BULLETIN

UNIVERSITY OF DEBRECEN

ACADEMIC YEAR 2016/2017.

FACULTY OF PUBLIC HEALTH

BSc in Public Health

COORDINATING CENTER FOR INTERNATIONAL EDUCATION

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CHAPTER 1

INTRODUCTION

The aim of the University of Debrecen is to become a university of medical sciences committed to the prevention and restoration of health of the people, not only in its region but in the entire country.

In the past two decades both medical science and health care have entered a new era: the medical science of the 21st century. Molecular medicine is opening up and new possibilities are available for the diagnosis, prevention, prediction and treatment of the diseases. One can witness such a progress in medical sciences that has never been seen before. Modern attitudes in health care should be enforced in practice, including therapeutical approaches that consider the explanation and possible prevention of diseases, and attempt to comprehend and take the human personality into consideration. These approaches demand the application of the most modern techniques in all fields of the medical education.

All curricula wish to meet the challenges of modern times and they embody some very basic values. They are comprehensive; they take into consideration the whole human personality (body and soul) in its natural and social surroundings; and they are based upon the best European humanistic traditions. Moreover, all curricula prepare students for co-operation and teamwork.

With respect to education, both students and teachers are inspired to acquire higher levels of professionalism, precision, and problem solving skills, upon which the foundations of specialist training and independent medical practice can be built. This approach enables the assimilation of new scientific developments, facilitating further education and the continuous expansion of knowledge. The interplay of these factors ensures the ability to understand and handle the changing demands of health care.

With respect to research, the faculty members continuously acquire, internalize and subsume new knowledge, especially concerning the genesis, possible prevention and treatment of diseases. Moreover, new information aimed at improving, preserving and restoring the health of the society is also absorbed. The University of Debrecen is already internationally recognized in the fields of both basic and clinical research, and the clinicians and scientists of the University are determined to preserve this achievement. Special attention is given to facilitate and support the close co-operation of researchers representing basic science and clinical research, and/or interdisciplinary studies.

With respect to therapeutic practice, the main objective is to provide high quality, effective, up to date and much devoted health care to all members of the society, showing an example for other medical institutions in Hungary. One of the primary tasks is to continuously improve the actual standards of the diagnostic and therapeutic procedures and techniques, and to establish regional or even nationwide protocols.

With respect to serving the community, all faculty members wish to play a central role in shaping the policies of the health service; both within the region and in Hungary. They also want to ensure that sufficient number of medical doctors, dentists and other health care experts with university education is provided for the society.

With respect to the development, all employees strive for reinforcing those features and skills of the lecturers, scientists, medical doctors, health care professionals, collaborators and students which are of vital importance in meeting the challenges of medical education, research and therapy of the 21st century. These include humanity, empathy, social sensitivity, team-spirit, creativity, professionalism, independence, critical and innovative thinking, co-operation and management.

The organizational structure, including the multi-faculty construction of the institution, is a constantly improving, colorful educational environment, in which co-operation is manifest

between the individual faculties and colleges, the various postgraduate programs as well as the molecular- and medical biology educations.

HIGHER EDUCATION IN DEBRECEN

A Brief History

1235: First reference to the town of Debrecen in ancient charters.
1538: Establishment of the “College of Reformed Church” in Debrecen.
1567: Higher education begins in the College.
1693: Declaration of Debrecen as a “free royal town”.
1849: Debrecen serves as the capital of Hungary for 4 months.
1912: Establishment of the State University of Debrecen comprising the Faculties of Arts, Law, Medicine and Theology.
1918: Inauguration of the Main Building of the Medical Faculty by King Charles IV of Hungary.
1921: The Medical Faculty becomes operational.
1932: Completion of buildings of the campus.
1944: Although during the Second World War, Debrecen became the capital of Hungary again (for 100 days), the University itself is abandoned for a while.
1949: The only year when the University has five faculties.
1950: The Faculty of Law idles; the Faculty of Science is established.
1951: The University is split up into three independent organizations: Academy of Theology, Medical School, Lajos Kossuth University of Arts and Sciences.
1991: The “Debrecen Universitas Association” is established.
1998: The “Federation of Debrecen Universities” is founded.
2000. The federation is transformed into the unified “University of Debrecen” with all the relevant faculties and with some 20,000 students.

Debrecen is the traditional economic and cultural center of Eastern Hungary. In the 16th century Debrecen became the center of the Reformed Church in Hungary and later it was referred to as the "Calvinist Rome". The 17th century was regarded as the golden age of the city because Debrecen became the mediator between the three parts of Hungary: the part under Turkish occupation, the Kingdom of Hungary and the Principality of Transylvania. For short periods of time, Debrecen served twice as the capital of Hungary. Nowadays, with its population of approximately a quarter of a million, it is the second largest city in Hungary.

Debrecen is a unique city: although it has no mountains and rivers, its natural environment is rather interesting. One of the main attractions and places of natural uniqueness in Hungary is Hortobágy National Park, known as “puszta" (“plain”), which begins just in the outskirts of Debrecen. This is the authentic Hungarian Plain without any notable elevations, with unique flora and fauna, natural phenomena (e.g. the Fata Morgana), and ancient animal husbandry traditions. The region is unmatched in Europe, no matter whether one considers its natural endowments or its historic and ethnographic traditions. A very lovely part of Debrecen is the “Nagyerdő” (“The Great Forest”), which is a popular holiday resort. Besides a number of cultural and tourist establishments, luxurious thermal baths and spas, Nagyerdő accommodates the University campus too.

The history of higher education in Debrecen goes back to the 16th century when the College of the Reformed Church was established. The University Medical School of Debrecen has its roots in this spiritual heritage. It was in the year of the millennium of the establishment of Hungary (1896) when the foundation of the present University was decided. The University of Debrecen was established in 1912, initially having four faculties (Faculties of Arts, Law, Medicine and Theology). The University was officially inaugurated by King Charles IV of Hungary on October 23rd, 1918.

The educational activity at the University started in 1924, although the construction of the whole University was completed only in 1932. In 1951 the Faculty of Medicine became a

self-contained, independent Medical University for training medical doctors.
The special training of dentists began in 1976. As a further development the University Medical School established the Health College of Nyíregyháza in 1991. In 1993, as part of a nationwide program, the University was given the rights to issue scientific qualifications and new Ph.D. programs were also launched. Several new programs (e.g. the training of molecular biologists, pharmacists, general practitioners) were commenced in the '90s. The Faculty of Public Health was established in 1999, while the Faculty of Dentistry was founded in 2000.
Education at the University of Debrecen
Debrecen, the second largest city of Hungary, is situated in Eastern Hungary. Students enrolled in the various programs (e.g. Medicine, Dentistry, Pharmacy, Public Health, Molecular Biology, etc.) study on a beautiful campus situated in the area called "Great Forest".
The Hungarian Government gives major priorities to the higher education of health sciences in its higher education policy. One of these priorities is to increase the ratio of college level training forms within the Hungarian higher education system. The governmental policy wishes to implement conditions in which the whole health science education system is built vertically from the lowest (post-secondary or certificate) to the highest (PhD-training) levels. In fact, this governmental policy was the reason behind the establishment of the new Health Science Education Center within the Federation of Debrecen Universities (DESZ), based partially on the intellectual resources of the University of Debrecen. The new programs – with specialized training for paramedics – will help to correct the balance of the Hungarian labor-market that became rather unsettled in the past few decades.
The Act of Higher Education (1993) has restored the rights of the medical universities to award postgraduate degrees and residency, and permission was also given to license Physicians' procedures. This kind of training required a new structure, a new administrative apparatus, and a suitable training center. The new residency programs were commenced in 1999.
The introduction of the credit system, starting in September 2003, has been mandatory in every Hungarian university, helping the quantitative and qualitative evaluation of the students' achievements. Admission requirements for Hungarian students are defined at national level, and they are applicable for every student wishing to be enrolled into the Medicine or Dentistry programs.
International students must pass an entrance exam in biology and (depending on their preference) in physics or chemistry. In some special cases it may be possible for the candidates to apply for transfer to higher years on the basis of their previous studies and achievements. International students study in English language. Entrance for certain courses of the Health College is also possible on the basis of a special evaluation (scoring) and an entrance interview.
The syllabuses and classes of all courses correspond to European standards. The total number of contact hours in medical education is over 5,500, which can be divided into three main parts: basic theoretical training (1st and 2nd year), pre-clinical subjects (3rd year) and clinical subjects (4th and 5th year) followed by the internship (6th year). The proportion of the theoretical and practical classes is 30% to 70%; whereas the students/instructors ratio is about 8/1. The first two years of dentistry education are similar to the medicine program, but the former contains a basic dental training that is followed by a three-year-long pre-clinical and clinical training. Besides the medicine and dentistry programs, there are several other courses also available, including molecular biology. The various Health College courses include more and more new curricula.
The Medicine program delivered in English and intended for international students was commenced in 1987; whereas the Dentistry and Pharmacy programs for international students

started in 2000 and 2004, respectively. The curriculum of the English language Medicine program meets all the requirements prescribed by the European medical curriculum, which was outlined in 1993 by the Association of Medical Schools in Europe. Compared to the Hungarian program, the most important differences are:
- Hungarian language is taught,
- More emphasis is laid upon the tropical infectious diseases (as parts of the "Internal Medicine" and "Hygiene and Epidemiology" courses).

Otherwise, the English language curriculum is identical with the Hungarian one. The 6th year of the curriculum is the internship that includes Internal Medicine, Pediatrics, Surgery, Obstetrics and Gynecology, Neurology, and Psychiatry. The completion of these subjects takes at least 47 weeks, although students are allowed to finish them within a 24-month-long period. The successfully completed internship is followed by the Hungarian National Board Examination. Just like the rest of the courses, the internship is also identical in the Hungarian and English programs.

A one-year-long premedical (Basic Medicine) course, which serves as a foundation year, is recommended for those applicants who do not possess sufficient knowledge in Biology, Physics and Chemistry after finishing high school.

After graduation, several interesting topics are offered for PhD training, which lasts for three years. If interested, outstanding graduates of the English General Medicine and Dentistry programs may join these PhD courses ("English PhD-program"). Special education for general practitioners has been recently started and a new system is in preparation now for the training of licensed physicians in Debrecen.

The accredited PhD programs include the following topics:

- Molecular and Cell Biology; Mechanisms of Signal Transduction
- Microbiology and Pharmacology
- Biophysics
- Physiology-Neurobiology
- Experimental and Clinical Investigations in Hematology and Hemostasis
- Epidemiological and Clinical Epidemiological Studies
- Cellular- and Molecular Biology: Study of the Activity of Cells and Tissues under Healthy and Pathological Conditions
- Immunology
- Experimental and Clinical Oncology
- Public Health
- Preventive Medicine
- Dental Research

The PhD-programs are led by more than 100 accredited, highly qualified coordinators and tutors.

Medical Activity at the Faculty of Medicine

The Faculty of Medicine is not only the second largest medical school in Hungary, but it is also one of the largest Hungarian hospitals, consisting of 49 departments; including 18 different clinical departments with more than 1,800 beds. It is not only the best-equipped institution in the area but it also represents the most important health care facility for the day-to-day medical care in its region.

The Kenézy Gyula County Hospital (with some 1,400 beds) is strongly affiliated with the University of Debrecen and plays an important role in teaching the practical aspects of medicine. There are also close contacts between the University and other health care institutions, mainly (but not exclusively) in its closer region. The University of Debrecen has a Teaching Hospital Network consisting of 19 hospitals in Israel, Japan and South Korea.

It is also of importance that the University of Debrecen has a particularly fruitful collaboration with the Nuclear Research Institute of the Hungarian Academy of Sciences in

Debrecen, allowing the coordination of all activities that involve the use of their cyclotron in conjunction with various diagnostic and therapeutic procedures (e.g. Positron Emission Tomography 'PET').
Scientific Research at the Faculty of Medicine
Scientific research is performed both at the departments for basic sciences and at the laboratories of clinical departments. The faculty members publish about 600 scientific papers every year in international scientific journals. According to the scientometric data, the Faculty is among the 4 best of the more than 80 Hungarian research institutions and universities. Lots of scientists reach international recognition, exploiting the possibilities provided by local, national and international collaborations. Internationally acknowledged research areas are Biophysics, Biochemistry, Cell Biology, Immunology, Experimental and Clinical Oncology, Hematology, Neurobiology, Molecular Biology, Neurology, and Physiology. The scientific exchange program involves numerous foreign universities and a large proportion of the faculty members are actively involved in programs that absorb foreign connections (the most important international collaborators are from Belgium, France, Germany, Italy, Japan, the UK and the USA).

HISTORY OF THE FACULTY OF PUBLIC HEALTH

The first Faculty of Public Health in Hungary was established by the decision of the Hungarian Government on 1st December 2005, by the unification of the School of Public Health, the Department of Preventive Medicine, the Department of Family Medicine and the Department of Behavioral Sciences of the University of Debrecen.
Becoming an independent faculty of the University of Debrecen (presently uniting 15 different faculties) was preceded by a 10-year period of development. Establishment and launching of 5 different postgraduate and one graduate training programmes as well as the establishment of a doctoral programme were carried out by the teaching staff of the faculty with the effective support of the University of Debrecen. As a result of these efforts the Faculty became a unique, internationally recognized and competitive training centre in Hungary. According to the Bologna process the Faculty has established and from 2006 and 2007 launched its bachelor and master training programmes in the field of public health and health sciences. With its 2 bachelor, 5 master training programmes and 6 postgraduate courses, the Faculty of Public Health offers a rich variety of learning experience at present. There are two doctoral programmes available since 2009.
Close cooperation with several faculties of the University of Debrecen guided the process of becoming a faculty, and the Faculty also became an internationally recognized workshop of public health research.

ORGANISATION STRUCTURE OF THE FACULTY OF PUBLIC HEALTH

Department of Preventive Medicine
Division of Biomarker Analysis
Division of Biostatistics and Epidemiology
Division of Health Promotion
Division of Public Health Medicine
Department of Family and Occupational Medicine
Department of Behavioral Sciences
Division of Clinical and Health Psychology
Division of Humanities for Health Care
Department of Health Management and Quality Assurance
Department of Hospital Hygiene and Infection Control

Department of Physiotherapy
School of Public Health (as postgraduate training center)

MISSION OF THE FACULTY OF PUBLIC HEALTH

The mission of the Faculty of Public Health of the University of Debrecen as the centre of public health education in Hungary is to improve health of the population by developing and maintaining high- and internationally recognized quality training programs, complying with the training needs of the public health and health care institutions, both at the graduate and postgraduate level; pursuing excellence in research; providing consultancy as well as developing and investing in our staff. The Faculty of Public Health organizes and carries out its training activities by the professional guidelines of the Association of Schools of Public Health in the European Region.

BSC IN PHYSIOTHERAPY PROGRAM AT THE FACULTY OF PUBLIC HEALTH

Bachelor course in Physiotherapy launched by the Faculty of Public Health of the University of Debrecen is built on a 13-year experience in education of physiotherapists at the University of Debrecen. The training is identical in content to the accredited Bachelor of Science program in Nursing and Patient Care with Physiotherapist specialization launched six years ago. The course is based on the University's highly trained, internationally competitive staff and excellent infrastructure in order to fulfill an international demand in health care (involving physiotherapy) training.
The majority of teachers have remarkable teaching experience in English taking part in the international training programmes of University of Debrecen.
The international MSc programs (MSc in Public Health, MSc in Complex Rehabilitation) launched by the Faculty of Public Health are offered for students graduated in the BSc courses of health sciences. Students studying in English – similarly to those studying in Hungarian – will have the opportunity to join the Students' Scientific Association, the most important means to prepare students for future academic career.
Outstanding students may present their work at the local Students' Scientific Conference organized by the Council of the Students' Scientific Association annually. Best performing students can advance to the National Students' Scientific Conference held every second year. Another way for students to introduce their scientific findings is to write a scientific essay which is evaluated through a network of reviewers.

CHAPTER 2

ORGANISATION STRUCTURE

RECTOR OF THE UNIVERSITY OF DEBRECEN	
Rector	Zoltán Szilvássy M.D., Ph.D., D.Sc.
Address	4032 Debrecen, Egyetem tér 1.
Phone	+36-52-416-060
Phone/fax	+36-52-416-490
E-mail	rector@unideb.hu
COORDINATING CENTER FOR INTERNATIONAL EDUCATION	
Director	Attila Jenei M.Sc., Ph.D.
Address	4032, Debrecen, Nagyerdei krt. 94.
Phone	+36-52-258-058
Fax	+36-52-414-013
E-mail	info@edu.unideb.hu
FACULTY OF MEDICINE	
Dean	László Mátyus M.D., Ph.D., D.Sc.
Address	4032, Debrecen, Nagyerdei krt. 98.
Phone	+36-52-258-086
Fax	+36-52-255-150
E-mail	dekan@med.unideb.hu
Vice Dean of General Affairs	Zoltán Szekanecz, M.D., Ph.D., D.Sc.
Address	4032, Debrecen, Nagyerdei krt. 98.
Phone	+36-52-255-091
Fax	+36-52-255-091
E-mail	dekan@med.unideb.hu
Vice-Dean for Educational Affairs	Zoltán Papp M.D., Ph.D., D.Sc.
Address	4032, Debrecen, Nagyerdei krt. 98.
Phone	+36-52-255-978
Fax	+36-52-255-978

E-mail	dekan@med.unideb.hu
Vice-Dean of Scientific Affairs	László Virág M.D., Ph.D., D.Sc.
Address	4032, Debrecen, Nagyerdei krt. 98.
Phone	+36-52-417-345
Fax	+36-52-412-566
E-mail	dekan@med.unideb.hu
Dean’s advisor	Endre Nagy M.D.,Ph. D.,D.Sc.
Address	4032, Debrecen, Nagyerdei krt. 98.
Phone	+36-52-417-717/54166
Fax	+36-52-419-807
E-mail	dekan@med.unideb.hu
DEAN'S OFFICE OF THE FACULTY OF MEDICINE	
Head of Directory Office	Katalin Juhász M.A.
Address	4032, Debrecen, Nagyerdei krt. 98.
Phone/Fax	+36-52-258-085, +36-52-255-150
E-mail	kjuhasz@edu.unideb.hu
REGISTRAR'S OFFICE	
Head of Registrar's Office	Csilla Kerékgyártó M.D.
Address	4032, Debrecen, Nagyerdei krt. 94.
Phone/Fax	+36-52-258-001
E-mail	kerekgy@med.unideb.hu
FACULTY OF DENTISTRY	
Dean	Csaba Hegedűs M.D., L.D.S.,Ph.D.,
Address	4032 Debrecen, Nagyerdei krt. 98.
Phone/Fax	+36-52-255-208
E-mail	hegedus.csaba.prof@dental.unideb.hu
Vice-Dean for Educational Affairs	István Tornai M.D.,Ph.D.
Address	4032 Debrecen, Nagyerdei krt. 98.
Phone/Fax	+36-52-255-208

E-mail	itornai@med.unideb.hu
Vice-Dean for General Affairs	Pál Redl M.D.,L.D.S.,Ph.D.
Address	4032 Debrecen, Nagyerdei krt. 98.
Phone/Fax	+36-52-255-208
E-mail	redl.pal@dental.unideb.hu
FACULTY OF PHARMACY	
Dean	Miklós Vecsernyés Pharm.D.,Ph.D.,D.Sc.
Address	4032 Debrecen, Nagyerdei krt. 98.
Phone/Fax	+36-52-411-717/54033
E-mail	vecsernyes.miklos@pharm.unideb.hu
Vice-Dean For General and Development Affairs	Gábor Halmos Pharm.D,.Ph.D
Address	4032 Debrecen, Nagyerdei krt. 98.
Phone/Fax	+36-52-411-600/55292
E-mail	halmos.gabor@pharm.unideb.hu
Vice-Dean for Educational Affairs	Ildikó Bácskay Pharm.D., Ph.D.
Address	4032 Debrecen, Nagyerdei krt. 98.
Phone/Fax	+36-52-411-600/54034
E-mail	bacskay.ildiko@pharm.unideb.hu
FACULTY OF PUBLIC HEALTH	
Dean	Margit Balázs MSc.,Ph.D.,D.Sc.
Address	4028 Debrecen, Kassai út 26/b.
Phone	+36-52-460-194
Fax	+36-52-460-195
E-mail	balazs.margit@sph.unideb.hu
Vice-Dean for Educational Affairs	Attila Bánfalvi MA., Ph.D.
Address	4032, Debrecen, Móricz Zsigmond. krt. 22.
Phone	+36-52-411-600
Fax	+36-52-255-487
E-mail	banfalvi.attila@sph.unideb.hu

Vice-Dean for Strategic Affairs	Karolina Kósa M.D., Ph.D.
Address	4032 Debrecen, Móricz Zsigmond krt. 22.
Phone	+36-52-255-594
Fax	+36-52-255-723
E-mail	kosa.karolina@sph.unideb.hu
FACULTY OF HEALTH	
Dean	Imre Semsei, D.Sc.
Address	4400 Nyíregyháza, Sóstói u. 2-4.
Phone	+36-42-598-235
Fax	+36-42-408-656
E-mail	dekan@foh.unideb.hu
Vice-Dean for Scientific Affairs	János Kiss Ph.D.
Address	4400 Nyíregyháza, Sóstói út 2-4.
Phone	+36-42-598-235
Fax	+36-42-408-656
E-mail	kiss.janos@foh.unideb.hu
Vice-Dean for Educational Affairs	Attila Sárváry Ph.D.
Address	4400 Nyíregyháza, Sóstói út 2-4.
Phone	+36-42-598-235
Fax	+36-42-408-656
E-mail	sarvary.attila@foh.unideb.hu
Vice-Dean for General and Development Affairs	Gergely Fábián Ph.D.
Address	4400 Nyíregyháza, Sóstói út 2-4.
Phone	+36-42-598-235
Fax	+36-42-408-656
E-mail	fabian.gergely@csello.hu
FOREIGN MEDICAL STUDENT ASSOCIATION (FMSA)	
Address	4032 Debrecen, Móricz Zsigmond krt. 22.
	III.sz. Markusovszky Kollégium
Phone	+36-52-411-717/55376
Fax	+36-52-255-028

Internet	www.fmsa.hu
E-mail	info@fmsa.hu
KENÉZY LIFE SCIENCES LIBRARY	
Address	4032 Debrecen, Egyetem tér 1.
Phone/Fax	+36-52-518-610 , +36-52-518-605
E-mail	kenezy@lib.unideb.hu
Internet	http://kenezy.lib.unideb.hu

CHAPTER 3

ADMINISTRATIVE UNITS

EDUCATIONAL ORGANIZATIONAL OFFICE OF FACULTY OF PUBLIC HEALTH

Kassai str. 28, Debrecen, 4028, Tel: 52-512-765/77408
E-mail: belgyar.zsuzsa@sph.unideb.hu, Web: http://nk.unideb.hu

Head	Ms	Zsuzsa Nagy-Belgyár (maternity leave)
	Ms	Lilla Bucskuné Almási (expletive person)
Education Officer, Contact Person	Mr	Róbert Bata
	Ms.	Zsuzsa Flóra Péter
	Ms	Andrea Debreczeni (maternity leave)
	Ms.	Tímea Géber

COORDINATING CENTER FOR INTERNATIONAL EDUCATION

Nagyerdei krt. 94., Debrecen, 4032
Telephone: +36-52-258-058 Fax: +36-52-414-013
E-mail: info@edu.unideb.hu, Web: www.edu.unideb.hu

Director	Prof.	Attila Jenei Ph.D.
Program Coordinator	Prof.	Ferenc Erdődi Ph.D, D.Sc.
BMC Coordinator	Ms.	Beáta Lontay Ph.D.
Manager Assistants	Ms.	Anna Kapitány M.Sc.
	Ms.	Andrea Tiba B.Sc.
Contract&Marketing Coordinator		Ábrahám Gergely Varga J.D.
Financial Coordinator	Ms.	Rita Kovács J.D.
Agent Coordinator		József Harmati J.D.
English Program Coordinators	Ms.	Dóra Benkő B.A. (Admissions, Visa issues, BMC)
	Ms.	Adrienn Gagna-Szakó M.Sc. (Admissions, BMC, US Loans, Wyckoff HMC Applications)
	Ms.	Anett Galvácsi M.A (Tuition fee, Financial Certificates, Refunds, USMLE Coordinator)
	Ms.	Katalin Györe M.A. (Admissions, Visa issues, BMC)
	Ms.	Krisztina Németh M.Sc. (Bulletin)
	Ms.	Enikő Sallai M.Sc. (Tuition fee, Health Insurance)

	Ms. Bella Brigitta Szilágyi M.A. (Stipendium Hungaricum Coordinator)
IT Project Coordinator	Imre Szűcs B.Sc.

CHAPTER 4

DEPARTMENTS OF THE FACULTY OF PUBLIC HEALTH

INSTITUTE OF BEHAVIOURAL SCIENCES, FACULTY OF PUBLIC HEALTH

Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-255-594
Web: http://mti.dote.hu

Associate Professor, Head of Department	Ms.	Karolina Kósa M.D., M.Sc., Ph.D.
Associate Professor, Head of Division of Clinical And Health Psychology	Ms.	Ildikó Kuritár Szabó M.A., Ph.D.
Associate Professor, Head of Division of Humanities For Health Care		Attila Bánfalvi M.A., Ph.D., C.Sc.
Professor Emeritus		Péter Molnár M.D., D.Sc.
Associate Professor		Antal Bugán M.A., Ph.D.
Assistant Professor	Ms.	Mónika Andrejkovics M.A., Ph.D.
		Péter Kakuk M.A., Ph.D.
	Ms.	Judit Molnár M.A., Ph.D.
		Roland Tisljár M.A., Ph.D.
Assistant Lecturer		János Kristóf Bodnár M.A., Ph.D.
		Sándor Kőmüves M.A., Ph.D.
	Ms.	Eszter Tisljár - Szabó M.A., Ph.D.
Psychologist	Ms.	Beáta Kovács-Tóth M.A.
Invited Lecturer		Bence Döbrőssy M.A.
Intern	Ms.	Bernadett Bodor M.Sc.
	Ms.	Katalin Mária Dallos M.Sc.
	Ms.	Márta Erdei M.Sc.
	Ms.	Bernadett Hidegh M.Sc.
	Ms.	Éva Knapek M.Sc.
	Ms.	Katalin Merza M.A.
	Ms.	Erika Nagy M.Sc.
	Ms.	Anna Eszter Rácz M.Sc.
PhD Student		Dániel Balajthy M.Sc.
	Ms.	Amanda Illés M.Sc.
		Szabolcs Kató M.Sc.
	Ms.	Orsolya Micskei M.Sc.
	Ms.	Brigitta Munkácsi M.Sc.
	Ms.	Anikó Nagy M.Sc.
Academic Advisor	Ms.	Mónika Andrejkovics M.A., Ph.D. (4th year, Behavioural Medicine,

		Behavioural Science Final Exam)
		Attila Bánfalvi M.A., Ph.D., C.Sc. (3rd year, Medical Anthropology, Medical Sociology)
		Péter Kakuk M.A., Ph.D. (4th year, Bioethics)
	Ms.	Judit Molnár M.A., Ph.D. (3rd year Medical Psychology, 5th year Pharmaceutical Psychology)
		Roland Tisljár M.A., Ph.D. (1st year, Basics of Behavioural Sciences, Communication)

DEPARTMENT OF FAMILY AND OCCUPATIONAL MEDICINE, FACULTY OF PUBLIC HEALTH

Móricz Zs. Krt. 22., Debrecen, 4032, Tel: +36-52-25-52-52
E-mail: csotanszek@sph.unideb.hu, Web: www.fam.med.unideb.hu www.nk.unideb.hu

Full Professor, Head of Department		Imre Rurik M.D., M.Sc., Ph.D., D.Sc.
Professor Emeritus		István Ilyés M.D., M.Sc., Ph.D.
Assistant Professor		Zoltán Jancsó M.D., Ph.D.
Assistant Lecturer	Ms.	Anna Nánási M.D.
	Ms.	Judit Szidor M.D.
	Ms.	Hajnalka Tamás M.D.
	Ms.	Tímea Ungvári M.Sc.
Senior Lecturer		László Róbert Kolozsvári M.D., Ph.D.
Clinical Specialist	Ms.	Emőke Lengyel M.D.
	Ms.	Izabella Szilágyi M.D.
	Ms.	Erzsébet Tóth M.D.
Undergraduate educational officer	Ms.	Tímea Ungvári M.Sc.
Postgraduate educational officer	Ms.	Anna Nánási M.D.
Other Invited Lecturers		István Erdei M.D.
		János Hintalan M.D.
	Ms.	Eszter Kovács M.D.
	Ms.	Hajnalka Márton M.D.
		Csaba Sárkány M.D.
		Attila Simay M.D., Ph.D. (Hon. Associate Professor)
		Péter Szerze M.D.
	Ms.	Margit Szövetes M.D.

DEPARTMENT OF HEALTH MANAGEMENT AND QUALITY ASSURANCE, FACULTY OF PUBLIC HEALTH

Nagyerdei krt. 98., Debrecen, 4032, Tel: 06-52-255-052
E-mail: lepp.anett@med.unideb.hu, Web: www.emmt.unideb.hu

Associate Professor, Head of Department	Ms.	Klára Bíró D.M.D., Ph.D.
Associate Professor	Ms.	Judit Zsuga M.D., Ph.D.
Assistant Lecturer		Gábor Bányai-Márton J.D.
Assistant	Ms.	Anett Lepp
Strategic Advisor	Ms.	Judit Balogh M.Sc.
		Csaba Papp M.D., M.Sc.
PhD Student	Ms.	Klára Boruzs MBA

DEPARTMENT OF HYGIENE AND INFECTION CONTROL, FACULTY OF PUBLIC HEALTH

Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-255-795
E-mail: orosip@med.unideb.hu, Web: www.nk.unideb.hu

Associate Professor, Head of Department	Ms.	Piroska Orosi M.D., Ph.D.
Staff Member	Ms.	Ágnes Borbély M.D.
	Ms.	Judit Kecskés

DEPARTMENT OF PHYSIOTHERAPY, FACULTY OF PUBLIC HEALTH

Kassai str. 26., Debrecen, 4028, Tel: 36-52-512-732
E-mail: cseri.julianna@sph.unideb.hu, Web: http://nk.unideb.hu

Associate Professor, Head of Department	Ms.	Ilona Veres-Balajti M.Sc., Ph.D.
College Professor, Coordinator of BSc in Physiotherapy Program	Ms.	Julianna Cseri M.D., Ph.D
Assistant Professor		Balázs Lukács M.Sc., Ph.D.
	Ms.	Zsuzsanna Némethné Gyurcsik M.Sc., Ph.D.
	Ms.	Andrea Váncsa M.D., Ph.D.
Assistant Lecturer	Ms.	Zsuzsa Lábiscsák-Erdélyi M.Sc.
	Ms.	Judit Pálinkás M.Sc.
Invited Lecturer	Ms.	Katalin Papp M.Sc., Ph.D.
		Imre Semsei Ph.D., D.Sc.
		Zoltán Szentkereszty M.D.
	Ms.	Adrienne Tóthmartinez M.D.
Practice Teacher	Ms.	Éva Csepregi M.Sc.

