exam | 1 | 2 | 3 | Exam |
| Internal Medicine – Cardiology, Hematology | 2 | – | 3 | Exam | – | – | – | – |
| Internal Medicine – Infectology Practice | – | 2 | 0 | S | – | – | – | – |
| Internal Medicine | – | – | – | – | 2 | total 16 | 3 | Qual(3) |
| Neurology | 1 | 2 | 3 | Exam | 1 | 1 | 2 | Qual(3) |
| Ophthalmology | – | – | – | – | 2 | 2 | 3 | Exam |
| Oto-Rhino-Laryngology | 2 | 3 | 4 | Exam | – | – | – | – |
| Pediatrics | 3 | 2 | 5 | Exam | 2 | 2 | 4 | Eval(5) |
| Psychiatry | 1 | 1 | 2 | Qual(3) | 2 | 1 | 3 | Exam |
| Anesthesiology and Intensive Therapy | 2 | 1 | 1 | Eval(5) | 2 | 1 | 2 | Exam |
| Surgery | 1 | 1 | 2 | Qual(3) | – | – | – | – |
| Traumatology | – | – | – | – | 2 | 2 | 3 | Exam |
| Urology | – | – | – | – | 1 | 2 | 2 | Exam |

Abbreviations: **Exam** – Examination, **Qual(3)** – Qualification (3), **Eval(3)** – Evaluation (5), **S** – Signature, **TMark** – Term Mark

Compulsory Elective Subjects: Advanced Biostatistics, Basic Biostatistics, Cases in Medical Microbiology and Infectious Diseases, Child and Adolescent Psychiatry and Mentalhygiene, Clinical Genetics, Clinical Immunology, Family Medicine, Health and Social Policy, Hungarian Language, Introduction to Health Economics, Laboratory Diagnostics in Clinical Practice, Medical Informatics, Microsurgery, Neurosurgery, Non-Conventional Medical Propedeutics, Nuclear Medicine, Pharmacology Cases, Pharmacotherapy, Physiotherapy, Diseases of the Temporomandibular System, Introduction to Aviation and Space Medicine, The Clinical Basics of Aviation and Space Medicine, The Language of Effective Doctor-Patient Communication, Rehabilitation, Rheumatology, Risk Analysis, Management and Communication, Stomatology, Tropical Diseases, Clinical Aspects of Mood Disorders.

Elective Subjects: Animal Experiments in Medicine, Clinical Pharmacology, Global Perspectives of Modern Management of Acute Bleeding in Obstetrics, Modern Approach of the Gynecological Laparoscopy, Sexual Disorders-Gynecological Aspects, Biophysics of Hearing.

Sixth Year

| Compulsory Subjects | Practice | Exam form |
|--|--------------------|---------------------------|
| Internal Medicine <i>including</i> General Practice | 10 weeks 1 week | Comprehensive Examination |
| Surgery | 7 weeks | Comprehensive Examination |
| Neurology | 4 weeks | Comprehensive Examination |
| Psychiatry | 4 weeks | Comprehensive Examination |
| Obstetrics and Gynaecology | 4 weeks | Comprehensive Examination |
| Pediatrics <i>including</i> District Pediatric Consultation | 8 weeks 1 week | Comprehensive Examination |
| Thesis | – | Defence |

Study Plans at the Faculty of Dentistry

First Year

| Compulsory Subjects | 1 st semester | | | | 2 nd semester | | | |
|-------------------------------------|--------------------------|--------|---------|-----------|--------------------------|--------|---------|-----------|
| | Weekly hours | | Credits | Exam form | Weekly hours | | Credits | Exam form |
| | Theory | Pract. | | | Theory | Pract. | | |
| Anatomy, Histology and Embryology | 2 | 5 | 6 | Exam | 2 | 5 | 6 | Exam |
| Cell Biology and Molecular Genetics | 2 | 2 | 3 | Exam | 2 | 2 | 3 | Exam |
| Medical Physics and Statistics | 3 | 2 | 3 | Exam | 2 | 2 | 4 | Exam |
| Medical Chemistry | 3 | 3 | 4 | Exam | 3 | 3 | 4 | Exam |
| Dental Instruments | 1 | 1 | 2 | Eval(5) | – | – | – | – |
| Dental Anatomy | 2 | 1 | 3 | Exam | – | – | – | – |
| First Aid and Resuscitation | – | 2 | 1 | TMark | – | – | – | – |

Abbreviations: Exam – Examination, TMark – Term Mark, Eval(5) – Evaluation

Compulsory Elective Subjects: Introduction to Medicine, Biostatistical Calculation, Basics of Molecular Biology, Frontiers in Molecular Biology, Genetical Analysis, Cytomorphology and Microtechnics, Introduction to Analytical Chemistry, Bioinorganic Chemistry, Introduction to Informatics, Communication in Dentistry, Neurocytology, Modern Instrumental Analysis and Separation Methods, Steric Structure of Biopolymers, Introduction to Chemistry.

