

BULLETIN

UNIVERSITY OF DEBRECEN

ACADEMIC YEAR 2019-2020

FACULTY OF PUBLIC HEALTH

BSc in Public Health

EDUCATIONAL OFFICE FACULTY OF PUBLIC HEALTH

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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 centre 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 Centre 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 University 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 bests 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 programs as well as the establishment of a doctoral program 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 center in Hungary. According to the Bologna process the Faculty has established and from 2006 and 2007 launched its bachelor and master training programs in the field of public health and health sciences. With its 3 bachelor, 5 master training programs and 6 postgraduate courses, the Faculty of Public Health offers a rich variety of learning experience at present. There are two doctoral programs 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 AND MSC PROGRAMMES AT THE FACULTY OF PUBLIC HEALTH

Bachelor program in Physiotherapy launched by the Faculty of Public Health of the University of Debrecen is built on a 17-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 fulfil an international demand in health care (involving physiotherapy) training.

The another bachelor program launched by the Faculty of Public Health is the BSc in Public Health.

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

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CHAPTER 3

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CHAPTER 4

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CHAPTER 5

UNIVERSITY CALENDAR

UNIVERSITY CALENDAR FOR THE BSC IN PUBLIC HEALTH PROGRAM ACADEMIC YEAR 2019/2020

1ST SEMESTER

Year 2019/2020	Registration week	Course	Examination Period
BSc in Public Health BSc in Physiotherapy MSc in Public Health	September 2-6., 2019. (1 week)	September 9 – December 13., 2019 (14 weeks)	December 16., 2019 – January 31., 2020 (7 weeks)

2ND SEMESTER

Year 2019/2020	Registration week	Course	Examination Period
BSc in Public Health BSc in Physiotherapy MSc in Public Health	February 3-7., 2020 (1 week)	February 10 –May 15., 2020. (14 weeks)	May 18 – July 03.,2020 (7 weeks)

Orientation meeting (planned): September 6., 2019. 10.00 am

CHAPTER 6

ACADEMIC PROGRAM 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).

CHAPTER 7

Compulsory courses for the 1. year

Sem	Subjects	Neptun code	L	S	P	Exam	Crd	Prerequisites of taking the subject
1	Bioethics	NK_PH_BIOE	14			ESE	2	None
1	Communication	NK_PH_COMM17			21	ESE	2	None
1	Ecology	NK_PH_ECO	28	14		ESE	4	None
1	First aid	NK_PH_FAID17	14		14	AW5	2	None
1	Health informatics I.	NK_PH_HINF1	10		18	AW5	2	None
1	General principles of Nursing and Clinical Medicine	NK_PH_NCM	14		14	AW5	2	None
1	Mathematical basics of biostatistics	NK_PH_MATBST		14	42	AW5	3	None
1	Medical latin	NK_PH_LAT17			28	AW5	2	None
1	Philosophy	NK_PH_PHIL	14			ESE	1	None
1	Basic Psychology	NK_PH_BPSY	28			ESE	2	None
1	Basic Sociology	NK_PH_BSOC	14			ESE	1	None
1	Basic of Pedagogy	NK_PH_PEDA2_	14			ESE	1	None
1	Health Antropology	NK_PH_HANT		15		ESE	2	None
1	Work safety and fire protection	NK_PH_WSFP		14		AW5	1	None
1	Elective subjects						3	
1	Physical education I.				28			

Compulsory courses for the 1. year

Sem	Subjects	Neptun code	L	S	P	Exam	Crd	Prerequisites of taking the subject
2	Anatomy	NK_PH_ANAT	42	28		ESE	6	Medical latin
2	Biostatistics	NK_PH_BIOST2	14		28	ESE	5	Mathematical basics of biostatistics
2	Biology, Cell Biology	NK_PH_CELLBI	28			ESE	2	None
2	Genetics and molecular biology	NK_PH_GEN1	14			ESE	2	None
2	Health informatics II.	NK_PH_HINF2	10		18	AW5	2	Health informatics I
2	Health psychology	NK_PH_HPSY17	16			ESE	1	Basic Psychology
2	Health sociology	NK_PH_HSOC4	28			ESE	3	Basic Sociology
2	History of public health	NK_PH_HIST	14			AW5	2	None
2	Hungarian Language I.	NK_PH_HUNG11			28	SIGN	0	.
2	Introduction to public health	NK_PH_INPH2	14			ESE	1	None
2	Basics of economy and management	NK_PH_BEM	28			ESE	2	None
2	Physiology I	NK_PH_PHYS4	28	14		ESE	5	General principles of nursing and clinical medicine
2	Hungarian language I.				28	Sign		
2	Physical education II				28	Sign		

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_BBIOCH17	14	14		ESE	3	Biology, Cell biology
1	Basic epidemiology	NK_PH_BEPI	14	14		ESE	5	Biostatistics
1	Microbiology I.	NK_PH_BMIC1	28	28		ESE	4	None
1	Immunology	NK_PH_IMM	28			ESE	3	Biology, Cell biology
1	Introduction to law I.	NK_PH_ILAW1	14	14		ESE	2	None
1	Hungarian language II.	NK_PH_HUNG22			28	Sign	0	
1	Public health medicine I.	NK_PH_MED1	28	28		ESE	6	Anatomy
1	Clinical propedeutics	NK_PH_CPROP	14		14	ESE	2	Anatomy, Physiology I.

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_ENVH	28	28		ESE	6	Ecology, Physiology I.
2	Epidemiology of communicable and non-communicable diseases I.	NK_PH_EPIC4	14	42		ESE	6	Basic Epidemiology
2	Introduction to law II.	NK_PH_LAW2	14	14		ESE	3	Introduction to law I.
2	Public health medicine II.	NK_PH_MED4	28	28		ESE	6	Public health medicine I.
2	Microbiology II.	NK_PH_BMIC2	28	28		ESE	4	Microbiology I.
2	Terrestrial environment protection	NK_PH_TERR	18			AW5	2	Ecology
2	Basics of Research Methodology.		28			ESE		Biostatistics

Compulsory courses for the 3. year

Sem	Subjects	Neptun code	L	S	P	Exam	Crd	Prerequisites of taking the subject
1	Health promotion and health policy	NK_PH_HPHP	14	28		ESE	4	Introduction to public health; Introduction to law II.
1	Epidemiology of communicable and non-communicable diseases II.	NK_PH_EPIC2	14	28		ESE	4	Epidemiology of communicable and non-communicable diseases I., Microbiology II.
1	Health care law I.	NK_PH_HLAW1	14		14	ESE	3	Introduction to law II.
1	Occupational health	NK_PH_OCC	28	20	8	ESE	6	Basic epidemiology, Environmental health
1	Pharmacology	NK_PH_PHARM	28			ESE	3	Biochemistry
1	Public health medicine III.	NK_PH_MED5	28		28	ESE	6	Public health medicine II.
1	Aquatic environmental protection	NK_PH_AQWA	18			AW5	2	Ecology

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_FLAB2			168	AW5	8	Field and laboratory practice I.
1	Health care law III.	NK_PH_HLAW3	14		14	ESE	3	Health care law II.
1	Health promotion	NK_PH_HPROM17	10		18	ESE	4	Health promotion and health policy
1	Nutritional health and food safety	NK_PH_NUTR1	14		28	ESE	5	Microbiology II.
1	Thesis I.	NK_PH_THESIS1				AW5	6	Field and laboratory practice I.
1	Health promotion in primary care	NK_PH_HPPC			14	AW5	1	Health promotion and health policy
1	Professional Hungarian II.	NK_PH_PHUN2			56	ESE	3	Professional Hungarian 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_FLAB3			168	AW5	8	Field and laboratory practice II.
2	Health care law IV.	NK_PH_HLAW4	14		14	ESE	3	Health care law III.
2	Thesis II.	NK_PH_THESIS2				AW5	14	Thesis I.
2	Applied epidemiology	NK_PH_APEPI	14		14	ESE	3	Basic epidemiology
2	Basics of quality assurance	NK_PH_BQASS6	14	14		ESE	2	None

CHAPTER 8 ACADEMIC PROGRAMME

Department of Emergency Medicine

Subject: **FIRST AID**

Year, Semester: 1st year/1st semester

Number of teaching hours: **28**

Lecture: **14**

Practical: **14**

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 maneuvers.

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:

Lecture: Burning, first aid in burning diseases, shock.

6th week:

Practical: AVPU, ABCDE approachment.

7th week:

Practical: Recognition of unconsciousness,

recovery position, airway management.

8th week:

Practical: Practicing the ventilation.

9th week:

Practical: Complex CPR training, usage of AED.

10th week:

Practical: Practical exam.

11th week:

Practical: Types of bleeding, bleeding control, hypovolaemic shock, Trendelenburg position.

12th week:

Practical: Distortions and extended soft-tissue injuries, bandage for fixation with special triangle, stifneck, dessault bandage, fixation of finger and hand fractures, usage of siplint.

13th week:

Practical: Basic trauma care.

14th week:

Practical: Consultation, written test.

Self Control Test

Requirements

Condition of signing the Lecture book: Attendance at practices is compulsory. The tutor may refuse to sign the Lecture book if the student is absent from the practicals more than twice in a semester. Missed practicals should be made up after consultation with the tutor. Facilities for a maximum of 2 make-up practicals are available at the Ambulance Center in Debrecen. The current knowledge of students will be tested twice in each semester driving a written test.

Department of Foreign Languages

Subject: **HUNGARIAN LANGUAGE I.**

Year, Semester: 1st year/2nd semester

Number of teaching hours: **28**

Practical: **28**

1st week:

Practical: 1. lecke (Greetings, the alphabet, numbers 0-20, colours, everyday expressions)

2nd week:

Practical: 2. lecke (Nationalities, languages, numbers 21-29)

3rd week:

Practical: 3. lecke, 4. lecke (Names of places, the days of the week, numbers 30-100, the time, hány óra van?, Test Your Knowledge 1)

4th week:

Practical: 5. lecke (adjectives and adverbs, verbs expressing activities 1, times of day, hány órákor?, numbers 1000-1000000000)

5th week:

Practical: 6. lecke (verbs expressing activities 2, everyday expressions, ordinal numbers)

6th week:

Practical: 7. lecke (Revision 1 Units 1-6)

7th week:

Practical: Midterm test

8th week:

Practical: 8. lecke (everyday objects, food and

drink, adverbs of frequency)

9th week:

Practical: 9. lecke (Food, drink, fruit, vegetables, the menu, ordering in a restaurant, shopping in the market, the uses of tessék)

10th week:

Practical: 10. lecke (the weather, the seasons and months, clothes)

11th week:

Practical: 11. lecke (Test Your Knowledge 2) , 12. lecke I. rész (body parts)

12th week:

Practical: 12. lecke II.rész (adjectives and descriptions, accessories) , 13. lecke (jobs, places, personal details and filling in a form, family relations)

13th week:

Practical: 14. lecke (Revision 2 Units 8-13)

14th week:

Practical: End term test

Requirements

Requirements of the course: Attending language classes is compulsory. Students should not be absent from more than 10 percent of the classes. If a student is late it is considered as an absence. If a student misses more than two occasions, the final signature may be refused and the student must repeat the course.

Absentees can make up the missed classes in the same week. Maximum one language class may be made up with another group. Students have to ask for the teacher's written permission (by e-mail) 24 hours in advance. Students can attend any class (make up or regular) only if they take their course book with them.

The teacher evaluates active participation in each class. Students are not supposed to share course books in the classes therefore if they fail to bring the course book to the class for the second time the attendance is refused.

Testing, evaluation

In each Hungarian language course, students must sit for 2 written language tests and an oral exam. A further minimum requirement is the knowledge of 200 words per semester divided into 10 word quizzes. There are five word quizzes before and another five after the midterm test. If students fail or miss any word quizzes they cannot start their written test and have to take a vocabulary exam that includes all 100 words before the midterm and end term tests. A word quiz can be postponed by a week and students can take it only with their own teacher. Students can get bonus points (5-5%) by taking two extra quizzes containing 20 sentences each before the midterm and end term tests. The sentences are taken from the units of the course book.

The oral exam consists of a role-play from a list of situations covered in the course book. If students fail the oral exam, they fail the whole course. The results of the written tests and the oral exam are combined and averaged.

Based on the final score the grades are given as follows.

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 of the written tests is below 60, the student can take a written remedial exam once covering the whole semester's material.

Course book: See the website of the Department of Foreign Languages: ilekt.med.unideb.hu.

Audio files to the course book, oral exam topics and vocabulary minimum lists are also available on the website.