Instructor	Ms.	Éva Anett Csuhai
PhD student	Ms.	Hajnalka Petrika M.Sc.
Academic Advisor	Ms.	Zsuzsanna Némethné Gyurcsik M.Sc., Ph.D.

DEPARTMENT OF PREVENTIVE MEDICINE, FACULTY OF PUBLIC HEALTH
Kassai út 26/b, Debrecen, 4028, Tel: +36-52-417-267

Full Professor, Head of Department	Ms.	Róza Ádány M.D., Ph.D., D.Sc.
Associate Professor, Head of Division		István Kárpáti M.D., Ph.D.
Full professor, Head of Biomarker Analysis Division	Ms.	Margit Balázs M.Sc., Ph.D., D.Sc.
Associate Professor, Head of Biostatistics and Epidemiology Division		János Sándor M.D., Ph.D.
Associate Professor, Head of Health Promotion Division	Ms.	Karolina Kósa M.D., M.Sc., Ph.D.
Associate Professor, Head of Dep. of Hygiene and Infection Control	Ms.	Piroska Orosi M.D., Ph.D.
Associate Professor		Balázs Ádám M.D., M.Sc., Ph.D.
	Ms.	Helga Bárdos M.D., M.Sc., Ph.D.
		Sándor Gődény M.D., Ph.D.
		Sándor Szűcs M.Sc., Ph.D.
Assistant Professor		Ervin Árnyas M.Sc., Ph.D.
	Ms.	Éva Bíró M.D., Ph.D.
	Ms.	Szilvia Fiatal M.D., Ph.D.
	Ms.	Orsolya Varga M.D., Ph.D.
Assistant Lecturer		Tibor Jenei
		Tamás Köbling M.D.
		Attila Csaba Nagy M.D., Ph.D.
		Károly Nagy Ph.D.
		László Pál Ph.D.
		Gábor Rácz M.D.
Resident	Ms.	Judit Diószegi M.D.
		Gergely Fürjes M.D.
	Ms.	Márta Füzi M.D.
	Ms.	Dóra Kölesné Dezső M.D.
Invited Lecturer		György Juhász M.D.
		József Legoza M.D.

Hungarian Academy of Sciences University of Debrecen Public Health Research Group Fellow	Ms.	Szilvia Ecsedi M.Sc., Ph.D.
		Rühl Ralph M.D., Ph.D.
Research Assistant	Ms.	Tímea Kiss M.Sc.
	Ms.	Viktória Koroknai M.Sc.
	Ms.	Nóra Kovács M.Sc.
		Péter Pikó M.Sc.
		István Szász M.Sc.
	Ms.	Valéria Vinczéné Sipos M.Sc.
PhD Student	Ms.	Orsolya Csenteri M.Sc.
		Viktor Dombrádi jr M.Sc.
		Esafiogho Peter Eseroghene M.Sc.
	Ms.	Andrea Lukács M.Sc.
	Ms.	Beáta Soltész M.Sc.
		Gergő József Szőllősi M.Sc.
		Ferenc Vincze M.Sc.
Academic Advisor		Sándor Szűcs M.Sc., Ph.D.

CHAPTER 5

FACULTY OF MEDICINE - DEPARTMENTS OF BASIC SCIENCES

DEPARTMENT OF ANATOMY, HISTOLOGY AND EMBRYOLOGY

Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-255-567
Web: http://www.anat.dote.hu

Associate Professor, Head of the Department		Péter Szücs M.D., Ph.D.
Full Professor, Head of Oral Anatomy Division	Ms.	Klára Matesz M.D.,Ph.D.,D.Sc.
Full Professor		Miklós Antal M.D., Ph.D., D.Sc.
Professor Emeritus		István Földes M.D., Ph.D., D.Sc.
		László Módis M.D., Ph.D., D.Sc.
		György Székely M.D., Ph.D., D.Sc., M.H.A.Sc.
Associate Professor		András Birinyi M.Sc., Ph.D.
		Szabolcs Felszeghy Ph.D., D.D.S.
		Zoltán Kisvárday M.Sc., Ph.D., D.Sc.
		Ervin Wolf M.Sc., Ph.D.
	Ms.	Róza Zákány M.D., Ph.D.
Assistant Professor	Ms.	Krisztina Holló M.Sc., Ph.D.
		Tamás Juhász M.Sc., Ph.D.
		Csaba Matta M.Sc., Ph.D.
		Zoltán Mészár M.Sc., Ph.D.
Postgraduate Lecturer	Ms.	Cintia Angel M.Sc.
	Ms.	Zsófia Antal M.D., Ph.D.
	Ms.	Anita Balázs M.Sc., Ph.D.
		Botond Gaál M.Sc., Ph.D.
	Ms.	Krisztina Hegedűs M.Sc.
		Zoltán Hegyi M.Sc., Ph.D.
	Ms.	Edina Karanyecz M.Sc.
	Ms.	Éva Katona M.Sc.
	Ms.	Szilvia Kecskés M.Sc., Ph.D.
	Ms.	Annamária Kenyeres M.Sc.
	Ms.	Lívia Kicska M.Sc.
	Ms.	Gréta Kis M.Sc.
	Ms.	Ildikó Papp M.Sc., Ph.D.
	Ms.	Éva Rácz M.Sc., Ph.D.
	Ms.	Zsanett Sólyom M.Sc.

	Ms.	Csilla Somogyi M.Sc.
	Ms.	Ildikó Wéber M.Sc., Ph.D.
Junior Scientific Officer	Ms.	Nóra Dobrosi M.Sc.
		László Ducza M.Sc.
		Zsolt Kocsis M.D.
		Roland Takács M.Sc.
Invited Lecturer		Gary Kish M.D.
Course Director		Tamás Juhász M.Sc., Ph.D. (Macroscopic Anatomy)
		Zoltán Kisvárday M.Sc., Ph.D., D.Sc. (Neurobiology)
		Ervin Wolf M.Sc., Ph.D. (Histology and Embryology)
PhD Student	Ms.	Klaudia Dócs M.Sc.
	Ms.	Javdani Fariba M.D.
	Ms.	Andrea Gajtkó M.Sc.
		Tibor Hajdú M.D.
	Ms.	Andrea Hunyadi M.Sc.
		Mohit Srivastava M.Sc.
	Ms.	Rita Varga M.Sc.
Academic Advisor for 1st year medical and dental students	Ms.	Gréta Kis M.Sc.
Academic Advisor for 2nd year medical and dental students	Ms.	Mónika Szakadát M.Sc.

DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY

Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-416-432
E-mail: tokes@med.unideb.hu, Web: http://bmbi.med.unideb.hu

Full Professor, Head of Department		József Tőzsér M.Sc., Ph.D., D.Sc.
Head of Dental Biochemistry Division	Ms.	Zsuzsa Szondy M.D., Ph.D., D.Sc.
Full Professor		Endre Barta M.Sc., Ph.D.
		László Fésüs M.D., Ph.D., D.Sc., M.H.A.Sc.
	Ms.	Mónika Fuxreiter M.Sc., Ph.D., D.Sc.
		László Nagy M.D., Ph.D., M.H.A.Sc.
Associate Professor		Zoltán Balajthy M.Sc., Ph.D.
	Ms.	Réka Révészné Tóth M.Sc., Ph.D.
		István Szatmári M.Sc., Ph.D.
Assistant Professor		Bálint Bálint L. M.D., Ph.D.

	Ms.	Éva Csősz M.Sc., Ph.D.
		Róbert Király M.Sc., Ph.D.
		Zsolt Sarang M.Sc., Ph.D.
	Ms.	Beáta Scholtz M.Sc., Ph.D.
		Lóránt Székvölgyi M.Sc., Ph.D.
		Lajos Széles M.Sc., Ph.D.
	Ms.	Szilvia Tőkés M.Sc., Ph.D.
Senior Research Fellow		András Mádi M.Sc., Ph.D.
Research Fellow	Ms.	Beáta Bartáné Tóth M.Sc., Ph.D.
		Máté Demény M.D.,Ph.D.
		Márton Miskei M.Sc., Ph.D.
		Szilárd Póliska M.Sc., Ph.D.
	Ms.	Mónika Szentandrássyné Gönczi M.Sc., Ph.D.
		Tamás Varga M.Sc., Ph.D.
Junior Research Fellow	Ms.	Rita Hegymeginé Elek M.Sc.
	Ms.	Krisztina Joóné Matúz M.Sc., Ph.D.
	Ms.	Beáta Kiss M.Sc.
		Endre Károly Kristóf M.D.
	Ms.	Krisztina Lenténé Köröskényi M.Sc., Ph.D.
		Mohamed Faisal Mahdi M.D.
	Ms.	Ágnes Mosolygó-Lukács M.Sc.
		János Mótyán M.Sc., Ph.D.
		Gergely Nagy M.Sc.
		Attila Pap M.Sc.
	Ms.	Éva Péntek-Garabuczi M.Sc., Ph.D.
Biologist		Tamás Kerekes M.Sc.
	Ms.	Erzsébet Mátyás M.Sc.
	Ms.	Éva Nagy M.Sc.
	Ms.	Tímea Silye-Cseh M.Sc.
PhD Student		Viktor Ambrus M.Sc.
	Ms.	Dóra Bojcsuk M.Sc.
		Pál Botó M.Sc.
	Ms.	Zsófia Budai M.Sc.
	Ms.	Mária Csumita M.Sc.
		Tamás Csuth M.Sc.
		Erik Czipa M.Sc.
	Ms.	Katalin Dánielné Sándor M.Sc.

	Ms. Eszter Deák M.D., M.Sc.
	Norbert Duró M.Sc.
	Ms. Ergulen Elvan M.Sc.
	Ms. Edina Erdős M.Sc.
	Ms. Lívia Gazda M.Sc.
	Ms. Mária Golda M.Sc.
	László Halász M.Sc.
	Szabolcs Hetey M.Sc.
	Attila Horváth M.Sc.
	József Horváth M.Sc.
	Ms. Monroy Ixchelt Cuaranta M.Sc.
	Ms. Bernadett Jakob M.Sc.
	Károly Jambrovics M.Sc.
	Gergely Joós M.D.
	Gergő Kalló M.Sc.
	Norbert Kassay M.Sc.
	Thangarajan Kiruphagaran M.Sc.
	Ms. Ágnes Klusóczki M.Sc.
	Ms. Lilla Ozgyin M.Sc.
	Andreas Patsalos M.Sc.
	Ms. Rashmi Rashmi M.Sc.
	Tibor Sághy M.Sc.
	Ms. Mária Szatmári Tóth M.Sc.
	Ms. Zsófia Szojka M.Sc.
	Ms. Erika Takács M.Sc.
Academic Advisor	Ms. Szilvia Tőkés M.Sc., Ph.D. (E-mail: tokessz@dote.hu, Ext.:64439)

DEPARTMENT OF BIOPHYSICS AND CELL BIOLOGY

Egyetem tér 1., Debrecen, 4032

Full Professor, Head of Department	János Szöllősi M.Sc., Ph.D., D.Sc.
Full Professor	Attila Jenei M.Sc., Ph.D.
	György Vereb M.D., Ph.D., D.Sc.
Professor Emeritus	Sándor Damjanovich M.D., Ph.D., D.Sc., M.H.A.Sc.
Associate Professor	Zsolt Bacsó M.D., Ph.D.
Assistant Professor	Zsolt Fazekas M.Sc., Ph.D.

		Péter Hajdu M.Sc., Ph.D.
Assistant Lecturer	Ms.	Ágnes Tóth M.Sc., Ph.D.
Research Fellow	Ms.	Beáta Mészáros M.Sc., Ph.D.
	Ms.	Ágnes Nagyné Dr. Szabó M.Sc., Ph.D.
		Pál Pap M.Sc., Ph.D.
	Ms.	Tímea Váradi M.Sc., Ph.D.
	Ms.	Barbara Zsebik M.Sc., Ph.D.
Junior Research Fellow		Tamás Kovács M.D.
		László Ujlaky-Nagy M.D.
	Ms.	Julianna Volkó M.Sc.
Biologist		Gábor Szalóki M.Sc.
Bioimaging expert		Gábor Mocsár M.Sc.
PhD Student		András Balajthy M.D.
		Csaba Bankó M.Sc.
		István Csomós M.Sc.
	Ms.	Ágota Csóti M.Sc.
	Ms.	Erfaneh Firouzi Niaki D.Pharm.
	Ms.	Tímea Hajdu M.Sc.
		Péter Nánási M.D.
		Zoltán Dénes Pethő M.D.
		István Rebenku M.Sc.
	Ms.	Tímea Szendi-Szatmári M.Sc.
		Szabolcs Tarapcsák M.Sc.
		Gábor Tóth M.D.
	Ms.	Orsolya Vörös M.Sc.
	Ms.	Florina Zákány M.D.
Visiting Lecturer		László Bene M.Sc., Ph.D.
		Zoltán Krasznai M.Sc., Ph.D.
Academic Advisor		Zsolt Fazekas M.Sc., Ph.D.

DEPARTMENT OF FOREIGN LANGUAGES

Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-258-030
E-mail: ilekt@med.unideb.hu, Web: ilekt.med.unideb.hu

Head of Department	Ms.	Judit Lampéné Zsíros M.A., Ph.D.
Teacher	Ms.	Anna Balóné Jóna M.A.
	Ms.	Mariann Fodor M.D., Ph.D.
	Ms.	Ildikó Gerő M.A.

	Ms.	Mariann Gulyásné Szitás M.A.
	Ms.	Jusztina J. Nagy M.A.
	Ms.	Judit Kovács M.A.
	Ms.	Éva Kövesi M.A.
	Ms.	Mónika Krasznai M.A.
	Ms.	Zsuzsa Lívia Mezei M.A.
		László Répás M.A.
	Ms.	Katalin Rozman M.A.
		Tecumseh Stretch M.A.
Academic Advisor		László Répás M.A.

DEPARTMENT OF HUMAN GENETICS

Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-416-531
E-mail: nagy.balint@med.unideb.hu, Web: http://www.genetics.dote.hu

Associate Professor, Head of Department		Bálint Nagy M.Sc., Ph.D. habil., D.Sc.
Full Professor		Sándor Biró M.Sc., Ph.D., D.Sc.
		László Takács M.D., Ph.D., D.Sc., M.H.A.Sc.
Professor Emeritus		György Barabás M.Sc., Ph.D., D.Sc.
Associate Professor		András Penyige M.Sc., Ph.D.
Assistant Professor	Ms.	Zsuzsanna Birkó M.Sc., Ph.D.
	Ms.	Judit Keserű M.Sc., Ph.D.
Assistant Lecturer		Gergely Buglyó M.D., Ph.D.
	Ms.	Melinda Paholcsek M.Sc., Ph.D.
	Ms.	Melinda Szilágyi-Bónizs M.Sc., Ph.D.
	Ms.	Krisztina Szirák M.Sc., Ph.D.
Molecular Biologist	Ms.	Beáta Soltész M.Sc.
Invited Lecturer		Zsigmond Fehér M.D., Ph.D.
		József Schlammadinger M.D., Ph.D.
		György Vargha M.D., Ph.D.
		Sándor Vitális M.D., Ph.D.
PhD Student		Gábor Fidler M.Sc.
Academic Advisor		András Penyige M.Sc., Ph.D. (BMC, Biology, Human Genetics)
Academic Advisor for 1st year medical and dental students		Sándor Biró Ph.D., D.Sc.

DEPARTMENT OF IMMUNOLOGY

Egyetem tér 1., Debrecen, 4032, Tel: +36-52-417-159
Web: www.immunology.unideb.hu

Full Professor, Head of Department		Tamás Bíró M.D., Ph.D., D.Sc.
Full Professor	Ms.	Éva Rajnavölgyi M.Sc., Ph.D., D.Sc.
Associate Professor		Attila Bácsi M.Sc., Ph.D.
		Árpád Lányi M.Sc., Ph.D.
Assistant Lecturer	Ms.	Zsófia Agod M.Sc.
	Ms.	Tünde Fekete M.Sc., Ph.D.
		Attila Szabó M.Sc., Ph.D.
	Ms.	Aliz Varga M.Sc., Ph.D.
Research Fellow		Péter Gogolák M.Sc., Ph.D.
		Gábor Koncz M.Sc., Ph.D.
	Ms.	Kitti Pázmándi M.Sc., Ph.D.
Research Assistant	Ms.	Adrienn Gyöngyösi M.Sc.
PhD Student		Pál Krisztián Bene M.Sc.
	Ms.	Eszter Boldizsár
	Ms.	Noémi Miltner M.Sc.
		Máté István Sütő M.Sc.
	Ms.	Márta Tóth M.Sc.
	Ms.	Anett Türk-Mázló M.Sc.
Academic Advisor		Gábor Koncz M.Sc., Ph.D.

INSTITUTE OF SPORT SCIENCE OF UNIVERSITY OF DEBRECEN

Móricz Zs. krt. 22., Debrecen, 4032, Tel: +36-52-411-600/54436
E-mail: sport@med.unideb.hu

Head of Department		László Balogh M.D.
Lecturer	Ms.	Katalin Jóna M.Sc.
		Miklós Magyarits M.A.
		Ágoston Nagy Ph.D.
	Ms.	Katalin Varga M.Sc.

DEPARTMENT OF MEDICAL CHEMISTRY

Egyetem tér 1., Debrecen, 4010, Tel: +39-52-412-345
E-mail: medchem@unideb.hu, Web: medchem.unideb.hu

Full Professor, Head of Department	László Virág M.D., Ph.D., D.Sc.
Full Professor	Viktor Dombrádi M.Sc., Ph.D., D.Sc.

		Ferenc Erdődi M.Sc., Ph.D., D.Sc.
		Pál Gergely M.Sc., Ph.D., D.Sc., M.H.A.Sc.
Associate Professor		Péter Bay M.Sc., Ph.D.
	Ms.	Csilla Csortos M.Sc., Ph.D.
	Ms.	Ilona Farkas M.Sc., Ph.D.
Assistant Professor	Ms.	Éva Bakó M.Sc., Ph.D.
	Ms.	Edina Bakondi M.Sc., Ph.D.
		Tibor Docsa M.Sc., Ph.D.
		Csaba Hegedűs M.Sc., Ph.D.
	Ms.	Andrea Kiss M.Sc., Ph.D.
		Endre Kókai M.Sc., Ph.D.
	Ms.	Beáta Lontay M.Sc., Ph.D.
	Ms.	Krisztina Tar M.Sc., Ph.D.
Assistant Lecturer		Bálint Bécsi M.Sc., Ph.D.
	Ms.	Karolina Cseri M.Sc.
	Ms.	Judit Iván M.Sc., Ph.D.
Research Fellow	Ms.	Anita Boratkó M.Sc., Ph.D.
	Ms.	Edit Kapitányné Mikó M.Sc., Ph.D.
	Ms.	Katalin Kovács M.Sc., Ph.D.
		Dénes Nagy M.Sc., Ph.D.
		András Vida M.Sc., Ph.D.
Junior Research Fellow	Ms.	Petra Lakatos M.Sc.
	Ms.	Adrienn Sipos M.Sc.
Invited Lecturer		Béla Tóth M.Sc., Ph.D.
PhD Student		Tamás Fodor M.Sc.
		Dániel Horváth M.Sc.
		Tamás Kéki M.Sc.
		Zoltán Kónya M.Sc.
	Ms.	Tünde Kovács M.Sc.
	Ms.	Judit Márton M.Sc.
	Ms.	Lilla Nikoletta Nagy M.Sc.
	Ms.	Margit Péter M.Sc.
	Ms.	Katalin Petrényi M.Sc.
		Zsolt Regdon M.Sc.
	Ms.	Ildikó Szabó M.Sc.
		István Tamás M.Sc.
	Ms.	Emese Tóth M.Sc.

	Ms.	Zsuzsanna Valkó M.Sc.
Academic Advisor	Ms.	Éva Bakó M.Sc., Ph.D.

DEPARTMENT OF MEDICAL MICROBIOLOGY

Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-255-425
E-mail: mikro@dote.hu, Web: go.unideb.hu

Associate Professor, Head of Department		József Kónya M.D., Ph.D.
Professor Emeritus		Lajos Gergely M.D., Ph.D., D.Sc.
Associate Professor		László Majoros M.D., Ph.D.
	Ms.	Judit Szabó M.D., Ph.D.
		György Veress M.Sc., Ph.D.
Assistant Professor	Ms.	Eszter Csoma M.Sc., Ph.D.
		Gábor Kardos M.D., Ph.D.
	Ms.	Krisztina Szarka M.Sc., Ph.D.
Assistant Lecturer	Ms.	Zsuzsanna Dombrádi M.Sc., Ph.D.
	Ms.	Eszter Gyöngyösi M.Sc., Ph.D.
		Renátó Kovács M.Sc., Ph.D.
	Ms.	Brigitta László M.Sc., Ph.D.
Research Fellow	Ms.	Anita Szalmás M.Sc., Ph.D.
Biologist	Ms.	Cecilia Miszti M.Sc.
		Levente Szakács M.Sc.
Resident	Ms.	Evelin Bukta M.D.
Specialist	Ms.	Anita Kozák M.D.
Academic Advisor of Faculty of Medicine		György Veress M.Sc., Ph.D.
Academic Advisor of Faculty of Dentistry		György Veress M.Sc., Ph.D.
PhD Student	Ms.	Alíz Bozó M.Sc.
	Ms.	Dorottya Franyó M.Sc.
Academic Advisor of Faculty of Pharmacy		László Majoros M.D., Ph.D.

DEPARTMENT OF PHARMACOLOGY AND PHARMACOTHERAPY

Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-255-009
Web: http://pharmacology.med.unideb.hu

Full Professor, Head of Department		Zoltán Szilvássy M.D., Ph.D., D.Sc.
Professor Emeritus	Ms.	Judith Gergely D.Pharm., Ph.D., D.Sc.
Administration officer	Ms.	Oxána Kiszil J.D.
	Ms.	Andrea Szalai B.Sc., M.Sc.
Associate Professor	Ms.	Ilona Benkő M.D., Ph.D.

		Béla Juhász D.Pharm., Dr. habil., Ph.D.
		Róbert Pórszász M.D., Dr. habil., MBA, Ph.D.
		József Szentmiklósi M.D., Ph.D.
Assistant Professor		Attila Megyeri M.D., Ph.D.
Assistant Lecturer	Ms.	Ágnes Cseppentő M.D.
		Balázs Varga D.Pharm., Ph.D.
Senior Research Fellow		József Németh M.Sc., Ph.D.
Research Fellow	Ms.	Zsuzsanna Gál M.Sc., Ph.D.
	Ms.	Rita Kiss M.D., Ph.D.
Nutricionist	Ms.	Katalin Szabó M.Sc.
Chemist		Lajos Veress M.Sc.
Molecular Biologist	Ms.	Diána Kovács M.Sc., Ph.D.
PhD Student	Ms.	Mariann Bombicz D.Pharm.
	Ms.	Beáta Lelesz M.Sc.
		Dániel Priksz D.Pharm.
Junior Lecturer	Ms.	Mariann Bombicz D.Pharm.
	Ms.	Andrea Kurucz M.D.
Academic Advisor		Róbert Pórszász M.D., Dr. habil., MBA, Ph.D.

DEPARTMENT OF PHYSIOLOGY

Nagyerdei krt. 98., Debrecen, 4012, Tel: +36-52-255-575

Web: http://phys.dote.hu

Full Professor, Head of Department		László Csernoch M.Sc., Ph.D., D.Sc.
Full Professor, Head of Sport Physiology Division		János Magyar M.D.,Ph.D.,D.Sc.
Full Professor, Head of Dental Physiology and Pharmacology Division		Péter Nánási M.D., Ph.D., D.Sc.
Full Professor		László Csernoch M.Sc., Ph.D., D.Sc.
		János Magyar M.D.,Ph.D.,D.Sc.
		Péter Nánási M.D., Ph.D., D.Sc.
Professor Emeritus		László Kovács M.D.,Ph.D.,D.Sc.,M.H.A.Sc.
Associate Professor		Tamás Bányász M.D., Ph.D.
Assistant Professor		János Almássy M.Sc., Ph.D.
	Ms.	Szilvia Benkő M.Sc., Ph.D.
		Balázs Horváth M.D.,Ph.D.
		Balázs Pál M.D.,Ph.D.

		Norbert Szentandrássy M.D., Ph.D.
		István Balázs Tóth M.Sc., Ph.D.
Assistant Lecturer	Ms.	Ágnes Jenes M.D., Ph.D.
		Attila Szöllősi M.D.
Postgraduate Lecturer		Attila Oláh M.D.
Senior Research Fellow		Péter Szentesi M.Sc., Ph.D.
Postdoctoral Fellow	Ms.	Johanna Mihály M.Sc., Ph.D.
	Ms.	Magdolna Szántó M.Sc., Ph.D.
Research Fellow	Ms.	Gabriella Czifra M.Sc., Ph.D.
	Ms.	Beatrix Dienes M.Sc., Ph.D.
	Ms.	Mónika Sztretye M.Sc., Ph.D.
Junior Research Fellow	Ms.	Lídia Ambrus M.Sc.
	Ms.	Adrienn Kovács M.Sc.
		Tamás Oláh M.Sc., Ph.D.
	Ms.	Anitta Kinga Sárvári M.Sc.
OTKA Postdoctoral Fellow		János Fodor M.Sc., Ph.D.
PhD Student	Ms.	Ágnes Angyal M.Sc.
		Norbert Balogh M.Sc.
	Ms.	Csilla Bordás M.Sc.
		Tamás Czirják M.Sc.
		Balázs Kelemen M.Sc.
	Ms.	Éva Kókai M.Sc.
		Gergő Kovács M.Sc.
		Arnold Markovics M.Sc.
		Imre Lőrinc Szabó M.D.
		Roland Veress M.Sc.
		János Vincze M.D.
Research Advisor		István Jóna M.Sc., Ph.D., D.Sc.

CHAPTER 6

FACULTY OF MEDICINE - CLINICAL DEPARTMENTS

DEPARTMENT OF CARDIOLOGY

Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-255-928

Chairman	István Édes M.D., Ph.D., D.Sc.

Division of Cardiology

Móricz Zs. krt. 22., Debrecen, 4032, Tel: +36-52-255-928
E-mail: edes@dote.hu, Web: http://en.debkard.hu

Full Professor, Head of Department	István Édes M.D., Ph.D., D.Sc.
Full Professor	Zoltán Csanádi M.D., Ph.D.
Associate Professor	Zsolt Kőszegi M.D., Ph.D.
Assistant Professor	Ms. Judit Barta M.D., Ph.D.
	Ms. Annamária Bódi M.D., Ph.D.
	Attila Borbély Ph.D.
	Marcel Clemens M.D., Ph.D.
	Ms. Andrea Daragó M.D.
	Tibor Fülöp M.D., Ph.D.
	László Fülöp M.D., Ph.D.
	Szabolcs Gergely M.D.
	Attila Kertész M.D., Ph.D.
	Rudolf Kolozsvári M.D., Ph.D.
	Tibor Szűk M.D., Ph.D.
	Gusztáv Vajda M.D.
Assistant Lecturer	Dániel Czuriga M.D., Ph.D.
	Ms. Nóra Erdei M.D., Ph.D.
	Ms. Zita Hertelendi M.D., Ph.D.
	Ms. Nóra Homoródi M.D.
	Csaba Jenei M.D.
	Ms. Erzsébet Lizanecz M.D., Ph.D.
	Sándor Sipka M.D., Ph.D.
Cardiologist	László Balogh M.D.
	Ms. Orsolya Bene M.D.
	Ferenc Győry M.D., Ph.D.
	Csaba Kun M.D.
	Andrij Leny M.D.

		László Nagy M.D.
	Ms.	Andrea Péter M.D.
	Ms.	Ildikó Rácz M.D.
	Ms.	Ágnes Orsolya Rácz M.D.
		Gábor Sándorfi M.D.
		Gábor. Szabó M.D.
		Miklós Szokol M.D.
Resident		Ferenc Abonyi
	Ms.	Ágnes Balogh M.D., Ph.D.
	Ms.	Alexandra Kiss M.D., Ph.D.
		Gábor Kolodzey M.D.
		Bertalan Kracskó M.D.
	Ms.	Krisztina Medvés-Váczi M.D.
	Ms.	Edina Nagy-Baló M.D., Ph.D.
		Gergő Szilágyi M.D.
Educational Advisor	Ms.	Judit Barta M.D., Ph.D.

Division of Cardiac Surgery
Móricz Zs. krt. 22., Debrecen, 4032, Tel: +36-52-255-306

Associate Professor, Head of Division		Tamás Szerafin M.D., Ph.D.
Professor Emeritus		Árpád Péterffy M.D., D.Sc.
Assistant Lecturer		Tamás Debreceni M.D.
	Ms.	Andrea Molnár M.D., Ph.D.
Chief Physician		Ambrus Horváth M.D.
Clinical Assistant		Tamás Maros M.D.
		Lehel Palotás M.D.
		József Simon M.D.
		István Szentkirályi M.D.
Candidate Clinical Assistant		Péter Csizmadia M.D.
		András Durkó M.D.
Resident		Ákos Attila Berczi M.D.

DEPARTMENT OF CLINICAL ONCOLOGY
Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-255-585
Web: http://oncology.deoec.hu

Head of Department	Zsolt Horváth M.D., Ph.D.

Senior Research Scientist	Iván Uray M.D., Ph.D.

DEPARTMENT OF INTERNAL MEDICINE
Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-255-525

Full Professor, Head of Department	György Paragh M.D., Ph.D., D.Sc.
Education Officer, Contact Person	Péter Fülöp M.D., Ph.D.

Division of Emergency Medicine
Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-411-717/50190
E-mail: ujvarosy.andras@mentok.hu

Associate Professor, Head of Division	Zoltán Szabó M.D., Ph.D.
Associate Professor	István Lőrincz M.D., Ph.D.
Assistant Professor	Ms. Dóra Ujvárosy M.D.
	Zoltán Vincze M.D., Ph.D.
Candidate Clinical Assistant	Tamás Köbling M.D.
Resident	Zoltán Szegedi M.D.
	Szabolcs Tóth M.D.
Invited Lecturer	Ms. Tímea Boros M.D.
	Gergely Nagy M.D.
	Tamás Ötvös M.D.
	Ms. Margit Petrus M.D.
	Zoltán Szatmári M.D.
	Sándor Szima M.D.