Elective Subject: General Elective Subjects, Language Courses (University of Szeged).

Criteria Subjects: Hungarian Language, Nursing Summer Practice, Physical Training, Medical Latin Language.

Second Year

| Compulsory Subjects | 1 st semester | | | | 2 nd semester | | | |
|-----------------------------------|--------------------------|--------|---------|-----------|--------------------------|--------|---------|-----------|
| | Weekly hours | | Credits | Exam form | Weekly hours | | Credits | Exam form |
| | Theory | Pract. | | | Theory | Pract. | | |
| Anatomy, Histology and Embryology | 2 | 5 | 7 | Exam | 2 | 5 | 7 | ComEx |
| Biochemistry | 3 | 2 | 5 | Exam | 4 | 2 | 6 | ComEx |
| Physiology for Dental Students | 6 | 2 | 7 | Exam | 4 | 2 | 8 | ComEx |
| Ethics in Medicine | 1 | 1 | 1 | Exam | – | – | – | – |
| Medical Psychology | 1 | 1 | 1 | Exam | – | – | – | – |
| Medical Sociology | – | – | – | – | 1 | – | 1 | Exam |
| Oral Biology | – | – | – | – | 1 | 1 | 2 | Exam |

Abbreviations: Exam – Examination, ComEx – Comprehensive Examination

Compulsory Elective Subjects: Medical Physiology Seminar, Biochemistry Seminar, Molecular Cytology and Histology, Dental Materials and Technology, Medical Anthropology, Molecular Developmental Biology.

Elective Subjects: Animal Experiments in Medicine, Mathematical and Statistical Modelling in Medicine, Biochemical Basics of Preventive Medicine, General Elective Subjects, Language Courses (University of Szeged).

Criteria Subjects: Hungarian Language, Odontotechnological Summer Practice, Physical Training.

Third Year

| Compulsory Subjects | 1 st semester | | | | 2 nd semester | | | |
|--|--------------------------|--------|---------|-----------|--------------------------|--------|---------|-----------|
| | Weekly hours | | Credits | Exam form | Weekly hours | | Credits | Exam form |
| | Theory | Pract. | | | Theory | Pract. | | |
| Pathophysiology | 2 | 2 | 3 | Exam | 3 | 2 | 3 | Exam |
| Pathology and Oral Pathology | 3 | 2 | 3 | Exam | 2 | 2 | 3 | Exam |
| Microbiology and Immunology | 3 | 1 | 3 | Exam | – | – | – | – |
| Pharmacology | 2 | 1 | 2 | Eval(5) | 2 | 1 | 2 | Exam |
| Public Health | 1 | – | 1 | Eval(5) | 1 | 1 | 2 | Exam |
| Gnatology | 1 | 3 | 1+3 (4) | Ev+TM | – | – | – | – |
| Introduction to Internal Medicine | 1 | – | 1 | Eval(5) | – | – | – | – |
| Introduction to Surgery | 1 | – | 1 | Eval(5) | – | – | – | – |
| Advanced Imaging Techniques in Dentistry | – | – | – | – | 1 | 1 | 1 | Eval(5) |
| General and Dental Radiology | 2 | 2 | 3 | Exam | – | – | – | – |
| Preclinical Course of Operative Dentistry | 1 | 4 | 2+1 (3) | Ev+TM | 1 | 4 | 2+1 (3) | Ev+TM |
| Preclinical Course of Operative Dentistry Preliminary Exam | – | – | – | – | – | – | – | PE |
| Preclinical Course of Prosthodontics | 1 | 2 | 1+1 (2) | Ev+TM | 1 | 4 | 1+3 (4) | Ev+TM |
| Preclinical Course of Oral Surgery | – | – | – | – | 2 | 1 | 2 | Exam |

Abbreviations: **Exam** – Examination, **TMark** – Term Mark, **Eval(5)** – Evaluation, **Ev+TM** – Theory: Eval(5) + Pract.: TMark, **PE** – Preliminary Exam

Compulsory Elective Subjects: Bio- and Alloplastic Materials in Dentistry, Surgical Techniques, Microsurgery, Antimicrobial Chemotherapy, Microsurgery, Medical Informatics.

