

BULLETIN

UNIVERSITY OF DEBRECEN

ACADEMIC YEAR 2021-2022

FACULTY OF PUBLIC HEALTH

BSc in Public Health

CONTENT

ORGANISATION STRUCTURE	9
ADMINISTRATIVE UNITS	10
DEPARTMENTS OF THE FACULTY OF PUBLIC HEALTH	12
UNIVERSITY CALENDAR	13
ACADEMIC PROGRAM FOR CREDIT SYSTEM	14
ACADEMIC PROGRAMME	20
LIST OF TEXTBOOKS.....	79
TITLES OF THESES.....	85

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.

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 Biostatistics and Bioinformatics
Department of Health Promotion
Department of Humanities for Health Care
Department of Intervention Epidemiology
Department of Habilitation Medicine
Division of Public Health Medicine
Department of Physiotherapy

Department of Hospital Hygiene and Infection Control
Department of Health Management and Quality Assurance
Unit of Leadership Training for Health Care

MISSION OF THE FACULTY OF PUBLIC HEALTH

The mission of the Faculty of Public Health of the University of Debrecen as the center 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 the experience in education of physiotherapists at the University of Debrecen. 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 BSc in Dietetics programme starts in the academic year 2021/22 at first.

The international MSc programs (MSc in Public Health, MSc in Complex Rehabilitation) launched by the Faculty of Public Health are offered for students graduated in the BSc courses of health sciences. Students studying in English – similarly to those studying in Hungarian – will have the opportunity to join the Students' Scientific Association, the most important means to prepare students for future academic career.

Outstanding students may present their work at the local Students' Scientific Conference organized by the Council of the Students' Scientific Association annually. Best performing students can advance to the National Students' Scientific Conference held every second year. Another way for students to introduce their scientific findings is to write a scientific essay which is evaluated through a network of reviewers.

CHAPTER 2
ORGANISATION STRUCTURE

RECTOR OF THE UNIVERSITY OF
DEBRECEN

Rector	Zoltán Szilvássy M.D., Ph.D., D.Sc.
Address	4032 Debrecen, Egyetem tér 1.
Phone	+36-52-416-060
Phone/fax	+36-52-416-490
E-mail	rector@unideb.hu

COORDINATING CENTER FOR
INTERNATIONAL EDUCATION

Director	Attila Jenei M.Sc., Ph.D.
Address	4032 Debrecen, Nagyerdei krt. 94.
Phone	+36-52-258-058
Fax	+36-52-414-013
E-mail	info@edu.unideb.hu

FACULTY OF PUBLIC HEALTH

Dean	Judit Zsuga M.D., PhD.
Address	4028 Debrecen, Kassai út 26/b.
Phone	+36-52-512-765
Fax	+36-52-512-769
E-mail	zsuga.judit@med.unideb.hu

Vice-Dean for Educational Affairs	Ilona Veres-Balajti MSc., Ph.D.
Address	4028 Debrecen, Kassai út 26/b.
Phone	+36-52-512-765/77134, 77135
E-mail	balajti.ilona@sph.unideb.hu

CHAPTER 3
ADMINISTRATIVE UNITS

EDUCATIONAL ORGANIZATIONAL OFFICE OF FACULTY OF PUBLIC HEALTH

Kassai str. 28, Debrecen, 4028, Tel: 52-512-765/77408

E-mail: info@sph.unideb.hu, Web: http://nk.unideb.hu

Head	Ms. Zsuzsa Nagy-Belgyár
Education Officer, Contact Person	Ms. Andrea Debreczeni
	Ms. Regina Szabó
	Ms. Andrea Szűcs
	Ms. Tímea Varga-Géber