Division of Metabolism
Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-255-600

Full Professor, Head of Division of Metabolism	György Paragh M.D., Ph.D., D.Sc.
Full Professor	Dénes Páll M.D., Ph.D., D.Sc.
Associate Professor	Zoltán Balogh M.D., Ph.D.
	Péter Fülöp M.D., Ph.D.
	Ms. Mariann Harangi M.D., Ph.D.
	Miklós Káplár M.D., Ph.D.
	Ms. Éva Katona M.Sc.
Assistant Professor	Péter Koncsos M.D.
	Sándor Somodi M.D., Ph.D.
Assistant Lecturer	Tamás Köbling M.D.

Chief Consultant		Attila Szűcs M.D., Ph.D.
Senior Research Fellow		Zsolt Karányi M.Sc.
	Ms.	Ildikó Seres M.Sc., Ph.D.
Biologist	Ms.	Mónika Katkó M.D.
Clinical Assistant	Ms.	Tímea Besenyei M.D.
	Ms.	Henrietta Dér M.D.
	Ms.	Krisztina Gaál M.D.
	Ms.	Andrea Kahler M.D.
	Ms.	Judit Kéri M.D.
	Ms.	Ilona Enikő Kovács M.D.
	Ms.	Julianna Kulcsár M.D.
		Szabolcs Lengyel M.D.
	Ms.	Alida Magdolna Páll M.D.
	Ms.	Ildikó Szántó M.D.
		Ferenc Sztanek M.D.
Candidate Clinical Assistant	Ms.	Regina Esze M.D.
		Imre Juhász M.D.
	Ms.	Eszter Kusicza M.D.
		György Nagy M.D.
	Ms.	Réka Szentimrei M.D.
	Ms.	Noémi Zsíros M.D.
Resident	Ms.	Lilla Juhász M.D.
	Ms.	Judit Kaluha M.D.
		Balázs Mata M.D.
PhD Student	Ms.	Anita Szentpéteri
	Ms.	Viktória Varga

Division of Public Health Medicine
Nagyerdei krt. 98., Debrecen, 4012

Associate Professor, Head of Division		István Kárpáti M.D., Ph.D.
Assistant Lecturer		Tamás Köbling M.D.

Division of Rheumatology
Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-255-091
E-mail: reuma.titkarsag@med.unideb.hu, Web: www.rheumatology.hu

Full Professor, Head of Division		Zoltán Szekanecz M.D., Ph.D., D.Sc.
Full Professor	Ms.	Gabriella Szűcs M.D., Ph.D.
Associate Professor		Sándor Szántó M.D., Ph.D.

Assistant Professor	Ms.	Szilvia Szamosi M.D., Ph.D.
Assistant Lecturer	Ms.	Nóra Bodnár M.D.
	Ms.	Edit Végh M.D.
Clinical Specialist	Ms.	Katalin Gulyás M.D.
	Ms.	Ágnes Horváth M.D.
	Ms.	Zsófia Pethő M.D.
Resident	Ms.	Ágnes Kovács Ph.D.
	Ms.	Boglárka Soós M.D.

DEPARTMENT OF NEUROLOGY

Móricz Zs. str. 22., Debrecen, 4032, Tel: +36-52-255-255
E-mail: iroda@med.unideb.hu ; csiba@med.unideb.hu

Full Professor, Head of Department		László Csiba M.D., Ph.D., D.Sc.
Full Professor		István Fekete M.D.
Professor Emeritus		Ferenc Mechler M.D., Ph.D., D.Sc.
Associate Professor	Ms.	Tünde Csépány M.D., Ph.D.
	Ms.	Tünde Magyar M.D., Ph.D.
		László Oláh M.D., Ph.D.
Assistant Professor	Ms.	Judit Boczán M.D., Ph.D.
	Ms.	Klára Fekete M.D., Ph.D.
		Bertalan Vámosi M.D.
Assistant Lecturer	Ms.	Krisztina Csapó M.D., Ph.D.
	Ms.	Katalin Réka Kovács M.D., Ph.D.
		Norbert Kozák M.D., Ph.D.
		Zsolt Mezei M.D., Ph.D.
	Ms.	Szilvia Puskás M.D.,Ph.D.
Clinical Assistant	Ms.	Anita Frendl M.D.
	Ms.	Edina Kovács M.D.
	Ms.	Katalin Szabó M.Sc.
Candidate Clinical Assistant		Szabolcs Farkas M.D., Ph.D.
		Gergely Hofgárt M.D.
	Ms.	Kitti Bernadett Kovács M.D.
Resident	Ms.	Lilla Rácz M.D.
PhD Student	Ms.	Aletta Harmann M.D.
	Ms.	Csilla Vér

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-255-144
E-mail: gyvarga@med.unideb.hu

Full Professor, Head of Department		Róbert Póka M.D., Dr. habil., Ph.D.
Full Professor		Zoltán Hernádi M.D., Ph.D., D.Sc.
		Zoltán Tóth M.D., Ph.D., D.Sc.
Professor Emeritus		Antal Borsos M.D., Ph.D., D.Sc.
		László Lampé M.D., Ph.D., D.Sc.
Associate Professor		Attila Jakab M.D., Ph.D.
		Tamás Szilveszter Kovács M.D., Ph.D.
		Tamás Major M.D., Ph.D.
	Ms.	Olga Török M.D., Ph.D.
Assistant Professor		László Birinyi M.D., Ph.D.
		Roland Csorba M.D., Ph.D.
		Alpár Gábor Juhász M.D., Ph.D.
		Zoárd Krasznai M.D., Ph.D.
		Rudolf Lampé M.D., Ph.D.
		Csaba Móré M.D., Ph.D.
		Tamás Sápy M.D., Ph.D.
	Ms.	Szilvia Vad M.D., Ph.D.
Assistant Lecturer		Péter Daragó M.D.
		Tamás Deli M.D., Ph.D.
		János Lukács M.D.
		Péter Török M.D., Ph.D.
Biologist	Ms.	Zsuzsanna Buczkó M.Sc.
	Ms.	Ildikó Zsupán M.Sc.
Clinical Assistant		István Argay M.D.
		Balázs Erdődi M.D.
	Ms.	Ágnes Farkas M.D.
		István Fekete M.D.
	Ms.	Judit Kerepesi M.D.
		Bence Kozma M.D.
		László Orosz M.D.
		Jashanjeet Singh M.D.
Candidate Clinical Assistant		Péter Damjanovich M.D.
	Ms.	Eszter Maka M.D.
		Szabolcs Molnár M.D.

		Gergő Orosz M.D.
Resident		Levente Barna M.D.
	Ms.	Szilvia Csehely M.D.
		Zsolt Farkas M.D.
	Ms.	Orsolya Nagyházi M.D.
	Ms.	Mónika Orosz M.D.
	Ms.	Lilla Ördög M.D.
		Attila Sipos M.D.
Psychologist	Ms.	Zsuzsa Török M.A., Ph.D.
Academic Advisor (IV. Year)		Tamás Szilveszter Kovács M.D., Ph.D.
Academic Advisor (VI. year)		Tamás Major M.D., Ph.D.

DEPARTMENT OF ORTHOPEDIC SURGERY

Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-255-815
E-mail: zjonas@med.unideb.hu, Web: www.ortopedia.dote.hu

Full Professor, Head of Department		Zoltán Csernátony M.D., Ph.D., D.Sc.
Professor Emeritus		János Rigó M.D., Ph.D.
		Kálmán Szepesi M.D., Ph.D., D.Sc.
Assistant Professor		Zoltán Jónás M.D.
		János Szabó M.D.
Assistant Lecturer		Tamás Bazsó M.D.
		Gyula Győrfi
		Zsolt Hunya M.D.
		Zoltán Karácsonyi M.D.
		László Kiss M.D.
		Henrik Rybaltovszki M.D.
	Ms.	Csenge Szeverényi M.D.
Clinical Assistant		István Soltész M.D.

DEPARTMENT OF PEDIATRICS

Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-411-717/55289
E-mail: mogyoros@med.unideb.hu, Web: www.pediatrics.dote.hu

Full Professor, Head of Department		György Balla M.D., Ph.D., D.Sc.
Full Professor, Head of Division of Pediatric Haematology and Oncology		Csongor Kiss M.D., Ph.D., D.Sc.
Full Professor	Ms.	Ilma Korponay-Szabó M.D., Ph.D.
Associate Professor, Head of Division of		Gábor Mogyorósy M.D., Ph.D.

General Pediatrics		
Associate Professor, Head of Division of Pediatric Emergency Care	Ms.	Rita Káposzta M.D., Ph.D.
Associate Professor		István Csízy M.D., Ph.D.
	Ms.	Ilona György M.D., Ph.D.
		Gábor Mogyorósy M.D., Ph.D.
		Béla Nagy M.D., Ph.D.
	Ms.	Éva Nemes M.D., Ph.D.
		Tamás Szabó M.D., Ph.D.
		István Szegedi M.D., Ph.D.
Assistant Professor	Ms.	Enikő Felszeghy M.D.,Ph.D.
	Ms.	Katalin Szakszon M.D., Ph.D.
	Ms.	Judit Tóth M.D.
Assistant Lecturer	Ms.	Erika Bálega M.D.
	Ms.	Andrea Berkes M.D., Ph.D.
	Ms.	Ágnes Papp M.D.
		István Pataki M.D.
		László Sasi Szabó M.D.
Emeritus	Ms.	Éva Oláh M.D., Ph.D., D.Sc.
Senior Lecturer	Ms.	Andrea Nagy M.D.
Clinical Assistant		Zsolt Bene M.D.
		Gábor Garai M.D.
		Imre Gáspár M.D.
	Ms.	Éva Juhász M.D.
	Ms.	Orsolya Kadenczki M.D.
	Ms.	Erzsébet Ilona Lakatos M.D.
	Ms.	Ágnes Magyar M.D.
	Ms.	Edina Mák M.D.
		Zsolt Reiger M.D.
Resident	Ms.	Edina Bányász M.D.
	Ms.	Bernadett Bíró M.D.
	Ms.	Beáta Bujdosó M.D.
	Ms.	Anita Gertrud Czifra M.D.
	Ms.	Klára Erdei M.D.
	Ms.	Boglárka Fehér M.D.
	Ms.	Anita Grabicza M.D.
	Ms.	Réka Jancsik M.D.
		Péter Juhász M.D.

	Ms.	Nóra Kicska M.D.
	Ms.	Eszter Kovács M.D.
		András Kretzer M.D.
	Ms.	Lilla Macsi M.D.
	Ms.	Katalin Nagy M.D.
	Ms.	Helga Perényi M.D.
	Ms.	Boglárka Schvarckopf M.D.
	Ms.	Orsolya Somodi M.D.
	Ms.	Vivien Stercel M.D.
		Levente Szabó M.D.
	Ms.	Lilla Szegedi M.D.
	Ms.	Anna Szőllős M.D.
	Ms.	Flóra Ujhelyi M.D.
	Ms.	Zsuzsa Zele M.D.
Psychologist	Ms.	Erika Tizedes
Academic Advisor	Ms.	Enikő Felszeghy M.D., Ph.D.

DEPARTMENT OF PHYSICAL MEDICINE AND REHABILITATION

Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-255-942
E-mail: orfmt@med.unideb.hu, Web: http://rehabilitacio.med.unideb.hu

Head of Department, Associate Professor		Zoltán Jenei M.D., Ph.D.
Associate Professor	Ms.	Zsuzsanna Vekerdy-Nagy M.D., Ph.D. habil. (retired)
Clinical Specialist	Ms.	Ágnes Bajusz-Leny M.D.
	Ms.	Judit Horváth M.D.
	Ms.	Rita Szepesi M.D.
Resident	Ms.	Adél Nagy M.D.
	Ms.	Lilla Szabó M.D.
Neuro-psychologist	Ms.	Györgyi Lente M.Sc.
Psychologist	Ms.	Noémi Zsuzsanna Kovács M.Sc.
Speech Therapist	Ms.	Noémi Fejér M.A.
	Ms.	Ildikó Mózesné Kapocska M.A.
	Ms.	Adrienn Polonkai M.A.
Physiotherapist	Ms.	Szabina Antal M.A.
	Ms.	Zsuzsa Bodnár M.A.
	Ms.	Kitti Boros, M.A.
	Ms.	Bettina Burgond M.A.
	Ms.	Andrea Győrfiné Jánossy M.A.

	Ms.	Anna Kövérné Kurta M.A.
	Ms.	Gabriella Nagy M.A.
	Ms.	Szabina Nagy M.A.
	Ms.	Éva Anna Szabados M.A.
Physiotherapist, Occupational therapist and Rehabilitation expert	Ms.	Zsófia Hőgye M.A.
Rehabilitation expert	Ms.	Gabriella Nagy M.A.
Social Worker	Ms.	Julianna Kavaleczné Ilyés M.A.
IT Specialist	Ms.	Beáta Alíz Dézsi M.Sc.
Social Educator	Ms.	Szilvia Baksa M.A.
PhD Student	Ms.	Judit Horváth M.D.
	Ms.	Adél Nagy M.D.
	Ms.	Anna Sárközi M.D.

DEPARTMENT OF PSYCHIATRY

Nagyerdei krt. 98., Debrecen, 4012, Tel: +36-52-255-240

Head of Department		Ede Frecska M.D., M.A., Ph.D.
Associate Professor	Ms.	Anikó Égerházi M.D., Ph.D.
Assistant Professor		Roland Berecz M.D., Ph.D.
	Ms.	Theodóra Glaub M.D.
Assistant Lecturer		Csaba Móré E. M.D., Ph.D.
Clinical Assistant		Gábor Andrássy M.D.
	Ms.	Edina Cserép M.D.
		Attila Kovács
	Ms.	Erzsébet Magyar M.D.
	Ms.	Katalin Tolvay M.D.
Resident		Ágoston Gajdos M.D.
		Balázs Jeges M.D.
	Ms.	Annamária Nagy M.D.
		Bence Szerdahelyi M.D.
Psychologist	Ms.	Éva Gasparik M.A.
	Ms.	Lili Kövér M.A.
	Ms.	Emese Kulcsár M.A.
	Ms.	Ella Molnár M.A.
	Ms.	Andrea Ritz M.A.
Academic Advisor	Ms.	Réka Stébel

DEPARTMENT OF PULMONOLOGY

Nagyerdei krt. 98., Debrecen, 4032, Tel: +36-52-255-222

Full Professor, Head of Department	Ms.	Mária Szilasi M.D., Ph.D.
Assistant Professor		Imre Varga M.D., Ph.D.
Assistant Lecturer	Ms.	Andrea Fodor M.D.
		Tamás Kardos M.D.
	Ms.	Angéla Mikáczó M.D.
	Ms.	Anna Sárközi M.D.
		Attila Vaskó M.D.
Chief Physician		László Brugós M.D., Ph.D.
Clinical Assistant	Ms.	Melinda Lajtos M.D.
		Attila Lieber M.D.
		Zoltán Örlős M.D.
	Ms.	Zsuzsa Papp M.D.
	Ms.	Ildikó Szűcs M.D.
Candidate Clinical Assistant		Attila Makai M.D.
	Ms.	Regina Szabó-Szűcs M.D.
Responsible for Educational Matters	Ms.	Andrea Fodor M.D.

DEPARTMENT OF TRAUMATOLOGY AND HAND SURGERY

Bartók Béla út 2-26., Debrecen, 4031, Tel: +36-52-419-499, +36-52-511-780
E-mail: dbtrauma@med.unideb.hu

Associate Professor, Head of Department		Béla Turchányi M.D., Ph.D.
Professor Emeritus		Károly Fekete M.D., Ph.D.
		Zoltán Záborszky M.D., Ph.D.
Hon. Associate Professor		Géza Ács M.D.
Head Surgeon		István Frendl M.D.
Chief Surgeons of the Kenézy Hospital		János Bagyó M.D.
		József Balázs M.D.
		Béla Barta M.D.
	Ms.	Danie Czakó M.D.
		Zoltán Dézsi M.D.
		Péter Horkay M.D.
		Árpád Kiss M.D.
		Bojko Lazarov Szeferinkin M.D.
		László Molnár M.D.
		Levente Molnár M.D.

	András Nagy M.D.
	Árpád Németh M.D.
	Dániel Rezes M.D.
	Zsigmond Varga M.D.
Surgeons of the Kenézy Hospital	Árpád Barkaszi M.D.
	Miklós Bíró M.D.
	Aurél Bogdán M.D.
	Subuh Deeb Mahmoud M.D.
	Szabolcs Gorzsás M.D.
	Sándor Imre Kiss M.D.
	László Kiss M.D.
	Ádám Lőrincz M.D.
	Ms. Katalin Muraközy M.D.
	Zoltán Németi M.D.
	Zoltán Domokos Pap M.D.
	József Papp M.D.
Resident	Péter Berényi M.D.
	Károly Elek M.D.
	Márton Árpád Fésüs M.D.
	László Gubik M.D.
	Ádám Kristóf Gulyás M.D.
	Gergely Huszanyik M.D.
	Dávid Kovács M.D.
	Csaba Körei M.D.
	Zoltán Mikó M.D.
	Márton József Séber M.D.
Consultant	István Szarukán M.D.

CHAPTER 7

UNIVERSITY CALENDAR

UNIVERSITY CALENDAR FOR THE BSC IN PUBLIC HEALTH PROGRAM
ACADEMIC YEAR2016/2017

OPENING CEREMONY:11th September, 2016

1st SEMESTER

Course	Examination Period
12th September - 23rdDecember, 2016 (15 weeks)	27December 2016- 10th February, 2017 (7 weeks)

2nd SEMESTER

Course	Examination Period
13February - 26thMay, 2017 (15 weeks)	29th May - 14thJuly 2017 (7 weeks)

CHAPTER 8

ACADEMIC PROGRAMME FOR CREDIT SYSTEM

In September, 2003, the introduction of the credit system became compulsory in every Hungarian university, including the University of Debrecen. The aim of the credit system is to ensure that the students' achievements can be properly and objectively evaluated both quantitatively and qualitatively.

A credit is a relative index of cumulative work invested in a compulsory, required elective or optional subject listed in the curriculum. The credit value of a course is based upon the number of lectures, seminars and practical classes of the given subject that should be attended or participated in (so called „contact hours"), and upon the amount of work required for studying and preparing for the examination(s) (in the library or at home). Together with the credit(s) assigned to a particular subject (quantitative index), students are given grades (qualitative index) on passing an exam/course/class. The credit system that has been introduced in Hungary is in perfect harmony with the European Credit Transfer System (ECTS). The introduction of the ECTS promotes student mobility, facilitates more organization of student' exchange programs aimed at further education in foreign institutions, and allows recognition of the students' work, studies and achievements completed in various foreign departments by the mother institution.

Credit-based training is flexible. It provides students with a wider range of choice, enables them to make progress at an individual pace, and it also offers students a chance to study the compulsory or required subjects at a different university, even abroad. Owing to the flexible credit accumulation system, the term „repetition of a year" does not make sense any longer.

It should be noted, however, that students do not enjoy perfect freedom in the credit system either, as the system does not allow students to randomly include subjects in their curriculum or mix modules.

Since knowledge is based on previous knowledge, it is imperative that the departments clearly and thoroughly lay down the requirements to be met before students start studying a subject.

The general principles of the credit system are the following:

According to the credit regulations, students should obtain an average of 30 credits in each semester

The criterion of obtaining 1 credit is to spend some 30 hours (including both contact and noncontact hours) studying the given subject.

Credit(s) can only be obtained if students pass the exam on the given subject.

Students accumulate the required amount of credits by passing exams on compulsory, required elective and optional subjects. Completion of every single compulsory credit course is one of the essential prerequisites of getting a degree. Courses belonging to the required elective courses are closely related to the basic subjects, but the information provided here is more detailed, and includes material not dealt within the frame of the compulsory courses. Students do not need to take all required elective courses, but they should select some of them wisely to accumulate the predetermined amount of credits from this pool. Finally, a certain amount of credits should be obtained by selecting from the optional courses, which are usually not closely related to the basic (and thus mandatory) subjects, but they offer a different type of knowledge.

Students can be given their degree if, having met other criteria as well, they have collected 240 credits during their studies. Considering the recommended curriculum, this can be achieved in four years.

The pilot curricula show the recommended pacing of compulsory courses. If these courses are carefully supplemented with credits obtained from the necessary number of required elective and

optional courses, students can successfully accumulate the credits required for their degree within 8 semesters.

The diploma work is worth 20 credits.

Internship (supervised practices) in the final year is compulsory.

Regulations concerning the training of students in the credit system prescribe a minimum amount of credits for certain periods as outlined in the Regulations of Training and Examination (RTE).

Although Physical Education and Summer Internship (controlled practices) are not recognized by credits, they have to be completed to get the final degree (see the rules outlined in the Information section about the conditions).

Compulsory courses for the 1. year

Sem	Subjects	Neptun code	L	S	P	Exam	Crd	Prerequisites of taking the subject
1	Basics of Informatics	NK_PH_BINF1	12		33	AW5	3	None
1	Bioethics	NK_PH_BIOE1	15			ESE	1	None
1	Chemistry	NK_PH_CHEM1	46	24		ESE	6	None
1	Communication skills	NK_PH_COMM1	10	20		ESE	3	None
1	Ecology	NK_PH_ECO1	30	15		ESE	6	None
1	First aid	NK_PH_FAID1	6		15	AW5	2	None
1	Hungarian Language I.	NK_PH_HUNG11			30	SIGN	0	None
1	Introduction to Nursing and Clinical Medicine	NK_PH_NURS1	15		15	ESE	3	None
1	Psychology	NK_PH_PSY2	30			ESE	2	None
1	Sociology	NK_PH_SOC1	15			ESE	1	None

Compulsory courses for the 1. year

Sem	Subjects	Neptun code	L	S	P	Exam	Crd	Prerequisites of taking the subject
2	Basic anatomy	NK_PH_ANAT2	30	15	15	ESE	6	None
2	Basics of pedagogy	NK_PH_PEDA2	15			ESE	1	None
2	Biostatistics	NK_PH_BIOST2	15		30	ESE	4	Basics of informatics
2	Cell Biology	NK_PH_CELL2	30			ESE	3	None
2	Genetics and molecular biology	NK_PH_GEN2	30			ESE	3	None
2	Health (& Library) informatics I.	NK_PH_HLINF3	10		20	AW5	3	Basics of informatics
2	Health psychology	NK_PH_HPSY	30			ESE	3	Psychology
2	Health sociology	NK_PH_HSOC2	30			ESE	2	Sociology
2	Hungarian Language II.	NK_PH_HUNG22			30	SIGN	0	Hungarian Language I.
2	Introduction to public health	NK_PH_INPH2	15			ESE	1	None
2	Medical latin	NK_PH_LAT1			30	ESE	2	None

Compulsory courses for the 2. year

Sem	Subjects	Neptun code	L	S	P	Exam	Crd	Prerequisites of taking the subject
1	Basic Biochemistry	NK_PH_BBIOCH3	30	15		ESE	4	Cell biology
1	Basic epidemiology	NK_PH_BEPI3	15		30	ESE	3	Biostatistics
1	Basic microbiology	NK_PH_BMIC3	30			ESE	4	None
1	Health (& Library) informatics II.	NK_PH_HINF3	10		20	ESE	3	Health (& Library) informatics I.
1	Introduction to law I.	NK_PH_LAW3	30			ESE	2	None
1	Physiology	NK_PH_PHYS3	30	15		ESE	4	Basic anatomy
1	Professional Hungarian I.	NK_PH_PHUNG3			30	AW5	2	Hungarian language II.
1	Public health medicine I.	NK_PH_MED3	30		30	ESE	6	Basic anatomy

Compulsory courses for the 2. year

Sem	Subjects	Neptun code	L	S	P	Exam	Crd	Prerequisites of taking the subject
2	Biochemistry	NK_PH_BIOCH4	10	5		ESE	1	Basic biochemistry
2	Environmental health	NK_PH_ENH4	30	26	4	ESE	6	Ecology, Chemistry
2	Epidemiology of communicable and non-communicable diseases I.	NK_PH_EPIC4	15	45		ESE	6	Basic Epidemology
2	Introduction to law II.	NK_PH_LAW4	30			ESE	2	Introduction to law I.
2	Professional Hungarian II.	NK_PH_PHUNG4			30	AW5	2	Professional Hungarian I.
2	Public health medicine II.	NK_PH_MED4	30		30	ESE	6	Public health medicine I.

Compulsory courses for the 3. year

Sem	Subjects	Neptun code	L	S	P	Exam	Crd	Prerequisites of taking the subject
1	Basics in health promotion and policy	NK_PH_BHPRO5	30		15	ESE	4	Introduction to public health; Psychology
1	Epidemiology of communicable and non-communicable diseases II.	NK_PH_EPIC5	15	30		FE	4	Epidemiology of communicable and non-communicable diseases I.
1	Health care law I.	NK_PH_HCLAW5	30			ESE	3	None
1	Immunology	NK_PH_IMM5	30			ESE	2	Cell Biology
1	Occupational health	NK_PH_OCCH5	30	30		ESE	6	Basic epidemiology, Chemistry, Environmental health
1	Pharmacology	NK_PH_PHARM5	30			ESE	3	Chemistry
1	Public health medicine III.	NK_PH_MED5	30		30	ESE	6	Public health medicine II.

Compulsory courses for the 3. year

Sem	Subjects	Neptun code	L	S	P	Exam	Crd	Prerequisites of taking the subject
2	Basics of quality assurance	NK_PH_BQASS6	15	15		ESE	2	None
2	Field and laboratory practice I.	NK_PH_FLAB6			180	AW5	8	Basic epidemiology; Basics in health promotion and policy
2	Health care law II.	NK_PH_HCLAW6	30			ESE	3	Health care law I.
2	Public health medicine IV.	NK_PH_MED6	30		30	FE	6	Public health medicine III.; Immunology

Compulsory courses for the 4. year

Sem	Subjects	Neptun code	L	S	P	Exam	Crd	Prerequisites of taking the subject
1	Field and laboratory practice II.	NK_PH_FLAB7			180	AW5	8	Field and laboratory practice I.
1	Health care law III.	NK_PH_HCLAW7	30			ESE	3	Health care law II.
1	Health promotion	NK_PH_HPROM	10		20	ESE	2	Basics in health promotion and policy
1	Nutritional health and food safety	NK_PH_NUTRI	15	30		ESE	5	Basic microbiology
1	Thesis I.	NK_PH_THES7			15	ESE	6	Field and laboratory practice I.

Compulsory courses for the 4. year

Sem	Subjects	Neptun code	L	S	P	Exam	Crd	Prerequisites of taking the subject
2	Field and laboratory practice III.	NK_PH_FLAB8			180	ESE	8	Field and laboratory practice II.
2	Health care law IV.	NK_PH_HCLAW8	30			FE	3	Health care law III.
2	Health system management	NK_PH_HSMAN	30			FE	2	None
2	Thesis II.	NK_PH_THES8			60	ESE	14	Thesis I.

Required elective courses for the 1. year

Sem	Subjects	Neptun code	L	S	P	Exam	Crd	Prerequisites of taking the subject
1	Mathematical basics of biostatistics	NK_PH_MAT	15		45	AW5	3	None

Required elective courses for the 2. year

Sem	Subjects	Neptun code	L	S	P	Exam	Crd	Prerequisites of taking the subject
1	Basics of research methodology	NK_PH_REM	15		15	ESE	3	None
1	Environmental protection	NK_PH_EPRO	15			AW5	1	None
1	Internet in medicine	NK_PH_INTM	20			AW5	2	None
1	Modern morphological methods and possible applicatons	NK_PH_MOM	22		8	ESE	3	Genetics

Required elective courses for the 2. year

Sem	Subjects	Neptun code	L	S	P	Exam	Crd	Prerequisites of taking the subject
2	Clinical audit	NK_PH_CAUD	8	6		AW5	1	None
2	Health impact assessment	NK_PH_HIA	9		6	AW5	1	None

Required elective courses for the 3. year

Sem	Subjects	Neptun code	L	S	P	Exam	Crd	Prerequisites of taking the subject
1	Applied epidemiology	NK_PH_AEP			30	ESE	3	None
1	Introduction to the general laboratory practice	NK_PH_GLP			15	AW5	1	Chemistry, Biochemistry

Freely Chosen Courses

Department	Subject	Neptun code	Crd	Sem	Hours	Exam	Prerequisites of taking the subject	Coordinator
Institute of Behavioural Sciences, Faculty of Public Health	Inborn sociality-socialized individuality: a new concept	NK_PH_INSO_01	2	1	20	AW5	None	

CHAPTER 9

ACADEMIC PROGRAMME FOR THE 1ST YEAR

Department of Foreign Languages

Subject: HUNGARIAN LANGUAGE I.
Year, Semester: 1st year/1st semester
Number of teaching hours:
Practical: 30

1st week:
Practical: Organization of the course

2nd week:
Practical: Introduction, the Hungarian alphabet, pronunciation rules

3rd week:
Practical: Ki vagy? (Who are you?) Personal pronouns

4th week:
Practical: Jó napot kívánok! (Greetings, formal and informal, basic situations)

5th week:
Practical: Számok (Numbers, phone numbers)

6th week:
Practical: Time expressions

7th week:
Practical: Pénz (Money, banknotes, ordinal numbers, how much? how many?)

8th week:
Practical: Mid-term test

9th week:
Practical: Hogy vagy? (How are you?)

10th week:
Practical: Milyen nyelven beszélsz? (What language do you speak?, nationalities)

11th week:
Practical: Mit csinálsz? (What are you doing? verb conjugation)

12th week:
Practical: Hová mész ma este? (Where are you going tonight? Past, present, future, where …to?)

13th week:
Practical: Revision

14th week:
Practical: End-term test

15th week:
Practical: Assessment and evaluation

Requirements

Requirements of the language courses
Attendance
Language class attendance is compulsory. The maximum percentage of allowable absences is 10 % which is a total of 2 out of the 15 weekly classes. The missed classes may only be made up in the same week. Maximally, two language classes may be made up with another group and students have to ask for written permission (via e-mail) 24 hours in advance from the teacher whose class they would like to attend for a makeup because of the limited seats available. Students arriving late for the classes are not allowed to enter the class. Being late is counted as an absence. If the number of absences is more than two, the final signature is refused and the student must repeat the course. Students are required to bring the textbook or other study material given out for the course with them to each language class. Active participation is evaluated by the teacher in every class. If students' behaviour or conduct does not meet the requirements of active participation, the teacher

may evaluate their participation with a "minus" (-). If a student has 5 minuses, the signature may be refused due to the lack of active participation in classes.
Testing, evaluation
In each Hungarian language course, students must sit for 2 written language tests and a short minimal oral exam.
A further minimum requirement is the knowledge of 200 words per semester announced on the first week. There is a (written or oral) word quiz in the first 5-10 minutes of the class, every week. If a student has 5 or more failed or missed word quizzes he/she has to take a vocabulary exam that includes all 200 words along with the oral exam. The results of word quizzes are added to the average score of the written tests.
The oral exam consists of a role-play randomly chosen from a list of situations announced in the beginning of the course. Failing the oral exam results in failing the whole course. The result of the oral exam is added to the average of the mid-term and end-term tests.
The minimum requirement for the mid-term and the end-term tests is 50 % each. If a student does not score this much he/she has to repeat the test. Based on the final score the grades are given according to the following table:
Final score Grade
0 - 59 fail (1)
60-69 pass (2)
70-79 satisfactory (3)
80-89 good (4)
90-100 excellent (5)
If the final score is below 60, the student once can take an oral remedial exam covering the whole semester's material.
Consultation classes
In each language course once a week students may attend a consultation class with one of the teachers of that subject in which they can ask their questions and ask for further explanations of the material covered in that week. These classes are optional.
Course book: See the website of the department.
Website: Oral exam topics and vocabulary minimum lists are available from the website of the Department of Foreign Languages: ilekt.med.unideb.hu.