Elective Subjects: Basic Medical Skills, Advanced Medical Skills, Basic Immunopathology, Animal Experiments in Medicine, General Elective Subjects, Language Courses (University of Szeged).

Criteria Subjects: Preclinical Course of Prosthodontics and Gnatology, Dentist-Patient Communication, Hungarian Language, Oral Surgery Summer Practice.

Fourth Year

| Compulsory Subjects | 1 st semester | | | | 2 nd semester | | | |
|---|--------------------------|---------|---------|-----------|--------------------------|--------|---------|-----------|
| | Weekly hours | | Credits | Exam form | Weekly hours | | Credits | Exam form |
| | Theory | Pract. | | | Theory | Pract. | | |
| In the General Clinical Module | | | | | | | | |
| Internal Medicine | 3 | 2 | 4 | Exam | 2 | 1 | 3 | Exam |
| Dermatology | 1 | total 3 | 1 | Exam | – | – | – | – |
| Neurology | 1 | 1 | 2 | Exam | – | – | – | – |
| Forensic Medicine | 1 | – | 2 | Exam | – | – | – | – |
| Surgery | – | – | – | – | 2 | 1 | 3 | Exam |
| Obstetrics and Gynecology | – | – | – | – | 1 | – | 1 | Eval(5) |
| Psychiatry | – | – | – | – | 1 | 1 | 1 | Eval(5) |
| Oxyology Practice | – | – | – | – | – | 2 | 2 | TMark |
| In the Dental Clinical Module | | | | | | | | |
| Operative Dentistry | 1 | 6 | 2+2 (4) | Ev+TM | 1 | 5 | 2+2 (4) | Ev+TM |
| Operative Dentistry Preliminary Exam | – | – | – | – | – | – | – | PE |
| Endodontics | 1 | – | 2 | Exam | – | – | – | – |
| Prosthodontics | 1 | 7 | 1+4 (5) | Ev+TM | 1 | 7 | 1+4 (5) | Ev+TM |
| Prosthodontics Preliminary Exam | – | – | – | – | – | – | – | PE |
| Oral Surgery | – | 3 | 1 | TMark | – | 3 | 2 | TMark |
| Oral Medicine | 2 | 1 | 3 | Exam | 1 | 2 | 3 | Eval(5) |
| Oral Medicine Preliminary Exam | – | – | – | – | – | – | – | PE |
| Infection Control in Dentistry | 1 | 1 | 2 | Exam | – | – | – | – |
| Dental Diagnostics and Treatment Planning | – | – | – | – | 1 | 1 | 2 | Eval(5) |
| Pediatric Dentistry | – | – | – | – | 1 | 2 | 1+1 (2) | Ex+TM |
| Periodontology | 1 | 2 | 1+2 (3) | Ex+TM | 1 | 2 | 1+2 (3) | Ev+TM |
| Periodontology Preliminary Exam | – | – | – | – | – | – | – | PE |

Abbreviations: **Exam** – Examination, **TMark** – Term Mark, **Eval(5)** – Evaluation, **Ev+TM** – Theory: Eval(5) + Pract.: TMark, **Ex+TM** – Theory: Exam + Pract.: TMark, **PE** – Preliminary Exam

Compulsory Elective Subjects: Anesthesiology and Oxyology in Dentistry, Esthetic Dentistry, Surgical Considerations in Dentistry.

Elective Subjects: Echocardiography, Modern Diagnostic and Therapeutic Approach of Hematology, Global Perspectives of Modern Management of Acute Bleeding in Obstetrics, Sexual Disorders – Gynecological Aspects, Modern Approach of the Gynecological Laparoscopy, Actual Problems in Obstetric Immunology, Dental Biometry and Evaluation of Research Results, The Investigation of Male and Female Infertility and the Importance of Andrological Aspects, The Use of Gynecological Endoscopy with Respect on Average and Special Applications, Gynecological Endocrinology and Infertility, Modern Diagnostic and Therapeutic Approach of Hematology, Arythmology, General Elective Subjects, Language Courses (University of Szeged).

Criteria Subjects: Basic Treatment in Dental Medicine Summer Practice, Hungarian Language.