COORDINATING CENTER FOR INTERNATIONAL EDUCATION

Nagyerdei krt. 94., Debrecen, 4032 Telephone: +36-52-258-058

E-mail: info@edu.unideb.hu, Web: www.edu.unideb.hu

Director	Prof. Attila Jenei M.Sc., Ph.D.
Program Coordinator	Prof. Ferenc Erdódi M.Sc., Ph.D., D.Sc.
BMC Coordinator	Ms. Beáta Lontay M.Sc., Ph.D.
Manager Assistant	Ms. Márta Hajdu M.A.
Agent&Marketing Coordinator	Tamás Zabán M.Sc.
Marketing Coordinator	Ms. Eszter Balázs M.Sc.
	Ms. Dóra Mónus M.A.
Financial Coordinator	Ms. Rita Kovács J.D.
Agent Coordinator	József Harmati J.D.
Ranking and Marketing Coordinator	Ms. Zsófia Münnich M.Sc.
English Program Coordinators	Ms. Dóra Benkő (Admission, Visa Issues, BMC, US Loans)
	Ms. Regina Berei (Tuition fee, Financial certificates, Refunds)
	Ms. Marianna Gyuris (Admission, Visa issues, USMLE, MCCEE, Stipendium Hungaricum Scholarship, Wyckoff Heights)
	Ms. Ildikó Lakatos M.A. (Admission, Visa Issues)
	Ms. Krisztina Németh M.Sc. (Bulletin)
	Ms. Enikő Sallai M.Sc. (Tuition fee, Health Insurance)

ENGLISH PROGRAM BULLETIN FOR BSC IN PUBLIC HEALTH

IT Project Coordinator

Ms. Mária Tóth M.Sc.
(Stipendium Hungaricum Scholarship)

Imre Szűcs B.Sc.

CHAPTER 4
DEPARTMENTS OF THE FACULTY OF PUBLIC HEALTH

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

Nagyerdei krt. 98., Debrecen, 4032, Tel: 06-52-255-052

E-mail: hadhazy.gyongyi@sph.unideb.hu, Web: www.emmt.unideb.hu

Associate Professor, Head of Department	Ms. Klára Bíró D.M.D., Ph.D.
Associate Professor	Ms. Judit Zsuga M.D., Ph.D.
Assistant Lecturer	Mr. Gábor Bányai-Márton, J.D.
	Ms. Klára Boruzs MBA, Ph.D.

DEPARTMENT OF PHYSIOTHERAPY, FACULTY OF PUBLIC HEALTH

Kassai str. 26., Debrecen, 4028, Tel: 36-52-512-732

E-mail: bessenyei.lilla@sph.unideb.hu, Web: <http://nk.unideb.hu>

Associate Professor, Head of Department	Ms. Ilona Veres-Balajti M.Sc., Ph.D.
Assistant Professor	Mr. Balázs Lukács M.Sc., Ph.D.
Assistant Lecturer	Ms. Zsuzsa Lábiscsák-Erdélyi M.Sc.
	Ms. Éva Csepregi, M.Sc.
	Ms. Anett Csuhai, M.Sc.
Research Assistant	Ms. Krisztina Berki
	Ms. Blanka Besenyei
	Ms. Dóra Lámfalusi-Németh M.Sc.

CHAPTER 5
UNIVERSITY CALENDAR

UNIVERSITY CALENDAR FOR THE BSC IN PUBLIC HEALTH PROGRAM
ACADEMIC YEAR 2021/2022

Academic year opening ceremony	5 th September 2021 (Sunday)
1 st semester Registration week	30 th August –3 rd September 2021(1 week)
1 st semester study period	6 th September 2021–10 th December 2021(14 weeks)
Professional week (no education)	18 th October 2021–22 th October 2021(1 week)
1 st semester exam period	13 th December 2021–28 th January 2022(7 weeks)
1 st semester extension week	31 th January 2022–4 th February 2022(1 week)
2 nd Semester Registration week	31 th January 2022–4 th February 2022(1 week)
2 nd semester study period	7 th February 2022–13 ^h May 2022(14 weeks)
Professional week (no education)	21 th March 2022–25 th March 2022(1 week)
2 nd semester exam period	16 th May 2022–1 st July 2022(7 weeks)
2 nd semester extension week	4 th July 2022–8 th July 2022(1 weeks)
Graduation ceremony (plan)	24 th June 2022 (Friday)

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.