Department of Internal Medicine

Subject: INTRODUCTION TO NURSING AND CLINICAL MEDICINE
Year, Semester: 1st year/1st semester
Number of teaching hours:
Lecture: 15
Practical: 15

1st week:
Lecture: The history of nursing and medicine The physician's behavior. The patient and health care staff relationship. The professional secrecy. The aim of the diagnosis and its different forms. Symptoms of diseases.

2nd week:
Lecture: System of definitions and philosophy of nursing; nursing theories; nursing models, basic human needs; assessment of the basic human needs; patient observation. Nursing protocols and standards. Rules of the nursing documentation; ethical and legal aspects of nursing.

3rd week:
Lecture: Physiological breathing: needs of the rest and movements and their gratification; needs of nutrition, water and fluid balance and their gratification; suitable clothes and physiological body temperature.

4th week:
Lecture: Defecation and micturition; hygienic

needs; needs of communication and information. Needs of the safety; the unconscious patient; postoperative nursing tasks; aseptic and hygienic environment. How to take care of a dying patient.

5th week:
Practical: Scene of the nursing; structure of a hospital unit; observation of the patient; measurement of vital parameters. Nursing diagnosis and preparing of the nursing plan; maintenance of the patient's personal hygiene; beds and bed-making; methods of bed-making; general and specific instructions for the bed-making.

6th week:
Practical: Patient medication; personal and objective conditions of feeding; artificial feedings; feeding with tube.

7th week:
Lecture: Tools for collecting urine and faeces; the planning and evaluation of the safety for patient.

8th week:
Lecture: History taking. Family history, previous diseases, present complaints. Types of diagnosis, hospital course, hospital discharge summary. General medical physical examination (inspection, palpation, percussion, auscultation).

9th week:
Lecture: Physical examination of the skin, head, neck, and thyroid gland, the lymph nodes, the oral cavity, the eyes and the breasts and axillae.

10th week:
Lecture: Clinical laboratory: anatomic pathology, clinical microbiology, clinical biochemistry, hematology. Non invasive and invasive diagnostic tests (electrocardiography, nuclear medicine techniques, x-ray, ultrasound, MRI, PET, CT etc), cardiac catheterization and different forms of endoscopy.

11th week:
Lecture: Physical examination of the respiratory and cardiovascular system.

12th week:
Lecture: Physical examination of the abdomen and genital-urinary system.

13th week:
Lecture: Physical examination of the locomotors system and the nervous system.

14th week:
Lecture: Different forms of management of patients, Drug treatment efficacy, side effects, overdose and interaction. Clinical toxicology.

15th week:
Lecture: Final tutorial – consultation

Requirements

There are no requirements to take the Introduction to Nursing and Clinical Medicine course. Attendance of lectures is highly recommended, since the topics in examination cover the lectured topics. Attendance of practices is compulsory. If you missed more than 2 practices, the signature may be refused. To pass the practical examination is the indispensable condition for signature of Lecture Book.

Department of Medical Chemistry

Subject: CHEMISTRY
Year, Semester: 1st year/1st semester
Number of teaching hours:
Lecture: 46
Seminar: 24

1st week:
Lecture: Chemistry: the science of matter. Quantum theory and the atom. Electronic structure and the periodic table. Types of

chemical bonds. Covalent bonding and properties of molecules.
Seminar: Atomic structure. Periodic perspective. Ionic and metallic bonds. Covalent bond: valence bond and molecular orbital theories.

2nd week:
Lecture: Intermolecular forces. Changes of state. Kinetic-molecular theory of gases and liquids. Solutions and colloids.
Seminar: The gaseous state. Liquid and solid states. Vapor pressures of liquid solutions and related properties. Freezing point depression. Osmosis.

3rd week:
Lecture: The ionization of water. Ions in aqueous solution. Acids and bases. The law of chemical equilibrium.
Seminar: The chemistry of water. Electrolytes. Acids and bases: Bronsted Lowry and Lewis theories. Equilibrium constant expressions. Le Chatelier's principle. Strength of acids and bases.

4th week:
Lecture: Ions and ionic equilibria.Thermochemistry and thermodynamics.
Seminar: Acid base equilibria. Titration curves. Buffer solutions. Solubility product. Internal energy and enthalpy. Hess' law. Entropy, free energy and free enthalpy.

5th week:
Lecture: Chemical kinetics. Electrochemistry. Thermodynamics of redox reactions.
Seminar: Chemical kinetics at the molecular level. Reaction rates and rate equations. Reaction mechanisms. Catalysis. Oxidation reduction and electrochemistry. Electrolysis.

6th week:
Lecture: 1st control testCarbon-carbon bond, carbon-heteroatom bond. Stereochemistry: chiral molecules, optical activity, relative and absolute configurations. Saturated and unsaturated hydrocarbons: structure, isomerism and biological significance.
Seminar: Separation of chiral molecules. Electron distribution in organic compounds. Nomenclature of hydrocarbons. Chemical reactions of saturated and unsaturated hydrocarbons.
Self Control Test

7th week:
Lecture: Alkynes. Aromatic hydrocarbons: structure and chemical reactions. Organic halogen compounds. Alcohols and phenols: physical and chemical properties. Biological oxidation of alcohols.
Seminar: Aromatic and heteroaromatic compounds. The mechanism of nucleophilic substitution. Important alcohols and phenols.

8th week:
Lecture: Aldehydes and ketones: physical and chemical properties. Keto and enol tautomers. Biological significance of aldehydes, ketones and quinones. Nitrogen containing compounds. Structure, properties and chemical reactions of amines. Nitrogen containing heterocyclic compounds.
Seminar: Ethers. Sulfur containing organic compounds. Biologically important nitrogen containing compounds: dyes sulfa drugs and alkaloids.

9th week:
Lecture: Carboxylic acids: physical and chemical properties. Acidity. Chemical reactions. Important carboxylic acids. Amino acids and peptides. Structure, classification, stereochemistry, acid-base behavior of amino acids. Stereochemistry of peptide bond. Naturally occurring peptides.
Seminar: Carboxylic acid derivatives: esters, thioesters, anhydrides, acyl halides, amides. Reactions and separations of amino acids. Principle of sequence analysis.

10th week:
Lecture: Structure and function of proteins. The three-dimensional structure of proteins. Carbohydrates: structure and stereochemistry. Properties of monosaccharides and disaccharides.
Seminar: Purification of proteins. Enzymes. Oligosaccharides of glycoproteins. Heteropolysaccharides.

11th week:
Lecture: Lipids: structure, classification and biological functions. Steroids.
Seminar: The structure of biological membranes. Carbohydrate metabolism. Polysaccharides and their role in energy storing: glycogenolysis.

12th week: Lecture: Nucleotides and nucleic acids. Structure of nucleosides, nucleotides and nucleotide coenzymes. Polynucleotides. Seminar: Structure of DNA and RNA. Determination of DNA sequences.	**15th week:** Lecture: 3rd Control test.

Requirements

The program consists of lectures and seminars. Attendance at seminars is recorded. Students should attend at least 80% of seminars.

Three control tests (general chemistry; organic chemistry and bioorganic chemistry) covering the topics of lectures and seminars will be written during the semester. Preparation for the tests and exams should be based on the official textbooks, lectures and seminars. Knowledge of the "minimal requirements" as published on the Department's homepage is not sufficient for the successful completion of control tests/exams. Minimal requirements simply indicate the core knowledge, the lack of which (or any part of it) necessarily results in the student failing the test/exam.

Control tests and final exams will be assessed as follows*:

Percentage (%)*	Mark
0-49	fail (1)
50-62	pass (2)
63-74	satisfactory (3)
75-86	good (4)
87-100	excellent (5)

*Percentage values may slightly vary depending on the actual number of questions in the tests/exams.

The final exam is a written test composed of three modules: general chemistry; organic chemistry and bioorganic chemistry. Each module consists of multiple choice questions. For each module students may opt for either accepting the percentage of the corresponding control test or taking the exam test. The mark of the exam will be determined by calculating the average percentage values of the three modules (either from control tests or from exam tests). Thus the student may get full exemption from the final exam in case (s) he passed all three control tests and chooses to take the results of the control tests rather than sitting a final exam. The student can only pass the exam if the result of all three modules is at least a "pass (2)".

Students should declare till a given deadline whether or not they accept the control test result(s) otherwise the results will be cancelled. If the student chooses to use control test results, then (s)he should answer questions in the final written examination only from the missing module(s). Results of control tests and exam modules can be carried to B or C chance exams

Students who have successfully passed the exam are allowed to take one improvement exam.

In case students take the exam in the second semester at the end of an exam course, then all three modules of the exam must be taken and results of previous control tests or exam modules cannot be considered.

Department of Preventive Medicine, Faculty of Public Health

Subject: BASICS OF INFORMATICS
Year, Semester: 1st year/1st semester
Number of teaching hours:
Lecture: 12
Practical: 33

1st week:
Lecture: History of computers. Principles of computers' operation (data handling, measures, hardware, software)

2nd week:
Lecture: Component of PCs, functions and operation of peripheral units. Electronic data storage (concepts of data, file, directory) Concepts and function of operation systems, basics of Windows

3rd week:
Practical: Data files, types of and connection between data storing files, operation with data files, directory structure. Software installation

4th week:
Lecture: Networks: concept, setting, function, operation, application
Practical: Networks: concept, setting, function, operation, application

5th week:
Lecture: Text editing software (WORD x.x)
Practical: Editing, formatting, saving, printing documents; creation of header, footer and footnotes

6th week:
Practical: Preparation of table of content and index. Cross-reference, hyperlink. Creation of table. Styles', templates' application; insertion of pictures, objects, into document; operations in big documents

7th week:
Practical: Preparation of table of content and index; cross-reference, hyperlink; creation of table; styles, template application; insertion of pictures, objects, into document; operations in big documents

8th week:
Lecture: Application of spreadsheet software (EXCEL x.x)
Practical: Application of spreadsheet software (EXCEL x.x). Design of sheets, data preparation

9th week:
Practical: Entering data, calculations, functions

10th week:
Practical: Entering data, calculations, functions

11th week:
Practical: Preparation of diagrams. Formatting tables, diagrams, inserting them into Word documents

12th week:
Lecture: Computer graphics
Practical: Application of image editing software. (MS Power Point x.x) Presentation preparation

13th week:
Practical: Designing and formatting slides and adding notes to; editing equations, diagrams, tables, compilation of presentation

14th week:
Lecture: Internet, electronic mailing
Practical: Internet, electronic mailing

15th week:
Practical: Compressing files; computer viruses

Requirements

The participation in practicals is compulsory: the maximum of acceptable absence is 2 occasions. Further requirement is the submission of the assays and home assignments.The students have to

prepare an essay and to prepare homework for every topic. The average of the grades for assays and home assignments is the final grade. Exemption opportunity: If the student submit acceptable certification of the completion of a course on basics of informatics, and demonstrate the course description defined level of knowledge on computer usage, the student is not obliged to take part in the course.
Participation in seminars and practices is obligatory. In the case of more than two absences signature is refused. During the course a practical mark will be given to the students on the base of classroom tasks, homeworks, and tests.

Subject: ECOLOGY
Year, Semester: 1st year/1st semester
Number of teaching hours:
Lecture: 30
Seminar: 15

1st week:
Lecture: Introduction to ecology. Key terms in ecology. Geosphere, Biosphere and Noosphere. Concept of the ecosystem.

Seminar: Mountain Sickness

2nd week:
Lecture: The general effects of environmental pollution (deforestation, desertification, loss of biological diversity, acid precipitation, global warming, depletion and degradation of terrestrial aquifers, depletion of stratospheric ozone layer)
Seminar: Global warming and its health impacts – „Six Degrees Could Change the World"

3rd week:
Lecture: The development of the Universe. Formation and evolution of the Solar System. The origin and evolutionary history of life on planet Earth.
Seminar: The Large Hadron Collider.

4th week:
Lecture: Adaptation. Plant and animal adaptations to the environment. Tolerance. Homeostasis. The organism and its environment – part I. The physical environment (geology and soil; topography; light and temperature variation; climate and weather; catastrophes).
Seminar: Thermoregulation, blood glucose homeostasis and osmoregulation.

5th week:
Lecture: The organism and its environment – Part II. The biotic environment. Intraspecific relationships (within species). Interspecific relationships (between species). Co-evolution. Determining niches. Fundamental and realised niches. Niche overlap and species coexistence. Gause's competitive exclusion principle.
Seminar: Relationships between species: African trypanosomes.

6th week:
Lecture: Population ecology. Properties of population (defining population; density and dispersion; age structure; sex ratio; mortality and natality). Evolutionary strategies: r and K strategies. Population growth and regulation (exponential and logistic growth curves). Population fluctuations and cycles.
Seminar: Analysis of exponential and logistic growth curves by Populus 5.4 program.

7th week:
Lecture: Conservation. The reasons for conservation. Conservation of species. Conservation of ecosystems. Conservation of the biosphere. Viable conservation.
Seminar: Coral reef in danger.

8th week:
Lecture: National Parks of Hungary I. (Hortobágy National Park, Kiskunság National Park, Bükk National Park, Aggtelek National Park).
Seminar: Big Forest of Debrecen and Lesser Mole Rat Reserve of Hajdúbagos.

9th week:
Lecture: National Parks of Hungary II. (Fertő-Hanság National Park, Danube-Drava National Park, Körös-Maros National Park, Balaton Uplands National Park, Danube-Ipoly National Park, Őrség National Park).
Seminar: Orchid Habitat Restoration and Preservation.

10th week:
Lecture: Concept of ecosystem. Components of ecological systems and essential processes. Ecosystems energetic. The nature of energy. Primary and secondary production. Food chains; Trophic levels and ecological pyramids. Succession (vegetation changes; the causes of change; patterns of succession). Human influence on succession.
Seminar: Bacteria as Multicellular Organisms.

11th week:
Lecture: Biogeochemical cycles. Gaseous cycles and sedimentary cycles. Biomes. The world's terrestrial biomes.
Seminar: Water ecosystems.

12th week:
Lecture: Sociobiology. The advantages and disadvantages of group living. Optimal group size. Evolution of helping behaviour. The unit of selection and social systems. Human sociobiology (parental investment in the later medieval Portuguese nobility; helping behaviour in humans)
Seminar: Social life of ants.

13th week:
Lecture: Ecological genetics. The importance of genetics to ecology. Genetic and environmental variation. The role of variation in natural selection. Reproductive systems. Genetic consequences of different reproductive systems. Patterns of genetic variation. Genetic variation within an organism.
Seminar: Genetically modified organisms.

14th week:
Lecture: Microbial ecology – (part I.): History of microbial ecology. Object and task of microbial ecology. Whittaker (1969): the five kingdom system. Whoese (1978): classification of living organisms. Bergey's Manual of Systematic of Bacteriology. The main groups of microorganisms: Archeae, Eubacteria, Eucaria (Protozoa, Algae, Fungi, Lichens). Diversity of metabolism in microorganisms.
Seminar: Origin of the Earth's atmosphere.

15th week:
Lecture: Microbial ecology – (part II.): Microbial communities in different habitats (sulphuretum and methanogen communities). Interactions between plants and microorganisms. Interactions between animals and microorganisms. Humans and microorganisms. The growth and spread of microorganisms. Microorganisms in environment protection.
Seminar: Industrially important bacteria

Requirements

Attendance of the lectures is recommended, but not compulsory. Students are required to attend the seminars and may not miss more than two seminars during the semester. In case a student misses more than 2 ones, the lecture book will not be signed. The attendance of the seminars will be recorded by seminar leaders
Examination:
At the end of the semester students are required to take a Final Exam. The exam includes 25 multiple choice test questions and 5 short questions (30 x 2 points). The control tests, including the topics of the lectures and seminars, will given during the semester.

Tests will be assessed as follows:

Percentage (%)	Mark
0-50	fail (1)
51- 59	pass (2)

60-69	satisfactory (3)
70- 79	good (4)
80-100	excellent (5)

The maximum score is 100% and the examination takes 60 minutes. The examination will be conducted in accordance with the Rules of Examination of the University.

Compulsory literature:
All the topics of lectures and seminars.

Division of Emergency Medicine

Subject: FIRST AID
Year, Semester: 1st year/1st semester
Number of teaching hours:
Lecture: 6
Practical: 15

1st week:
Lecture: Definition of "first aid"; first aid levels; time factor; behaviour of first responder in the field; the emergency call

2nd week:
Lecture: Unconsciousness; airway obstruction; airway opening manoeuvres; Gábor manoeuvre

3rd week:
Lecture: Death as a process; determining of clinical death; the different oxygen demand of the brain depending on age; establishing unconsciousness or death; assessment of vital signs; assessment of breathing, circulation, pupils and muscle tone

4th week:
Lecture: Reanimation on the spot – organisation problems; the theory of CPR; complications during the CPR; effect, results and success during CPR

5th week:
Practical: Examination of breathing and circulation; the chest-thrust; airway opening manoeuvres; the recovery position (Gábor manoeuvre); one hour

6th week:
Practical: Practicing the ventilation (one hour)

7th week:
Practical: Practicing the chest compression (one hour)

8th week:
Practical: CPR training without equipment (two hours)

9th week:
Practical: CPR training, two-rescuer method (two hours)

10th week:
Practical: Bleeding control with direct pressure and pressure point techniques; bandages and fixation; equipments, tools and manoeuvres; general rules of provisory injury therapy; pressure bandage for controlling of arterial and venous bleeding on the spot (two hours)

11th week:
Practical: Bandages for head, nose; ears, eyes; chin, body and extremities; practising the bandages (two hours)

12th week:
Practical: First aid in fractures, luxations, distortions and extended soft-tissue injuries; bandage for fixation with special triangle; Schantz collar; stifneck; Dessault bandage;

fixation of finger and hand fractures; usage of Kramer splint and pneumatic splint (two hours)

13th week:
Practical: CPR training (two hours)

14th week:
Practical: Burning; first aid in burning diseases; shock

15th week:
Practical: Intoxication; guideline of poisoning in toxicology; typical intoxications, special signs, first aid

Requirements

Attendance at lectures is inevitable condition for understanding the principles of the subject; attendance at practices is obligatory. The tutor may refuse the sign of Lecture Book if the student is absent from the practices more than twice in a semester. Missed practices should be made up for after consultation with the practice tutor. Facilities for a maximum of 2-make up practices are available at the Ambulance Station in Debrecen. The current knowledge of students will be tested two times in each semester in written test.

Institute of Behavioural Sciences, Faculty of Public Health

Subject: BIOETHICS
Year, Semester: 1st year/1st semester
Number of teaching hours:
Lecture: 15

1st week:
Lecture: The meaning of bioethics and its relationship with traditional medical ethics
Seminar: Interactive processing of the theme

2nd week:
Lecture: The nature of ethical decision making in clinical context
Seminar: Interactive processing of the theme

3rd week:
Lecture: Paternalism and anti-paternalism in modern bioethics
Seminar: Interactive processing of the theme

4th week:
Lecture: Patients' rights (in Hungary and in other countries)
Seminar: Interactive processing of the theme

5th week:
Lecture: The ethics of informed consent
Seminar: Interactive processing of the theme

6th week:
Lecture: The ethical aspects of living with disabilities
Seminar: Interactive processing of the theme

7th week:
Lecture: The epistemology and ethics of complementary medical therapies
Seminar: Interactive processing of the theme

8th week:
Lecture: Consultation
Seminar: Written examination

Requirements

Attendance and activity in the classes; usable understanding of the core theoretical knowledge; knowledge about the actual patients' rights regulation.
There will be opportunities to make individual presentations on relevant topics.

Subject: COMMUNICATION SKILLS
Year, Semester: 1st year/1st semester
Number of teaching hours:
Lecture: 10
Seminar: 20

1st week:
Lecture: Introduction to the concept of communication. Channels of communication. Verbal and non-verbal communication. The main non-verbal channels.

2nd week:
Lecture: The helping relationship. Influencing factors, principles.The role of empathy in the communication.

3rd week:
Lecture: Aggressive, passive and assertive communication. Effective communication techniques

4th week:
Lecture:
The importance of communication with people in different situations. Difficulties in communication situations.Persuasive communication.

Practical:

5th week:
Lecture: Communication Disorders.Special issues in communication.Management of the conflicts occurred during the helping relationship.Communication with the elderly. Communication with impaired persons.Communication with the 'difficult' patient.Communication with acute patients.

Practical:
Discussing the semester’s tasks, the conditions of getting a mark, preparation for the field practice. Getting acquainted, introduction. Expectations and fears.

6th week:
Practical:
Review of the basic concepts of communication, communication channels.

7th week:
Practical:
Verbal and non-verbal communication.

8th week:
Practical:

Empathy, problems of empathy, active listening. Collaborative communication.

9th week:
Practical:

Significance of the first impression. Analysis of our own communication styles.Aggressive, passive and assertive communication. Persuasive communication.

10th week:
Practical:
Film – the doctor.

11th week:
Practical:
Film – analyzing its communicational aspect.

12th week:
Practical:
Field practice – observation (no course).

13th week:
Practical:
Persuasive communication Effectife communications techniques. Presentation of the field practice and feedbacks.

14th week:
Practical:

Presentation of the field practice and feedbacks.

15th week:
Practical:

Presentation of the field practice.Closing the semester, semester-review. Feedbacks. Written exam.

Subject: PSYCHOLOGY
Year, Semester: 1st year/1st semester
Number of teaching hours:
Lecture: 30

1st week:
Lecture: Introduction

2nd week:
Lecture: Nature of psychology: main fields, theories and methodes.

3rd week:
Lecture: Early attachment, morher-child bonding. Intimate relationships in adulthood.

4th week:
Lecture: Phasis of psychological development. The newborn's skills. Cognitive development in childhood.

5th week:
Lecture: Normative life crises (Erikson). The course of dying. Death, grief.

6th week:
Lecture: Learning and conditioning: different approaches of learning. Classical and operant conditioning.

7th week:
Lecture: Motivation: rewards and incentives, urges, homeostasis, hunger and sexuality (Maslow).

8th week:
Lecture: Emotions: arousal, expression of emotions, reactions to emotional states, aggression.

9th week:
Lecture: Personality: psychoanalitic, behavioral and phenomenological approach.

10th week:
Lecture: Stress and coping: stress-provoking events, psychological and physiological reactions to stress. The effects of stress on health. Coping skills.

11th week:
Lecture: Social behaviour: attitudes, attraction, obedience, resistance and identification. Collective decisions.

12th week:
Lecture: Biopsychosocial model. Health behaviors: definition, demographic determinants. The model of health beliefs, variables influencing health attitudes.

13th week:
Lecture: Illness behaviors: definition, the experience of illness, patient role. Representations and benefits of illness. Illness cognitions.

14th week:
Lecture: Illness as crisis. Chronic illness, hospitalisation.

15th week:
Lecture: Methods of psychotherapy: dynamic, behavioral and cognitive methods.

Requirements

Attendance at lectures is highly recommended, since the topics in examination cover the lectured topics.

Subject: SOCIOLOGY
Year, Semester: 1st year/1st semester
Number of teaching hours:
Lecture: 15

1st week:
Lecture: Introduction to sociology and to the module

2nd week:
Lecture: Definition of health; gender and health

3rd week:
Lecture: Social class and health; ethnicity and health

4th week:
Lecture: Families and changing family relationships

5th week:
Lecture: Social forces, health and illness

6th week:
Lecture: The social distribution of illness

7th week:
Lecture: The experience of illness, social contexts

8th week:
Lecture: Disability and chronic illness

9th week:
Lecture: Mental health and mental illness

10th week:
Lecture: The profession of medicine

11th week:
Lecture: Other health care providers

12th week:
Lecture: Patients and practitioners

13th week:
Lecture: Main scopes of social policy in general and in Hungary I

14th week:
Lecture: Main scopes of social policy in general and in Hungary II

15th week:
Lecture: Repetition, discussion

Requirements

Attendance at lectures is highly recommended, since the topics in examination cover the lectured topics.

Department of Anatomy, Histology and Embryology

Subject: BASIC ANATOMY
Year, Semester: 1st year/2nd semester
Number of teaching hours:
Lecture: 30
Seminar: 15
Practical: 15

1st week:
Lecture: Covering and lining epithelia. Glandular epithelium. Connective tissues
Seminar: Histology of epithelial tissues
Practical: Epithelial tissues.1. Endothel (small intestine, HE) 2. Columnar epithelium (small intestine, brush border,HE) 3. Pseudostratified epithelium with cilia (trachea, HE) 4. Stratified squamos non-keratinizing epithelium (oesophagus, HE) 5. Stratified squamos keratinizing epithelium (fingertip, HE) 6. Sebaceous, sweat and apocrine glands (axillary

skin, HE) 7. Mucous and serous glands(submandibular gland, HE)

2nd week:
Lecture: Adipose tissue. Cartilage. Bone. Bone formation. Muscle tissue
Seminar: Histology Connective tissue.
Practical: Connective tissue. Demonstration: 1. Mesenchyme (umbilical cord, HE) 2. Fibroblasts (healing wound, HE) 3. Mast cell (healing wound, toluidine blue) 4. Macrophages (skin, trypane blue-nuclear fast red) 5. Collagen fiber (colon, HE) 6. Elastic fiber (aorta, orcein) 7. Reticular fiber (liver, AgNO3 impregnation)

3rd week:
Lecture: Blood vessels. Blood. Bone marrow and blood formation
Seminar: Histology Adipose tissue. Cartilage. Bone.
Practical: Adipose tissue. Cartilage. Bone. Demonstration: 1. Adipocytes (suprarenal gland, HE) 2. Hyaline cartilage (trachea, HE) 3. Elastic cartilage (epiglottis, orcein) 4. Fibrous cartilage, and bone (knee joint, HE) 5. Bone, cross-section (Schmorl's stain)

4th week:
Lecture: Histology of lymphatic organs I-II.. Fertilization. Cleavage.
Seminar: Histology: Bone formation. Muscle tissue
Practical: Bone formation. Muscle tissue. 1. Enchondral ossification epiphyseal growth plate (knee joint, HE) 2. Skeletal muscle (HE) Demonstration: 3. Skeletal muscle (iron-haematoxylin) 4. Smooth muscle (small intestine, HE) 5. Cardiac muscle (PTAH)

5th week:
Lecture: Gastrulation, formation of the mesoderm. Differentiation of the ectoderm, mesoderm and entoderm, folding of the embryo.
Seminar: Histology: Blood vessels. Blood. Bone marrow. Blood formation.
Practical: Blood vessels. Blood. Bone marrow. Blood formation. 1. Elastic artery (orcein) 2. Muscular artery and vein (HE) 3. Arteriole, venule, capillary (colon, HE) 4. Blood smear (May-Grünwald-Giemsa) 5. Bone marrow (HE)

6th week:
Lecture: Featal membranes. Placenta. The fetal period. Twins. Anatomical terminology. Osteology and arthrology – introduction.
Seminar: Histology of lymphatic organs
Practical: Histology of lymphatic organs. 1. Thymus (HE) 2. Lymphatic follicle (colon, HE) 3. Lymph node (HE) 4. Spleen (HE) 5. Palatine tonsil (HE)

7th week:
Lecture: The upper limb. The lower limb. The skull and the back.
Seminar: Anatomy: Upper and lower limbs.
Practical: Upper and lower limbs. The bones, joints, muscles, blood vessels and nerves of the upper limb. Sites of venous injections and measurement of blood pressure. Bones, ligaments and membranes of the pelvis. The structure and function of the pelvic girdle. The bones, joints, muscles, blood vessels and nerves of the lower limb. Sites of muscular injections. Femoral canal.
Self Control Test

8th week:
Lecture: Anatomy of the head and neck. Nasal and oral cavities. The pharynx and the larynx
Seminar: Anatomy of the head, neck and back
Practical: Anatomy of the head, neck and back Subdivisions of the skull. Calvaria and base of the skull. Sutures and fontanelles. The bony orbit, nasal cavity and paranasal sinuses. Temporomandibular, atlantooccipital and atlantoaxial joints. Overview of the anatomy of the head and neck. Sensory and motor innervation of the face. Muscles of facial expression. The parotid gland. Common carotid artery and its branches. Internal and external jugular veins. Cervical plexus. Define the location of the hyoid bone, thyroid gland and thyroid cartilage. Site of conicotomy. Surface projection of the apex of the lung. The larynx and the pharynx. The structure of the vertebral column.

9th week:
Lecture: The heart. The trachea, lungs and pleura.
Seminar: Anatomy of the heart and the respiratory system
Practical: Anatomy of the heart and the respiratory system. The structure of the wall of the thorax, Lymphatic drainage of the mammary gland. The lungs, pleura and pleural recesses. The

root of the lung. The heart. The pericardium and its sinuses. The mediastinum and its major parts.

10th week:
Lecture: Histology of the lung. Development of the lung and heart. Circulatory system. The vascular system of the embryo.
Seminar: The histology of the respiratory system
Practical: The histology of the respiratory system 1. Larynx (HE) 2. Trachea (HE) 3. Lung (HE) Demonstration: 4. Lung injected with indian ink (HE)

11th week:
Lecture: Development and general organization of the alimentary system. The oesophagus. The stomach. Small and large intestines
Seminar: The anatomy of the alimentary system.
Practical: The anatomy of the alimentary system. The structure and layers of the abdominal wall. The stomach, the dupdenum, the liver, the pancreas and the spleen. Demonstration of some parts of the small and large intestines. The peritoneum. The abdominal aorta and its branches. Lymphatic drainage of the abdominal cavity. The diaphragm.

12th week:
Lecture: The pancreas. The liver. The system of the portal vein. The peritoneum. The retroperitoneum
Seminar: Histology of the alimentary system.
Practical: Histology of the alimentary system. 1. The stomach (HE) 2. Jejunum (HE) 3. Colon (HE) Demonstration: 4. Vermiform appendix (HE) 5. Liver (pig, HE) 6. Pancreas (HE)

13th week:
Lecture: Neuroendocrine regulation. The hypothalamo-hypophysealis system. The pineal, thyroid, parathyroid and suprarenal glands. The kidney
Seminar: Histology of the endocrine system
Practical: Histology of the endocrine system 1. Pituitary gland (HE) 2. Thyroid gland (HE) 3. Parathyroid gland (HE) 4. Suprarenal gland (HE)

14th week:
Lecture: The urinary system. Male genital organs.
Seminar: Anatomy of the urogenital apparatus.
Practical: The anatomy of the urogenital apparatus. Location and capsules of the kidney. The kidney in a transverse section. Visceral relation of pelvic organs. Demonstration of male and female pelvis organs. Demonstration of external genital organs. Internal iliac artery. Sacral plexus.