Subject: **MEDICAL LATIN**

Year, Semester: 1st year/1st semester

Number of teaching hours: **28**

Practical: **28**

1. week

lecture:
seminar/practice: Class introduction and Chapter 1 Introduction to medical terminology

2. week

lecture:
seminar/practice: Chapter 2: Anatomical positions, planes and directions

3. week

lecture:
seminar/practice: Chapter 3: Parts of the body

4. week

lecture:
seminar/practice: Grammar 1: Basic elements of Latin grammar

5. week

lecture:
seminar/practice: Chapter 4: Greek roots

6. week

lecture:

seminar/practice: Chapter 5: Regions

7. week

lecture:
seminar/practice: Formation of adjectives

8. week

lecture:
seminar/practice: Revision, Mid-term Test

9. week

lecture:
seminar/practice: Chapter 6: Skeletal system I

10. week

lecture:
seminar/practice: Skeletal system II, Plural forms

11. week

lecture:
seminar/practice: Chapter 7: Joints

12. week

lecture:
seminar/practice: Complex adjectives
13. week
lecture:
seminar/practice: Chapter 8 Muscles
Latin and Greek prefixes related to

numerals and quantities; Latin numerals
14. week
lecture:
seminar/practice: Revision 2 – , End-term
Test

Requirements

By the end of the term students should:

know the vocabulary pertaining to 1) the anatomical positions, 2) planes and directions; 3) the body parts; 4) the bones and the skeleton; 5) the body regions; 6) the bone connections; 7) the muscular system;

understand basic grammatical terms like Singular, Plural, Nominative, Genitive, etc.;

be able to use Latin nouns in both Singular Nominative and Genitive as well as Plural forms

be able to use Latin adjectives in concord with the nouns in adjective phrases

be able to understand prefixes related to numerals and quantities

be able to form adjectives from Latin nouns;

be able to understand and actively use several Latin and Greek prefixes and suffixes relating to medical terminology.

Department of Internal Medicine

Subject: **GENERAL PRINCIPLES OF NURSING AND CLINICAL MEDICINE**

Year, Semester: 1st year/1st semester

Number of teaching hours: **28**

Lecture: **14**

Practical: **14**

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.

Requirements

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 Preventive Medicine, Faculty of Public Health

Subject: **ECOLOGY**

Year, Semester: 1st year/1st semester

Number of teaching hours: **42**

Lecture: **28**

Seminar: **14**

1st week:

Lecture: Introduction to the course

Seminar: Mountain Sickness

2nd week:

Lecture: Role of small habitat islands in human transformed landscapes – nature conservation, cultural and ecosystem services

Seminar: Global warming and its health impacts – „Six Degrees Could Change the World”

3rd week:

Lecture: Island biogeography

Seminar: The Large Hadron Collider.

4th week:

Lecture: Conservation and management of grassland ecosystems

Seminar: Thermoregulation, blood glucose homeostasis and osmoregulation.

5th week:

Lecture: First exam and consultation

Seminar: Relationships between species:
African trypanosomes.

6th week:

Lecture: Ecological succession

Seminar: Big Forest of Debrecen and Lesser
Mole Rat Reserve of Hajdúbagos.

7th week:

Lecture: Application of remote sensing in
ecology

Seminar: Orchid Habitat Restoration and
Preservation.

8th week:

Lecture: Ecosystem ecology, ecological
systems

Seminar: Coral reefs in danger

9th week:

Lecture: Ecosystem services and ecological
footprint

Seminar: Water ecosystems

10th week:

Lecture: Second exam and consultation

Seminar: Social life of ants.

11th week:

Lecture: Ecological impacts of invasive plant
and animal species in a changing world

Seminar: Genetically modified organisms.

12th week:

Lecture: Urbanisation, urban ecology

Seminar: Origin of the Earth's atmosphere

13th week:

Lecture: Third exam

Seminar: Industrially important bacteria

14th week: Possibility for repeating exams

Seminar: Bacteria as Multicellular
Organisms

Requirements

- for a signature

Participation at classes is compulsory. A student must attend the classes and may not miss more than three times during the semester. In case a student does so, the subject will not be signed and the student must repeat the course. In case of more than three absences, a medical certificate needs to be presented.

- an offered grade:

During the semester there are three midterm tests related to the lectures and a multiple choice test related to the seminars which is at the end of the semester.

The offered grade is the average of them.

The minimum requirement for the tests (and also for the exam) is 60%. The grade for the tests and the examination is given according to the following table:

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

- for a grade

The course ends in a written exam. If a student takes the exam, the calculation of the final grade is the average of the grade for the written exam and the grade for the seminar.

For the grades please refer the table above.

Literature

- Pásztor L., Botta-Dukát Z., Magyar G., Czárán T., Meszéna G. (2016) Theory-Based Ecology A Darwinian approach. Oxford University Press, pp. 301. ISBN: 978-01-995-7785-9

- Robert J. Whittaker, José María Fernández-Palacios (2007): Island Biogeography Ecology, evolution, and conservation Oxford University Press, USA ISBN 978-01-985-6612-0

Subject: **HEALTH INFORMATICS I.**

Year, Semester: 1st year/1st semester

Number of teaching hours: **28**

Lecture: **10**

Practical: **18**

1st week:

Lecture: Information and data management. The concepts of data and information. The basic algorithms of data management. The concept of coding, its different approaches, its advantages and disadvantages, code-refreshing. The fundamentals of database management, data models, the concept of database. The operators of database management. Handling data with database programs (MS Access).

2nd week:

Lecture: The fundamentals of health classification. The widely used health classification systems: BNO, WHO, SNOMED.

3rd week:

Lecture: The networks of informatics, long distance data management. Health and public health, online and offline data bases. Data and information retrieval.

4th week:

Lecture: Health and public health data administration. Health and public health data and information systems data flow and data exchange Health and public health data bases.

5th week:

Lecture: Library information systems: MEDLINE, PUBMED, CD-ROM-ok multimedia systems. Health and public health libraries, online and offline data collection in these libraries and databases.

6th week:

Practical: Database management: the fundamentals of database management, knowledge and data transfer between spreadsheet and database manager programs.

7th week:

Practical: Data retrieval from health and public health databases, formulating queries on the query grid of MS Access I.

8th week:

Practical: Data retrieval from health and public health databases, formulating queries on the query grid of MS Access II.

9th week:

Practical: Creating and normalizing data tables and data bases. Designing forms and reports.

10th week:

Practical: Presenting demo health and public health systems.

11th week:

Practical: The fundamentals of space and graphic informatics, the application of them in health and public health routine.

12th week:

Practical: The legal and ethical questions of data protection and privacy, the rules of handling these data.

13th week:

Practical: Handling digital data, the problem of data security. The systems and methods of data protection both hardware and software.

14th week:

Practical: Scientific data retrieval and collection. Searching in online and offline libraries. The selection of appropriate hardware and software tools, data and knowledge transfer in health and computer related problem solving I.

Subject: **MATHEMATICAL BASICS OF BIOSTATISTICS**

Year, Semester: 1st year/1st semester

Number of teaching hours: **56**

Seminar: **14**

Practical: **42**

1st week:

Lecture: Mathematical notation, formulas, operations

Practical: Mathematical notation, formulas, operations

2nd week:

Lecture: Equations, inequalities

Practical: Equations, inequalities

3rd week:

Lecture: Trigonometry

Practical: Trigonometry

4th week:

Lecture: Relations, functions

Practical: Relations, functions

5th week:

Lecture: Number sequences and series

Practical: Number sequences and series

6th week:

Lecture: The concept of limit

Practical: The concept of limit

7th week:

Lecture: Calculus

Practical: Calculus

8th week:

Lecture: Mathematical investigation of functions

Practical: Mathematical investigation of functions

9th week:

Lecture: Introduction to Matrices

Practical: Introduction to Matrices

10th week:

Lecture: Determinants and linear transformations

Practical: Determinants and linear transformations

11th week:

Lecture: Vectors

Practical: Vectors

12th week:

Lecture: Basic concepts of probability, classical probability

Practical: Basic concepts of probability, classical probability

13th week:

Lecture: The mathematical concept of probability

Practical: The mathematical concept of probability

14th week:

Lecture: The concept of sets, set operations

Practical: The concept of sets, set operations

Subject: **PHILOSOPHY**

Year, Semester: 1st year/1st semester

Number of teaching hours: **14**

Lecture: **14**

1st week:

Lecture: Oxford Concise Medical Dictionary

2nd week:

Lecture: Martin Heidegger: What is Metaphysics?

3rd week:

Lecture: Rudolf Carnap: The Elimination of Metaphysics Through Logical Analysis of Language

4th week:

Lecture: Rudolf Carnap: The Elimination of Metaphysics Through Logical Analysis of Language

5th week:

Lecture: The Philosophical Questions of Health and Disease 1.

6th week:

Lecture: The Philosophical Questions of Health and Disease 2.

7th week:

Lecture: The Philosophical Questions of Health and Disease 3.

Self Control Test

8th week:

Lecture: The Philosophical Questions of Health and Disease 4.

Requirements

This lecture is to provide the audience with a concise, yet overall introduction into the history and most basic concepts of the Western philosophical thought. A more particular and practical emphasis is placed to assist future health experts in addressing the philosophical questions of life sciences, most prominently public health.

Institute of Behavioural Sciences, Faculty of Public Health

Subject: **BIOETHICS**

Year, Semester: 1st year/1st semester

Number of teaching hours: **14**

Lecture: **14**

1st week:

Lecture: Introduction to modern ethics. The basics of bioethics

2nd week

Lecture: The relationship between morality, ethics, professional ethics and the law.

3rd week

Lecture: Ethical theories and principles

4th week

Lecture: Patients' Rights

5th week

Lecture: Confidentiality and privacy in healthcare

6th week

Lecture: Autonomy and self-determination

7th week

Lecture: Ethics of clinical research

8th week

Lecture: Ethics of animal experimentation

9th week

Lecture: Ethics at the beginning of life

10th week

Lecture: Ethics and end-of-life decision-making

11th week

Lecture: Ethics of organ transplantation

12th week

Lecture: Ethical theory and moral judgement

13th week

Lecture: Ethical case presentation

14th week

Lecture: Ethical case presentation

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**

Year, Semester: 1st year/1st semester

Number of teaching hours: **21**

Practice: **21**

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.

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 Effective communications techniques. Presentation of the field practice and feedbacks.

14th week:

Practical:

Presentation of the field practice and feedbacks.

Subject: **BASIC PSYCHOLOGY**

Year, Semester: 1st year/1st semester

Number of teaching hours: **28**

Lecture: **28**

1st week:

Lecture: Introduction

2nd week:

Lecture: Nature of psychology: main fields, theories and methods.

3rd week:

Lecture: Early attachment, mother-child bonding. Intimate relationships in adulthood.

4th week:

Lecture: Phases 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

8th week:

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

9th week:

Lecture: Personality: psychoanalytic, 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 behavior: 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, hospitalization.

Requirements

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

Subject: **BASICS OF SOCIOLOGY**

Year, Semester: 1st year/1st semester

Number of teaching hours: **14**

Lecture: **14**

1st week:

Lecture: Introduction to sociology. Basic concepts. Sociology and public health. Problems and perspectives

2nd week:

Lecture: Social structures. Social stratification. Systems of stratification. Basic theories of stratification

3rd week:

Lecture: Social class. Ethnicity. Ageism. Gender. Minority groups

4th week:

Lecture: Culture, norms and deviance

5th week:

Lecture: Marriage, family and kinship

6th week:

Lecture: Global sociology, global poverty

7th week:

Lecture: Sociological research methods

Requirements

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

Department of Foreign Languages

Subject: **HUNGARIAN LANGUAGE II.**

Year, Semester: 2nd year/1st semester

Number of teaching hours: **28**

Practical: **28**

1st week:

Practical: 1. Már beszélek egy kicsit magyarul

2nd week:

Practical: 1. Már beszélek egy kicsit magyarul

3rd week:

Practical: 2. Magyaróráám lesz

4th week:

Practical: 2. Magyaróráám lesz

5th week:

Practical: 3. Debrecenben lakom

6th week:

Practical: 3. Debrecenben lakom

7th week:

Practical: 4. Már ezt is tudom! Midterm test
Self Control Test

8th week:

Practical: 5. Magyarórán

9th week:

Practical: 6. Honnan jön, és hová megy?

10th week:

Practical: 6. Honnan jön, és hová megy?

11th week:

Practical: 7. Utazás

12th week:

Practical: 7. Utazás

13th week:

Practical: 8. Már ezt is tudom! End term test

14th week:

Practical: Practical: Oral exam

Requirements

Requirements of the course:

Attendance

Attending language classes is compulsory. Students should not be absent from more than 10 percent of the classes. If a student is late it is considered as an absence. If a student misses more than two occasions, the final signature may be refused and the student must repeat the course.

Absentees can make up the missed classes in the same week. Maximum one language class may be made up with another group. Students have to ask for the teacher's written permission (by e-mail) 24 hours in advance. Students can attend any class (make up or regular) only if they take their course book with them.

The teacher evaluates active participation in each class. Students are not supposed to share course books in the classes therefore if they fail to bring the course book to the class for the second time the attendance is refused.

Testing, evaluation

In each Hungarian language course, students must sit for 2 written language tests and an oral exam. A further minimum requirement is the knowledge of 200 words per semester divided into 10 word quizzes. There are five word quizzes before and another five after the midterm test. If students fail or miss any word quizzes they cannot start their written test and have to take a vocabulary exam that includes all 100 words before the midterm and end term tests. A word quiz can be postponed by a week and students can take it only with their own teacher. Students can get bonus points (5-5%) by taking two extra quizzes containing 20 sentences each before the midterm and end term tests. The sentences are taken from the units of the course book.

The oral exam consists of a role-play from a list of situations covered in the course book. If students fail the oral exam, they fail the whole course. The results of the written tests and the oral exam are combined and averaged.

Based on the final score the grades are given as follows.

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 of the written tests is below 60, the student can take a written remedial exam once covering the whole semester's material.