Fifth Year

| Compulsory Subjects | 1 st semester | | | | 2 nd semester | | | |
|--------------------------------------|--------------------------|---------|---------|-----------|--------------------------|---------|---------|-----------|
| | Weekly hours | | Credits | Exam form | Weekly hours | | Credits | Exam form |
| | Theory | Pract. | | | Theory | Pract. | | |
| In the General Clinical Modul | | | | | | | | |
| Oto-Rhino-Laryngology | 2 | 1 | 3 | Eval(5) | – | – | – | – |
| Pediatrics | 2 | total 7 | 2 | Exam | – | – | – | – |
| Ophthalmology | – | – | – | – | 1 | total 3 | 1 | Exam |
| Medical Genetics | – | – | – | – | 1 | – | 1 | Eval(5) |
| In the Dental Clinical Modul | | | | | | | | |
| Prosthodontics | – | 6 | 3 | TMark | – | 6 | 3 | TMark |
| Operative Dentistry | – | 4 | 2 | TMark | – | 6 | 3 | TMark |
| Oral Surgery | 2 | 1+3 (4) | 4 | Ev+TM | – | 6 | 4 | TMark |
| Pediatric Dentistry | 1 | 4 | 2+2 (4) | Ev+TM | – | 3 | 2 | TMark |
| Orthodontics | 1 | 2 | 2+1 (3) | Ex+TM | 1 | 2 | 2+1 (3) | Ev+TM |
| Periodontology | 1 | 2 | 2+1 (3) | Ev+TM | 1 | 2 | 0+2 (2) | S+TM |
| Practice Management in Dentistry | 2 | – | 2 | Exam | – | – | – | – |
| Dental Implantology | 2 | – | 2 | Eval(5) | – | 2 | 2 | TMark |
| Preventive Dentistry | 1 | 1 | 1+1 (2) | Ex+TM | – | – | – | – |
| Prosthodontics and Implantology | – | – | – | – | – | – | – | ComEx |
| Operative Dentistry and Endodontics | – | – | – | – | – | – | – | ComEx |
| Pediatric Dentistry and Orthodontics | – | – | – | – | – | – | – | ComEx |
| Oral Surgery | – | – | – | – | – | – | – | ComEx |
| Periodontology | – | – | – | – | – | – | – | ComEx |

Abbreviations: **Exam** – Examination, **ComEx** – Comprehensive Examination, **TMark** – Term Mark, **Eval(5)** – Evaluation, **Ev+TM** – Theory: Eval(5) + Pract.: TMark, **Ex+TM** – Theory: Exam + Pract.: TMark, **S+TM** – Theory: Signature + Pract.: TMark

Compulsory Elective Subjects: Weekly Scientific Session, Dental Treatment of Elderly People and Patients with Special Needs, Dental Implantology in Prosthodontics, Child and Adolescent Psychiatry, Mentalhygiene.

Elective Subjects: Diseases of the Temporomandibular System, Treatment of Traumatic Dental Injuries in Childhood.

State Board Examination: Thesis, Written Test, Patient Examination – Oral, Patient Examination – Practical.

Suggested Study Plans* at the Faculty of Pharmacy

First Year

| Compulsory Subjects | 1 st semester | | | | 2 nd semester | | | |
|--------------------------------|--------------------------|--------|---------|-----------|--------------------------|--------|---------|-----------|
| | Weekly hours | | Credits | Exam form | Weekly hours | | Credits | Exam form |
| | Theory | Pract. | | | Theory | Pract. | | |
| Physics-Biophysics | 2 | – | 2 | Exam | 2 | – | 3 | Exam |
| Physics-Biophysics | – | – | – | – | – | 3 | 2 | TMark |
| History of Pharmacy | 2 | – | 2 | Exam | – | – | – | – |
| Mathematics | 2 | – | 3 | Exam | – | – | – | – |
| Mathematics | – | 2 | 2 | TMark | – | – | – | – |
| Informatics | – | 2 | 2 | TMark | – | – | – | – |
| General Chemistry | 2 | – | 3 | Exam | – | – | – | – |
| General Chemistry | – | 4 | 3 | TMark | – | – | – | – |
| Pharmaceutical Biology | 3 | – | 3 | Exam | – | – | – | – |
| Anatomy | 2 | – | 2 | Exam | 2 | – | 2 | Exam |
| English Language | – | 2 | 0 | TMark | – | 2 | 0 | TMark |
| Latin Language | – | 2 | 2 | TMark | – | – | – | – |
| Hungarian Language | – | 4 | 2 | TMark | – | 4 | 2 | TMark |
| Inorganic Chemistry | – | – | – | – | 3 | – | 4 | Exam |
| Qualitative Chemical Analysis | – | – | – | – | 2 | – | 3 | Exam |
| Qualitative Chemical Analysis | – | – | – | – | – | 5 | 4 | TMark |
| Quantitative Chemical Analysis | – | – | – | – | 2 | – | 0 | S |
| Quantitative Chemical Analysis | – | – | – | – | – | 4 | 4 | TMark |
| Biostatistics | – | – | – | – | 1 | – | 2 | Exam |
| Biostatistics | – | – | – | – | – | 1 | 0 | S |
| First Aid and Resuscitation | – | – | – | – | 1 | – | 0 | S |
| First Aid and Resuscitation | – | – | – | – | – | 1 | 2 | TMark |