15th week:
Lecture: Female genital organs. Development of the urogenital system
Seminar: Histology of the kidney and genital organs
Practical: Histology of the kidney and genital organs 1. Kidney, transverse section (HE) 2. Testis and epididymis (HE) 3. Ovary (HE) Demonstration: 4. Corpus luteum (HE) 5. Uterus, progesteron phase (HE)
Self Control Test

Requirements

Concerning attendance, the rules written in the Regulations Governing Admission, Education and Examinations of the University are valid. The presence in practices, seminars and lectures will be recorded. The head of the department may refuse to sign the Lecture Book if a student is absent more than twice from practices and seminars in one semester even if he/she has an acceptable reason.
The program of the lectures, seminars and practices is written in the University Calendar.

Two midterm examinations (SCTs) will be held, one on the 7 week and on the 15 week. The exams cover the topics of lectures, seminars and practices of the second semester.

The midterm exams will be evaluated with points and the points of the two examinations will be added. Students with scores higher than 60% earn an exemption from the final examination with a mark that will be calculated on the basis of the overall performance on the two midterm

examinations.

The end-semester exam is a written exam that covers the topics of lectures, seminars and practices of the semester. The exam will be evaluated with points that will be converted into final mark in the following way:

0 –	59 %	fail (1)
50 –	62.5 %	pass (2)
63 –	75 %	satisfactory (3)
76 –	87,5 %	good (4)
88 –	100 %	excellent (5)

Registration for examinations: through the NEPTUN system.

Department of Foreign Languages

Subject: HUNGARIAN LANGUAGE II.
Year, Semester: 1st year/2nd semester
Number of teaching hours:
Practical: 30

1st week:
Practical: Repetition and revision of 1st semester topics

2nd week:
Practical: Mit kérsz? (What would you like? In a buffet)

3rd week:
Practical: Formal and informal style, Accusative suffixes

4th week:
Practical: Kérsz egy kávét? (Would you like a coffee? Adjective forming suffixes)

5th week:
Practical: Tud, akar, szeret, szeretne (Can, want, like, would like)

6th week:
Practical: Word formation, infinitives

7th week:
Practical: Milyen idő van ma? (Weather)

8th week:
Practical: Mid-term test
Self Control Test

9th week:
Practical: Irregular verbs

10th week:
Practical: Postán, vasútállomáson (At the post office, train station)

11th week:
Practical: Mit eszünk ma este? (Food and cooking; negation)

12th week:
Practical: Tetszik a ruhád (Colors, possessive suffixes)

13th week:
Practical: Revision

14th week:
Practical: End-term test
Self Control Test

15th week:
Practical: Oral minimum exam.Assessment and evaluation

Requirements

Requirements of the language courses

Attendance

Language class attendance is compulsory. The maximum percentage of allowable absences is 10 % which is a total of 2 out of the 15 weekly classes. The missed classes may only be made up in the same week. Maximally, two language classes may be made up with another group and students have to ask for written permission (via e-mail) 24 hours in advance from the teacher whose class they would like to attend for a makeup because of the limited seats available. Students arriving late for the classes are not allowed to enter the class. Being late is counted as an absence. If the number of absences is more than two, the final signature is refused and the student must repeat the course. Students are required to bring the textbook or other study material given out for the course with them to each language class. Active participation is evaluated by the teacher in every class. If students' behaviour or conduct does not meet the requirements of active participation, the teacher may evaluate their participation with a "minus" (-). If a student has 5 minuses, the signature may be refused due to the lack of active participation in classes.

Testing, evaluation

In each Hungarian language course, students must sit for 2 written language tests and a short minimal oral exam.

A further minimum requirement is the knowledge of 200 words per semester announced on the first week. There is a (written or oral) word quiz in the first 5-10 minutes of the class, every week. If a student has 5 or more failed or missed word quizzes he/she has to take a vocabulary exam that includes all 200 words along with the oral exam. The results of word quizzes are added to the average score of the written tests.

The oral exam consists of a role-play randomly chosen from a list of situations announced in the beginning of the course. Failing the oral exam results in failing the whole course. The result of the oral exam is added to the average of the mid-term and end-term tests.

The minimum requirement for the mid-term and the end-term tests is 50 % each. If a student does not score this much he/she has to repeat the test. Based on the final score the grades are given according to the following table:

Final score	Grade
0 - 59	fail (1)
60-69	pass (2)
70-79	satisfactory (3)
80-89	good (4)
90-100	excellent (5)

If the final score is below 60, the student once can take an oral remedial exam covering the whole semester's material.

Consultation classes

In each language course once a week students may attend a consultation class with one of the teachers of that subject in which they can ask their questions and ask for further explanations of the material covered in that week. These classes are optional.

Course book: See the website of the department.

Website: Oral exam topics and vocabulary minimum lists are available from the website of the Department of Foreign Languages: ilekt.med.unideb.hu

Subject: MEDICAL LATIN
Year, Semester: 1st year/2nd semester
Number of teaching hours:
Practical: 30

1st week:
Practical: Course organization and introduction. The Latin and Greek alphabet and pronunciation. Basic terminology of health sciences

2nd week:
Practical: Planes and directional terms in anatomical terminology

3rd week:
Practical: The parts of the body. Latin and Greek words and word roots

4th week:
Practical: Genitive case and the plural forms.

5th week:
Practical: The skeleton of human body; basic terms of osteology; names of bones; an etymological approach. Word formation: adjectival suffixes

6th week:
Practical: Formation of adjectives

7th week:
Practical: Revision. Mid-term test

8th week:
Practical: Regions of the body
Self Control Test

9th week:
Practical: Joints

10th week:
Practical: Formation of complex adjectives

11th week:
Practical: Formation of nouns from verbs, Latin prefixes

12th week:
Practical: Muscles

13th week:
Practical: Latin and Greek numerals

14th week:
Practical: Revision. End-term test
Self Control Test

15th week:
Practical: Assessment and evaluation

Requirements

Requirements of the language courses

Attendance

Language class attendance is compulsory. The maximum percentage of allowable absences is 10 % which is a total of 2 out of the 15 weekly classes. Students arriving late for the classes are not allowed to enter the class. Being late is counted as an absence. If the number of absences is more than two, the final signature is refused and the student must repeat the course. Students are required to bring the textbook or other study material given out for the course with them to each language class. Active participation is evaluated by the teacher in every class. If students' behaviour or conduct does not meet the requirements of active participation, the teacher may evaluate their participation with a "minus" (-). If a student has 5 minuses, the signature may be refused due to the lack of active participation in classes.

Testing, evaluation

In each language course, students must sit for 2 written language tests and a short minimal oral exam.

A further minimum requirement is the knowledge of 300 words per semester announced on the first week. There is a (written or oral) word quiz in the first 5-10 minutes of the class, every week. If a student has 5 or more failed or missed word quizzes he/she has to take a vocabulary exam that includes all 300 words along with the oral exam. The results of word quizzes are added to the average score of the written tests.

Based on the final score the grades are given according to the following table:

Final score	Grade
0 - 59	fail (1)

60-69	pass (2)
70-79	satisfactory (3)
80-89	good (4)
90-100	excellent (5)

If the final score is below 60, the student once can take an oral remedial exam covering the whole semester's material.

Consultation classes

In each language course once a week students may attend a consultation class with one of the teachers of that subject in which they can ask their questions and ask for further explanations of the material covered in that week. These classes are optional.

Course book: See the website of the department.

Website: Oral exam topics and vocabulary minimum lists are available from the website of the Department of Foreign Languages: ilekt.med.unideb.hu

Department of Preventive Medicine, Faculty of Public Health

Subject: BIOSTATISTICS
Year, Semester: 1st year/2nd semester
Number of teaching hours:
Lecture: 15
Practical: 30

1st week:
Lecture: The role and importance of statistical analysis
Practical: Introduction to STATA

2nd week:
Lecture: Basic data management, types of variables
Practical: Data management 1

3rd week:
Lecture: Presenting data by measures and charts
Practical: Data management 2

4th week:
Lecture: Theoretical basics of interval estimation
Practical: Theoretical basics of interval estimation

5th week:
Lecture: Estimating the population mean
Practical: Estimating the population mean

6th week:
Lecture: Theoretical basics of hypothesis testing, statistical power, error of type 1 and 2
Practical: Theoretical basics of hypothesis testing, statistical power, error of type 1 and 2

7th week:
Lecture: Statistical inference by interval estimation and/or hypothesis testing
Practical: Z-test and one-sample t-test of mean

8th week:
Lecture: Comparing two means, two-sample t-test, paired t-test
Practical: Comparing two means, two-sample t-test, paired t-test

9th week:
Lecture: Comparing more means
Practical: One-way analysis of variance (ANOVA)

10th week:
Lecture: Probability, proportion, odds
Practical: Rank tests (Mann-Whitney-Wilcoxon, Kruskal-Wallis, Wilcoxon sign-rank test)

11th week:
Lecture: Estimating a probability
Practical: Estimating a proportion by exact binomial distribution and z-test

12th week:
Lecture: Comparing two independent proportions, the relationship with measures in epidemiology

Practical: Analyzing the association of two categorical variables

13th week:
Lecture: Simple linear regression
Practical: Simple linear regression

14th week:
Lecture: Multiple linear regression
Practical: Multiple linear regression

15th week:
Lecture: Survival tables, Kaplan-Meyer analysis, estimating incidence rates and ratios
Practical: The skeleton of human body; basic terms of osteology; names of bones; an etymological approach. Word formation: adjectival suffixes

Requirements

Participation in seminars and practices is obligatory. In the case of more than two absences signature is refused. During the course a practical mark will be given to the students on the base of classroom tasks, homeworks, and tests.

Subject: GENETICS AND MOLECULAR BIOLOGY
Year, Semester: 1st year/2nd semester
Number of teaching hours:
Lecture: 30

1st week:
Lecture: Introduction to molecular genetics; structure of the DNA molecule; the genetic code

2nd week:
Lecture: DNA replication and recombination

3rd week:
Lecture: Transmission genetics; genes and alleles; Mendel's laws; genotype and phenotype

4th week:
Lecture: The chromosomal basis of heredity. Human cytogenetics; chromosomes; chromosome alterations

5th week:
Lecture: Transformation and transduction; molecular mechanisms of crossing over1st self control test
Self Control Test

6th week:
Lecture: Molecular genetics of gene expression; molecular mechanism of gene regulation

7th week:
Lecture: Mutations and DNA repair; the role of mutations in the development and progression of diseases

8th week:
Lecture: Genetic polymorphisms; the role of genetic polymorphisms in the predisposition of different diseases

9th week:
Lecture: Introduction to genetic engineering; application of recombinant DNA technology in biotechnology and medicine2nd self control test
Self Control Test

10th week:
Lecture: Molecular genetics of the cell cycle; the genetic origin of cancer

11th week:
Lecture: Molecular evolution and population genetics; the genetic basis of complex inheritance

12th week:
Lecture: Nucleic acid manipulations Polymerase chain reaction; Recombinant molecular biological techniques

13th week:
Lecture: New molecular biological techniques in the diagnosis of diseases; molecular targeted therapies

14th week:
Lecture: The Human Genome Programme (overwiev, advantages and results)3rd self control test
Self Control Test

15th week:
Lecture: Summary lectures, Consultation

Requirements

Signing the lecture book: Attendance on 30% of lectures is compulsory. Attendance on lectures is highly recommended, for acquiring the knowledge required to write a successful test and to pass the course. Lectures are the best sources to obtain and structure the necessary information. During the consultations students can ask their questions related to the topic of the lectures discussed before.

Self Control Test: Only students who attended on 90% of lectures are allowed to write the self control tests. The dates and the topics for self control test will be announced on the first week of the semester. Based on the scores of the self control tests you will receive a „recommended final mark." If you accept this mark it will be your „final mark".

End of Semester Exam: the exam is a written test from all the material covered during the semester. Who accepts the recommended mark is exempted from the ESE in the examination period.

Subject: HEALTH (& LIBRARY) INFORMATICS I.
Year, Semester: 1st year/2nd semester
Number of teaching hours:
Lecture: 10
Practical: 20

1st week:
Lecture: Information and data processing, The concept of informationSteps of information processing

2nd week:
Lecture: Concept, techniques, advantages and disadvantages of coding,Updating of codes

3rd week:
Lecture: Foundations of database management, data model, database definition

4th week:
Practical: The elements of data model, database operations

5th week:
Practical: Database management operations: MS Excel

6th week:
Lecture: TEST
Self Control Test

7th week:
Practical: Database management, MS Access: defining keys, table design, layout, interconnection

8th week:
Practical: Management of forms

9th week:
Practical: Queries, reports

10th week:
Practical: IT networks, remote data processing, file transfer

11th week:
Practical: Using the Internet: search engines, E-mail

12th week:
Lecture: Hungarian and international public health data sources via the Internet

13th week:
Practical: Hungarian and international public health data sources via the Internet

14th week:
Practical: Geographic information system (GIS) visualization methods, Application of GIS in public health

15th week:
Practical: TEST
Self Control Test

Requirements

Information collection: defining types of information sources in terms of their currency, format (for example a review vs. an original article), authority, relevance, and availability, new directions in information search
How to write an academic paper: structure and main characteristics in an academic paper
Role and structure of the University Library of Debrecen.
Search for information: Distinguish the different source types, evaluate the information quality.
Perform database searches using logical operators (Boolean), in a manner that reflects understanding of medical language, terminology and the relationships among medical terms and concepts
How to search information in the library catalogue
Search in Medline (PubMed) and other relevant bibliographic databases
Identify and acquire full-text electronic documents
How to reference: preparing bibliographies, managing bibiliographic data with reference management softwares
Health care basics. Health care in different countries. UN, WHO, worldwide organizations.
Stucture and types of health care systems'. Patient, doctor, nurse. Medical tasks, medical data
Medical data – data type, functions. Data – Information – Knowledge. Code systems in health care.
Data – Information – Knowledge. Public Health and International databases. Comparing different countries.
Differences, measurements: collecting data, building spreadsheets, charts. Public Health worldwide – What to do, how to do?

Subject: HEALTH PSYCHOLOGY
Year, Semester: 1st year/2nd semester
Number of teaching hours:
Lecture: 30

1st week:
Lecture: Basics of Health psychology

2nd week:
Lecture: Factors influencing health status

3rd week:
Lecture: Humor, Optimism, Physical Health

4th week:
Lecture: Positive Psychology

5th week:
Lecture: Depression, Suicide, Anxiety

6th week:
Lecture: Health Anxiety, Somatization

7th week:
Lecture: Pain - psychological aspects of pain, definitions and theories

8th week:
Lecture: Pain - the role of psychology in pain treatment

9th week:
Lecture: Burnout in helping professions

10th week:
Lecture: Prevention and treatment of burnout

11th week:
Lecture: Health risk behaviours: tobacco, alcohol dependence

12th week:
Lecture: Health risk behaviours: drug dependence, sexual behaviour

13th week:
Lecture: Health risk behaviours: gambling, internet addiction

14th week:
Lecture: Health risk behaviours: eating disorders, obesity, exercise dependence

15th week:
Lecture: Mindfullness (demonstration)

Subject: INTRODUCTION TO PUBLIC HEALTH
Year, Semester: 1st year/2nd semester
Number of teaching hours:
Lecture: 15

1st week:
Lecture: Definition of health and its determinants

2nd week:
Lecture: Monitoring and analysing health state:options and methods

3rd week:
Lecture: Theory and practice in health promotion

4th week:
Lecture: Allocating public health in the medical and health sciences, evolution and development. Public health: successes, failures and challenges in the 21st century

5th week:
Lecture: Relation between health and economy

6th week:
Lecture: -

7th week:
Lecture: Levels of prevention

8th week:
Lecture: Easter

9th week:
Lecture: Organizational structure for public health services in Hungary

10th week:
Lecture: Global indicators of health state I. Public health databases

11th week:
Lecture: Screening programs. Public health programmes

12th week:
Lecture: North Karelia Program

13th week:
Lecture: WHO Health 2020

14th week:
Lecture: North Karelia Program

15th week:
Lecture: National Public Health Program

Requirements

R.J. Donaldson, L.J. Donaldson: Essential Public Health Medicine, Petroc Press; 2Rev Ed edition (Dec 2003)
Last JM: A dictionary of epidemiology Oxford University Press, 2001

Division of Cell Biology

Subject: CELL BIOLOGY
Year, Semester: 1st year/2nd semester
Number of teaching hours:
Lecture: 30

1st week:
Lecture: 1-2. Cell structure

2nd week:
Lecture: 3-4. Chemical Compounds of the Cell

3rd week:
Lecture: 5-6. Membranes, membrane transport

4th week:
Lecture: 7-8. Ion Channels, Membrane Potential, Calcium homeostasis

5th week:
Lecture: 9-10. Vesicular Structures and Transport

6th week:
Lecture: Self Control Test 1
Self Control Test

7th week:
Lecture: 13-14. Signal Transduction

8th week:
Lecture: 15-16. The Nucleus, DNA and Chromatin Structure

9th week:
Lecture: 17-18. Cell Cycle, Meiosis, Mitosis

10th week:
Lecture: 19-20. Mitochondrion, Cell-Cell Contacts
Self Control Test

11th week:
Lecture: 21-22. Cytoskeleton, Motility

12th week:
Lecture: self control test 2.

13th week:
Lecture: 25-26. consultation

14th week:
Lecture: pre-exam
Self Control Test

15th week:
Lecture: 29-30. consultation

Requirements

Signing the lecture book: Attendance on 30% of lectures is compulsory. Attendance on lectures is highly recommended, for acquiring the knowledge required to write a successful test and to pass the course. Lectures are the best sources to obtain and structure the necessary information. During the consultations students can ask their questions related to the topic of the lectures discussed before. Writing the tests is not compulsory. Making up a missed test is not possible. Please have some kind of ID with picture (student card, passport, driving license, etc.) with you. Without that, it is not allowed to write the test.

All self-controls (and exams) consist of two parts. The first part is a Minimal (M, 15 minutes), the second is an Extended (E, 30 minutes) part, which are evaluated jointly. Part M contains True/False type questions and basic definitions (based on the key words). Students must start with part M and it

will be collected after 15 minutes. Part E contains True/False, triple True/False and a series of mini-essays based on the key words provided during the semester. Part E is only evaluated if the score on part M is at least 50%.

Self-control scores are calculated along the formulas below (percentage results on the test and essay parts are denoted by M and E).

First self-control: if M=50% or more, D1=M+E
Second self-control: if M=50% or more, D2=M+E

Grade based on self-controls is offered according to the final score (F), which is calculated as F=(D1+D2)/4 (after the 2nd test):

Excellent (5): above 85%
Good (4): between 75-84%
Satisfactory (3):between 55-74%
Pass (2): between 45-54%
Fail (1): below 45%

If this score does not convert to a passing, or better grade, we still offer bonus points: B=(D1+D2)/40.

In general, it is a good strategy to prepare for the self-controls, as it is possible to pass the course by preparing for half of the whole material at a time, and, even if a passing grade is not offered, bonuses are allocated that help improve the final grade either at the pre-exam or at the exams.

Institute of Behavioural Sciences, Faculty of Public Health

Subject: BASICS OF PEDAGOGY
Year, Semester: 1st year/2nd semester
Number of teaching hours:
Lecture: 15

1st week:
Lecture: Basic concepts of pedagogy

2nd week:
Lecture: Principles of pedagogical activity

3rd week:
Lecture: Theories and trends in pedagogy

4th week:
Lecture: Elements of pedagogical influence

5th week:
Lecture: Values and aimsProcess of pedagogical influence

6th week:
Lecture: Fields of personality development

7th week:
Lecture: Process of education postoperative nursing tasks; aseptic and hygienic environment

8th week:
Lecture: Process of teaching and learning

9th week:
Lecture: Edifying conduct

10th week:
Lecture: Methodology (basics, influencing factors, methods, differentiation)

11th week:
Lecture: Scenes of pedagogical activity (family, school, boarding schools, etc.)

12th week:
Lecture: Key participants and their communication

13th week:
Lecture: Consultation

14th week:
Lecture: Theoretical and practical issues of planning

15th week:
Lecture: Pedagogical activity in health care

Requirements

Introduction, Based concept of pedagogy; Principles of pedagogy activity; Theories and trends in pedagogy; Elements of pedagogical influence; Process of pedagogical influence; Fields of personality development; Process of education; Process of teaching and learning; Edifying conduct; Methodology; Science of pedagogical activity; Key participants and their communication; Theoretical and practical issues of planning; Pedagogical activity in health care; Practice (Ibolya Utcai Általános Iskola, Debrecen)

Subject: HEALTH SOCIOLOGY
Year, Semester: 1st year/2nd semester
Number of teaching hours:
Lecture: 30

1st week:
Lecture: Introduction to sociology of health, revision of basic sociological concepts and the sociological perspective

2nd week:
Lecture: Theories of disease causation, the social determinants of health and disease

3rd week:
Lecture: Society and changing patterns of disease, historical and cross regional perspectives.

4th week:
Lecture: Sociology and public health, economy and health policy. The sociology of poverty-inequality and health

5th week:
Lecture: Social structure and health-gender, age and ethnicity

6th week:
Lecture: Case studies :morbidity and mortality in Nigeria, China , Hungary and the UK from the sociological perspective

7th week:
Lecture: Health behaviour and illness behaviour, the case of chronic illness

8th week:
Lecture: The sociology of health care organisations

9th week:
Lecture: Informal health care, community care and self help

10th week:
Lecture: Medicalisation

11th week:
Lecture: Deviance, sick role, anomie and stigma

12th week:
Lecture: Sociological research methods, measuring health outcomes, the anatomy of research articles

13th week:
Lecture: The socio-cultural aspects of the AIDS epidemic in Africa

14th week:
Lecture: Summary, conclusions

15th week:
Lecture: Final test
Self Control Test

Requirements

Introduction to sociology of health, basic sociological concepts, the sociological perspective; Society and changing patterns of disease, historical and cross regional perspective; Social determinants of health and disease; Sociology and public health, economy and health policy ; The sociology of poverty- inequality and health ; Social structure and health-gender and age; Social structure and health- ethnicity and religion; Case studies : morbidity and mortality in Nigeria, India , Hungary and Saudi Arabia from the sociological perspective; Health behaviour and illness behaviour, the case of chronic illness; The sociology of health care organisations; Informal health care, community care and self help ; Deviance, sick role, anomie and stigma; Sociological research methods, measuring health outcomes, the anatomy of research articles

CHAPTER 10

ACADEMIC PROGRAMME FOR THE 2ND YEAR

Department of Biochemistry and Molecular Biology

Subject: BASIC BIOCHEMISTRY
Year, Semester: 2nd year/1st semester
Number of teaching hours:
Lecture: 30
Seminar: 15

1st week:
Lecture: Energy in biology. Oxidative phosphorylation. PDH complex. The citric acid cycle and its regulation. The mithocondrial genome.

2nd week:
Lecture: Carbohydrate metabolism I. Introduction. Digestion and absorption of carbohydrates. Main pathways of the carbohydrate metabolism, central role of glucose. Absorption and transport of monosaccharides. Carbohydrate metabolism in various tissues. Glycolytic pathway and its regulation. Gluconeogenesis.

3rd week:
Lecture: Carbohydrate metabolism II. Glycogen in liver and muscle. Degradation and synthesis of glycogen. Regulation of glycogen synthesis and degradation.

4th week:
Lecture: Carbohydrate metabolism III. Pentose phosphate pathway. Metabolism of galactose and fructose. Metabolism of glucuronic acid. Inherited diseases in the carbohydrate metabolism.

5th week:
Lecture: Lipid metabolism I. Introduction. Lipid metabolism during well feed stage. Synthesis of fatty acids. Synthesis of triacyl-glycerols and its regulation.

6th week:
Lecture: Lipid metabolism II. Lipid metabolism during starvation, oxidation of fatty acids (beta oxidation). Ketone bodies. Lipid and carbohydrate metabolism during starvation and well feed state. Biochemistry of diabetes mellitus.

7th week:
Lecture: Lipid metabolism III. The mevalonate metabolic pathway. Synthesis of cholesterol. Excretion of cholesterol. Steroid hormones. Bile acids. Vitamin D.

8th week:
Lecture: self-control test I. Week 1-7.
Self Control Test (topics of 1st-7th weeks)

9th week:
Lecture: Lipid metabolism IV. Lipoproteins in blood plasma. Cholesterol transport in the body. Biochemical explanation of elevated blood cholesterol level.

10th week:
Lecture: Amino acid metabolism I. Formation and utilization of the intracellular amino acid pool. Nitrogen balance. Exogenous amino acid sources, digestion of proteins. Amino acid transports. Structure and function of glutathione. Endogenous amino acid sources: intracellular protein breakdown. Common reactions in the amino acid metabolism: fate of the nitrogen. Transaminations and deaminations. . Formation and elimination of ammonia in the body. Nitrogen transport between the tissues.

11th week:
Lecture: Amino acid metabolism II. The urea cycle and its regulation. Decarboxylation and carboxylation reactions in the amino acid metabolism. C1 transfer and transmethylation, related enzyme and vitamin deficiencies. Fate of the carbon skeleton of amino acids: glucogenic and ketogenic amino acids. Examples: degradation of isoleucine and valine,

phenylalanine and related enzyme deficiencies (PKU). Precursor functions: NO, creatine, polyamines, carnitine, cathecolamines.

12th week:
Lecture: Nucleotides metabolism I. Nucleotide pool. Digestion and absorption of nucleic acids. Sources of atoms in purine ring. De novo synthesis of purine nucleotides. Regulation of purine nucleotide synthesis. Salvage pathways for the purine bases. Degradation of purine nucleotides. Diseases associated with purine nucleotide metabolism. Gout.

13th week:
Lecture: Nucleotides metabolism II. De novo synthesis of pyrimidine nucleotides. Regulation of pyrimidine nucleotide synthesis. Salvage pathways for the pyrimidines. Degradation of pyrimidine nucleotides.

14th week:
Lecture: Biochemistry of nutrition. Energy requirement. Basic metabolic rate. Energy content of the food. Energy storage and thermogenesis. Biochemical mechanism of obesity. Protein as nitrogen and energy source. Nitrogen balance. Essential amino acids. Protein malnutrition. Vegetarianism. Carbohydrates and lipids. Pathological mechanisms in obesity. Vitamins: structure and biochemical functions. Relationship between the biochemical functions and the symptoms of deficiency.

15th week:
Lecture: self-control test Week 9-14.
Self Control Test (topics of 7-14th weeks)

Requirements

Requirements
Achievement during the semester: will be evaluated in term of points. During the semester points can be collected for the self-control tests from the material of the lectures. Self control tests consist of simple and multiple choice test questions and assay questions. Grade will be offered on the base of the collected points for all those students, who collected at least 50% of points: pass (2) for 50%-64%; satisfactory (3) for 65%-74%; good (4) for 75%-85%; excellent (5) for 86%-100%. Those students who want to get a better grade can take an exam. Those, who did not collect 50%, have to take a written exam in the exam period.
The end of semester exam is a written one and consists of similar test and assay questions to those of self-control tests. 50 percent is needed to get a passing mark, and the grade increases as shown above.
Attendance at the lectures is highly recommended. Attendance at seminars is obligatory.The signature of the Lecture Book is refused if a student is absent from more than 2 seminars. Seminars will be given by the lecturer (or his/her colleague) based on the previous week's lecture material.
Additional possibilities for consultation are provided by the lecturer on Thursdays between 15 and 16 pm. in her office.
Lecture presentations with short explanations are available on the web page of the department: (http://bmbi.med.unideb.hu). (Downloads/educational in English/Physiotherapists/Basic Biochemistry/2014

Department of Foreign Languages

Subject: PROFESSIONAL HUNGARIAN I.
Year, Semester: 2nd year/1st semester
Number of teaching hours:
Practical: 30

1st week:
Practical: Revision, pretest

2nd week:
Practical: 1. lecke Bemutatkozás 1.

3rd week:
Practical: 1. lecke Bemutatkozás 2.

4th week:
Practical: 2. lecke Foglalkozások 1.

5th week:
Practical: 2. lecke Foglalkozások 2.

6th week:
Practical: Revision

7th week:
Practical: Mid-term test

8th week:
Practical: 3. lecke A családom 1.

9th week:
Practical: 3. lecke A családom 2.

10th week:
Practical: 4. lecke A testem

11th week:
Practical: 5. lecke Kinek van...?

12th week:
Practical: Practice

13th week:
Practical: Revision

14th week:
Practical: End-term test

15th week:
Practical: Evaluation

Requirements

Requirements of the language courses

Attendance

Language class attendance is compulsory. The maximum percentage of allowable absences is 10 % which is a total of 2 out of the 15 weekly classes. Students arriving late for the classes are not allowed to enter the class. Being late is counted as an absence. If the number of absences is more than two, the final signature is refused and the student must repeat the course. Students are required to bring the textbook or other study material given out for the course with them to each language class. Active participation is evaluated by the teacher in every class. If students' behaviour or conduct does not meet the requirements of active participation, the teacher may evaluate their participation with a "minus" (-). If a student has 5 minuses, the signature may be refused due to the lack of active participation in classes.

Testing, evaluation

In each Hungarian language course, students must sit for 2 written language tests and a short minimal oral exam.

A further minimum requirement is the knowledge of 200 words per semester announced on the first week. There is a (written or oral) word quiz in the first 5-10 minutes of the class, every week. If a student has 5 or more failed or missed word quizzes he/she has to take a vocabulary exam that includes all 200 words along with the oral exam. The results of word quizzes are added to the average score of the written tests.

The oral exam consists of a role-play randomly chosen from a list of situations announced in the beginning of the course. Failing the oral exam results in failing the whole course. The result of the oral exam is added to the average of the mid-term and end-term tests.

Based on the final score the grades are given according to the following table:

Final score	Grade
0 - 59	fail (1)
60-69	pass (2)
70-79	satisfactory (3)
80-89	good (4)

90-100 excellent (5)

If the final score is below 60, the student once can take an oral remedial exam covering the whole semester's material.

Consultation classes

In each language course once a week students may attend a consultation class with one of the teachers of that subject in which they can ask their questions and ask for further explanations of the material covered in that week. These classes are optional.

Course book: See the website of the department.