Course book: See the website of the Department of Foreign Languages: ilekt.med.unideb.hu.

Audio files to the course book, oral exam topics and vocabulary minimum lists are also available on the website.

Department of Preventive Medicine, Faculty of Public Health

Subject: **ANATOMY**

Year, Semester: 1st year/2nd semester

Number of teaching hours: **70**

Lecture: **42**

Seminar: **28**

1st week

lecture: 1. Covering and lining epithelia 2. Glandular epithelium 3. Connective

tissues

seminar: -

2nd week

lecture: 1. Adipose tissue. Cartilage 2. Bone. Bone formation 3. Muscle tissue
seminar: Histology: Epithelial tissues

3rd week
lecture: 1. Blood vessels 2. Blood 3. Bone marrow and blood formation
seminar: Histology: Connective tissue

4th week
lecture: 1. Histology of lymphatic organs I. 2. Histology of lymphatic organs II. 3. Fertilization and cleavage
seminar: Histology: Adipose tissue, cartilage and bone

5th week
lecture: 1. Gastrulation, formation of the mesoderm
2. Differentiation of the ectoderm and mesoderm 3. Differentiation of the entoderm, folding of the embryo
seminar: Histology: Bone formation and muscle tissue

6th week
lecture: 1. Fetal membranes and placenta. The fetal period. Twins 2. Osteology and arthrology
-introduction 3. The upper limb
seminar: Histology: Blood vessels and blood. Bone marrow and blood formation

7th week
lecture: 1. The lower limb 2. The skull and the back 3. Anatomy of the head and neck
seminar: Histology: Histology of lymphatic organs

8th week
lecture: 1. Nasal and oral cavities 2. The pharynx and the larynx 3. The heart I.
seminar: Anatomy: Upper and lower limbs
on Histology seminar: **1st Self Control Test**

9th week
lecture: 1. The heart II. 2. The trachea,

lungs and pleura 3. Histology of the lung
seminar: Anatomy: The anatomy of the head, neck and back

10th week
lecture: 1. Development of the lung and heart 2. Circulatory system. The vascular system of the embryo 3. The oesophagus and the stomach
seminar: Histology: The histology of the respiratory system

11th week
lecture: 1. Small and large intestines 2. The pancreas. The liver I.
3. The liver II. The system of the portal vein
seminar: Anatomy: The anatomy of the heart and the respiratory system

12th week
lecture: 1. The peritoneum and the retroperitoneum 2. Neuroendocrine regulation. Hypothalamo-hypophyseal system 3. Epiphysis, thyroid, parathyroid and adrenal glands
seminar: Histology: The histology of the alimentary system

13th week
lecture: 1. The kidney 2. The urinary system 3. Male genital organs
seminar: Histology: Histology of the endocrine system

14th week
lecture: 1. Female genital organs I. 2. Female genital organs II.
3. Development of the urogenital system
seminar: Histology: Histology of the kidney and genital organs
Anatomy: The anatomy of the alimentary system and the urogenital apparatus
2nd Self Control Test

Subject: **BIOSTATISTICS**
Year, Semester: 1st year/2nd semester
Number of teaching hours: **42**
Lecture: **14**
Practical: **28**

1st week:

Lecture: The role and importance of statistical analysis
 Practical: Introduction to Microsoft Excell

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, charts, descriptive statistics

4th week:

Lecture: Theoretical basics of interval estimation
 Practical: Theoretical basics of interval estimation, distribution of the sample mean

5th week:

Lecture: Estimating the population mean
 Practical: Confidence Interval for a Population Mean

6th week:

Lecture: Theoretical basics of hypothesis testing, statistical power, error of type 1 and 2
 Practical: Hypothesis testing: a single population mean (z-test)

7th week:

Lecture: Statistical inference by interval estimation and/or hypothesis testing
 Practical: One-sample t-test of mean

Subject: GENETICS AND MOLECULAR BIOLOGY

Year, Semester: 1st year/2nd semester

Number of teaching hours: **14**

Lecture: **14**

7th week:

lecture: Introduction to genetics. Genes as units of biological information.
 Transcription and translation.

8th week

lecture: DNA replication. Genes and alleles.
 Mendel's laws.
 Dominant and recessive inheritance, understanding X chromosome inheritance.

9th week

lecture: Mutation and DNA repair. Inheritance of genes in population. Family tree analysis.
 Mutagenic effects and damages.

10th week**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: Nonparametric and distribution-free statistics
 Practical: Checking the assumption of normality (p-p plot), data transformation

11th week:

Lecture: Estimating probability, proportion and odds
 Practical: Confidence interval for a population proportion, z-test for a population proportion

12th week:

Lecture: The chi-square distribution and the analysis of frequencies
 Practical: Chi-square test statistic

13th week:

Lecture: Introduction to the regression modeling
 Practical: Simple linear regression

14th week:

Lecture: The multiple linear regression model
 Practical: Multiple linear regression

lecture: The structure of DNA. DNA transcription to RNA. Transcriptomes. Genetic code. Non-coding RNAs.

11th week

lecture: DNA polymorphisms. Gene regulations. Epigenetics. Inherited diseases. The genetic background of cancer development and progression.

12th week

lecture: Recombinant DNA technology and the use in medicine and biology.
 Genomic techniques in basic science and diagnosis.

13th week

lecture: Pharmacogenomics.
The Human Genome Project.

Subject: **HEALTH PSYCHOLOGY**
Year, Semester: 1st year/2nd semester
Number of teaching hours: **14**
Lecture: **14**

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

Subject: **HISTORY OF PUBLIC HEALTH**

Year, Semester: 1st year/2nd semester

Number of teaching hours: **14**

Lecture: **14**

1st week:

Lecture: Introduction and definitions

2nd week:

Lecture: World epidemics in history (I) Pestis and Lepra

3rd week:

Lecture: World epidemics in history (II) TB, Pox, Influenza

4th week:

Lecture: Development of isolation system of infected patients

5th week:

Lecture: Academic achievement of Ignác Semmelweis

6th week:

Lecture: History of hand hygiene in the light the present practice

7th week:

Lecture: History of public health

8th week:

Lecture: Famous people in Hung. public health

9th week:

Lecture: Hungarian public health law in 1876.

10th week:

Lecture: History of occupational health control

11th week:

Lecture: Eradication of Ancylostomiasis among mineworkers of Selmecebánya

12th week:

Lecture: History of the science of nutrition

13th week:

Lecture: Changing of habits in food consumption in Hungary

14th week:

Lecture: History of Health Promotion

Subject: **INTRODUCTION TO PUBLIC HEALTH**

Year, Semester: 1st year/2nd semester

Number of teaching hours: **14**

Lecture: **14**

1st week:

Lecture: Allocating public health in the medical and health sciences, evolution and development

2nd week:

Lecture: Definition of health and its determinants

3rd week:

Lecture: Public health: successes, failures and challenges in the 21st century

4th week:

Lecture: Monitoring and analyzing health state: options and methods

5th week:

Lecture: Relation between health and economy

6th week:

Lecture: Theory and practice in health promotion

7th week:

Lecture: Levels of prevention

8th week:

Lecture: Organizational structure for public health services in Hungary

9th week:

Lecture: Global indicators of health state I.

10th week:

Lecture: Global indicators of health state II.

11th week:
Lecture: Public health databases

12th week:
Lecture: North Karelia Program

13th week:
Lecture: Screening programs

14th week:
Lecture: Public health programmers

Division of Cell Biology

Subject: **BIOLOGY, CELL BIOLOGY**
Year, Semester: 1st year/2nd semester
Number of teaching hours: **28**
Lecture: **28**

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

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 $M \geq 50\%$ or more, $D1 = M + E$

Second self-control: if $M \geq 50\%$ 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: **HEALTH SOCIOLOGY**

Year, Semester: 1st year/2nd semester

Number of teaching hours: **28**

Lecture: **28**

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

Department of Foreign Languages

Subject: **PROFESSIONAL HUNGARIAN I.**

Year, Semester: 3rd year/2nd semester

Number of teaching hours: **56**

Practical: **56**

1st week:

Practical: 1. fejezet: Emlékszik?

2nd week:

Practical: 1. fejezet: Emlékszik? / Tegezés-
Önözés

3rd week:

Practical: 2. fejezet: Tegezés-Önözés

4th week:

Practical: 3. fejezet: Élelmiszerek 1.

5th week:

Practical: 4. fejezet: Élelmiszerek 2.

6th week:

Practical: 5. fejezet: Étkezések, étteremben 1.

7th week:

Practical: 6. fejezet: Étkezések étteremben 2.

8th week:

Practical: 7. fejezet: Összefoglalás, midterm test

9th week:

Practical: 8. fejezet: A városban 1.

10th week:

Practical: 9. fejezet: A városban 2.

11th week:

Practical: 10. fejezet: Édes otthon 1.

12th week:

Practical: 11. fejezet: Édes otthon 2.

13th week:

Practical: 12. fejezet: Összefoglalás

14th week:

Practical: 13. fejezet: Preparing for the oral
exam, end term test

Requirements

Requirements of the course:

Attendance

Attending language classes is compulsory. Students should not be absent from more than 10 percent of the classes. If a student is late it is considered as an absence. If a student misses more than two occasions, the final signature may be refused and the student must repeat the course.

Absentees can make up the missed classes in the same week. Maximum one language class may be made up with another group. Students have to ask for the teacher's written permission (by e-mail) 24 hours in advance. Students can attend any class (make up or regular) only if they take their course book with them.

The teacher evaluates active participation in each class. Students are not supposed to share course books in the classes therefore if they fail to bring the course book to the class for the second time the attendance is refused.

Testing, evaluation

In each Hungarian language course, students must sit for 2 written language tests and an oral exam. A further minimum requirement is the knowledge of 200 words per semester divided into 10 word quizzes. There are five word quizzes before and another five after the midterm test. If students fail or miss any word quizzes they cannot start their written test and have to take a vocabulary exam that includes all 100 words before the midterm and end term tests. A word quiz can be postponed by a week and students can take it only with their own teacher. Students can get bonus points (5-5%) by taking two extra quizzes containing 20 sentences each before the midterm and end term tests. The sentences are taken from the units of the course book.

The oral exam consists of a role-play from a list of situations covered in the course book. If students fail the oral exam, they fail the whole course. The results of the written tests and the oral exam are combined and averaged.

Based on the final score the grades are given as follows.

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 of the written tests is below 60, the student once can take a written remedial exam once covering the whole semester's material.

Course book: See 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: **28**

Lecture: **14**

Seminar: **14**

1st week:

Lecture: Concept of law, evolution of legal thinking

Seminar: Evolution of legal thinking

2nd week:

Lecture: Legal norm

Seminar: Branches of law

3rd week:

Lecture: Legal relationship

Seminar: Legislation

4th week:

Lecture: Legal liability

Seminar: Types of legislation

5th week:

Lecture: Law system

Seminar: Applicability, enforceability, validity

6th week:

Lecture: The state

Seminar: Branches of power

7th week:

Lecture: Force of Law

Seminar: Sovereignty

8th week:

Lecture: Legal interpretation

Seminar: Government control

9th week:

Lecture: Law enforcement

Seminar: Ministers, members of government

10th week:

Lecture: Theories of state formation

Seminar: Inviolability

11th week:

Lecture: The constitutional court

Seminar: Constitutionality

12th week:

Lecture: State functions

Seminar: Protection of fundamental rights

13th week:

Lecture: The judicial system

Seminar: Judges

14th week:

Lecture: Three branches of government

Seminar: Compliance and violation of law

Department of Immunology

Subject: **IMMUNOLOGY**

Year, Semester: 2nd year/1st semester

Number of teaching hours: **28**

Lecture: **28**

1. week

lecture: Tissues/organs of the immune system: Functions of central lymphoid organs. Functions of peripheral lymphoid organs. Features of antigens. Cellular and humoral immunity – Direct and indirect interactions.

2. week

lecture: Cellular components of the immune system: The development of the major lineages of blood cells.

3. week

lecture: Antigen recognition (non-specific or specific): Antigen recognition and effector functions of innate immune system. Antigen recognition and effector functions of adaptive immune system.

4. week

lecture: T cells; types and functions: Development of T-lymphocytes, TCR variability. Structure of TCR. Cytotoxic T cells. Helper and regulatory T cells.

5. week

lecture: The collaboration between innate and adaptive immunity – I. Mechanism of antigen presentation. Structure of MHC molecules. Immunological synapse – Koreceptors and costimulatory molecules.

6. 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).

7. week

lecture: Structure of antibodies: Production of various antibody isotypes and their functions. Affinity maturation, somatic recombination, isotype switching.

8. week

lecture: The collaboration 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

9. week

lecture: The immune response to intracellular pathogens. Immune response to viral infection. The immune response to extracellular pathogens.

10. week

lecture: Inflammation. Chemokine mediated migration of leukocytes.

11. week

lecture: Immunological memory. Passive and active immunisation.

12. week

lecture: Hypersensitivity reactions.

13. week

lecture: Mechanisms of the development of autoimmune diseases.

14. week

lecture: Consultation.