Abbreviations: **Exam** – Examination, **TMark** – Term Mark, **S** – Signature

Elective Subjects: General Laws in Sciences, Short History of Hungary, Radiochemistry

* subject to change

Second Year

| Compulsory Subjects | 1 st semester | | | | 2 nd semester | | | |
|--------------------------------|--------------------------|--------|---------|-----------|--------------------------|--------|---------|-----------|
| | Weekly hours | | Credits | Exam form | Weekly hours | | Credits | Exam form |
| | Theory | Pract. | | | Theory | Pract. | | |
| Quantitative Chemical Analysis | 3 | – | 4 | ComEx | – | – | – | – |
| Quantitative Chemical Analysis | – | 4 | 3 | TMark | – | – | – | – |
| Organic Chemistry | 4 | – | 4 | Exam | 3 | – | 5 | ComEx |
| Organic Chemistry | – | 6 | 5 | TMark | – | – | – | – |
| Pharmaceutical Botany | – | – | – | – | 3 | – | 5 | Exam |
| Pharmaceutical Botany | – | – | – | – | – | 2 | 2 | TMark |
| Physiology | 4 | – | 4 | Exam | 4 | – | 6 | ComEx |
| Physiology | – | 2 | 2 | TMark | – | 2 | 0 | S |
| Physical Chemistry | 2 | – | 2 | Exam | – | 5 | 4 | TMark |
| Colloid Chemistry | 2 | – | 3 | Exam | – | – | – | – |
| Hungarian Language | – | 4 | 0 | S | – | 4 | 0 | S |
| Biochemistry | – | – | – | – | 4 | – | 4 | Exam |
| Pharmaceutical Propedeutics | – | – | – | – | 2 | – | 3 | Exam |

Abbreviations: **ComEx** – Comprehensive Examination, **TMark** – Term Mark, **Exam** – Examination, **S** – Signature

Elective Subjects: Practical Optical Spectroscopy, Radiochemistry, The Role of Nutrition in the Prevention and Treatment of Diseases, Basic Communication.

Third Year

| Compulsory Subjects | 1 st semester | | | | 2 nd semester | | | |
|--|--------------------------|--------|---------|-----------|--------------------------|--------|---------|-----------|
| | Weekly hours | | Credits | Exam form | Weekly hours | | Credits | Exam form |
| | Theory | Pract. | | | Theory | Pract. | | |
| Pharmacognosy | 3 | – | 3 | Exam | 2 | – | 3 | ComEx |
| Pharmacognosy | – | 4 | 3 | TMark | – | 4 | 3 | TMark |
| Pharmaceutical Chemistry | 4 | – | 5 | Exam | 4 | – | 5 | ComEx |
| Pharmaceutical Chemistry | – | 6 | 5 | TMark | – | 6 | 5 | TMark |
| Pharmaceutical Technology | 2 | – | 0 | S | 2 | – | 3 | Exam |
| Pharmaceutical Technology, Galenic Prep. and Their Manufacture | – | – | – | – | – | 3 | 3 | TMark |
| Pharmaceutical Technology, Prescription Pharmacy | – | – | – | – | – | 3 | 3 | TMark |
| Microbiology and Immunology | 4 | – | 4 | Exam | – | – | – | – |
| Microbiology and Immunology | – | 2 | 0 | S | – | – | – | – |
| Pathophysiology | 2 | – | 3 | Exam | 2 | – | 4 | Exam |
| Pathophysiology | – | 2 | 0 | S | – | 2 | 0 | S |
| Hungarian Language | – | 3 | 0 | TMark | – | 3 | 0 | TMark |
| Biopharmacy | – | – | – | – | 2 | – | 2 | Exam |
| Biopharmacy | – | – | – | – | – | 3 | 2 | TMark |

Abbreviations: **Exam** – Examination, **ComEx** – Comprehensive Examination, **TMark** – Term Mark, **S** – Signature

Elective Subjects: Communication in Pharmacy Practice, The Harms of Smoking and Strategies to Quit.