Website: Oral exam topics and vocabulary minimum lists are available from the website of the Department of Foreign Languages: ilekt.med.unideb.hu

Department of Health Management and Quality Assurance, Faculty of Public Health

Subject: INTRODUCTION TO LAW I.
Year, Semester: 2nd year/1st semester
Number of teaching hours:
Lecture: 30

1st week:
Lecture: Concept of law, evolution of legal thinking

2nd week:
Lecture: Legal norm

3rd week:
Lecture: Legal relationship

4th week:
Lecture: Legal liability

5th week:
Lecture: Law system

6th week:
Lecture: Sources of law

7th week:
Lecture: Force of Law

8th week:
Lecture: Legal interpretation

9th week:
Lecture: Law enforcement

10th week:
Lecture: Theories of state formation

11th week:
Lecture: State sovereignty

12th week:
Lecture: State functions

13th week:
Lecture: Civil service legal disputes

14th week:
Lecture: Three branches of government

15th week:
Lecture: The institutions of collective labour law

Requirements

Evolution of Legal Thinking; Brief History of Law; Ethics & Law; Concept of Law; Sources of Law; The Legal System(s); Fundamental Rights; Human Rights; The Right To Health and the United Nations; The World Health Organization; The Role of the State (formation, function, sovereignty); The Functions of Government; The Court System, Legal Disputes, Law Enforcement; The Role of the European Union

Department of Medical Microbiology

Subject: BASIC MICROBIOLOGY
Year, Semester: 2nd year/1st semester
Number of teaching hours:
Lecture: 30

1st week:
Lecture: The microbial word. Cell-mediated and antibody-mediated (humoral) immunity. Active and passive immunization

2nd week:
Lecture: Laboratory diagnosis of bacterial and viral infections. Sterilization and disinfection

3rd week:
Lecture: Structure of bacterial cells. Essential and nonessential components. Exotoxins and endotoxins. Non-toxic virulence factors

4th week:
Lecture: Overview of the major Gram- positive bacteria

5th week:
Lecture: Overview of the major and Gram-negative bacteria

6th week:
Lecture: Bacterial respiratory tract diseases. Skin and soft tissue infections caused by bacteria

7th week:
Lecture: Sexually transmitted bacterial diseases. Central nervous system diseases caused by bacteria

8th week:
Lecture: General mycology. Medically important fungi

9th week:
Lecture: The structure and classification of viruses. The pathogenesis of viral diseases

10th week:
Lecture: Respiratory tract infections caused by viruses

11th week:
Lecture: Agents of viral gastroenteritis. Hepatitis viruses

12th week:
Lecture: Agents of viral skin rash. Congenital virus infections

13th week:
Lecture: The protozoal diseases

14th week:
Lecture: Helminths. Ectoparasites

15th week:
Lecture: Consultation

Requirements

The students are required to attend the lectures.

Examination

:
End semester examination consists of an oral test. The student's performance will be assessed on a five-grade scale.

Department of Physiology

Subject: PHYSIOLOGY
Year, Semester: 2nd year/1st semester
Number of teaching hours:
Lecture: 30
Seminar: 15

1st week:
Lecture: Membrane transport mechanisms; humoral regulation of cell function; significance of the membrane potential in the regulation of cell function
Seminar: Introduction to physiology, requirements; general overview of the structure and function of the cell membrane; role of membrane defects in the pathomechanism of diseases

2nd week:
Lecture: Compartmentalization of body fluids; blood as a circulating body fluid; plasma and formed elements
Seminar: Types of anaemia; redistribution of body fluid compartments in pathological conditions

3rd week:
Lecture: Blood typing; haemostasis; mechanisms against bleeding; definition and significance of homeostasis; homeostatic parameters
Seminar: Clinical significance of blood typing, Rh+ incompatibility; disturbed haemostasis; anticoagulant agents

4th week:
Lecture: Cardiovascular physiology: electrical and contractile properties of the heart; impulse generation and conduction; basics and diagnostic significance of electrocardiography; the heart as a pump; the cardiac cycle; neural and humoral regulation of cardiac function
Seminar: Starling mechanism as a compensatory mechanism in normal and pathological conditions, analysis of normal electrocardiogram

5th week:
Lecture: Cardiovascular physiology: characteristics of peripheral circulation; principles of haemodynamics; functional characteristics of blood vessels; vascular tone; main determinant of arterial blood pressure; reflex and humoral control of blood pressure and redistribution of cardiac output
Seminar: Discussion of lectured topics focused on the blood pressure and its regulation

6th week:
Lecture: Respiratory physiology: mechanics of mechanics of breathing; alveolar ventilation; gas transport in the blood; neural and chemical control of breathing
Seminar: Discussion of lectured topics focused on the static and dynamic respiratory parameters

7th week:
Lecture: Motoric and secretory function of the gastrointestinal tract; digestion, absorption; nutrition (food requirements, regulation of food intake); energy balance, thermoregulation
Seminar: Discussion of lectured topics completed with pathophysiologic relations

8th week:
Lecture: General aspects of renal function; glomerular filtration; types of tubular transport processes; characteristic parameters of the renal function: glomerular filtration rate (GFR), filtration fraction (FF), clearance (C) and extraction coefficient (E). Principles of the volume and osmoregulation; characteristics of the salt and water reabsorption; pH regulation; role of the respiration and excretion in the acid-base balance; micturition
Seminar: The role of the kidney in the homeostatic regulation

9th week:
Lecture: Hormonal regulation; paracrine and endocrine mechanisms; hypothalamo-hypophyseal system; neurohormones and tropic hormones
Seminar: General overview of the hormonal regulation; relationships of neural an humoral regulation

10th week:
Lecture: Thyroid hormones (T3 and T4); endocrine regulation of intermediate metabolism and basal metabolic rate; physiological effects of corticosteroids
Seminar: Hormonal regulation of cellular metabolism, especially the metabolism of skeletal muscle cells

11th week:
Lecture: Significance of the ionized calcium concentration in the blood; regulation of calcium handling; endocrine function of the pancreas; significance and regulation of blood glucose level
Seminar: Tetania; hypo- and hyperglycaemia

12th week:
Lecture:
Sexual hormones; somatic and autonomic nervous system; introduction to neural control; voluntary and reflex regulation

Seminar: Genital and extra genital effects of sexual steroids

13th week:
Lecture: Sensory function of the nervous system; stimulus, receptor, conduction of excitation; cortical processing; physiological basis of vision and hearing; motor function of nervous system: function and regulation of skeletal muscles (cortical, subcortical and spinal levels of regulation, coordinative function of cerebellum
Seminar: Summary of somatic neural regulation

14th week:
Lecture: Regulation of visceral functions; common and different features of sympathetic and parasympathetic regulation; integrated function of the sympathetic nervous system and the adrenal medulla
Seminar: Summary of the neural control of visceral functions

15th week:
Lecture: Summary, consultation
Seminar: Consultation

Requirements

Signature of Lecture Book

Attendance at lectures and seminars is compulsory. The signature of the Lecture Book may be refused for the semester in the cases of absences from more than two seminars. For continuous updates on all education-related maters, please check the departmental web-site (http://phys.dote.hu).

The lectures of Physiology are listed at the web site of the Department of Physiology (http://phys.dote.hu)

Evaluation during the semester

The knowledge of students will be tested 3 times per semester using a written test system (mid-semester tests). Participation is compulsory.

Examination

The semester is closed by the end-semester exam (ESE) covering the topics of all lectures, seminars. It is not compulsory to take the ESE if the average of mid-semesters test reaches or higher than the passing limit (55%) and none of the individual tests' results are less than 40%.
The mark based on the average score of mid-semester tests is calculated according to the following table:

0 – 54 % fail (1)
55 – 64 % pass (2)

65 – 74 % satisfactory (3)
75 – 84 % good (4)
85 – 100 % excellent (5)

If one is not satisfied with this result, (s)he may participate in ESE during the examination period. A and B chances are written tests, C chance is oral presentation.

Department of Preventive Medicine, Faculty of Public Health

Subject: BASIC EPIDEMIOLOGY
Year, Semester: 2nd year/1st semester
Number of teaching hours:
Lecture: 15
Practical: 30

1st week:
Seminar: Epidemiology — Definition, functions, and characteristics

2nd week:
Lecture: Studying populations - basic demography

3rd week:
Lecture: The Phenomenon of Disease

4th week:
Seminar: Measuring Disease and Exposure

5th week:
Lecture: Standardization of rates and ratios

6th week:
Lecture: Relating risk factors

7th week:
Lecture: Analytic study design

8th week:
Lecture: Causal inference

9th week:
Lecture: Sources of error

10th week:
Seminar: Multicausality — Confounding

11th week:
Lecture: Multicausality — Effect modification

12th week:
Seminar: Multicausality — Analysis approaches

13th week:
Lecture: Data analysis and interpretation

14th week:
Lecture: Practical aspects of epidemiologic research

15th week:
Lecture: Role of epidemiology
Practical: Needs for epidemiological research and the utilization of their results

Requirements

Participation in seminars and practices is obligatory. In the case of more than two absences signature is refused. During the course a practical mark will be given to the students on the base of classroom tasks, homeworks, and tests.

Subject: HEALTH (& LIBRARY) INFORMATICS II.
Year, Semester: 2nd year/1st semester
Number of teaching hours:
Lecture: 10
Practical: 20

1st week:
Lecture: The basics of nosology (classification of diseases)

2nd week:
Practical: The most important classifications of health-care and public health:BNO, WHO, SNOWMED

3rd week:
Practical: The most important classifications of health-care and public health:BNO, WHO, SNOWMED

4th week:
Lecture: Health-care administration. Health-care information systems and databases

5th week:
Practical: Data-flow in health-care

6th week:
Practical: Primary care, specialty care, hospital, public health information systems

7th week:
Practical: Library information systems

8th week:
Practical: TEST
Self Control Test

9th week:
Practical: Some use of library in formationsystemdetails: MEDLINE, PUBMED, CD-ROM, and multimedia systems

10th week:
Lecture: Information systems in public health, Traditional and electronic sources of information, studies and databases in public health

11th week:
Practical: Traditional sources of information, studies and databases of public health

12th week:
Practical: Electronic sources of information, studies and databases of public health

13th week:
Lecture: The issues of privacy, legal and ethical rules, Basics of Cryptography

14th week:
Practical: Physical and logical techniques and solutions of the protection of IT systems

15th week:
Lecture: TEST
Self Control Test

Requirements

Information collection: defining types of information sources in terms of their currency, format (for example a review vs. an original article), authority, relevance, and availability, new directions in information search
How to write an academic paper: structure and main characteristics in an academic paper
Role and structure of the University Library of Debrecen.
Search for information: Distinguish the different source types, evaluate the information quality.
Perform database searches using logical operators (Boolean), in a manner that reflects understanding of medical language, terminology and the relationships among medical terms and concepts
How to search information in the library catalogue
Search in Medline (PubMed) and other relevant bibliographic databases
Identify and acquire full-text electronic documents

How to reference: preparing bibliographies, managing bibiliographic data with reference management softwares
Health care basics. Health care in different countries. UN, WHO, worldwide organizations.
Stucture and types of health care systems'. Patient, doctor, nurse. Medical tasks, medical data
Medical data – data type, functions. Data – Information – Knowledge. Code systems in health care.
Data – Information – Knowledge. Public Health and International databases. Comparing different countries.
Differences, measurements: collecting data, building spreadsheets, charts. Public Health worldwide – What to do, how to do?

Subject: PUBLIC HEALTH MEDICINE I.
Year, Semester: 2nd year/1st semester
Number of teaching hours:
Lecture: 30
Practical: 30

1st week:
Lecture: Clinical diagnosis History, physical examination, investigations Laboratory diagnosis, Imaging techniques, Functional tests

2nd week:
Lecture: Diseases of the circulatory systemIschaemic heart disease, AMI, Hypertension and its complications, Thrombo-embolic diseases, Stroke

3rd week:
Lecture: Haematological diseasesAnaemia, myeloproliferative diseases

4th week:
Lecture: NeoplasiaBreast, lung and throat cancers, Colorectal cancers, Cervical, uterine, and ovarian cancers, Stomach cancer, Prostate carcinoma, Cancers of the mouth, Kidney tumours, Scrotal tumours, Malignant haematologic diseases

5th week:
Lecture: Diseases of the digestive systemDiseases of the stomach. Diseases of the liver, gall bladder and pancreas

6th week:
Lecture: Metabolic diseasesDiabetes, Hyperlipidaemia, Gout, Porphyria

7th week:
Lecture: Diseases of the pulmonary systemBronchial asthma, Chronic obstructive pulmonary disease

8th week:
Lecture: Infectious diseasesAcute and chronic infectious diseases

9th week:
Lecture: Diseases of the musculoskeletal systemBones, joint and muscular diseases (with emphasis on osteoporosis)

10th week:
Lecture: Endocrinological diseases

11th week:
Lecture: Diseases of the kidney

12th week:
Lecture: Neurological diseases

13th week:
Lecture: PsychiatryPsychosis, schizophrenia, alcoholism, delirium.

14th week:
Lecture: Paediatric diseasesDental diseases

15th week:
Lecture: The fundamentals of surgeryThe operating theatre and surgical procedures

Requirements

Clinical diagnosis; Diseases of the circulatory system; Haematological diseases; Neoplasia; Diseases of the digestive system; Metabolic diseases; Diseases of the pulmonary system; Infectious diseases; Diseases of the musculoskeletal system; Endocrinological diseases; Diseases of the kidney; Neurological diseases; Psychiatry; Paediatric diseases; Dental diseases; The fundamentals of surgery

Department of Biochemistry and Molecular Biology

Subject: BIOCHEMISTRY
Year, Semester: 2nd year/2nd semester
Number of teaching hours:
Lecture: 10
Seminar: 5

1st week:
Lecture: Biochemistry of the liver. Biotransformation. Ethanol metabolism, biochemical consequences of ethanol consumption.
Seminar: Introduction

2nd week:
Lecture: Metabolism of red blood cells. Hemoglobin; structure, function and regulation. Pathological forms of hemoglobin. Serum proteins. Synthesis of hem, regulation of the synthesis in eukariotic cells. Degradation of hem: formation, conjugation and excretion of bile pigments. Disorders in hem metabolism. Iron transport, storage and distribution in the human body. Molecular regulation of the iron level in cells: stability of transferrin receptor and ferritin mRNA, IRE binding protein.
Seminar: Biochemistry of liver, biotransformation

3rd week:
Lecture: Cellular, humoral and vascular aspects of blood clotting. Structure, activation, adhesion and aggregation of thrombocytes. Classification of blood clotting factors and their role. Blood clotting in the test tube and in the body. Role of thrombocytes and the vascular endothel. Limiting factors, inhibitors and activators of blood coagulation. Fibrinolysis.
Seminar: Metabolism iron, hem

4th week:
Lecture: Biochemistry of the extracellular matrix: function, main components: glucosaminoglycans and proteoglycans, collagens, elastin, adhesion proteins. Synthesis and degradation of collagens.
Seminar: Biochemistry of ECM and blood clotting

5th week:
Seminar: Sport biochemistry
Self Control Test

Requirements

Compulsory reading:
Lecture presentations with short explanations are available on the web page of the department: ().

Achievement during the semesterwill be evaluated in term of points.
During the semester points can be collected for the self-control test from the material of the lectures. Self control test consist of simple and multiple choice test questions and assay questions. Grade will be offered on the base of the collected points for all those students, who collected at least 50% of points: pass (2) for 50%-64%; satisfactory (3) for 65%-74%; good (4) for 75%-85%; excellent (5) for 86%-100%. Those students who want to get a better grade can take an exam. Those, who did not collect 50% have to take a written exam in the exam period.

The end of semester exam is a written oneand consists of similar test and assay questions to those of self-control test. 50 percent is needed to get a passing mark, and the grade increases as shown above.

Requirements:
Attendance at the lectures is highly recommended. Attendance at seminars is obligatory. The signature of the Lecture Book may be refused if a student is absent from more than 1 seminars.

Prerequisities:Basic Biochemistry

Department of Foreign Languages

Subject: PROFESSIONAL HUNGARIAN II.
Year, Semester: 2nd year/2nd semester
Number of teaching hours:
Practical: 30

1st week:
Practical: Revision

2nd week:
Practical: Pretest

3rd week:
Practical: 6. lecke Melyik a jobb?

4th week:
Practical: 6. lecke Melyik a jobb?

5th week:
Practical: 7. lecke Napirend

6th week:
Practical: 7. lecke Napirend

7th week:
Practical: Revision. Mid-term test

8th week:
Practical: 8. lecke Szabadidő

9th week:
Practical: 8. lecke Szabadidő

10th week:
Practical: 9. lecke Hol voltál tegnap?

11th week:
Practical: 9. lecke Hol voltál tegnap?

12th week:
Practical: 10. lecke Mit csináltál tegnap?

13th week:
Practical: 10. lecke Mit csináltál tegnap?

14th week:
Practical: Revision. End-term test

15th week:
Practical: Evaluation

Requirements

Requirements of the language courses
Attendance

Language class attendance is compulsory. The maximum percentage of allowable absences is 10 % which is a total of 2 out of the 15 weekly classes. Students arriving late for the classes are not allowed to enter the class. Being late is counted as an absence. If the number of absences is more than two, the final signature is refused and the student must repeat the course. Students are required to bring the textbook or other study material given out for the course with them to each language

class. Active participation is evaluated by the teacher in every class. If students' behaviour or conduct does not meet the requirements of active participation, the teacher may evaluate their participation with a "minus" (-). If a student has 5 minuses, the signature may be refused due to the lack of active participation in classes.

Testing, evaluation

In each Hungarian language course, students must sit for 2 written language tests and a short minimal oral exam.

A further minimum requirement is the knowledge of 200 words per semester announced on the first week. There is a (written or oral) word quiz in the first 5-10 minutes of the class, every week. If a student has 5 or more failed or missed word quizzes he/she has to take a vocabulary exam that includes all 200 words along with the oral exam. The results of word quizzes are added to the average score of the written tests.

The oral exam consists of a role-play randomly chosen from a list of situations announced in the beginning of the course. Failing the oral exam results in failing the whole course. The result of the oral exam is added to the average of the mid-term and end-term tests.

Based on the final score the grades are given according to the following table:

Final score	Grade
0 - 59	fail (1)
60-69	pass (2)
70-79	satisfactory (3)
80-89	good (4)
90-100	excellent (5)

If the final score is below 60, the student once can take an oral remedial exam covering the whole semester's material.

Consultation classes

In each language course once a week students may attend a consultation class with one of the teachers of that subject in which they can ask their questions and ask for further explanations of the material covered in that week. These classes are optional.

Course book: See the website of the department.

Website: Oral exam topics and vocabulary minimum lists are available from the website of the Department of Foreign Languages: ilekt.med.unideb.hu

Department of Health Management and Quality Assurance, Faculty of Public Health

Subject: INTRODUCTION TO LAW II.
Year, Semester: 2nd year/2nd semester
Number of teaching hours:
Lecture: 30

1st week:
Lecture: Introduction to Contracts

2nd week:
Lecture: Contractual Capacity

3rd week:
Lecture: Contracts in Writing

4th week:
Lecture: Agency

5th week:
Lecture: Relationship of Principal and Agent

6th week:
Lecture: The Law of Torts

7th week:
Lecture: Intentional Torts

8th week:
Lecture: Negligence

9th week:
Lecture: Strict Liability

10th week:
Lecture: Sales and Product Liability

11th week:
Lecture: Consumer Protection

12th week:
Lecture: Landlord – Tenant

13th week:
Lecture: Corporations

14th week:
Lecture: Structure and Management

15th week:
Lecture: Starting a Business

Requirements

Brief History of International Law; Development of International Law; Politics & Law; The subjects of International Law; International Treaties; International Organisations; The United Nations; Expert Bodies; International Court of Justice; International criminal courts and tribunals; Recognition & Territory; Use of Force by States; Settlement of disputes by peaceful means; The law of treaties

Department of Preventive Medicine, Faculty of Public Health

Subject: ENVIRONMENTAL HEALTH
Year, Semester: 2nd year/2nd semester
Number of teaching hours:
Lecture: 30
Seminar: 26
Practical: 4

1st week:
Lecture: Scope of environmental health
Seminar: Introduction to the seminar work, requirement of the subjects, instructions for preparing power point presentation by the 14th week of the semester

2nd week:
Lecture: Introduction to toxicology
Seminar: The disaster of Seveso – case study

3rd week:
Lecture: Air pollution and health
Seminar: The London smog of December 1952 – case study

4th week:
Lecture: Water pollution and health
Seminar: Environmental arsenic poisoning – case study

5th week:
Lecture: Impacts of soil contamination on human health
Seminar: Environmental cadmium poisoning – case study

6th week:
Lecture: Health effects of non-ionising radiation and electromagnetic fields
Seminar: Mobile phones use and brain cancer risk

7th week:
Lecture: Health effects of ionising radiation and radioactive substances
Seminar: Nuclear accidents and protecting the general public

8th week:
Lecture: Health effects of noise and vibration
Seminar: Midterm test

9th week:
Lecture: Food borne diseases, food poisoning
Practical: Chemical and microbiological examination of drinking water (laboratory practice for small group)

10th week:
Lecture: Principles of occupational health
Practical: Chemical and microbiological examination of drinking water (laboratory practice for small group)

11th week:
Lecture: Hazardous substances in the environment
Seminar: Environmental PCB poisoning – case study

12th week:
Lecture: Body defence against the adverse effects of environmental exposures
Seminar: Environmental lead poisoning – case study

13th week:
Lecture: Health implications of waste and hazardous waste
Seminar: Chemical safety

14th week:
Lecture: Global environmental health problems
Seminar: Student presentations

15th week:
Lecture: Environmental justice and environmental health policy
Seminar: Summary of seminars

Requirements

Attendance of lectures is highly recommended. Attendance of the seminars and practices is obligatory. The academic adviser refuse to sign the lecture book if a student is absent more than two times from seminars (including practices) in the semester even if he/she has an acceptable excuse. Students should also perform a midterm test on the 8th week of the semester. There is no possibility to repeat this test during the semester. The mark of the midterm test will be included in the calculation of the final average mark of the subject. Students should hold a ten minutes power point presentation which will be graded and the mark will be included in the calculation of the final average mark of the subject.
Requirements for the end semester exam:
The end semester exam involves a written section covering the topics of all lectures, seminars and practices of the subject. The written exam consists of two parts and includes multiple choice test questions related to the topics of lectures, as well as seminars and practices. The final exam is assessed on the basis of the average of four marks (mark of the test related to the topics of lectures, mark of the test related to the topics of seminars and practices, mark of the midterm test, mark of the student presentation) and it is failed if any part of the written exam is graded unsatisfactory. Students should repeat only those section(s) of the exam that has/have been previously unsuccessful. In this case the final exam is graded according to the average of the passing marks obtained on the first and repeated exams.

Type of exam:
end semester exam

Prerequisites:completion of ecology and chemistry subjects

Subject: EPIDEMIOLOGY OF COMMUNICABLE AND NON-COMMUNICABLE DISEASES I.
Year, Semester: 2nd year/2nd semester
Number of teaching hours:
Lecture: 15
Seminar: 45

1st week:
Lecture: Introduction to the epidemiology of infectious diseases
Practical: (2 hours): Editing data entry form using the Epi-Info software (Case Study)

2nd week:
Lecture: The spread of infectious diseases, indicators of measuring the infectivity
Seminar: (4 hours): Editing data entry form using the Epi-Info software 2 (case study), the dynamics of infection (Case Study)

3rd week:
Lecture: Outbreak curve
Seminar: (4 hours): Data entry and data management (case study)

4th week:
Seminar: (3 hours): Outbreak investigation - descriptive analysis (case study)

5th week:
Lecture: The basics of statistical inferenceThe basics of sample size calculation

6th week:
Lecture: Using analytical epidemiological studies in outbreak investigation
Seminar: (2 hours): Statistical power estimation using PS software (Case Study)

7th week:
Seminar: (4 hours): Outbreak investigation - analytical analysis (case study)

8th week:
Lecture: Stratified analysis
Seminar: (3 hours): Stratified analysis (case study)

9th week:
Lecture: Logistic regression
Seminar: (2 hours): Logistic regression (Case Study)

10th week:
Lecture: The practical aspects of the implementation of outbreak investigation
Seminar: (3 hours): The surveillance of infectious diseases

11th week:
Lecture: Surveillance of nosocomial of diseases
Seminar: Surveillance of nosocomial diseases

12th week:
Lecture: Epidemiology of respiratory infectious
Seminar: Monkey pox (Case Study)

13th week:
Lecture: Epidemiology of tuberculosis
Seminar: (2 hours): Epidemiology of tuberculosis in developed countries (case study)

14th week:
Lecture: Epidemiology of gastrointestinal diseases Epidemiology of hepatitis
Seminar: (3 hours): Hepatitis outbreak investigation (Case Study)

15th week:
Lecture: Epidemiology of HIV / AIDS
Seminar: Hepatitis outbreak investigation 2 (Case Study)

Requirements

Prerequisite subject: Basic Epidemiology.
Examination: During the semester the students will get practical grade for the homework assessments. At the end of the semester students are required to take a written test which will cover the topics of all lectures and seminars of the first semester. The mark of the final exam will be calculated on the basis of the average of the practice grade and the written exam.

Participation in seminars and practices is obligatory. In the case of more than two absences signature is refused. During the course a practical mark will be given to the students on the base of classroom tasks, homeworks, and tests.

Subject: PUBLIC HEALTH MEDICINE II.
Year, Semester: 2nd year/2nd semester
Number of teaching hours:
Lecture: 30
Practical: 30

1st week:
Lecture: Clinical diagnosisHistory, physical examination, investigationsLaboratory diagnosis, Imaging techniques, Functional tests

2nd week:
Lecture: Diseases of the circulatory systemIschaemic heart disease, AMI, Hypertension and its complications, Thrombo-embolic diseases, Stroke

3rd week:
Lecture: Haematological diseasesAnaemia, myeloproliferative diseases

4th week:
Lecture: NeoplasiaBreast, lung and throat cancers, Colorectal cancers, Cervical, uterine, and ovarian cancers, Stomach cancer, Prostate carcinoma, Cancers of the mouth, Kidney tumours, Scrotal tumours, Malignant haematologic diseases

5th week:
Lecture: Diseases of the digestive systemDiseases of the stomach. Diseases of the liver, gall bladder and pancreas

6th week:
Lecture: Metabolic diseasesDiabetes, Hyperlipidaemia, Gout, Porphyria

7th week:
Lecture: Diseases of the pulmonary systemBronchial asthma, Chronic obstructive pulmonary disease

8th week:
Lecture: Infectious diseasesAcute and chronic infectious diseases

9th week:
Lecture: Diseases of the musculoskeletal systemBones, joint and muscular diseases (with emphasis on osteoporosis)

10th week:
Lecture: Endocrinological diseases

11th week:
Lecture: Diseases of the kidney

12th week:
Lecture: Neurological diseases

13th week:
Lecture: PsychiatryPsychosis, schizophrenia, alcoholism, delirium

14th week:
Lecture: Paediatric diseasesDental diseases

15th week:
Lecture: The fundamentals of surgeryThe operating theatre and surgical procedures

Requirements

Clinical diagnosis; Diseases of the circulatory system; Haematological diseases; Neoplasia; Diseases of the digestive system; Metabolic diseases; Diseases of the pulmonary system; Infectious diseases; Diseases of the musculoskeletal system; Endocrinological diseases; Diseases of the kidney; Neurological diseases; Psychiatry; Paediatric diseases; Dental diseases; The fundamentals of surgery

CHAPTER 11

ACADEMIC PROGRAMME FOR THE 3RD YEAR

Department of Health Management and Quality Assurance, Faculty of Public Health

Subject: HEALTH CARE LAW I.
Year, Semester: 3rd year/1st semester
Number of teaching hours:
Lecture: 30

1st week:
Lecture: Development of medical officer service's regulation

2nd week:
Lecture: Medical officer service in the state administration system

3rd week:
Lecture: Power and territorial system of the medical officer service

4th week:
Lecture: Population health management

5th week:
Lecture: Public health management

6th week:
Lecture: Environmental and settlement health management

7th week:
Lecture: Administrative tasks related to the deceased

8th week:
Lecture: Workplace aerosol exposure (dusts, fibers)

9th week:
Lecture: Control of the food chain

10th week:
Lecture: Rights and obligations of the food chain actors

11th week:
Lecture: State's responsibility in the food chain control

12th week:
Lecture: Administration tasks of the food chain supervisory authority

13th week:
Lecture: Occupational health management

14th week:
Lecture: Administration and coordination tasks of the health administration bodies

Requirements

Year, semester: 3rd year/1st semester
Number of teaching hours: 30
Lecture: 30
Jonathan Montgomery: Health Care Law, 2nd edition, New York, 2003

Department of Immunology

Subject: IMMUNOLOGY
Year, Semester: 3rd year/1st semester
Number of teaching hours:
Lecture: 30

1st week:
Lecture: Tissues/organs of the immune system: Functions of central lymphoid organs. Functions of peripherial lymphoid organs. Features of antigens. Cellular and humoral immunity - Direct and indirect interactions.

2nd week:
Lecture: Cellular component of the immune system: The development of the major lineages of blood cells.

3rd week:
Lecture: Antigen recognition (non-specific of specific): Antigen recognition and effector functions of innate immune system. Antigen recognition and effector functions of adaptive immune system.

4th week:
Lecture: T cells; types and functions: Development of T-lymphocytes, TCR variability. Structure of TCR. Cytotoxic T cells. Helper and regulatory T cells.

5th week:
Lecture: The collaboration between innate and adaptive immunity - I. Mechanism of antigen presentation: Structure of MHC molecules. Immunological synapse - Coreceptors and costimulatory molecules.

6th week:
Lecture: Triggering of immune response by B cells: Development of B-lymphocytes, BCR variability. Antibody production by plasma cells. Effector functions of secreted antibodies (neutralization, opsonization, phagocytosis).

7th week:
Lecture: Structure of antibodies: Production of various antibody isotypes and their functions. Affinity maturation, somatic recombination, isotype switching.

8th week:
Lecture: The collaborations between innate and adaptive immunity - II.: Professional antigen presenting cell mediated T cell polarization. Effect of cytokines on innate immune response. Effector functions of T cells. T cell priming and activation of effector T lymphocytes. Cooperation of T and B cells: T cell independent and T cell dependent B cell activation.

9th week:
Lecture: The immune response to intracellular pathogens. Immune response to viral infection. The immunre response to extracellular pathogens.

10th week:
Lecture: Inflammation. Chemokine mediated migration of leukocytes.

11th week:
Lecture: Memory. Passive and active immunisation.

12th week:
Lecture: Hypersensitivity reactions.

13th week:
Lecture: Consultation.

Requirements

During the semester one self-control test (SCT) will be organised at the end of the semester on week 15. The SCT contains the material of the lectures.
If a student's score for the SCT is higher than 50%, she/he will be offered a grade. Should student accept this offered grade, she/he will be exempted from the end-term exam.
Those students who have not qualified for an offered grade must take the end-term exam during the

exam period. The end-term exam consists of a written and an oral part.
"A" exam: To qualify for the oral part of an "A" exam, students must score higher than 60% on the written (entry) exam. Students who score less than 60% on the written part will fail (thus, the oral exam will not take place).
"B" exam: "B" exams are identical to "A" exams except when the student failed the oral, but not the written, part of th "A" exam. With a score of higher than 60% on the written part of the "A" exam, the student is exempt from the written exam on the "B" exam.
"C" exam: "C" exams are oral exams only, without a written entry test.
Those students who would like to improve the grade of a successful ("A" or "B" exam) or do not accept the offered grade, are also exempted from the entry test.
The list of exam topics is available on the departmental website (www.immunology.unideb.hu).
Lecture materials and other information concerning education can be found on our website at www.immunology.unideb.hu by clicking the link "For Students".