Department of Medical Imaging

Subject: **BASIC BIOCHEMISTRY**

Year, Semester: 2nd year/1st semester

Number of teaching hours: **28**

Lecture: **14**

Seminar: **14**

- 1. week:**
lecture: Energy in biology. Oxidative phosphorylation. PDH complex. The citric acid cycle and its regulation.
seminar: -Introduction to the course requirements
- 2. 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.
seminar: Mitochondrion
- 3. week:**
lecture: Carbohydrate metabolism II. Glycogen in liver and muscle. Degradation and synthesis of glycogen. Regulation of glycogen synthesis and degradation.
seminar: Carbohydrate metabolism I
- 4. week:**
lecture: Carbohydrate metabolism III. Pentose phosphate pathway. Metabolism of galactose and fructose. Inherited diseases in the carbohydrate metabolism.
seminar: Carbohydrate metabolism II
- 5. week:**
lecture: Lipid metabolism I. Introduction. Lipid metabolism during well feed stage. Synthesis of fatty acids. Synthesis of triacyl-glycerols and its regulation.
seminar: Carbohydrate metabolism III.
- 6. week:**
lecture: Lipid metabolism II. Lipid metabolism during starvation, oxidation of fatty acids (beta oxidation). Ketone bodies. Biochemistry of diabetes mellitus.
seminar: Lipid metabolism I.
- 7. week:**
lecture: Lipid metabolism III. Biosynthesis of cholesterol. Excretion of cholesterol. Steroid hormones. Bile acids. Vitamin D.
seminar: Lipid metabolism II
- 8. week:**
lecture: Self-control test I.
seminar: Lipid metabolism III.
- 9. week:**
lecture: Lipid metabolism IV. Lipoproteins in blood plasma. Cholesterol transport in the body. Biochemical explanation of elevated blood cholesterol level
seminar: Discussion of self control test I.
- 10. week:**
lecture: Amino acid metabolism I. Formation and utilization of the intracellular amino acid pool. Common reactions in the amino acid metabolism: fate of the nitrogen. Transaminations and deaminations. Formation and elimination of ammonia in the body.
seminar: Lipid metabolism IV.
- 11. week:**
lecture: Amino acid metabolism II. The urea cycle. 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. Related enzyme deficiencies (PKU).
seminar: Amino acid metabolism I
- 12. week:**
lecture: Nucleotides metabolism. Nucleotide pool. Sources of atoms in

purine and pyrimidine ring. De novo synthesis of purine and pyrimidine nucleotides. Regulation of the nucleotide biosynthesis. Salvage pathways. Degradation of nucleotides. Diseases associated with nucleotide metabolism. Gout.

seminar: Amino acid metabolism II

13. week:

lecture: Biochemistry of nutrition I.
Energy requirement. Basic metabolic

rate. Energy content of the food. Energy storage and thermogenesis, obesity. Macro end microcomponents of food: lipids, carbohydrates, proteins and vitamins. Essentiality. Malnutrition.
seminar: Nucleotides metabolism

14. week:

lecture: Self control test II.
seminar: Biochemistry of nutrition

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 mandatory. 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: [https://elearning.med.unideb.hu/Faculty of Medicine/ Department of Medical Imaging/Radiológia Nem Önálló Tanszék-Biokémia/Basic Biochemistry](https://elearning.med.unideb.hu/Faculty%20of%20Medicine/Department%20of%20Medical%20Imaging/Radiologia%20Nem%20Onallo%20Tanszek-Biokemia/Basic%20Biochemistry)

Department of Medical Microbiology

Subject: **MICROBIOLOGY I.**

Year, Semester: 2nd year/1st semester

Number of teaching hours: **56**

Lecture: **28**

Seminar: **28**

Subject: **MICROBIOLOGY II.**

Year, Semester: 2nd year/2nd semester

Number of teaching hours: **56**

Lecture: **28**

Seminar: **28**

1st week:

Lecture: The microbial world. 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

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: 1st year/2st semester

Number of teaching hours: **42**

Lecture: **28**

Seminar: **14**

1. week

lecture: Membrane transport mechanisms; cell-cell communication; humoral regulation of cell function; Ligands, ligand-binding receptors, signalisation pathways. Basis of the excitatory processes, resting potential, local response, action potential. Propagation of the action potential, synaptic function.

seminar: Course requirements.

2. week

lecture: Compartmentalization of body

fluids; blood as a circulating body fluid; plasma and formed elements (red blood cells, white blood cells, platelets). Blood typing. Haemostasis.

seminar: Membrane transport mechanisms, electric characteristics of the cell membrane. Synaptic function.

3. week:

lecture: 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.
seminar: Compartmentalization of body fluids. The blood as a circulating body fluid. Homeostasis.
- 4. week**
lecture: Characteristics of peripheral circulation; principles of haemodynamics; functional characteristics of blood vessels; vascular tone; main determinants of arterial blood pressure.
seminar: Cardiac functions.
- 5. week**
lecture: Regulation of visceral functions; common and different features of sympathetic and parasympathetic regulation; characteristics of the connections between autonomic nerves and the innervated structures. Integrated function of the sympathetic nervous system and the adrenal medulla. Neural and humoral regulation of the cardiovascular system.
seminar: Characteristics of the peripheral circulation.
- 6. week**
lecture: Respiratory physiology: mechanics of mechanics of breathing; alveolar ventilation; gas transport in the blood; neural and chemical control of breathing
seminar: 1st mid-semester test: cell physiology, blood, circulatory system
- 7. week**
lecture: Function of the digestive system. Motor and secretory function of the gastrointestinal tract; digestion, absorption
seminar: Function of the respiratory system.
- 8. week**
lecture: Nutrition (food requirements, regulation of food intake); energy balance, thermoregulation.
seminar: Function of the digestive system.
- 9. week**
lecture: General aspects of renal function; glomerular filtration; types of tubular transport processes; characteristic parameters of the renal function
seminar: Quantitative and qualitative aspects of diet. Thermoregulation and energy balance.
- 10. week**
lecture: Hormonal regulation; paracrine and endocrine mechanisms; hypothalamo-hypophyseal system; neurohormones and tropic hormones
seminar: 2nd mid-semester test: respiration, digestive system, kidney
- 11. week:**
lecture: Thyroid hormones (T3 and T4); endocrine regulation of basal metabolic rate. Physiological effects of corticosteroids. Significance of the ionized calcium concentration in the blood; regulation of calcium handling. PTH and calcitonin.
seminar: Basics of the hormonal regulation.
- 12. week:**
lecture: Endocrine function of the pancreas; significance and complex hormonal regulation of blood glucose level
seminar: Complex hormonal regulation of the intermediate metabolism.
- 13. week:**
lecture: Sexual hormones. Overview of the complex neural regulation. Somatic and autonomic nervous system; voluntary and reflex regulation
seminar: Osteoporosis. Abnormal blood glucose level.
- 14. week:**
lecture: Sensory function of the nervous system. Physiological basis of vision and hearing. Motor function of nervous system: function of skeletal muscles, neural regulatory mechanisms.
seminar: Function of skeletal muscles, neural regulatory mechanisms
 3rd mid-semester test: hormonal and neural regulation

Requirements

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.

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: **28**

Lecture: **14**

Seminar: **14**

1st week:

Lecture: Epidemiology — Definition, functions, and characteristics

Seminar: Epidemiologic milestone

2nd week:

Lecture: Studying populations - basic demography

Seminar: Demographic measures

3rd week:

Lecture: The Phenomenon of Disease

Seminar: The Phenomenon of Disease

4th week:

Lecture: Measuring Disease and Exposure

Seminar: Measuring Disease and Exposure

5th week:

Lecture: Standardization of rates and ratios

Seminar: Practicing standardization

6th week:

Lecture: Relating risk factors

Seminar: Measures of Risk factors to health

7th week:

Lecture: Analytic study design

Seminar: Analytic study designs

8th week:

Lecture: Causal inference

Seminar: Causal inference

9th week:

Lecture: Sources of error

Seminar: Control for errors

10th week:

Lecture: Multicausality — Confounding

Seminar: Confounding factor

11th week:

Lecture: Multicausality — Effect modification

Seminar: Effect modifiers

12th week:

Lecture: Multicausality — Analysis approaches

Seminar: Basic analytic measures

13th week:
Lecture: Data analysis and interpretation
Seminar: Data interpretation

14th week:
Lecture: Practical aspects of epidemiologic

Subject: **HEALTH INFORMATICS II.**
Year, Semester: 1st year/2nd semester
Number of teaching hours: **28**
Lecture: **10**
Practical: **18**

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

Subject: **PUBLIC HEALTH MEDICINE I.**
Year, Semester: 2nd year/1st semester
Number of teaching hours: **56**
Lecture: **28**
Practical: **28**

research
Seminar: Study design

9th week:
Practical: Some use of library in formation system details: 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

1st week:

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

2nd week:

Lecture: Diseases of the circulatory system. Ischaemic heart disease, AMI, Hypertension and its complications, Thrombo-embolic diseases, Stroke

3rd week:

Lecture: Haematological diseases. Anaemia, myeloproliferative diseases

4th week:

Lecture: Neoplasia Breast, lung and throat cancers, Colorectal cancers, Cervical, uterine, and ovarian cancers, Stomach cancer, Prostate carcinoma, Cancers of the mouth, Kidney tumors, Scrotal tumors, Malignant haematologic diseases

5th week:

Lecture: Diseases of the digestive system. Diseases of the stomach. Diseases of the liver, gall bladder and pancreas

6th week:

Lecture: Metabolic diseases. Diabetes, Hyperlipidaemia, Gout, Porphyria

7th week:

Lecture: Diseases of the pulmonary system. Bronchial asthma, Chronic obstructive pulmonary disease

8th week:

Lecture: Infectious diseases. Acute and chronic infectious diseases

9th week:

Lecture: Diseases of the musculoskeletal system. Bones, 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: Psychiatry. Psychosis, schizophrenia, alcoholism, delirium.

14th week:

Lecture: Paediatric diseases. Dental diseases

Requirements

Attendance of both lectures and practices is mandatory. Presence is going to be recorded on your attendance sheet (to be brought for each occasion by the student). At the end of lectures/practices every student is going to get a stamp and signature from the lecturer/practice leader. In case of absence signature will be refused (except for cases of documented serious diseases or other reasonable causes - to be discussed with your educational coordinator).

On week 14. lecture books are going to be signed by the coordinator if all the necessary stamps and signatures have been collected

Evaluation:

Lecture and practice topics will be asked at the end of the semester.

Lectures will be available on the following website: <http://www.nepegeszseg.hu/pdf/>

Compulsory reading: Topics of lectures and practices

Further reading:

CURRENT Medical Diagnosis and Treatment, Edited by Stephen J. McPhee, Maxine A. Papadakis, Michael W. Rabow 2012, Fifty-First Edition (LANGE CURRENT Series), McGraw-Hill, 2011.

Harrison's Principles of Internal Medicine, Dan Longo, Anthony Fauci, Dennis Kasper, Stephen Hauser, J. Jameson, Joseph Loscalzo 18th Edition, 2011

Oxford Handbook of Public Health Practice Edited by Charles Guest, Walter Ricciardi, Ichiro Kawachi, and Iain Lang (2013, Third Edition)

During the semester there are going to be 2 written exams (weeks 7 and 13). 25 simple questions (from lecture and practice slides) are going to be asked on each occasion. At the end of the semester every student is going to get a mark based on his/her midterm exam results (maximum 50 points, 90-100% excellent, 80-89% good, 70-79% satisfactory, 60-69% pass, 0-59% fail). Every student can accept/turn down this mark. Those who are not willing to accept their marks have to take a written exam at the end of the semester during the exam period (25 simple questions from all semester topics, 90-100% excellent, 80-89% good, 70-79% satisfactory, 60-69% pass, 0-59% fail). Those who fail 2 times on the written exam during the exam period are going to take an oral exam (exam topics are the same as lecture and practice topics).

Department of Foreign Languages

Subject: **PROFESSIONAL HUNGARIAN II.**

Year, Semester: 4th year/1st semester

Number of teaching hours: **56**

Practical: **56**

1st week:

Practical: 1. fejezet: Emlékszel?

2nd week:

Practical: 1. fejezet: Emlékszel ? / 2. fejezet: Testrészek 1.

3rd week:

Practical: 2. fejezet: Testrészek 2.

4th week:

Practical: 3. fejezet: Tünetek

5th week:

Practical: 4. fejezet: Gyógyszerek

6th week:

Practical: 5. fejezet: Klinikák és szakorvosok

7th week:

Practical: 6. fejezet: Lassítsunk egy kicsit!

8th week:

Practical: 7. fejezet: Összefoglalás, midterm test

9th week:

Practical: 8. fejezet: Szoktál kanapészőrfölni?

10th week:

Practical: 9. fejezet: Jó és rossz szokások

11th week:

Practical: 10. fejezet: Instrukció

12th week:

Practical: 11. fejezet: Tessék mondani!

13th week:

Practical: 12. fejezet: Anamnézis

14th week:

Practical: 13. fejezet: Összefoglalás / Preparing for the oral exam, end term test

Requirements

Attendance

Attending language classes is compulsory. Students should not be absent from more than 10 percent of the classes. If a student is late it is considered as an absence. If a student misses more than two occasions, the final signature may be refused and the student must repeat the course.

Absentees can make up the missed classes in the same week. Maximum one language class may be made up with another group. Students have to ask for the teacher's written permission (by e-mail) 24 hours in advance. Students can attend any class (make up or regular) only if they take their course book with them.