Fourth Year

| Compulsory Subjects | 1 st semester | | | | 2 nd semester | | | |
|---|--------------------------|--------|---------|-----------|--------------------------|--------|---------|-----------|
| | Weekly hours | | Credits | Exam form | Weekly hours | | Credits | Exam form |
| | Theory | Pract. | | | Theory | Pract. | | |
| Pharmaceutical Analysis | 3 | – | 3 | Exam | – | – | – | – |
| Pharmaceutical Analysis | – | 5 | 4 | TMark | – | – | – | – |
| Pharmaceutical Technology | 2 | – | 0 | S | 2 | – | 6 | ComEx |
| Pharmaceutical Technology, Prescription Pharmacy | – | 3 | 5 | TMark | – | 3 | 2 | TMark |
| Pharmaceutical Technology, Sterile and Aseptic Drug Formulations | – | 3 | 3 | TMark | – | – | – | – |
| Pharmaceutical Technology, Industrial Preparation and Investigation of Solid Dosage Forms | – | – | – | – | – | 5 | 2 | TMark |
| Pharmaceutical Technology, Investigation of Dosage Forms | – | – | – | – | – | 4 | 3 | TMark |
| Pharmacodynamics | 3 | – | 3 | Exam | 3 | – | 3 | Exam |
| Pharmacodynamics | – | 3 | 2 | TMark | – | 3 | 2 | TMark |
| Public Health | 2 | – | 1 | Eval | 2 | – | 3 | Exam |
| Ethics in Pharmacy | 2 | – | 2 | Exam | – | – | – | – |
| Introduction to Law | 2 | – | 2 | Exam | – | – | – | – |
| Introduction to Economy | 2 | – | 2 | Exam | – | – | – | – |
| Hungarian Language | – | 2 | 0 | TMark | – | 2 | 0 | ComEx |
| Drug Regulatory Affairs | – | – | – | – | 3 | – | 6 | ComEx |
| Clinical Laboratory Practice | – | – | – | – | 2 | – | 2 | Exam |
| Clinical Laboratory Practice | – | – | – | – | – | 2 | 0 | S |
| Pharmacy Administration | – | – | – | – | – | 1 | 2 | TMark |

Abbreviations: **Exam** – Examination, **TMark** – Term Mark, **S** – Signature, **ComEx** – Comprehensive Examination, **Eval** – Evaluation

Elective Subjects: Illicite Drug Use, Communication in Pharmacy Practice, Tropical Medicine.

Fifth Year

| Compulsory Subjects | 1 st semester | | | | 2 nd semester | | | |
|----------------------------|--------------------------|--------|---------|-----------|--------------------------|--------|---------|-----------|
| | Weekly hours | | Credits | Exam form | Weekly hours | | Credits | Exam form |
| | Theory | Pract. | | | Theory | Pract. | | |
| Basic Clinical Disciplines | 3 | – | 4 | Exam | – | – | – | – |
| Clinical Pharmacy | 2 | – | 3 | Exam | – | – | – | – |
| Pharmacodynamics | 3 | – | 5 | ComEx | – | – | – | – |
| Pharmacodynamics | – | 3 | 2 | TMark | – | – | – | – |
| Pharmaceutical Care | – | 3 | 2 | TMark | – | – | – | – |
| Natural Treatments | 2 | – | 2 | Exam | – | – | – | – |
| Pharmacy Practice | – | – | – | – | – | 16×40 | 16 | TMark |
| Thesis | – | – | – | – | – | – | 10 | Defence |

Abbreviations: **Exam** – Examination, **ComEx** – Comprehensive Examination, **TMark** – Term Mark

Compulsory Elective Subjects: Ward Pharmacy, Pharmaceutical Psychology, Veterinary Pharmacy, Quality Assurance, Everyday Dermatology, Phytotherapy, Computerized Dosage Form Planning

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