Department of Pharmacology and Pharmacotherapy

Subject: PHARMACOLOGY
Year, Semester: 3rd year/1st semester
Number of teaching hours:
Lecture: 30

1st week:
Lecture: Introduction to general pharmacology: pharmacokinetics and pharmacodynamics

2nd week:
Lecture: Pharmacology of autonomic nervous system: drugs acting on cholinergic and adrenergic receptors

3rd week:
Lecture: Pharmacology of central nervous system: antidepressants, antiepileptics

4th week:
Lecture: Pharmacology of central nervous system: antiparkinsonian drugs, anti-psychotics

5th week:
Lecture: Pharmacology of drugs of abuse: narcotics, stimulants

6th week:
Lecture: Pharmacology of drugs of abuse: depressants, cannabis, hallucinogens

7th week:
Lecture: Inhalants, steroids

8th week:
Lecture: Cardiovascular pharmacology: antianginal, anti-arrhythmic drugs

9th week:
Lecture: Cardiovascular pharmacology: antihypertensive, antihyperlipidaemic drugs

10th week:
Lecture: Drugs used in congestive heart failure

11th week:
Lecture: Respiratory pharmacology: antiasthmatics

12th week:
Lecture: Pharmacology of gastrointestinal system

13th week:
Lecture: Antimicrobial and antiviral chemotherapy

14th week:
Lecture: Antitumor agents

15th week:
Lecture: Consultation

Requirements

Attendance at lectures is highly recommended, since the topics in examination cover the lectured topics. During the semester two obligatory test is required to fulfil. You have to take ESE during the examination period.

Department of Preventive Medicine, Faculty of Public Health

Subject: BASICS IN HEALTH PROMOTION AND POLICY
Year, Semester: 3rd year/1st semester
Number of teaching hours:
Lecture: 30
Practical: 15

1st week:
Lecture: Basics and values in policy. Policy networks and subsystems.

2nd week:
Lecture: Values, principles and objectives of health policy. Stakeholders and stewardship. The relationship between health, social and economic policy.

3rd week:
Lecture: The policy process. Health policy analysis.

4th week:
Lecture: Healthy public policies. Health impact assessment.

5th week:
Lecture: Goals and functions of health care systems. Preventive and curative care.

6th week:
Lecture: The characteristics of health care market. Need, demand and supply of health services.

7th week:
Lecture: Financing health care: revenue collection, fund pooling and purchasing. Models of health care systems. Health care reforms.

8th week:
Lecture: Priority setting in health care. Performance measurement.

9th week:
Lecture: Health workforce: education and employment policy. Public health law.

10th week:
Lecture: The international arena of public health policy.

11th week:
Lecture: The concept of health promotion. Political decisions in health.

12th week:
Lecture: Defining and measuring health in health care and health promotion.

13th week:
Lecture: Individual and structural determinants of health 1. Policy measures to prevent smoking and drug abuse.

14th week:
Lecture: Individual and structural determinants of health 2. Policy measures to influence nutrition.

15th week:
Lecture: National and international infrastructure of health promotion.

Requirements

Attendance of the lectures is highly recommended.
Attendance of the seminars is obligatory and is a precondition of signing the lecture book, maximum two absences are allowed in the semester. Active participation in problem based learning

exercises is required.

Examination:
Type of the exam: end-of-semester examination.
Form of exam: written exam (covers the topics of all lectures and seminars and the required literature).
Evaluation: Fail /pass on a scale 1-5.

Subject: EPIDEMIOLOGY OF COMMUNICABLE AND NON-COMMUNICABLE DISEASES II.
Year, Semester: 3rd year/1st semester
Number of teaching hours:
Lecture: 15
Seminar: 30

1st week:
Lecture: Vaccinations, Vaccines
Seminar: Vaccine efficacy

2nd week:
Lecture: Emerging and re-emerging infectious diseasesThe world health report
Seminar: Epidemiology of HIV / AIDS

3rd week:
Lecture: Levels of prevention, preventive strategies
Seminar: The advantages and disadvantages of different preventive strategies

4th week:
Lecture: The theoretical basis for screening programs
Seminar: Screening programs

5th week:
Lecture: The screening systemsPublic Health Databases
Seminar: HFA database

6th week:
Lecture: Literature research
Seminar: HFA database; Literature Research

7th week:
Lecture: Evidence-based health policy
Seminar: Literature search using PubMed

8th week:
Lecture: Study Writing
Seminar: Literature search using PubMed (2)

9th week:
Lecture: Epidemiology and prevention of cardiovascular diseases
Seminar: Study design- a measurement the frequency of a non-communicable disease - a theoretical framework

10th week:
Lecture: Epidemiology of metabolic disorders
Seminar: Study design- a measurement the frequency of a non-communicable disease

11th week:
Lecture: Epidemiology of liver and gastrointestinal diseases
Seminar: Study design- a measurement the frequency of a non-communicable disease

12th week:
Lecture: Cancer Epidemiology and Prevention
Seminar: Epidemiology of cancer

13th week:
Lecture: Epidemiology of chronic respiratory diseases
Seminar: The epidemiology of cancer (2)

14th week:
Lecture: The epidemiology and prevention of accidentsBasics of health economics

15th week:
Lecture: Epidemiology and prevention of musculoskeletal disorders
Seminar: Basics of health economics

Requirements

Participation in the seminars is mandatory. If there are more than two absences, the index might not be signed. Prerequisite subject: Epidemiology of communicable and non-communicable diseases I.
Examination:
During the semester the students will get practical grade for the assessment of homework. At the end of the semester students are required to take a written test which will cover the topics of all lectures and seminars of the first semester. The mark of the final exam will be calculated on the basis of the average of the practice grade and the written exam.

Subject: OCCUPATIONAL HEALTH
Year, Semester: 3rd year/1st semester
Number of teaching hours:
Lecture: 30
Seminar: 30

1st week:
Lecture: Introduction to occupational health; History and the subject of occupational medicine and hygiene
Seminar: Organizational structure of occupational health

2nd week:
Lecture: Physiology of work, safety of working process
Seminar: Criteria, classification and reporting of occupational diseases

3rd week:
Lecture: Prevention of occupational diseases. Environmental and biological monitoring
Seminar: Occupational exposure limits

4th week:
Lecture: Physical workplace hazards (noise, vibration, temperature, pressure)
Seminar: Measurement, evaluation and prevention of workplace noise and heat exposure

5th week:
Lecture: Physical workplace hazards (ionizing and non-ionizing radiations)
Seminar: Measurement, evaluation and prevention of workplace exposure to radiations

6th week:
Lecture: Chemical workplace hazards (metals, gasses)
Seminar: Chemical safety

7th week:
Lecture: Chemical workplace hazards solvents, plastics, pesticides)
Seminar: Measurement, evaluation and prevention of workplace chemical exposures

8th week:
Lecture: Workplace aerosol exposure (dusts, fibers)
Seminar: Measurement, evaluation and prevention of workplace dust and fiber exposures

9th week:
Lecture: Chemical workplace hazards (mutagens, carcinogens, teratogens)
Seminar: Mutagenecity tests (laboratory practical)

10th week:
Lecture: Biological workplace hazards
Seminar: Measurement, evaluation and prevention of workplace biological exposures

11th week:
Lecture: Occupational stress, methods of stress prevention and control
Seminar: Workplace communication (situation practice)

12th week:
Lecture: Ergonomic workplace hazards, work injuries, accidents
Seminar: Occupational safety

13th week:
Lecture: Occupational hygiene surveys, comprehensive evaluation of work environment, occupational risk assessment
Seminar: Aspects of the preparation of Occupational Hygiene Reports

14th week:
Lecture: Occupational health evaluation of industrial processes I.
Seminar: Workplace visit

15th week:
Lecture: Occupational health evaluation of industrial processes II.
Seminar: Student presentations

Requirements

To register for the subject, students need a successful exam in chemistry, basic epidemiology and environmental health. Attendance of seminars and practices is obligatory, not more than 2 absences are required for the signature of lecture book
Examination:
The subject ends with a written exam assessing knowledge taught on lectures and seminars. To pass, students are required to give correct answers to at least 50% of the 10 multiple choice and 10 short open questions. “B” and upgrading exams are held in oral.

Subject: PUBLIC HEALTH MEDICINE III.
Year, Semester: 3rd year/1st semester
Number of teaching hours:
Lecture: 30
Practical: 30

1st week:
Lecture: Important gynecological disorders (STDs, gynecological neoplasms, infertility). Causes, prevention and treatment options.
Practical: General gynecological examination. Taking a proper gynecological history. The most common complaints in gynecology.

2nd week:
Lecture: Important gynecological disorders (contraception, the basics of sexual education).
Practical: General gynecological examination. Imaging techniques and laboratory tests in gynecology. Contraceptive methods. The basics of infertility. Preparing for the child.

3rd week:
Lecture: Important disorders in obstetrics (Premature birth. Complications, prevention and treatment)
Practical: General obstetrical examination. Taking a proper obstetrical history. Obstetrical check-ups.

4th week:
Lecture: Different types of gastrointestinal infections (gastroenteritis)

5th week:
Lecture: Hepatitis

6th week:
Lecture: Nosocomial infections

7th week:
Lecture: The commonest disorders and causes of death in Pediatrics, Prevention in Pediatrics
Practical: Case reports

8th week:
Lecture: Oncology in Pediatrics, Prevention and rehabilitation
Practical: Case reports

9th week:
Lecture: Diseases of the periodontium
Practical: Prevention of periodontal disorders

10th week:
Lecture: The commonest disorders in Dentistry (caries)
Practical:

Dental screening, prevention and treatment

11th week:
Lecture: The commonest types of malignancies, risk factors and social effects.

Practical:
Case presentations connected to lecture topics between

12th week:
Lecture: Prevention and diagnosis in Oncology
Practical:
Case presentations connected to lecture topics between

13th week:
Lecture: Clinical features and treatment options of the commonest malignancies (breast cancer, lung cancer, prostate cancer, coloc cancer)
Practical:
Case presentations connected to lecture topics between

14th week:
Lecture: Palliation. Miracle drugs in Oncology
Practical:
Case presentations connected to lecture topics between

15th week:
Lecture: The physiology of seeing. The commonest disorders of the eye
Practical:
Physicaland instrumental examinations in Ophthalmology

Requirements

Clinical diagnosis; Diseases of the circulatory system; Haematological diseases; Neoplasia; Diseases of the digestive system; Metabolic diseases; Diseases of the pulmonary system; Infectious diseases; Diseases of the musculoskeletal system; Endocrinological diseases; Diseases of the kidney; Neurological diseases; Psychiatry; Paediatric diseases; Dental diseases; The fundamentals of surgery

Department of Family and Occupational Medicine, Faculty of Public Health

Subject: CHILD AND ADOLESCENT HEALTH
Year, Semester: 3rd year/2nd semester
Number of teaching hours:
Lecture: 30

1st week:
Lecture: Child health services: organisation and place in the health care system

2nd week:
Lecture: Child health services: tasks and activities

3rd week:
Lecture: Demographic, mortality and morbidity data regarding child health care

4th week:
Lecture: Development of healthy infants, children and adolescents

5th week:
Lecture: Primary prevention in infant age, childhood and adolescence

6th week:
Lecture: Childhood surveillance

7th week:
Lecture: Continuous care of children with chronic diseases

8th week:
Lecture: Complexity of health promotion: health education, health protection and prevention in childhood

9th week:
Lecture: Care of infants, children and adolescents with special needs

10th week:
Lecture: Infant feeding and nutrition in childhood and adolescence

11th week:
Lecture: Physical activity and physical education

12th week:
Lecture: Obesity and its consequences in childhood and adolescence

13th week:
Lecture: Smoking, alcohol and drug abuse in childhood and adolescence

14th week:
Lecture: Puberty, its disturbances and adolescents' sexuality

15th week:
Lecture: Psychological problems and harmful behaviours in adolescence

Requirements

Attendance of lectures
Examination:
Oral exam, colloquium

Department of Health Management and Quality Assurance, Faculty of Public Health

Subject: HEALTH CARE LAW II.
Year, Semester: 3rd year/2nd semester
Number of teaching hours:
Lecture: 30

1st week:
Lecture: Principles of health care law

2nd week:
Lecture: System of health services

3rd week:
Lecture: Health care system, primary care, outpatient and inpatient care, other health services

4th week:
Lecture: Professional requirements of health services

5th week:
Lecture: Health care organization and management

6th week:
Lecture: Public health

7th week:
Lecture: Health promotion, family and women’s care, youth health care, sports health care, environment and settlement health, food and nutrition health

8th week:
Lecture: Radiation Health, occupational health, infectious disease control

9th week:
Lecture: Patients' rights and obligations

10th week:
Lecture: Rights and duties of health care workers

11th week:
Lecture: Medical research on humans

12th week:
Lecture: Special procedures related to human reproduction, research involving human embryos and gametes, sterilization

13th week:
Lecture: Treatment and care of psychiatric patients

14th week:
Lecture: Organ and tissue transplantation, blood provision

15th week:
Lecture: Provisions related to the deceased, disaster medical care

Requirements

Year, semester: 3rd year/2nd semester
Number of teaching hours: 30
Lecture: 30
Jonathan Montgomery: Health Care Law, 2nd edition, New York, 2003

Department of Preventive Medicine, Faculty of Public Health

Subject: BASICS OF QUALITY ASSURANCE
Year, Semester: 3rd year/2nd semester
Number of teaching hours:
Lecture: 15
Seminar: 15

1st week:
Lecture: Importance of quality management in healthcare, general definitions of quality, evolution of quality thinking

2nd week:
Seminar: What quality means to me?

3rd week:
Lecture: Dimensions and structure of quality in healthcare, definition of criteria, standard, guideline, protocol, indicator

4th week:
Seminar: Discussion of Donabedian model

5th week:
Lecture: Assessment of quality of healthcare services, types of audit

6th week:
Seminar: Measurement of quality of healthcare by Donabedian model

7th week:
Lecture: Quality problems in healthcare

8th week:
Seminar: Prioritising quality problems

9th week:
Lecture: Quality improvement and quality tools

10th week:
Seminar: Planning a quality improvement project

11th week:
Lecture: Importance of clinical effectiveness in the improvement of healthcare service; Steps of clinical effectiveness in the improvement of healthcare service

12th week:
Lecture: Clinical audit

13th week:
Seminar: Planning of a clinical audit projects by teams

14th week:
Seminar: Presentation and discussion of quality improvement projects 1.

15th week:
Seminar: Presentation and discussion of quality improvement projects 2.

Requirements

Regular attending for the course
Presentation of a quality improvement project
Examination:
Written form

Subject: FIELD AND LABORATORY PRACTICE I.
Year, Semester: 3rd year/2nd semester
Number of teaching hours:
Practical: 180

Requirements

This course aims to equip students with the knowledge and skills to make valuable contributions to environmental health, food and nutrition , child and youth health, radiation and chemical safety, as well as communicable diseases, health promotion and health administration and management.

The course focuses on: The health status of the population, risk factors and the analysis of them, risk assessment and prevention;
Effective public health rules: in the fields of enviromental health, radiation, chemical safety, food and nutrition;
Control of communicable diseases;
Laboratory methods of preventive medicine;
Health promotion activities to prevent diseases;
Health administration tasks;
Supervision of nursing, childhood care and pharmaceutics

Subject: PUBLIC HEALTH MEDICINE IV.
Year, Semester: 3rd year/2nd semester
Number of teaching hours:
Lecture: 30
Practical: 30

1st week:
Lecture: Clinical diagnosisHistory, physical examination, investigationsLaboratory diagnosis, Imaging techniques, Functional tests

2nd week:
Lecture: Diseases of the circulatory systemIschaemic heart disease, AMI,

Hypertension and its complications, Thrombo-embolic diseases, Stroke

3rd week:
Lecture: Haematological diseasesAnaemia, myeloproliferative diseases

4th week:
Lecture: NeoplasiaBreast, lung and throat cancers, Colorectal cancers, Cervical, uterine, and ovarian cancers, Stomach cancer, Prostate carcinoma, Cancers of the mouth, Kidney tumours, Scrotal tumours, Malignant haematologic diseases

5th week:
Lecture: Diseases of the digestive systemDiseases of the stomach. Diseases of the liver, gall bladder and pancreas

6th week:
Lecture: Metabolic diseasesDiabetes, Hyperlipidaemia, Gout, Porphyria

7th week:
Lecture: Diseases of the pulmonary systemBronchial asthma, Chronic obstructive pulmonary disease

8th week:
Lecture: Infectious diseasesAcute and chronic infectious diseases

9th week:
Lecture: Diseases of the musculoskeletal systemBones, joint and muscular diseases (with emphasis on osteoporosis)

10th week:
Lecture: Endocrinological diseases

11th week:
Lecture: Diseases of the kidney

12th week:
Lecture: Neurological diseases

13th week:
Lecture: PsychiatryPsychosis, schizophrenia, alcoholism, delirium

14th week:
Lecture: Paediatric diseasesDental diseases

15th week:
Lecture: The fundamentals of surgeryThe operating theatre and surgical procedures

Requirements

Clinical diagnosis; Diseases of the circulatory system; Haematological diseases; Neoplasia; Diseases of the digestive system; Metabolic diseases; Diseases of the pulmonary system; Infectious diseases; Diseases of the musculoskeletal system; Endocrinological diseases; Diseases of the kidney; Neurological diseases; Psychiatry; Paediatric diseases; Dental diseases; The fundamentals of surgery

CHAPTER 12

ACADEMIC PROGRAMME FOR THE 4TH YEAR

Department of Health Management and Quality Assurance, Faculty of Public Health

Subject: HEALTH CARE LAW III.
Year, Semester: 4th year/1st semester
Number of teaching hours:
Lecture: 30

1st week:
Lecture: Evolution of the welfare state and social service systems

2nd week:
Lecture: Health care as part of the social system

3rd week:
Lecture: Principles of the Social Security Act, system of benefits

4th week:
Lecture: Institutional social care and management

5th week:
Lecture: European Social Charter and its Rules

6th week:
Lecture: The evolution of social insurance systems

7th week:
Lecture: Forms of social insurance: health insurance; pension insurance

8th week:
Lecture: Accident insurance benefits in Hungary and in Western Europe

9th week:
Lecture: Health insurance benefits, the duration of the incapacity benefits (sick pay)

10th week:
Lecture: Health insurance benefits provided in nature

11th week:
Lecture: System of maternity benefits: maternity leave, childcare benefits, family support system, principles and concepts

12th week:
Lecture: Pension insurance systems in Western Europe

13th week:
Lecture: Forms of personal pension schemes, special rules of old-age and invalidity pension

14th week:
Lecture: Forms of dependent's pension schemes, the rules for Western European institutions

15th week:
Lecture: Special rules of private pension funds, principles and schemes

Requirements

Year, semester: 4th year/1st semester
Number of teaching hours: 30
Lecture: 30
Jonathan Montgomery: Health Care Law, 2nd edition, New York, 2003

Department of Preventive Medicine, Faculty of Public Health

Subject: FIELD AND LABORATORY PRACTICE II.
Year, Semester: 4th year/1st semester
Number of teaching hours:
Practical: 180

Requirements

This course aims to equip students with the knowledge and skills to make valuable contributions to environmental health, food and nutrition , child and youth health, radiation and chemical safety, as well as communicable diseases, health promotion and health administration and management.

The course focuses on: The health status of the population, risk factors and the analysis of them, risk assessment and prevention;
Effective public health rules: in the fields of enviromental health, radiation, chemical safety, food and nutrition;
Control of communicable diseases;
Laboratory methods of preventive medicine;
Health promotion activities to prevent diseases;
Health administration tasks;
Supervision of nursing, childhood care and pharmaceutics

Subject: HEALTH PROMOTION
Year, Semester: 4th year/1st semester
Number of teaching hours:
Lecture: 10
Practical: 20

1st week:
Lecture: History of public health and health promotion

2nd week:
Lecture: International infrastructure of health promotion

3rd week:
Lecture: Basics of communication

4th week:
Lecture: Life course perspective of health: childhood as determinant of health

5th week:
Lecture: Integrative model of health

6th week:
Lecture: Self-knowledge, professional self-reflexion

7th week:
Lecture: Changing health behavior 1: theories of behavior change

8th week:
Lecture: Changing health behavior 2: health education by written material

9th week:
Lecture: Changing health behavior 3: oral health education

10th week:
Lecture: Community development

11th week:
Lecture: Changing community behavior 1: Basics of project planning

12th week:
Lecture: Changing community behavior 2:
Practical: project planning

13th week:
Lecture: Public health problems of disadvantaged groups

14th week:
Lecture: Evidence-based policies to promote health in populations

15th week:
Lecture: Presenting project plans, feedback session

Requirements

Attendance of the lectures is highly recommended. Attendance of the seminars and practicals is obligatory and is a precondition of signing the lecture book. Maximum two absences are allowed in the semester, but absences from practicals must be made up for.
Examination:
Type of the exam: end-of-semester examination.
Form of exam:
Written exam (covers the topics of all lectures and seminars and the required literature). Evaluation: Fail /pass on a scale 1-5.
Individual oral presentation on a preselected topic. Evaluation: Fail /pass on a scale 1-5.
Group presentation of a project plan: Evaluation: Fail /pass on a scale 1-5 for all group members.
The final grade equals the mathematical average of the 3 sub-parts of the exam.

Subject: NUTRITIONAL HEALTH AND FOOD SAFETY
Year, Semester: 4th year/1st semester
Number of teaching hours:
Lecture: 15
Seminar: 30

1st week:
Lecture: Introduction to nutritional health
Seminar: Nutrition risk screening questionnaire

2nd week:
Lecture: Nutrients and energy metabolism
Seminar: Food balance sheets

3rd week:
Lecture: Energy and protein requirements
Seminar: Energy practice)gr.1.)
Food frequency questionnaires (computer lab, gr.2.)

4th week:
Lecture: Dietary assessment
Seminar: Energy practice
Food frequency questionnaires

5th week:
Lecture: Obesity epidemic
Seminar: Assessment of nutritional status

6th week:
Lecture: Nutritional deficiency disorders
Seminar: Prevention of nutritional deficiency disorders

7th week:
Lecture: Diet and cardiovascular diseases
Seminar: Diet and prevention of chronic noncommunicable diseases. Poster presentations

8th week:
Lecture: Diet and cancer I.
Seminar: Diet macro- micronutrients in health promotion I. Student presentations 1.

9th week:
Lecture: Diet and cancer II.
Seminar: Diet macro- and micronutrients in health promotion II. Student presentations

10th week:
Lecture: Dietary guidelines
Seminar: Diet macro- and micronutrients in health promotion II. Student presentations

11th week:
Lecture: Food safety. HACCP systems.
Seminar: Food processing, preservatisons. Food additives and regulations

12th week:
Lecture: Epidemiology of foodborne diseases
Seminar: Outbreak of foodborne disease. Case study

13th week:
Lecture: Food allergy and intolerance
Seminar: Foodborne disease investigation. Food hygiene

14th week:
Lecture: Genetically modified foods
Seminar: Regulation and legislation related to food chain

15th week:
Lecture: Food choice
Seminar: Consultation

Requirements

Attendance of lectures is not obligatory but highly recommended. Attendance of the group seminars and practices is obligatory.
Examination:
Written test, which assessed on five-grade scale.

Subject: THESIS I.
Year, Semester: 4th year/1st semester
Number of teaching hours:
Practical: 15

Department of Health Management and Quality Assurance, Faculty of Public Health

Subject: HEALTH CARE LAW IV.
Year, Semester: 4th year/2nd semester
Number of teaching hours:
Lecture: 30

1st week:
Lecture: The development of labour law, the appearance of civil service employment law

2nd week:
Lecture: Labour law principles, introductory provisions of the Code of Labour, the scope of the Act on Legal Status of Civil Servants

3rd week:
Lecture: Subjects and establishment of civil service legal relationship

4th week:
Lecture: Content of civil service legal relationship, fundamental rights and obligations

5th week:
Lecture: Carrier development of civil servants

6th week:
Lecture: Working time and rest time rules for the civil service

7th week:
Lecture: Remuneration of civil servants

8th week:
Lecture: Liability of civil servants, disciplinary liability

9th week:
Lecture: Civil servant's liability for damages

10th week:
Lecture: Employer's liability for damages

11th week:
Lecture: Termination of the civil service legal relationship 1

12th week:
Lecture: Termination of the civil service legal relationship 2

13th week:
Lecture: Civil service legal disputes

14th week:
Lecture: Special conditions of employment in the civil service

15th week:
Lecture: The institutions of collective labour law

Requirements

Year, semester: 4th year/2nd semester
Number of teaching hours: 30
Lecture: 30
Jonathan Montgomery: Health Care Law, 2nd edition, New York, 2003

Subject: HEALTH SYSTEM MANAGEMENT
Year, Semester: 4th year/2nd semester
Number of teaching hours:
Lecture: 30

1st week:
Lecture: The background of the Hungarian health system in the aspect of law. Basic definitions.

2nd week:
Lecture: The construction and the levels of the health system, its conditions of functions and obligations.

3rd week:
Lecture: The constitution of financing according to the sources (OEP, state support, own income or other sources) in health institutes.

4th week:
Lecture: The actual questions and the background of patient documentation according to the rules of law. The patient documentation system of the UDMHSC.

5th week:
Lecture: The basic rules of employing manpower in the health system.

6th week:
Lecture: The tools of human resource from recruitment to labour development.

7th week:
Lecture: Conflict management – amicable settlement of disputes during work.

8th week:
Lecture: Fame, reputation and image. The determination and the complex interpretation of the institute's image. Interdependace between image and PR. The tools of PR and PR in tools.

9th week:
Lecture: PR as Public Affairs, connection with the media and press, relations to the government, issue management/conflict management.

10th week:
Lecture: Effective communication in connection with tenders in the projects' preparatory, effectuative and later stages.

11th week:
Lecture: Tendering possibilities in public health nowadays.

12th week:
Lecture: Quality contol and quality assurance in health institutes (tasks and opportunities). Quality assurance as a supportive tool of decision preparation.

13th week:
Lecture: The social circumstances and the background of quality assurance in the aspect of law, profession and economy.

14th week:
Lecture: The estimation and the measurement of the level of health care nowadays.

15th week:
Lecture: Summary, Q & As, testing in a written form.

Requirements

Examination:
final examination

Form of examination:

The students are required to make an essay from a freely chosen topic in the field of health system management by using the literature they explore and elaborate on their own. The essay's volume is reqired to be 10.000-15.000 characters and has to be submitted by the 14th educational week. With the agreement of the teacher correction of the mark is possible by making a new essay on a different topic.

Department of Preventive Medicine, Faculty of Public Health

Subject: FIELD AND LABORATORY PRACTICE III.
Year, Semester: 4th year/2nd semester
Number of teaching hours:
Practical: 180

Requirements

This course aims to equip students with the knowledge and skills to make valuable contributions to environmental health, food and nutrition , child and youth health, radiation and chemical safety, as well as communicable diseases, health promotion and health administration and management.

The course focuses on: The health status of the population, risk factors and the analysis of them, risk assessment and prevention;
Effective public health rules: in the fields of enviromental health, radiation, chemical safety, food and nutrition;
Control of communicable diseases;
Laboratory methods of preventive medicine;
Health promotion activities to prevent diseases;
Health administration tasks;
Supervision of nursing, childhood care and pharmaceutics

Subject: THESIS II.
Year, Semester: 4th year/2nd semester
Number of teaching hours:
Practical: 60

CHAPTER 13

REQUIRED ELECTIVE COURSES

Department of Preventive Medicine, Faculty of Public Health

Subject: APPLIED EPIDEMIOLOGY
Year, Semester: 3rd year/1st semester
Number of teaching hours:
Practical: 30

1st week:
Practical: Evolution of epidemiological methods

2nd week:
Practical: Experimental and observational approaches

3rd week:
Practical: Defining study questions

4th week:
Practical: Model preparation

5th week:
Practical: Most frequently used study designs

6th week:
Practical: Statistical inference

7th week:
Practical: Statistics in epidemiology (95% confidence interval)

8th week:
Practical: Statistics in epidemiology (t-test, chi-square test, ANOVA)

9th week:
Practical: Statistics in epidemiology (risk/odds ratio, Mantel-Haenszel odds ratio)

10th week:
Practical: Statistics in epidemiology (linear, logistic and Cox regression)

11th week:
Practical: Statistics in epidemiology (standardization)

12th week:
Practical: Evaluating validity (confounding factors)

13th week:
Practical: Evaluating validity (selection bias)

14th week:
Practical: Evaluating validity (measurment bias)

15th week:
Practical: Answering study question and practical conclusions

Requirements

Evaluation of presented project work has to reach at least the satisfactory (2) level.
Examination:
Term mark (assessment of work, 5-grade)

Subject: BASICS OF RESEARCH METHODOLOGY
Year, Semester: 2nd year/1st semester
Number of teaching hours:
Lecture: 15
Practical: 15

1st week:
Lecture: The principles of scientific inquiry. Validity, reliability, precision of research

2nd week:
Lecture: Ethics of science

3rd week:
Lecture: Types of scientific research

4th week:
Lecture: Methods of quantitative research I

5th week:
Lecture: Methods of quantitative research II

6th week:
Lecture: Methods of qualitative research

7th week:
Lecture: Orientation in the scientific literature I

8th week:
Lecture: Orientation in the scientific literature II

9th week:
Lecture: Data sources

10th week:
Lecture: Measures of occurrence and association

11th week:
Lecture: Designing a scientific inquiry (study design)

12th week:
Lecture: Interpreting and publishing results

13th week:
Lecture: Rules of scientific publication

14th week:
Lecture: Presenting results

15th week:
Lecture: Requirements for diploma thesis

Requirements

Prerequisite: Basics of Informatics
Attendance at lectures is highly recommended, since the topics in examination cover the lectured topics. E-learning course completes the course material.
Examination: written

Subject: CLINICAL AUDIT
Year, Semester: 2nd year/2nd semester
Number of teaching hours:
Lecture: 8
Seminar: 6

1st week:
Lecture: Importance of clinical audit

2nd week:
Lecture: Steps of clinical audit

3rd week:
Lecture: Quality indicators

4th week:
Seminar: Planning of clinical audit projects by teams

5th week:
Seminar: Presentation and discussion of clinical audit projects by teams 1.

6th week:
Seminar: Presentation and discussion of clinical audit projects by teams 2.