The teacher evaluates active participation in each class. Students are not supposed to share course books in the classes therefore if they fail to bring the course book to the class for the second time the attendance is refused.

Testing, evaluation

In each Hungarian language course, students must sit for 2 written language tests and an oral exam. A further minimum requirement is the knowledge of 200 words per semester divided into 10 word quizzes. There are five word quizzes before and another five after the midterm test. If students fail or miss any word quizzes they cannot start their written test and have to take a vocabulary exam that includes all 100 words before the midterm and end term tests. A word quiz can be postponed by a week and students can take it only with their own teacher. Students can get bonus points (5-5%) by taking two extra quizzes containing 20 sentences each before the midterm and end term tests. The sentences are taken from the units of the course book.

The oral exam consists of a role-play from a list of situations covered in the course book. If students fail the oral exam, they fail the whole course. The results of the written tests and the oral exam are combined and averaged.

Based on the final score the grades are given as follows.

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 of the written tests is below 60, the student once can take a written remedial exam once covering the whole semester's material.

Course book: See 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: **28**

Lecture: **14**

Seminar: **14**

1st week:

Lecture: Basic laws, the Fundamental law

Seminar: Equality before the law

2nd week:

Lecture: Civil, political and personal rights

Seminar: Discrimination

3rd week:

Lecture: Personality rights

Seminar: Protection of reputation

4th week:

Lecture: Introduction to business law

Seminar: Business ethics

5th week:

Lecture: Corporations

Seminar: Starting a business

6th week:

Lecture: Property law

Seminar: Proprietary, possession

7th week:

Lecture: Nature of real property

Seminar: Nonpossessory interests

8th week:

Lecture: Sale of Property

Seminar: Adverse possession

9th week:

Lecture: Estates in real property

Seminar: Land use regulation

10th week:

Lecture: Introduction to contracts

Seminar: Contractual Capacity

11th week:

Lecture: Liability and negligence

Seminar: Sales and product liability

12th week:

Lecture: Valid and void agreements

Seminar: Conclusion to contracts

13th week:

Lecture: Types of contracts

Seminar: Contracts in writing

14th week:

Lecture: Agency

Seminar: Relationship of principal and agent

Department of Medical Imaging

Subject: **BIOCHEMISTRY**

Year, Semester: 2nd year/2nd semester

Number of teaching hours: **15**

Lecture: **10**

Seminar: **5**

1. week

lecture: Biochemistry of the liver.

Biotransformation. Ethanol metabolism,

biochemical consequences of ethanol consumption..

seminar:-

2. week

lecture: Iron metabolism. Iron absorption, transport, storage and distribution in the human body. Synthesis of hem, regulation of the synthesis in eukariotic cells. Disorders in hem metabolism. Degradation of hem: formation, conjugation and excretion of bile pigments.

Hemoglobin; structure, function and regulation of that.

seminar: Biochemistry of the liver.

3. 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: Iron metabolism

4. week:

lecture: Biochemistry of the extracellular matrix: function, main components: glucosaminoglycans and proteoglycans, collagens, elastin, adhesion proteins.

Synthesis and degradation of collagens.

seminar: Blood clotting.

5. week:

lecture: Sport biochemistry. Structure and mechanism of contraction in skeletal muscle. Generation of power stroke.

Energy supply of muscle contraction under aerobic and anaerobic conditions.

Role and activation of AMP kinase.

Irisine.

6. week:

lecture: - (Self control test)

seminar: Sport biochemistry

Requirements

Compulsory reading:

Lecture presentations with short explanations are available on the web page of [https://elearning.med.unideb.hu/Faculty of Medicine/Department of Diagnostic Imaging/Radiológia Nem Önálló Tanszék-Biokémia/Biochemistry](https://elearning.med.unideb.hu/Faculty_of_Medicine/Department_of_Diagnostic_Imaging/Radiológia_Nem_Önálló_Tanszék-Biokémia/Biochemistry)

Achievement during the semester will 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 one and 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 mandatory. The signature of the Lecture Book may be refused if a student is absent from more than 1 seminars.

Prerequisites: Basic Biochemistry

Department of Preventive Medicine, Faculty of Public Health

Subject: **ENVIRONMENTAL HEALTH**

Year, Semester: 2nd year/2nd semester

Number of teaching hours: **56**

Lecture: **28**

Seminar: **28**

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|--|---|
| <p>1. 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</p> <p>2. week:
<i>lecture:</i> Introduction to toxicology
<i>seminar:</i> The disaster of Seveso – case study</p> <p>3. week:
<i>lecture:</i> Air pollution and health
<i>seminar:</i> The London smog of December 1952 – case study</p> <p>4. week:
<i>lecture:</i> Water pollution and health
<i>seminar:</i> Environmental arsenic poisoning – case study</p> <p>5. week:
<i>lecture:</i> Soil contamination and health
<i>seminar:</i> Environmental cadmium poisoning – case study</p> <p>6. week:
<i>lecture:</i> Health effects of non-ionising radiation and electromagnetic fields
<i>seminar:</i> Mobile phone use and brain cancer risk</p> <p>7. week:
<i>lecture:</i> Health effects of ionising radiation and radioactive substances
<i>seminar:</i> Nuclear accidents and protection of the general public</p> <p>8. week:
<i>lecture:</i> Food-borne diseases, food</p> | <p>poisoning
<i>seminar:</i> Midterm test</p> <p>9. week:
<i>lecture:</i> Health effects of noise and vibration
<i>practice:</i> Chemical and microbiological examination of drinking water (laboratory practice for small group)</p> <p>10. week:
<i>lecture:</i> Hazardous substances in the environment
<i>practice:</i> Chemical and microbiological examination of drinking water (laboratory practice for small group)</p> <p>11. week:
<i>lecture:</i> Body defence mechanisms against the adverse effects of environmental exposures
<i>seminar:</i> Environmental lead poisoning – case study</p> <p>12. week:
<i>lecture:</i> Health implications of waste and hazardous waste
<i>seminar:</i> Chemical safety</p> <p>13. week:
<i>lecture:</i> Global environmental changes and human health
<i>seminar:</i> Environmental PCB poisoning – case study</p> <p>14. week:
<i>lecture:</i> Environmental justice and environmental health policy
<i>seminar:</i> Student presentations</p> |
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Subject: **EPIDEMIOLOGY OF COMMUNICABLE AND NON-COMMUNICABLE DISEASES I.**

Year, Semester: 2nd year/2nd semester

Number of teaching hours: **56**

Lecture: **14**

Seminar: **42**

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: Epidemic curves

Practical: Dynamics of infection (Case Study2)

4th week:

Practical: Data entry and data management (case study)

5th week:

Practical: Outbreak investigation – descriptive analysis (case study)

6th week:

Lecture: The basics of statistical inference

Practical: Statistical power estimation using PS software (Case Study)

7th week:

Lecture: The basics of sample size calculation

Lecture: Role of analytical studies in outbreak investigations

8th week:

Lecture: Epidemiology of HIV/AIDS

Practical: Outbreak investigation – analytical analysis (case study)

9th week:

Lecture: Stratified analysis

Practical: Stratified analysis (case study)

10th week:

Lecture: Surveillance of nosocomial diseases

Practical: Surveillance of nosocomial diseases

11th week:

Lecture: The practical aspects of the implementation of outbreak investigation

Practical: The surveillance of infectious diseases

12th week:

Lecture: Prion diseases

Practical: Monkey pox (Case Study)

13th week:

Lecture: Epidemiology of tuberculosis, Epidemiology of respiratory infectious diseases

Lecture: (2 hours): Epidemiology of tuberculosis in developed countries (case study)

Practical: Epidemiology of tuberculosis in developed countries (case study)

14th week:

Lecture: Epidemiology of gastrointestinal diseases, Epidemiology of hepatitis

Practical: Hepatitis outbreak investigation (Case Study)

Subject: **PUBLIC HEALTH MEDICINE II.**

Year, Semester: 2nd year/2nd semester

Number of teaching hours: **56**

Lecture: **28**

Practical: **28**

1st week:

Lecture: Clinical diagnosis. History, physical examination, investigations. Laboratory diagnosis, Imaging techniques, Functional tests

2nd week:

Lecture: Diseases of the circulatory system. Ischaemic heart disease, AMI, Hypertension and its complications, Thrombo-embolic diseases, Stroke

3rd week:

Lecture: Haematological diseases. Anaemia, myeloproliferative diseases

4th week:

Lecture: Neoplasia. Breast, 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 system. Diseases of the stomach. Diseases of the liver, gall bladder and pancreas

6th week:

Lecture: Metabolic diseases. Diabetes, Hyperlipidaemia, Gout, Porphyria

7th week:

Lecture: Diseases of the pulmonary system. Bronchial asthma, Chronic obstructive pulmonary disease

8th week:

Lecture: Infectious diseases. Acute and chronic infectious diseases

9th week:

Lecture: Diseases of the musculoskeletal system. Bones, 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: Psychiatry. Psychosis, schizophrenia, alcoholism, delirium

14th week:

Lecture: Paediatric diseases. Dental diseases

Requirements

Attendance of both lectures and practices is mandatory. Presence is going to be recorded on your attendance sheet (to be brought for each occasion by the student). At the end of lectures/practices every student is going to get a stamp and signature from the lecturer/practice leader. In case of absence signature will be refused (except for cases of documented serious diseases or other reasonable causes - to be discussed with your educational coordinator).

On week 14. lecture books are going to be signed by the coordinator if all the necessary stamps and signatures have been collected

Evaluation:

Lecture and practice topics will be asked at the end of the semester.

Lectures will be available on the following website: <http://www.nepegeszseg.hu/pdf/>

Compulsory reading: Topics of lectures and practices

Further reading:

CURRENT Medical Diagnosis and Treatment, Edited by Stephen J. McPhee, Maxine A. Papadakis, Michael W. Rabow 2012, Fifty-First Edition (LANGE CURRENT Series), McGraw-Hill, 2011.

Harrison's Principles of Internal Medicine, Dan Longo, Anthony Fauci, Dennis Kasper, Stephen Hauser, J. Jameson, Joseph Loscalzo 18th Edition, 2011

Oxford Handbook of Public Health Practice Edited by Charles Guest, Walter Ricciardi, Ichiro Kawachi, and Iain Lang (2013, Third Edition)

During the semester there are going to be 2 written exams (weeks 7 and 13). 25 simple questions (from lecture and practice slides) are going to be asked on each occasion. At the end of the semester every student is going to get a mark based on his/her midterm exam results (maximum 50 points, 90-100% excellent, 80-89% good, 70-79% satisfactory, 60-69% pass, 0-59% fail). Every student can accept/turn down this mark. Those who are not willing to accept their marks have to take a written exam at the end of the semester during the exam period (25 simple questions from all semester topics, 90-100% excellent, 80-89% good, 70-79% satisfactory, 60-69% pass, 0-59% fail). Those who fail 2 times on the written exam during the exam period are going to take an oral exam (exam topics are the same as lecture and practice topics).

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: **28**

Lecture: **14**

Practical: **14**

1st week:

Lecture: Development of medical officer service's regulation

Practical: Sources of administrative law

2nd week:

Lecture: Medical officer service in the state administration system

Practical: Principles of public administration

3rd week:

Lecture: Power and territorial system of the medical officer service

Practical: Types of cases

4th week:

Lecture: Population health management

Practical: Administrative sanctioning measures

5th week:

Lecture: Public health management

Practical: Nonsuit

6th week:

Lecture: Environmental and settlement health management

Practical: Evidence

7th week:

Lecture: Administrative tasks related to the deceased

Practical: Termination

8th week:

Lecture: Workplace aerosol exposure (dusts,

fibers)

Practical: Agency

9th week:

Lecture: Control of the food chain

Practical: Case study

10th week:

Lecture: Rights and obligations of the food chain actors

Practical: Case study

11th week:

Lecture: State's responsibility in the food chain control

Practical: Documents, public documents, official certificates

12th week:

Lecture: Administration tasks of the food chain supervisory authority

Practical: Sanctions of public administration

13th week:

Lecture: Occupational health management

Practical: Deadlines

14th week:

Lecture: Administration and coordination tasks of the health administration bodies

Practical: Medical practices – GPs' clusters (GPC)

Subject: **PHARMACOLOGY**

Year, Semester: 3rd year/1st semester

Number of teaching hours: **28**

Lecture: **28**

1st week:

Lecture: Introduction to general pharmacology: pharmacokinetics

2nd week:

Lecture: Introduction to general pharmacology: pharmacodynamics

3rd week:

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

4th week:

Lecture: Cardiovascular pharmacology: antihypertensive, antihyperlipidaemic drugs

5th week:

Lecture: Cardiovascular pharmacology: antianginal and anti-arrhythmic drugs, drugs used in congestive heart failure

6th week:

Lecture: Respiratory pharmacology: antiasthmatics, drugs used in COPD (inhalants, steroids)

7th week:

Lecture: Antimicrobial chemotherapy

8th week:

Lecture: Antitumor agents

9th week:

Lecture: Pharmacology of gastrointestinal system

10th week:

Lecture: Antidiabetic agents

11th week:

Lecture: Pharmacology of central nervous system: anxiolytic and sedative-hypnotic drugs, antidepressants

12th week:

Lecture: Pharmacology of central nervous system: general anaesthetics, antiepileptics, antiparkinsonian drugs, anti-psychotics, drugs used in Alzheimer disease

13th week:

Lecture: Pharmacology of inflammation and pain, local anesthetic agents

14th week: Opioids, drugs of abuse

Department of Preventive Medicine, Faculty of Public Health

Subject: **APPLIED EPIDEMIOLOGY**

Year, Semester: 4th year/2nd semester

Number of teaching hours: **28**

Lecture: **14**

Practical: **14**

1st week:

1 lecture and 1 practice on: Evolution of epidemiological methods

2nd week:

1 lecture and 1 practice on: Experimental and observational approaches

3rd week:

1 lecture and 1 practice on: Defining study questions

4th week:

1 lecture and 1 practice on: Model preparation

5th week:

1 lecture and 1 practice on: Most frequently used study designs

6th week:

1 lecture and 1 practice on: Statistical inference

7th week:

1 lecture and 1 practice on: Statistics in epidemiology (95% confidence interval)

8th week:

1 lecture and 1 practice on: Statistics in epidemiology (t-test, chisquare test, ANOVA)

9th week:

1 lecture and 1 practice on: Statistics in epidemiology (risk/odds ratio, Mantel-Haenszel odds ratio)

10th week:

1 lecture and 1 practice on: Statistics in epidemiology (linear, logistic and Cox regression)

11th week:

1 lecture and 1 practice on: Statistics in epidemiology (standardization)

12th week:

1 lecture and 1 practice on: Evaluating validity (confounding factors, selection bias)

13th week:

1 lecture and 1 practice on: Evaluating validity (measurement bias)

14th week:

1 lecture and 1 practice on: Answering study question and practical conclusions

Subject: **HEALTH PROMOTION AND POLICY**

Year, Semester: 3rd year/1st semester

Number of teaching hours: **42**

Lecture: **14**

Practical: **28**

1. week

Lecture: Fundamentals, aims and objectives of health policy. Objectives of health policy – prevention and treatments.

Seminar: Replay Health game

2. week

Lecture: The parties in health policy and power.

Seminar: The parties in health policy and power in your country.

3. week:

Lecture: Health care market is special. Economic models to demand, supply, and their interaction in the medical economy. Rationale for health policy.

Seminar: Sicko 1.

4. week:

Lecture: Health care systems. Financing options and allocation of health care resources.

Seminar: Sicko 2.

5. week:

Lecture: Cost effectiveness in health programs

Seminar: How to compare cost-effectiveness of healthcare programs?

6. week:

Lecture: Health Policy in an international context.

Seminar: TrustWHO.

7. week:

Lecture: Impact of health policy. Performance measurement in the health care.

Seminar: Indicators of the performance measurement in the health care.

8. week:

Lecture: Smoking policy and anti-smoking legislation.

Seminar: The Insider 1.

9. week:

Lecture: Sugary drink tax and similar policies

Seminar: The Insider 2.

10. week:

Lecture: Principles and actions of health promotion.

Seminar: Action for disease prevention and health promotion

11. week:

Lecture: Models of health

Seminar: Infrastructure of health promotion

12. week:

Lecture: Good presentation, bad presentation.

Seminar: Critical reading.

13. week:

Lecture: Effective communication.

Seminar: Critical evaluation of the sources of scientific information (UD Library, PubMed, Cochrane Reviews, WHO, CDC)

14. week:

Lecture: Health education

Seminar: Search for background materials in health topics (nutrition, physical activity, psychoactive substances, sexual behaviour, estimation of cardiovascular risk)

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. The subject leader may refuse to sign the lecture book if a student is absent more than twice in a semester even if he/she has an acceptable excuse.

Examination:

Type of the exam: end-of-semester examination.

Form of exam: Students are required to perform an oral presentation regarding a health policy topic during the semester. During the exam period the students are required to take an online written test which will cover the topics of all lectures and seminars of the semester. The final mark is determined by the presentation score (33%) and the exam result (66%).

Evaluation: five-grade scale

Subject: **EPIDEMIOLOGY OF COMMUNICABLE AND NON-COMMUNICABLE DISEASES II.**

Year, Semester: 3rd year/1st semester

Number of teaching hours: **42**

Lecture: **14**

Seminar: **28**

1st week:

Lecture: Vaccinations, Vaccines

Seminar: Vaccine efficacy

2nd week:

Lecture: The world health report, Levels of prevention, preventive strategies

3rd week:

Lecture: Emerging and re-emerging infectious diseases

Seminar: HFA database

4th week:

Lecture: The theoretical basis for screening programs

Seminar: HFA database (2)

5th week:

Lecture: Public Health Databases

Seminar: The advantages and disadvantages of different preventive strategies

6th week:

Lecture: Health monitoring

Seminar: Screening programs

7th week:

Lecture: Literature Research

Seminar: Epidemiology and prevention of cardiovascular diseases

8th week:

Lecture: Health Surveys

Seminar: Study design- a measurement the frequency of a non-communicable disease – a theoretical framework

9th week:

Lecture: Study Writing

Seminar: Literature search using PubMed

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 accidents. Basics of health economics

Subject: **OCCUPATIONAL HEALTH**

Year, Semester: 3rd year/1st semester

Number of teaching hours: **56**

Lecture: **28**

Seminar: **20**

Practice: **8**

1. week

| *lecture:* Introduction to occupational health and

safety. History and the subject of occupational medicine and occupational hygiene

seminar/practice Organizational structure of occupational health and safety

2. week

lecture: A Physiology of work, fitness to work. Occupational hazard and risk

seminar/practice: Criteria, classification and reporting of occupational diseases

3. week

lecture: Workplace prevention. Environmental and biological monitoring

seminar/practice: Occupational exposure limits

4. week

lecture: Physical workplace hazards (noise, vibration, temperature, pressure)

seminar/practice: Measurement and evaluation of occupational noise and heat exposure

5. week

lecture: Physical workplace hazards (ionizing and non-ionizing radiation)

seminar/practice: Measurement and evaluation of occupational exposure to radiation

6. week

lecture: Chemical workplace hazards (metals, gasses)

seminar/practice: Chemical safety

7. week

lecture: Chemical workplace hazards (solvents, plastics, pesticides)

seminar/practice: Measurement and evaluation of occupational chemical exposures

8. week

lecture: Workplace aerosol exposure (dusts and fibers)

seminar/practice: Measurement and evaluation of occupational aerosol exposures

9. week

lecture: Chemical workplace hazards (mutagens, carcinogens, teratogens)

seminar/practice: Mutagenicity tests (laboratory practice)

10. week

lecture: Biological workplace hazards

seminar/practice: Measurement and evaluation of occupational biological exposures

11. week

lecture: Mechanical (ergonomic) workplace hazards, occupational accidents

seminar/practice: Occupational safety

12. week

lecture: Occupational psychosocial hazards

seminar/practice: Workplace communication (situation exercise)

13. week

lecture: Occupational health and safety evaluation of industrial processes I

seminar/practice: Preparation for student presentations

14. week

lecture: Occupational health and safety evaluation of industrial processes II

seminar/practice: Student presentations

Subject: **PUBLIC HEALTH MEDICINE III.**

Year, Semester: 3rd year/1st semester

Number of teaching hours: **56**

Lecture: **28**

Practical: **28**

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, colic 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

Requirements

Attendance of both lectures and practices is mandatory. Presence is going to be recorded on your attendance sheet (to be brought for each occasion by the student). At the end of lectures/practices every student is going to get a stamp and signature from the lecturer/practice leader. In case of absence signature will be refused (except for cases of documented serious diseases or other reasonable causes - to be discussed with your educational coordinator).

On week 14. lecture books are going to be signed by the coordinator if all the necessary stamps and signatures have been collected

Evaluation:

Lecture and practice topics will be asked at the end of the semester.

Lectures will be available on the following website: <http://www.nepegeszseg.hu/pdf/>

Compulsory reading: Topics of lectures and practices

Further reading:

CURRENT Medical Diagnosis and Treatment, Edited by Stephen J. McPhee, Maxine A. Papadakis, Michael W. Rabow 2012, Fifty-First Edition (LANGE CURRENT Series), McGraw-Hill, 2011.

Harrison's Principles of Internal Medicine, Dan Longo, Anthony Fauci, Dennis Kasper, Stephen Hauser, J. Jameson, Joseph Loscalzo 18th Edition, 2011

Oxford Handbook of Public Health Practice Edited by Charles Guest, Walter Ricciardi, Ichiro

Kawachi, and Iain Lang (2013, Third Edition)

During the semester there are going to be 2 written exams (weeks 7 and 13). 25 simple questions (from lecture and practice slides) are going to be asked on each occasion. At the end of the semester every student is going to get a mark based on his/her midterm exam results (maximum 50 points, 90-100% excellent, 80-89% good, 70-79% satisfactory, 60-69% pass, 0-59% fail). Every student can accept/turn down this mark. Those who are not willing to accept their marks have to take a written exam at the end of the semester during the exam period (25 simple questions from all semester topics, 90-100% excellent, 80-89% good, 70-79% satisfactory, 60-69% pass, 0-59% fail). Those who fail 2 times on the written exam during the exam period are going to take an oral exam (exam topics are the same as lecture and practice topics).

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: **28**

Lecture: **28**

1. week

lecture: Demographic, mortality and morbidity data regarding child health care.

seminar/practice:-

2. week

lecture: Child health services: organisation, place in the health care system, tasks and activities.

seminar/practice: -

3. week

lecture: Development of infants, children and adolescents. Methods of the assessment.

seminar/practice:-

4. week

lecture: Infant feeding and nutrition in childhood and adolescence.

seminar/practice: -

5. week

lecture: Primary prevention in infants, children and adolescents.

seminar/practice:-

6. week

lecture: Childhood surveillance and screening.

seminar/practice: -

7. week

lecture: Continuous care of children with chronic diseases.

seminar/practice: -

8. week

lecture: Care of infants, children, adolescents

with special needs.

seminar/practice:-

9. week

lecture: Physical activity and physical education.

seminar/practice:-

10. week

lecture: Obesity and its consequences in childhood and adolescence.

seminar/practice:-

11. week

lecture: Smoking, alcohol and drug abuse in childhood and adolescence.

seminar/practice: -

12. week

lecture: Puberty, its disturbances and adolescents' sexuality.

seminar/practice: -

13. week

lecture: Psychological problems and harmful behaviours in adolescence.

seminar/practice:-

14. week

lecture: Child abuse and vulnerability. Health improvement in childhood and adolescence.

seminar/practice: -

Requirements

The subject leader may refuse to sign the lecture book if a student is absent more than twice in a semester even if he/she has an acceptable excuse.

Students are required to perform an oral presentation during the semester. During the exam period the students are required to take an online written test which will cover the topics of all lectures of the semester. Evaluation of the written test is assessed on a five-grade scale. The final mark is determined by the presentation score (33%) and the exam result (66%).

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: **28**

Lecture: **14**

Practical: **14**

1st week:

Lecture: Principles of health care law

Practical: The role of the state

2nd week:

Lecture: System of health services

Practical: Role of the government and society

3rd week:

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

Practical: Authority

4th week:

Lecture: Professional requirements of health services

Practical: Operating principles

5th week:

Lecture: Health care organization and management

Practical: Law and ethics

6th week:

Lecture: Public health

Practical: Possibilities of enforcement

7th week:

Lecture: Health promotion, family and women's care, youth health care, sports health care, environment and settlement health, food and nutrition health

Practical: Criminal and civil sanctions

8th week:

Lecture: Radiation Health, occupational health, infectious disease control

Practical: Research Involving Human Gametes and Embryos

9th week:

Lecture: Patients' rights and obligations

Practical: Rules and conditions of medical sterilization

10th week:

Lecture: Rights and duties of health care workers

Practical: Procedures of authority

11th week:

Lecture: Medical research on humans

Practical: Supporting and enforcing health-oriented legislation

12th week:

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

Practical: Administration and coordination

13th week:

Lecture: Treatment and care of psychiatric patients

Practical: Medical inspection

14th week:

Lecture: Organ and tissue transplantation, blood provision

Practical: Health development

Department of Preventive Medicine, Faculty of Public Health

Subject: **BASICS OF QUALITY ASSURANCE**

Year, Semester: 4th year/2nd semester

Number of teaching hours: **28**

Lecture: **14**

Seminar: **14**

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: Prioritizing 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.

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: **168**

Practical: **168**

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 environmental 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 pharmaceuticals

Subject: **PUBLIC HEALTH MEDICINE IV.**

Year, Semester: 3rd year/2nd semester

Number of teaching hours: **56**

Lecture: **28**

Practical: **28**

1st week:

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

2nd week:

Lecture: Diseases of the circulatory system Ischaemic heart disease, AMI, Hypertension and its complications, Thrombo-embolic diseases, Stroke

3rd week:

Lecture: Haematological diseases Anaemia, myeloproliferative diseases

4th week:

Lecture: Neoplasia Breast, 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 system

Diseases of the stomach. Diseases of the liver, gall bladder and pancreas

6th week:

Lecture: Metabolic diseases Diabetes, Hyperlipidaemia, Gout, Porphyria

7th week:

Lecture: Diseases of the pulmonary system Bronchial asthma, Chronic obstructive pulmonary disease

8th week:

Lecture: Infectious diseases Acute and chronic infectious diseases

9th week:

Lecture: Diseases of the musculoskeletal system Bones, joint and muscular diseases (with emphasis on osteoporosis)

10th week:

Lecture: Endocrinological diseases

11th week:

Lecture: Diseases of the kidney

schizophrenia, alcoholism, delirium

12th week:

Lecture: Neurological diseases

14th week:

Lecture: Paediatric diseases Dental diseases

13th week:

Lecture: Psychiatry Psychosis,

Requirements

Attendance of both lectures and practices is mandatory. Presence is going to be recorded on your attendance sheet (to be brought for each occasion by the student). At the end of lectures/practices every student is going to get a stamp and signature from the lecturer/practice leader. In case of absence signature will be refused (except for cases of documented serious diseases or other reasonable causes - to be discussed with your educational coordinator).