Requirements

Regular attending for the course
Presentation of the clinical audit project
Examination:
Written form

Subject: ENVIRONMENTAL PROTECTION
Year, Semester: 2nd year/1st semester
Number of teaching hours:
Lecture: 15

1st week:
Lecture: Human impacts on the Biosphere. Examination of global environmental problems.

2nd week:
Lecture: The main International Conferences on the Protection of the Environment from Stockholm to present days. Their results and decisions. Scope and definition of sustainable development. Structure and contents of Agenda 21.

3rd week:
Lecture: Composition and structure of the Earth's Atmosphere. Air pollution. Main pollutants and sources. Sulphurous- and photochemical smog. Different methods of prevention of air pollution.

4th week:
Lecture: Temperature changes. External forcings (greenhouse gases; aerosols and soot; solar variation). Climate models and effects of recent climate change. Responses to global warming (mitigation, adaptation, UNFCCC).

5th week:
Lecture: Emissions of chemicals leading to acidification. Acid deposition. Adverse effects of acid precipitation. Affected areas. Prevention methods.

6th week:
Lecture: Identification of ozone. The history and importance of the Ozone Layer. Ozone cycle overview. The ozone hole and its causes. Consequences of ozone layer depletion.

7th week:
Lecture: Renewable energy technologies: wind power; hydropower; solar energy; biomass; geothermal energy. Passive, Active and Autonomous houses.

8th week:
Lecture: History of agriculture (ancient origins; middle ages; modern era - Green Revolution). Labelling of fertilizers. Types of fertilizer. Comparison of organic and inorganic fertilizers. Environmental effects of fertilizer use.

9th week:
Lecture: Environmental impacts of intensive farming. Definition of pesticide. Classification. Uses and regulations of pesticides. Accidents, environmental- and health effects. Biological pesticides.

10th week:
Lecture: Waste types (state, source, environmental threats). Composition of waste. The major problems caused by waste production. Waste management (prevention and waste minimisation; reuse and recycling; methods of disposal). EU Waste Management Policy.

11th week:
Lecture: Radioactive substances in the environment. Natural and artificial radiation sources. Nuclear power. Nuclear and radiation accidents - Chernobyl disaster. The biological effects of radioactive contamination.

12th week:
Lecture: Water pollution categories. Principal sources of water pollution. Adverse effects. Cultural eutrophication. Measurement and control of water pollution.

13th week:
Lecture: Water quality indicators: physical, chemical and biological parameters. Biological water classification (trophity, halobity, saprobity, toxicity). Evaluation of wastewater toxicity by test organisms.

14th week:
Lecture: Concept of sound. Sound pressure level, frequency, and propagation. The acoustic environment. Heath effects of noise. Noise control.

15th week:
Lecture: Bioremediation. In-situ and ex-situ bioremediation. Various phytoremediation processes: phytoextraction, phytostabilization, phytotransformation, phytostimulation, phytovolatilization, rhizofiltration.

Requirements

Concerning attendance, the rules written in the Regulations Governing Admission, Education and Examinations of the University are valid.

Examination:
At the end of the semester students are required to take a Final Exam. The exam includes 20 multiple choice test questions and 5 short questions (25 x 2 points). The control tests, including the topics of the lectures, will be given during the semester.

Tests will be assessed as follows:

Percentage (%)	Mark
0-50	fail (1)
51- 59	pass (2)
60-69	satisfactory (3)
70- 79	good (4)
80-100	excellent (5)

The maximum score is 100% and the examination takes 50 minutes.
Compulsory and recommended literature: All the topics of lectures.

Subject: HEALTH IMPACT ASSESSMENT
Year, Semester: 2nd year/2nd semester
Number of teaching hours:
Lecture: 9
Practical: 6

1st week:
Lecture: Introduction into impact assessments

2nd week:
Lecture: Regulatory, environmental and social impact assessment

3rd week:
Lecture: History of health impact assessment (HIA)

4th week:
Lecture: International organizations, regulatory background of HIA (WHO, EU, World Bank)

5th week:
Lecture: Health impact assessment activities in countries

6th week:
Lecture: History and legal background of HIA in Hungary

7th week:
Lecture: General characteristics and types of HIA (rapid, intermediate, comprehensive)

8th week:
Lecture: Methodology of HIA (process, phases)

9th week:
Practical: Screening

10th week:
Practical: Data sources

11th week:
Practical: Quantitative risk assessment I.

12th week:
Practical: Quantitative risk assessment II.

13th week:
Lecture: Use of health impact assessment results in decision making

14th week:
Seminar: HIA case studies I. (seminar)

15th week:
Seminar: HIA case studies II. (seminar)

Requirements

Maximum two absences from seminars are allowed.
Examination:
The subject ends with a written exam assessing knowledge taught on lectures and seminars. To pass, students are required to give correct answers to at least 50% of the 10 multiple choice and 10 short open questions.

Subject: INTERNET IN MEDICINE
Year, Semester: 2nd year/1st semester
Number of teaching hours:
Lecture: 20

1st week:
Lecture: What does web 2.0 mean?Web 2.0 in medicine: Introduction

2nd week:
Lecture: The medical blogosphereFrom the first

comment to blog carnivals: Step by step

3rd week:
Lecture: Being up-to-date with RSSMicroblogging in medicine: Twitter and Friendfeed

4th week:
Lecture: Everything you have to know about WikipediaMedical wikis

5th week:
Lecture: Medical communities: onlineE-Patients on the web

6th week:
Lecture: Second Life: Virtual medicine I.Second Life: Virtual medicine II.

7th week:
Lecture: Medical practices on the webEducation online: medical resources

8th week:
Lecture: Podcasts and medical videosA new way of collaboration: Google Docs

9th week:
Lecture: Medical search enginesThe Google phenomenon

10th week:
Lecture: The dangers of web 2.0Future: is there a web 3.0?

Requirements

Two questionnaires must be filled in.

Subject: INTRODUCTION TO THE GENERAL LABORATORY PRACTICE
Year, Semester: 3rd year/1st semester
Number of teaching hours:
Practical: 15

1st week:
Lecture: Safety precautions in the laboratory

2nd week:
Seminar: Glassware used in the laboratory

3rd week:
Seminar: Cleaning glassware

4th week:
Seminar: Equipments used in the cell culture

5th week:
Seminar: Volumetric flasks used in the laboratory

6th week:
Seminar: Pipettes and pipettors used in the laboratory

7th week:
Seminar: Types of balances used in the laboratory

8th week:
Practical: Calibration of pipettors

9th week:
Seminar: Measurement of pH

10th week:
Practical: Calibration of pH meters

11th week:
Seminar: Buffers used in the laboratory

12th week:
Seminar: Types of solutions used in the laboratory

13th week:
Seminar: Types of centrifuges used in the laboratory

14th week:
Seminar: Spectrophotometric measurements

15th week:
Practical: Spectrophotometric determination of protein concentration

Requirements

Attendance of the seminars and laboratory practices is obligatory. The module coordinator can refuse to sign the lecture book if a student is absent more than twice from seminars and practices in the semester even if he/she has an acceptable excuse.
Examination:
At the end of the course students are required to take a written exam consisting of multiple choice test questions. The test covers the topics of the seminars and practices. If the test is graded unsatisfactory students should repeat the exam.

Subject: MATHEMATICAL BASICS OF BIOSTATISTICS
Year, Semester: 1st year/1st semester
Number of teaching hours:
Lecture: 15
Practical: 45

1st week:
Lecture: Mathematical notation, formulas, operations
Seminar: Mathematical notation, formulas, operations

2nd week:
Lecture: Equations, inequalities
Seminar: Equations, inequalities

3rd week:
Lecture: The concept of sets, set operations
Seminar: The concept of sets, set operations

4th week:
Lecture: Combinatorics
Seminar: Combinatorics

5th week:
Lecture: Relations, functions
Seminar: Relations, functions

6th week:
Lecture: Number sequences and series
Seminar: Number sequences and series

7th week:
Lecture: The concept of limit
Seminar: The concept of limit

8th week:
Lecture: Calculus
Seminar: Calculus

9th week:
Lecture: Mathematical investigation of functions
Seminar: Mathematical investigation of functions

10th week:
Lecture: Basic concepts of probability
Seminar: Basic concepts of probability

11th week:
Lecture: Classical probability
Seminar: Classical probability

12th week:
Lecture: The mathematical concept of probability
Seminar: The mathematical concept of probability

13th week:
Lecture: Total probability theorem, Bayes' theorem
Seminar: Total probability theorem, Bayes' theorem

14th week:
Lecture: Random variables, expected value, standard deviation
Seminar: Random variables, expected value, standard deviation

15th week:
Lecture: Probability distributions
Seminar: Probability distributions

Requirements

Participation in seminars and practices is obligatory. In the case of more than two absences signature is refused. During the course a practical mark will be given to the students on the base of classroom tasks, homeworks, and tests.

Subject: MODERN MORPHOLOGICAL METHODS AND POSSIBLE APPLICATONS
Year, Semester: 2nd year/1st semester
Number of teaching hours:
Lecture: 22
Practical: 8

1st week:
Lecture: Introduction into molecular morphological methods The history of microscopy. The structure of microscopes.

2nd week:
Lecture: Fluorescent dyes in morphological techniques. Fluorescent and confocal microscopes, advantage of confocal microscopes. Confocal microscope. Practice for small group.

3rd week:
Lecture: The history of cytogenetics and in situ hybridization. Basics and practical aspects of in situ hybridization. Generation of FISH PROBES. FISH on tissue sections and on cell preparations.

4th week:
Lecture: Application of FISH. Detection of translocation of chromosome segments using whole chromosome painting probes. Detection of gene amplification in interphase tumor cells with locus specific DNA probes different fluorochromes for chromosome analysis. Clinical application of FISH.

5th week:
Lecture: FISH in the research laboratory. Practice, protocol demonstration for small groups.

6th week:
Lecture: Methods for the search of genome alterations. The fundamentals of comparative genomic hybridization. Array comparative genomic hybridization. The use of array CGH in the diagnosis of cancer. DNA chips. Detection of genetic alterations in different diseases.

7th week:
Lecture: Epigenetic alteratioons and diseases.

8th week:
Lecture: The underlying principles of conventional immmunohistochemical methods. Immunohistochemical reactions on paraffin embedded and on frozen tissue sections, multiple labeling (fluorescent and enzymatic). Simultaneous detection of genetic alteration and protein expression (combination of FISH and immunochystochemical methods, demonstration).

9th week:
Lecture: Principle of laser microdissection. The structure of the laser microdissection module. Sample preparation, mounting histological sections.

10th week:
Lecture: Laser microdissection. Practice for small groups.

11th week:
Lecture: Polymerase chain reaction. Basic priciple and use in research and diagnosis.

12th week:
Lecture: PCR instrument. Practice for small groups.

13th week:
Lecture: Basic principle of microgel electrophoretic technique for the detection of DNA strand breaks and repair. Fluorescence microscopic demonstration of the digital image analysis software for the evaluation of comet

assay images. **14th week:** Lecture: Application of comet assay. Demonstration of comet assay. Practice for small groups.	**15th week:** Lecture: Summary and consultation. Pre-exam test.

Requirements

Molecular biology and biomedical research have recently experienced a revolutionary change with the development of new methods. The aim of the course is to introduce students into these new technical approaches that are used at the field of environmental health and molecular medicine and research. During the lectures, we will discuss the basics of the methods in details and highlight the possible applications at different fields. The course will help the students to join the scientific work at the University and understand the principal of the modern molecular techniques (e.g. microscopy, polymerase chain reaction, comet assay and fluorescence in situ hybridization).

Prerequisite:
Genetics and cell biology

Requirements:
Attendance on lectures and seminars are recommended since the topics in examination will cover the topic of lectures. The signature of the lecture book may be refused for the semester int he cases of absences from more than two practices or lectures. Student who do not attend on lectures and seminars are not allowed to write th epre-exam test. Depending ont he result of the test the final mark will be offered.

Examination:

At the end of the semester students will be examined (end-semester-exam: ESE). The form of examination is a written form. Evaluation of the written test is assessed on a fivegrade scale.

CHAPTER 14

LIST OF TEXTBOOKS

BMC

Introduction to Biophysics I.:

Serway/Vuille: College Physics.
10th edition. Cengage Learning, 2014. ISBN: 978-1285737027.
Gáspár R.: Physics for BMC students.
University of Debrecen, .

Introduction to Medical Chemistry I.:

McMurry, J., Fay, R.C.: Chemistry.
7th edition. Pearson Education, 2015. ISBN: 978-0321943170.

Introduction to Medical Chemistry II.:

McMurry, J., Fay, R.C.: Chemistry.
7th edition. Pearson Education, 2015. ISBN: 978-0321943170.
F., Erdődi, Cs., Csortos: Organic Chemistry for Premedical Students.
University of Debrecen, 2011.

Introduction to Biology I.:

Sadava, Hillis, Heller, Berenbaum: Life: The Science of Biology.
10th edition. Sinauer Macmillan, 2013. ISBN: 978-1-4641-4124-9.

Introduction to Biophysics II.:

Serway/Vuille: College Physics.
10th edition. Cengage Learning, 2014. ISBN: 978-1285737027.
Gáspár R.: Physics for BMC students.
University of Debrecen, .

Introduction to Biology II.:

Sadava, Hillis, Heller, Berenbaum: Life: The Science of Biology.
10th edition. Sinauer Macmillan, 2013. ISBN: 978-1-4641-4124-9.

English for BMC students:

Soars, John and Liz: Headway - Pre-Intermediate Students' Book and Workbook.
The 3rd edition. Oxford, .

SBMC

Introduction to Biophysics:

Serway/Vuille: College Physics.
10th edition. Cengage Learning, 2014. ISBN: 978-1285737027.

Introduction to Medical Chemistry :

McMurry, J., Fay, R.C.: Chemistry.
7th edition. Pearson Education, 2015. ISBN: 978-0321943170.
F., Erdődi, Cs., Csortos: Organic Chemistry for Premedical Students.
University of Debrecen, 2011.

Introduction to Biology:

Sadava, Hillis, Heller, Berenbaum: Life: The Science of Biology.
10th edition. Sinauer Macmillan, 2013. ISBN: 978-1-4641-4124-9.

1st year

Chemistry:

McMurry, J., Fay, R.C.: Chemistry.
7th edition. Pearson Education, 2015. ISBN: 978-0321943170.
Gergely, P.: Organic and Bioorganic Chemistry for Medical Students.
3rd edition. Medical and Health Science Center, University of Debrecen, 2008.
F., Erdődi, Cs., Csortos: Organic Chemistry for Premedical Students.
University of Debrecen, 2011.

Basics of Informatics:

: Handbooks of MS Office applications, Internet sources.
.

Psychology:

Segerstrale, U., Peter Molnár: Non-verbal communication: where nature meets culture. .
Lawrence Erlbaum Associate, Mahwah, New Jersey, 1997.
Hergenhahn, B. R.: An Introduction to the History of Psychology.

7th edition. Cengage Learning, 2013. ISBN: 978-1133958093.
Nolen-Hoeksema, S., Fredrickson, B., Loftus, G., Wagenaar, W.: Atkinson and Hilgard's Introduction to Psychology.
15th edition. Wadsworth Pub. Co, 2009.

Communication skills:

Pilling János: Medical Communication.
Medicina Könyvkiadó, 2011. ISBN: 9789632263359.
Csabai, M. and Molnar, P.: Health, Illness and Care. A Textbook of Medical Psychology..
Springer, Budapest, 2000.
Segerstrale, U., Peter Molnár: Non-verbal communication: where nature meets culture. .
Lawrence Erlbaum Associate, Mahwah, New Jersey, 1997.

Bioethics:

Glannon, W.: Biomedical Ethics.
1st. Oxford University Press, 2004. ISBN: 0-1951-4431-7.
Gigerenzer, G. : Reckoning With Risk.
1st edition. Penguin Books, 2003. ISBN: 0-140-29786-3.
N. Levy: Neuroethics.
Cambridge University Press, 2007.

First aid:

Kindersley D.: First Aid Manual .
10th edition. Dorling Kindersley Publishers Ltd, 2011. ISBN: 9781-4053-6214-6.
St. John Ambulance, St. Andrew's Ambulance Association, British Red Cross Society: First Aid Manual: The Step by Step Guide for Everyone.
9th edition. Penguin, 2009. ISBN: 1-405-33537-8.
Van de Velde S, et al: European first aid guidelines.
Resuscitation, 72:240-51.2007.
József Betlehem: First Things to Be Done in Emergencies – Providing First Aid for Health Professionals.
Medicina Könyvkiadó Zrt. , 2012.

Introduction to Nursing and Clinical Medicine:

Perry, A. G., Potter, P. A: Fundamentals of Nursing.
7th. Mosby Inc, 2008. ISBN: 9780-3230-4828-6.
Bickley, L. S.: Bates' Guide to Physical Examination and History Taking.
11th edition. Lippincott Williams & Wilkins, 2012. ISBN: 1-6091-3762-0.
Perry, A. G., Potter, P. A: Clinical Nursing Skills and Techniques.
7the. Mosby Inc, 2009. ISBN: 0-3230-5289-4.
Jarvis, C.: Physical Examination and Health Assessment.
6th. Saunders, 2011. ISBN: 1-4377-0151-5.
Jarvis, C.: Student Laboratory Manual for Physical Examination & Health Assessment.
6th edition. Saunders, 2011. ISBN: 1-4377-1445-5.

Sociology:

Weitz, R.: The Sociology of Health, Illness, and Health Care: A Critical Approach.
6th. Wadsworth Publishing, 2012. ISBN: 1-1118-2879-2.
Denny, E., Earle, S.: Sociology for Nurses.
2nd edition. Polity Press, 2009. ISBN: 0-7456-4625-5.
: http://www.sociologyofhealth.net.
.

Ecology:

Begon M., Townsend C.R., Harper J. L.: Ecology: From Individuals to Ecosystems.
4th Edition. Blackwell Publishing Ltd., 2006.
Chapman J. L., Reiss M. J.: Ecology: principles and applications.
Cambridge University Press, .
Townsend C.R., Begon M., Harper J. L.: Essentials of Ecology.
3rd edition. Blackwell Publishing Ltd., Oxford, 2008.

Introduction to public health:

L.J. Donaldson, R. J. Donaldson: Essential Public Health Medicine.
Kluwer Academic Publishers, 2003.
J.M. Last : A Dictionary of Epidemiology.
Oxford University Press, 2001.

Cell Biology:

Alberts B., Bray, D., Hopkin, K., Johnson, A., Lewis, J., Raff, M., Roberts, K., Walter, P.: Essential Cell Biology.
4th edition. Garland Science, 2014. ISBN: 978-0-8153-4455-1.

Basic anatomy:

Moore, K. L., Agur, A. M. R.: Essential Clinical Anatomy.
5th edition. Lippincott Williams & Wilkins, 2014. ISBN: 1-4511-8749-1.
Sadler, T. W. : Langman's Medical Embriology.
12th edition. Lippincott Williams &Wilkins, 2012. ISBN: 978-1-4511-4461-1.
Sobotta: Atlas of Human Anatomy I.-II..
14th edition. Urban & Schwarzenberg, . ISBN: 978-0-443-10349-0.
A. Birinyi (Ed): Anatomy.
2nd. University of Debrecen, 2008.
L.P. Gartner: Concise Histology.
Saunders, Elsevier, 2011. ISBN: 978-0-7020-3114-4.

Biostatistics:

Kirkwood B., Sterne JAC.: Essential medical statistics.
Blackwell Science, Oxford, 2006.

Health (& Library) informatics I.:

Parker, J.C., Thorson, E.: Health Communication in the New Media Landscape.
1st edition. Springer Publishing Company, 2008. ISBN: 978-0-826-10122-8.
Greenhalgh T .: How to Read a Paper: The Basic of Evidence Based Medicine.
3rd edition. Wiley-Blackwell, 2006. ISBN: 1-405-13976-5.

Genetics and molecular biology:

Hartl D. L.: Essential Genetics: A Genomics Perspective.
6th edition. Jones & Bartlett Publishers, 2014. ISBN: 978-1-4496-8688-8.

Basics of pedagogy:

Glanz, Rimer, Lewis eds.: Health behavior and health education.
Jossey-Bass, A Wiley Imprint, San Francisco, 2002.
Jossey-Bass: Dictionary of public health promotion and education.
2004. ISBN: 978-0-7879-7535-7.

Health sociology:

Barry, A-M. – Yuill, Ch. : Understanding the Sociology of Health. .
SAGE. , 2012. ISBN: (Chapters 1., 2.).
Helman, C. G. : Culture, Health and Illness. .
CRC Press.(Chapter 1.), .
K. White: An Introduction to the Sociology of Health and Illness.
2nd edition. SAGE Publications Ltd, 2009. ISBN: 978-1412918794.
W.C. Cockerham: The Blackwell Companion to Medical Sociology.
Wiley-Blackwell, 2001.

Medical latin:

Répás, L.: Basics of Medical Terminology.
Répás László, 2012.

2nd year

Introduction to law I.:

David Kelly, Gary Slapper: Law: The Basics.
1th edition.2011.

Physiology:

Koeppen, B. M., Stanton, B. A.: Berne & Levy Physiology.
6th Updated Edition. Mosby, 2010. ISBN: 0-3230-7362-X.
Hall, J. E.: Guyton and Hall Textbook of Medical Physiology.
13rd edition. Saunders, 2015. ISBN: 1-4557-7005-1.
Constanzo, L.S.: Physiology with Student Consult Online Access.
5th edition. Saunders, 2013. ISBN: 1-4557-0847-X.

Public health medicine I.:

McPhee, Stephen J.; Papadakis, Maxine A.; Tierney, Lawrence M.: Current Medical Diagnosis and Treatment.
2008.

Basic epidemiology:

Rothman, K.J. : Epidemiology: An Introduction.
2nd edition. Oxford University Press, 2012. ISBN: 0-1997-5455-1.
Woodward M.: Epidemiology: Study design and data analysis.
Chapman & Hall/CRC, Boca Raton, Florida, USA, 1999.
Hennekens CH., Buring JE.: Epidemiology in Medicine.
Little, Brown and Company, Boston, Toronto, .

Basic microbiology:

Levinson, W.: Review of Medical Microbiology and Immunology.
10th edition. McGraw-Hill Medical, 2008. ISBN: 0-071-49620-3.

Health (& Library) informatics II.:

Parker, J.C., Thorson, E.: Health Communication in the New Media Landscape.
1st edition. Springer Publishing Company, 2008. ISBN: 978-0-826-10122-8.
Greenhalgh T .: How to Read a Paper: The Basic of Evidence Based Medicine.
3rd edition. Wiley-Blackwell, 2006. ISBN: 1-405-13976-5.

Basic Biochemistry:

Ferrier, D.R.: Biochemistry.
6th edition. Lippincott Williams and Wilkins, 2013. ISBN: 1-4511-7562-0.
Devlin, T. M.: Textbook of Biochemistry with Clinical Correlations.
7th edition. John Wiley & Sons, 2010. ISBN: 0-470-28173-1.
Berg J.M., Tymoczko, J. L., Stryer, L.: Biochemistry.
7th edition. W. H. Freeman, 2010. ISBN: 1-4292-2936-5.

Professional Hungarian I.:

Győrffy Erzsébet, Ph.D.: Hogy s mint? I. .
2013.

Basics of research methodology:

Trochim, WMK : Research methods knowledge base.
URL:
http://www.socialresearchmethods.net/kb/contents.php
WHO Regional Office for the Western Pacific: Health research methodology. A Guide for Training in Research Methods.
URL:
http://www.wpro.who.int/publications/docs/Health_research_edited.pdf
Greenhalgh, T.: How to read a paper.
URL: http://www.bmj.com/about-bmj/resources-readers/publications/how-read-paper

Modern morphological methods and possible applicatons:

:
http://www.pcrlinks.com/generalities/introduction.htm.
.
Pinkel D., Albertson DG.: Comparative genomic hybridization. Annual Review of Genomics and Human Genetics (6: 331-54.).
2005.
Faust F, Kassie F, Knasmüller S, Boedecker RH, Mann M. and Mersch-Sundermann V.: The use of the alkaline comet assay with lymphocytes in human biomonitoring studies Mutat Res. (566 (3): 209-29.).
2004.
Player A, Barrett JC, Kawasaki ES.: Laser capture microdissection, microarrays and the precise definition of a cancer cell. Expert Rev Mol Diagn. (4 (6): 831-40.).
2004.
Feuk L., et al.: Structural variation in the human genome. Nat Rev Genet. (7 (2): 85-97.)
http://microscopy.unc.edu/Resources/Leica-lmd/Application_Letter_Microdissection.pdf.
2006.

Environmental protection:

Carson R.: Silent Spring.
First Mariner Books edition. New York, 2002.
Lynas M.: Six Degrees: Our Future on a Hotter Planet.
Fourth Estate, 2007.
Peirce J., Weiner R.F., Vesilind P.A.: Environmental Pollution and Control.
Fourth Edition. Butterworth-Heinemann, 1998.
Whitacre D.M. (ed.): Reviews of Environmental Contamination and Toxicology. Vol. 223..
Springer, New York, 2013.
Mihelcic, J.; Zimmerman, J.B.: Environmental Engineering: Fundamentals, Sustainability, Design.
2nd edition. John Wiley and Sons, New York, 2014.

Internet in medicine:

: http://www.med20course.com.
.

Introduction to law II.:

David Kelly, Gary Slapper: Law: The Basics.
1th edition.2011.

Environmental health:

: Power points slides of the lectures and seminars available at: www.nepegeszseg.hu/pdf.
.
Dade W. Moeller: Environmental Health.
4th edition. Harvard University Press, USA, 2011.

Public health medicine II.:

McPhee St. J., Papadakis, M.: Current Medical Diagnosis and Treatment.
55th edition. McGraw-Hill Incorporated, 2015.
ISBN: 0-0718-4509-7.

Epidemiology of communicable and non-communicable diseases I.:

Heyman DL (ed).: Control of communicable diseases manual.
18th ed.. American Public Health Association, Washington, DC, 2004.
Giesecke J.: Modern infectious disease epidemiology.
2nd edition. London: Arnold, 2002.
Gregg MB. (ed.): Field Epidemiology.
2nd edition. Oxford University Press, Oxford, 2002.
Webber R.: Communicable disease epidemiology and control. A global perspective.
2nd edition. CABI Publishing, Wallingford, 2005.

Professional Hungarian II.:

Győrffy Erzsébet, Ph.D.: Hogy s mint? I. .
2013.

Health impact assessment:

: Health Impact Assessment: a practical guidance.
IPHI (Institute of Public Health in Ireland), Dublin, 2003.

Clinical audit:

Baker, R.H., Hearnshaw, H., Robertson, N.: Implementing Change with Clinical Audit.
Wiley, 1999.

Biochemistry:

Devlin, T. M.: Textbook of Biochemistry with Clinical Correlations.
7th edition. John Wiley & Sons, 2010. ISBN: 0-470-28173-1.
Berg J.M., Tymoczko J.L., Stryer L.: Biochemistry.
5th edition. New York: W H Freeman, 2002.
ISBN: 0-7167-3051-0.
: http://bmbi.med.unideb.hu.
.
Harvey, Ferrier: Biochemistry.
6th edition. Lippincott Williams and Wilkins, 2011.

3rd year

Pharmacology:

Katzung, B. G.: Basic and Clinical Pharmacology.
13th edition. McGraw-Hill Education, 2014.
ISBN: 0-0718-2505-3.
Trevor, A. J., Katzung B. G., Masters S. B. : Katzung & Trevor's Pharmacology: Examination & Board Review.
11th edition. McGraw-Hill Education, 2015.
ISBN: 0-0718-2635-1.

Basics in health promotion and policy:

Stahl, T., Wismar, M., Ollila, E., Lahtinen, E., Leppo, K.: Health in all policies. Prospects and potentials (Part 1, pages 3-38).
Ministry of Social Affairs and Health, Helsinki, 2006.
: The Tallinn Charter: Health Systems for Health and Wealth (5 pages).
WHO, 2008.
: The World Health Report . Primary health care, now more than ever (Introduction and Overview, 14 pages).
WHO, 2008.
Naidoo J., Wills J.: Health promotion. Foundations for practice.
Bailliere Tindall, 2000.
Ewles, L., Simnett, I.: Promoting health: a practical guide.
Bailliere Tindall, 2003.
Birkland T.: An introduction to the policy process.
M.E.Sharpe, 2005.
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CHAPTER 15

TITLES OF THESES AND TDK

Department of Preventive Medicine

Thesis:
1. Investigation of workplace hazards
2. Occupational diseases in Hungary
3. Genotoxic exposures in the work- and ambient environment
4. Health impact assessment of policies, programmes and projects

Tutor: Balázs Ádám M.D., M.Sc., Ph.D.

Thesis:
5. Evaluation of chronic care for hypertension in general medical practice
6. Evaluation of chronic care for diabetes mellitus in general medical practice
7. Evaluation of chronic care for adult overweighted in general medical practice
8. Evaluation of chronic care for adult smokers in general medical practice

Tutor: János Sándor M.D., Ph.D.

Thesis and TDK:
9. Genomic determinants of cardiovascular diseases.

Tutor: Szilvia Fiatal M.D., Ph.D.

Thesis and TDK:
10. Health-related behaviours among adolescents Mental health of students

Tutor: Éva Bíró M.D., Ph.D.

Thesis
11. Pesticide use in developed and developing countries

Tutor: László Pál MSc., Ph.D.

Thesis:
12. Mortality due to environmental risk factors in European countries

Tutor: Sándor Szűcs MSc., Ph.D.

Thesis and TDK:
13. Assessment of air quality status in developing and developed countries

Tutor: Ervin Árnyas MSc., Ph.D.

Thesis:
14. Genetic epidemiology of obesity (literature review)

TDK:
15. The role of the FTO gene in the development of metabolic syndrome

Tutor: Károly Nagy MSc., Ph.D.

Department of Behavioural Sciences

16. Medicalization and its social-cultural context
17. Changing attitudes towards human phenomena in Western medicine
18. Prolongation of life as a modern Western project
19. Contemporary problems of Psy-complex
20. Health and disease in cultural context

Tutor: Attila Bánfalvi MSc., Ph.D.

Thesis:
21. End of Life Decisions

Tutor: Sándor Kőmüves MSc., Ph.D.

Department of Family and Occupational Health

Thesis:
22. Advantages of computer-aided diagnosis in primary care
23. Work related stress and burnout amongst healthcare workers
24. Health impairment related to occupational hazards

Tutor: László Róbert Kolozsvári M.D., Ph.D.

Thesis:
25. Psychosocial etiological factors in the workplace
26. Stress, as a risk factor in the working environment
27. Effects of burnout on work efficiency

Tutor: Tímea Ungvári MSc.

Thesis:
28. Cardiovascular risk factors and risk assessment
29. Continuing care of patients with high cardiovascular risk in primary care

Tutor: Zoltán Jancsó M.D., Ph.D.

Thesis:
30. The family physician as gatekeeper
31. Physical, mental and social aspects of aging
Tutor: Anna Nánási M.D.