On week 14. lecture books are going to be signed by the coordinator if all the necessary stamps and signatures have been collected

Evaluation:

Lecture and practice topics will be asked at the end of the semester.

Lectures will be available on the following website: <http://www.nepegeszseg.hu/pdf/>

Compulsory reading: Topics of lectures and practices

Further reading:

CURRENT Medical Diagnosis and Treatment, Edited by Stephen J. McPhee, Maxine A. Papadakis, Michael W. Rabow 2012, Fifty-First Edition (LANGE CURRENT Series), McGraw-Hill, 2011.

Harrison's Principles of Internal Medicine, Dan Longo, Anthony Fauci, Dennis Kasper, Stephen Hauser, J. Jameson, Joseph Loscalzo 18th Edition, 2011

Oxford Handbook of Public Health Practice Edited by Charles Guest, Walter Ricciardi, Ichiro Kawachi, and Iain Lang (2013, Third Edition)

During the semester there are going to be 2 written exams (weeks 7 and 13). 25 simple questions (from lecture and practice slides) are going to be asked on each occasion. At the end of the semester every student is going to get a mark based on his/her midterm exam results (maximum 50 points, 90-100% excellent, 80-89% good, 70-79% satisfactory, 60-69% pass, 0-59% fail). Every student can accept/turn down this mark. Those who are not willing to accept their marks have to take a written exam at the end of the semester during the exam period (25 simple questions from all semester topics, 90-100% excellent, 80-89% good, 70-79% satisfactory, 60-69% pass, 0-59% fail). Those who fail 2 times on the written exam during the exam period are going to take an oral exam (exam topics are the same as lecture and practice topics).

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: **28**

Lecture: **14**

Practical: **14**

1st week:

Lecture: Evolution of the welfare state and social service systems

Practical: Procedures and systems

2nd week:

Lecture: Health care as part of the social system

Practical: E-admin

3rd week:

Lecture: Principles of the Social Security Act, system of benefits

Practical: Basic principles

4th week:

Lecture: Institutional social care and management

Practical: Budget

5th week:

Lecture: European Social Charter and its Rules

Practical: Links with health and public health law

6th week:

Lecture: The evolution of social insurance systems

Practical: Links with health and public health law

7th week:

Lecture: Forms of social insurance: health insurance; pension insurance

Practical: Links with health and public health law

8th week:

Lecture: Accident insurance benefits in Hungary and in Western Europe

Practical: European unity

9th week:

Lecture: Health insurance benefits, the duration of the incapacity benefits (sick pay)

Practical: Procedures

10th week:

Lecture: Health insurance benefits provided in nature

Practical: EU legislation

11th week:

Lecture: International health organizations

12th week:

Lecture: Pension insurance systems in Western Europe

Practical: Basic principles of hiring

13th week:

Lecture: Forms of personal pension schemes, special rules of old-age and invalidity pension

Practical: Elements of the contract

14th week:

Lecture: Forms of dependent's pension schemes, the rules for Western European institutions

Practical: Limitation and special rules

Department of Preventive Medicine, Faculty of Public Health

Subject: **FIELD AND LABORATORY PRACTICE II.**

Year, Semester: 4th year/1st semester

Number of teaching hours: **168**

Practical: **168**

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 environmental 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 pharmaceuticals

Subject: **HEALTH PROMOTION**

Year, Semester: 4th year/1st semester

Number of teaching hours: **28**

Lecture: **10**

Practical: **18**

1. week

lecture: History and principles of health promotion.

seminar/practice: -

2. week

lecture: Determinants of health 1: policy.

seminar/practice: -

3. week

lecture: -

seminar/practice: Determinants of health 2: environment, health care, behaviour of individuals and groups.

4. week

lecture: Lifecourse in health: childhood and adult health.

seminar/practice: -

5. week

lecture: -

seminar/practice: Determinants of health 3: communities.

6. week

lecture: -

seminar/practice: Community development.

7. week

lecture: Models of behaviour change.

seminar/practice: -

8. week

lecture: -

seminar/practice: Behaviour change: motivation and skill improvement.

9. week

lecture: -

seminar/practice: Behaviour change among adolescents: peer education.

10. week

lecture: -

seminar/practice: Health promotion at settings.

11. week

lecture: -

seminar/practice: Basics of project planning.

12. week

lecture: -

seminar/practice: Public health projects.

13. week

lecture: Public health problems of

disadvantaged populations.

seminar/practice: -

14. week

lecture:-

seminar/practice: Group presentations.

Requirements

Attendance of the lectures and seminars is obligatory and is a precondition of signing the lecture book, maximum two absences are allowed in the semester. The subject leader may refuse to sign the lecture book if a student is absent more than twice in a semester even if he/she has an acceptable excuse.

Students are required to perform a health promotion project plan in form of a group presentation at the end of the semester. During the exam period the students are required to take a written test which will cover the topics of all lectures and seminars of the semester. Evaluation of the written test is assessed on a five-grade scale. The final mark is determined by the presentation score (33%) and the exam result (66%).

Subject: **NUTRITIONAL HEALTH AND FOOD SAFETY**

Year, Semester: 4th year/1st semester

Number of teaching hours: **42**

Lecture: **14**

Seminar: **28**

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 1. Energy expenditure

4th week:

Lecture: Dietary assessment

Seminar: Energy practice 2. Energy intake

5th week:

Lecture: Obesity epidemic

Seminar: Assessment of nutritional status.

Anthropometry

6th week:

Lecture: Nutritional deficiency disorders

Seminar: Prevention of nutritional deficiency disorders (project planning, small group work)

7th week:

Lecture: Diet and cardiovascular diseases

Seminar: Diet and prevention of chronic non-communicable diseases (poster presentation, small group work)

8th week:

Lecture: Diet and cancer

Seminar: Diet, macro- and micronutrients in health

promotion 1. (student ppt presentations and discussion)

9th week:

Lecture: Diabetes prevention strategies

Seminar: Diet, macro- and micronutrients in health promotion 2. (student ppt presentations and discussion)

10th week:

Lecture: Dietary guidelines

Seminar: Food competition day. (Food preparation and nutrient calculation of dishes)

11th week:

Lecture: Food safety. HACCP systems

Seminar: Food processing, preservations, food additives and regulations

12th week:

Lecture: Epidemiology of foodborne diseases

Seminar: Foodborne outbreak investigations (case study)

13th week:

Lecture: Food allergy and intolerance

Seminar: Food hygiene

14th week:

Lecture: Genetically modified food products

Seminar: Food law.

Requirements

Attendance on lectures and seminars is obligatory. If the number of absences from the seminar is more than two, the lecture book cannot be signed. Exam: written test, which assessed on five grade scale. Evaluation: less than 50% fail (1), 50-60% pass (2), 60-70% satisfactory (3), 70-80% good (4), more than 80% excellent (5).

Subject: **THESIS I.**

Year, Semester: 4th year/1st semester

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: **28**

Lecture: **14**

Practical: **14**

1st week:

Lecture: The development of labour law, the appearance of civil service employment law

Practical: Special rules

2nd week:

Lecture: Labour law principles, introductory provisions of the Code of Labour, the scope of the Act on Legal Status of Civil Servants

Practical: Career plan

3rd week:

Lecture: Subjects and establishment of civil service legal relationship

Practical: Disciplinary procedures

4th week:

Lecture: Content of civil service legal relationship, fundamental rights and obligations

Practical: Salary

5th week:

Lecture: Carrier development of civil servants

Practical: The social security and health insurance system

6th week:

Lecture: Working time and rest time rules for the civil service

Practical: Legal tools

7th week:

Lecture: Remuneration of civil servants

Practical: Legal tools

8th week:

Lecture: Liability of civil servants, disciplinary liability

Practical: Tasks

9th week:

Lecture: Civil servant's liability for damages

Practical: Tasks

10th week:

Lecture: Employer's liability for damages

Practical: Protecting interests - Chambers

11th week:

Lecture: Termination of the civil service legal relationship 1

Practical: The patient, as a person

12th week:

Lecture: Termination of the civil service legal relationship 2

Practical: Dignity

13th week:

Lecture: Civil service legal disputes

Practical: Mediation

14th week:

Lecture: Special conditions of employment in the civil service

Practical: The system of representation

Subject: **BASICS OF ECONOMY AND MANAGEMENT**

Year, Semester: 1st year/2nd semester

Number of teaching hours: **28**

Lecture: **28**

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 labor 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. Interdependence 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, effectuate and later stages.

11th week:

Lecture: Tendering possibilities in public health nowadays.

12th week:

Lecture: Quality control 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.

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 required 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: **168**

Practical: **168**

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 environmental 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 pharmaceuticals

Subject: **THESIS II.**

Year, Semester: 4th year/2nd semester

Department of Physiotherapy, Faculty of Public Health

Subject: **BASICS OF RESEARCH METHODOLOGY**

Year, Semester: 3rd year/2nd semester

Number of teaching hours: **28**

Lecture: **28**

1st week:

Lecture: The principles of scientific inquiry.
Validity, reliability, precision of research

2nd week:

Lecture: Types and process of scientific research

3rd week:

Lecture: Ethics of science

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 library

8th week:
Lecture: Orientation in the scientific literature I

9th week:
Lecture: Orientation in the scientific literature II

10th week:
Lecture: Study design

11th week:
Lecture: Collecting data, measurements, observations

12th week:
Lecture: Data storage, processing, and analysis

13th week:
Lecture: Interpreting, presenting and publishing results. Evidence-based practice

14th week:
Lecture: Rules of scientific publication

Requirements

Attendance at lectures is highly recommended, since the topics in examination cover the lectured topics. E-learning course contains the course material.

The course is closed by a written end of semester exam (ESE). The grading scale is as follows:

<54%: (1) fail

55-64%: (2) pass

65-74%: (3) satisfactory

75-84%: (4) good

85-100%: (5) excellent

The course supported by an e-learning module. The attendance at lectures cannot be replaced by the e-learning activity! 10% of the scores in the ESE can be achieved in the e-learning module. The bonus points are added to the score achieved in the written exam above 55%. The „fail” cannot be improved by bonus points.

Department of Preventive Medicine

Subject: **TERRESTRIAL ENVIRONMENTAL PROTECTION**

Year, Semester: 2nd year/2nd semester

Number of teaching hours: **18**

Lecture: **18**

1st week
Lecture: Introduction to the course, basics of environmental and nature protection

2nd week:
Lecture: Quantitative scientific tools in environmental science and environmental protection (Prof. dr. Béla Tóthmérész)

3rd week
Lecture: Categorisation of protected areas in

the world (dr. Orsolya Deák-Valkó)

4th week
Lecture: Conventions on biodiversity and environmental protection (dr. Balázs Deák)

5th week
Lecture: Mid-term exam and consultation (dr. Balázs Deák)

6th week

Lecture: Complexity of design of protected areas (Prof. dr. Béla Tóthmérész)

7th week

Lecture: Theoretical basics of species conservation (dr. Orsolya Deák-Valkó)

8th week

Lecture: Species conservation in practice (dr. Orsolya Deák-Valkó)

9th week

Lecture: Exam and consultation (Prof. dr. Béla Tóthmérész)

Requirements

- for a signature

Participation at classes is compulsory. A student must attend the classes and may not miss more than three times during the semester. In case a student does so, the subject will not be signed and the student must repeat the course. In case of more than three absences, a medical certificate needs to be presented.

-an offered grade:

During the semester there are two tests: the mid-term test in the 5th week and the end-term test in the 9th week. The offered grade is the average of them.

The minimum requirement for the tests (and also for the exam) is 60%. The grade for the tests and the examination is given according to the following table:

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

- for a grade

The course ends in a written exam. For the grades please refer the table above.

Literature

- Newman, E. I. 2000: Applied Ecology and Environmental Management. Blackwell Science Ltd., Oxford.

- Leuschner C., Ellenberg H. (2017): Vegetation Ecology of Central Europe I-II. Springer, Switzerland.

Subject: **AQUATIC ENVIRONMENTAL PROTECTION**

Year, Semester: 3rd year/1st semester

Number of teaching hours: **18**

Lecture: **18**

1st week

Lecture:

Introduction to aquatic environmental protection.

2nd week

Lecture:

Hydrosphere. Water distribution on Earth. Hydrologic cycle and its components.

3rd week

Lecture:

Water management. Concept of water resources management. Water demands and water use.

Static and dynamic water resources

4th week**Lecture:**

Water quality I: Water quality indicators: physical, chemical and biological parameters. Biological water quality classification (trophity, halobity, saprobity, toxicity). Water quality protection.

5th week**Practice:**

Water quality II: Evaluation of water toxicity by test organisms: Algal growth inhibition test, Daphnia acute immobilization test, Fish acute toxicity test and Seed germination (*Sinapis alba*) test.

6th week**Lecture:**

The EU Water Framework Directive (WFD). Objectives and implementation of WFD.

7th week**Lecture:**

Characterization of surface and groundwater resources. Principal sources and causes of water pollution. General categories of water contaminants. Control of water pollution.

8th week**Lecture:**

Definition and requirements of drinking water. Drinking water production.

9th week**Lecture:**

Definition of wastewater. Types and characteristics of wastewater. Wastewater treatment.

10th week**Lecture:**

Cultural eutrophication. Causes of eutrophication. Eutrophication processes. Controlling eutrophication.

11th week**Lecture:**

Wetlands. Characteristics of these habitats and the main causes of their destruction. Reservoirs of biodiversity.

12th week**Lecture:**

The main international conferences on the protection of the environment from Stockholm to present days. The Ramsar Convention.

13th week**Practice:**

Visit to the Surface Water Treatment Plant in Balmazújváros.

14th week

Practice: Student presentations

Requirements:

Attendance on the lectures is highly recommended, participation in practices is obligatory. Furthermore, during the semester students should give an oral presentation from a freely chosen topic in the fields of terrestrial environmental protection by using the scientific literature. Attendance of the practices and a well-made presentation are preconditions of fulfilling the requirements.

Examination

At the end of the semester, students are required to take a Final Exam. The exam includes 15 multiple choice test questions and 5 short questions (20 x 2 points). The control tests, including the topics of the lectures and practices, will be given during the semester.

Subject: **CLINICAL PROPEDEUTICS**

Year, Semester: 2nd year/1st semester

Number of teaching hours: **28**

Lecture: **14**

Practice: **14**

1st week

The behaviour of the staff in the medical and health care services

2nd week

Anamnesis, general physical examination

3rd week

Inspection, palpation, percussion, auscultation

4th week

Measurement of body temperature, body mass index and blood pressure

5th week

Radiology methods

6th week

Invasive and non-invasive instrumental examinations in cardio pulmonology

7th week

Methods of nuclear medicine

8th week

Laboratory diagnostic procedures

9th week

Physical examination of the abdomen

10th week

Ascites, vomitus, diarrhoea, obstipation

11th week

Reasons and recognition of the acute abdomen syndrome

12th week

Examination of the urogenital tract

13th week

Basic investigations of the movement and nervous systems

14th week

Practicals give possibilities for individual trainings in the basic methods

Subject: **WORK SAFETY AND FIRE PROTECTION**

Year, Semester: 1st year/1st semester

Number of teaching hours: **14**

Seminar: **14**

Subject: **BASICS OF PEDAGOGY**

Year, Semester: 1st year/1st semester

Number of teaching hours: **14**

Lecture: **14**

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 aims Process 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

Department of Behavioural Sciences

Subject: **HEALTH ANTHROPOLOGY**

Year, Semester: 1st year/1st semester

Number of teaching hours: **15**

Seminar: **15**

1st week:

Lecture: Introduction, methods, tasks

2nd week:

Lecture: The importance of an anthropological perspective in public health

3rd week:

Lecture: Methods of approach I.: science vs. hermeneutics

4th week:

Lecture: Methods of approach II: modern vs. postmodern

5th week:

Lecture: How culture can influence disease and health issues

6th week:

Lecture: Relationship between CAM and biomedicine I.

7th week:

Lecture: Relationship between CAM and biomedicine II

8th week:

Lecture: Body concepts in cultural perspectives

9th week:

Lecture: Medicalization in cultural context

10th week:

Lecture: Medicalization and health care systems II.

11th week:

Lecture: Pain and suffering in cultural context

12th week:

Lecture: The aspects and meanings of death and dying

13th week:

Lecture: Mental health in cultural context I.

14th week:

Lecture: Mental health in cultural context II.

Subject: **GERONTOLOGY**

Year, Semester: 3rd year/2nd semester

Number of teaching hours: **28**

Lecture: **28**

1st week:

Lecture: Basic terms of gerontology

2nd week:

Lecture: Gerontology in mirror of statistics I:
Process of aging of individuals

3rd week:

Lecture: Gerontology in mirror of statistics
II: Tendencies of mortality

4th week:

Lecture: Systemic approach of gerontology

5th week:

Lecture: Biogerontology: the basics

6th week:

Lecture: Biogerontology: aging theories

7th week:

Lecture: Biogerontology: experimental
gerontology

8th week:

Lecture: Biogerontology: aging and diseases

9th week:

Lecture: Geriatrics: Physiological as well as
pathological alterations due to aging I

10th week:

Lecture: Geriatrics: Physiological as well as
pathological alterations due to aging II

11th week:

Lecture: Social gerontology:
Gerontopsychology

12th week:

Lecture: Social gerontology: Aspects of the
society regarding aging

13th week:

Lecture: Prevention and aging

14th week:

Lecture: Possibilities for the slowing down
of the aging process

Requirements

Attendance at lectures is highly recommended, since the topics in examination cover the lectured topics. Students are encouraged to prepare and present own presentations from the topics.

ESE will be carried out as a written exam. The final score will be evaluated on the basis of the written exam and the personal activity during the semester.

Subject: **BASICS OF DIETETICS**

Year, Semester: 3rd year/2nd semester

Number of teaching hours: **28**

Lecture: **14**

Practice: **14**

1st week

Introduction to dietetic nutrition; basic definitions; energy and food requirements; nutrients (proteins, fats, carbohydrates; vitamins, minerals)

2nd week

Characteristics of the nutrition of the Hungarian population

3rd week

Principles of the healthy nutrition; food

pyramid

4th week

Food product knowledge; cereals; vegetables, fruits, milk products; meats, fats, oils, sweeties, drinks – their importance in the nutrition physiology

5th week

Undernourishment and its consequences

6th week

Metabolic syndrome, its dietetic treatment; diet in the diseases of the movement system; vegetarian diets

7th week

Diet in pregnancy and lactation

8th week

Practice: Calculation of the energy and nutrient content of foods

9th week

Kitchen technologies for health prevention

10th week

Construction and evaluation of a health protective diet

11th week

Possibilities of roboration: Diet in obesity and diabetes mellitus.

12th week

Dietetic treatment of osteoporosis

13th week

Patient health education

14th week

Practice

Subject: **HEALTH PROMOTION IN PRIMARY CARE**

Year, Semester: 4th year/1st semester

Number of teaching hours: **14**

Practice: **14**

1st week:

Practical: Introduction to health promotion. Determinants of health: environment and health care

2nd week:

Practical: History and principles of health promotion. Determinants of health: policy

3rd week:

Practical: Health promotion at settings. Prevention

4th week:

Practical: Prevention. Project, program, strategy. Basics of project planning

5th week:

Practical: Public health projects

6th week:

Practical: Physiotherapist in the healthcare system

7th week:

Practical: Physiotherapy in the primary care

Requirements

Attendance at practices is compulsory. If you miss more than 2 practical hours, the signature of the Lecture Book may be refused.

CHAPTER 9

LIST OF TEXTBOOKS

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

Hungarian Language:

Gerő Ildikó-Kovács Judit: Színesen magyarul. 2017.

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.

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., Csontos: 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.

Basics of Informatics:

Handbooks of MS Office applications, Internet sources.

Psychology:

Seegerstrale, 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.

Public health medicine (I-IV):

Current Medical Diagnosis and Treatment, Edited by Stephen J. McPhee, Maxine A. Papadakis,
Michael W. Rabow 2012, Fifty-First Edition (LANGE CURRENT Series), McGraw-Hill, 2011.

Harrison's Principles of Internal Medicine, Dan Longo, Anthony Fauci, Dennis Kasper, Stephen
Hauser, J. Jameson, Joseph Loscalzo 18th Edition, 2011

Oxford Handbook of Public Health Practice Edited by Charles Guest, Walter Ricciardi, Ichiro

Kawachi, and Iain Lang (2013,Third Edition)

Lectures will be available on the following website: <http://www.nepegeszseg.hu/pdf/>

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:

Tom L. Beauchamp and James F. Childress: The principles of biomedical ethics. 7th edition, (chapter given at the lectures) ISBN: 9780199924585. 2012.

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.

Hungarian Language I:

Gerő Ildikó-Kovács Judit: Színesen magyarul.2017.

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. 7th. 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.

Schowalter T.D.: Insect Ecology: An Ecosystem Approach. Fourth Edition. Elsevier, London, 2016. ISBN: 9780128030332.

Smith R. L: Ecology and Field Biology. Harper Collins College Publishers, New York, 1996. ISBN: 9780065009767.

All topics of the lectures and seminars.

Mathematical basics of biostatistics:

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.

Kirkwood B., Sterne JAC.: Essential medical statistics. Blackwell Science, Oxford, 2006.

Health informatics:

Handbooks of MS Office applications, Internet sources.

Medical latin:

Répás László: Basics of Medical Terminology, Latin and Greek Origins I. Répás László, 2016.

Martin, E.: Oxford Concise Medical Dictionary. 9th. Oxford University Press, 2015. ISBN: 978-0199-6878-17.

Philosophy:

Gardner, J.: Sophie's World: A Novel About the History of Philosophy. Reprint edition. Farrar, Straus and Giroux, 2007. ISBN: 0-5223-5934-8.

Additional Reading: Dawson, A. (ed): Public Health Ethics: Key Concepts and Issues in Policy and Practice. New York, NY. Cambridge University Press, 2011. ISBN: 978-0521689366.

Introduction to public health:

Mary-Jane Schneider: Introduction to Public Health, Second Edition, Rensselaer, New York, 2006. 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 Embryology. 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.

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CHAPTER 10

TITLES OF THESES

Balázs Ádám M.D., PhD

Thesis:

- Evaluation of health hazards in the workplace
- Characterization of occupational diseases
- Genotoxic exposures in the occupational and ambient environment
- Burden of occupational and environmental diseases
- Health impact assessment of policies, programmes and projects

János Sándor M.D., PhD

Thesis:

- Evaluation of chronic care for hypertension in general medical practice
- Evaluation of chronic care for diabetes mellitus in general medical practice
- Evaluation of chronic care for adult over weighted in general medical practice
- Evaluation of chronic care for adult smokers in general medical practice

Helga Bárdos M.D., PhD

Thesis and TDK:

- Gene-environment interactions and obesity (systematic review)
- The effect of school based health promotion programs on nutrition (systematic review)
- The effect of neighborhood environment on physical activity and diet (systematic review)
- Analysis of factors affecting risk perceptions (study)
- Prevalence of obesity (trend analysis)

Szilvia Fialat M.D., PhD

Thesis and TDK:

- Genomic determinants of cardiovascular diseases

Orsolya Varga, M.D., PhD

Thesis and TDK:

- National strategies and policies to prevent type 2 diabetes in the member states of the European Union

Éva Bíró M.D., PhD

Thesis and TDK:

- Mental health of youth (study, interventions)
- Health status and health-related behaviours of youth (study, interventions)
- Health literacy (study, interventions)

László Pál PhD.

Thesis

- Pesticide use in developed and developing countries
- Burden of disease attributable to radon exposure

Sándor Szűcs PhD.

- Analysis of mortality due to environmental risk factors in European countries
- Analysis of disease burden attributed to environmental risk factors in European countries
- Analysis of mortality due to lifestyle factors in European countries
- Analysis of disease burden attributed to lifestyle factors in European countries

Károly Nagy PhD.

Thesis:

Genetic epidemiology of obesity (literature review)
Investigation of workplace hazards

TDK:

Investigation of chemical-induced DNA damage by using the comet assay
Assessment of ergonomic hazards among drivers

Attila Nagy M.D., PhD

The prevalence of diabetes in a given area
Study design for diabetes monitoring

Attila Bánfalvi PhD.

Medicalization and its social-cultural context
Contemporary problems of Psy-complex

Sándor Kömüves PhD.

Thesis:

Palliative care and euthanasia

László Róbert Kolozsvári M.D., PhD

Early detection of dementia and cognitive impairment in primary care
Health impairment related to occupational hazards
Obesity and physical activity
Quality and safety in primary care

Anna Nánási M.D.

The role of telemedicine in primary care
The role of the family doctor in the care of musculoskeletal disorders

Viktor Dombrádi PhD.

Thesis:

Quality management in healthcare
ISO 9001 certification and accreditation in healthcare
Patient safety in hospitals
Patient-centered healthcare

Gábor Bányai-Márton

Thesis and TDK:

History of international health organizations
Bioterrorism and global health security

Klára Bíró, D.MD.

Thesis and TDK:

Increasing expectations among healthcare consumers
Challenges for healthcare managers

Judit Zsuga M.D.

Thesis and TDK

Workplace stress in health care
Performance and workplace stress

Klára Boruzs PhD.

Thesis and TDK:

Drug utilization in the world

The pharmaceutical industry's operation from viewpoint of the management

Drug utilization in the world

The pharmaceutical industry's operation from viewpoint of the management

Balázs Lukács PhD.

Effect of physical activity on cardiovascular health in young adults

Falls in the elderly: risk factors and prevention