ENGLISH PROGRAM BULLETIN FOR BSC IN PUBLIC HEALTH

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

	Subject	Subject type: compulsory/elective	Lec	Sem	Pract	TOT	Cr	Ass	Pre- requirement
I.SEMESTER	Applied Health Sciences I.	compulsory	52	39	0	91	8	ESE	
	Anatomy	compulsory	39	39	0	78	6	ESE	
	General principles in nursing and clinical propedeutics	compulsory	13	13	0	26	6	ESE	
	Introduction to basics of biostatistics	compulsory	0	13	13	26	2	AW5	
	Health informatics I.	compulsory	10	0	16	26	2	AW5	
	Basics of physiotherapy	compulsory	26	0	0	26	2	ESE	
	Roger's Conversation	compulsory	13	0	0	13	1	AW5	
	Physical education I.	compulsory	26	0	0	26	0	Sign	
	Hungarian language I.	compulsory for SH students	0	0	28	28	0	Sign	
Total			179	104	57	340	27		
II.SEMESTER	Applied Health Sciences II.	compulsory	52	39	0	91	8	ESE	Applied Health Sciences I.
	General principles in nursing and clinical propedeutics - Summer practice	compulsory	0	0	39	39	0		
	Basics of biostatistics	compulsory	13	26	0	39	3	ESE	Introduction to basics of biostatistics
	Basics of dietetics	compulsory	26	0	0	26	2	ESE	General principles in nursing and clinical propedeutics
	Health informatics II.	compulsory	10	0	16	26	2	AW5	Health informatics I.
	Physiology I.	compulsory	26	13	0	39	3	ESE	General principles in nursing and clinical propedeutics Applied Health Sciences I.
	Basics of epidemiology	compulsory	13	13	0	26	2	ESE	
	Communication	compulsory	13	0	0	13	1	AW5	Roger's Conversation
	Basics of quality assurance	compulsory	26	0	0	26	2	ESE	
	Ecology	compulsory	26	13	0	39	3	ESE	
	Hungarian language II.	compulsory for SH students	0	0	28	28	0	Sign	
	Elective subjects	elective					1		
	Physical education II.	criteria	26	0	0	26	0	Sign	
Total			231	104	83	418	27		

ENGLISH PROGRAM BULLETIN FOR BSC IN PUBLIC HEALTH

	Subject	Subject type: compulsory/elective	Lec	Sem	Pract	TOT	Cr	Ass	Pre- requirement
III.SEMESTER	Basics of psychology	compulsory	26	0	0	26	3	ESE	
	Professional Hungarian language I.	compulsory	0	26	0	26	2	AW5	
	Physiology II	compulsory	26	0	13	39	4	ESE	Physiology I.
	First aid	compulsory	13	0	13	26	2	AW5	
	Food Processing Technologies	compulsory	13	0	26	39	3	AW5	
	Introduction to law	compulsory	26	0	0	26	2	ESE	
	Microbiology I.	compulsory	13	13	0	26	2	ESE	Applied Health Sciences II.
	Work and fire regulations	compulsory	0	6	0	6	1	AW5	
	Public health medicine I.	compulsory	52	0	0	52	4	ESE	Basics of dietetics
	Latin Language	compulsory	0	26	0	26	2	AW5	
	Elective subjects	elective					4		
Total			169	97	52	318	29		
IV.SEMESTER	Professional Hungarian language II.	compulsory			0	0	0	AW5	Professional Hungarian language I.
	Principles of Health Sciences	compulsory	10	0	0	10	2	ESE	Anatomy, Physiology II.
	Health care law	compulsory	10	0	0	10	1	ESE	Introduction to law
	Environmental health	compulsory	20	0	0	20	5	ESE	Ecology
	Environmental health – Block practice	compulsory	0	0	30	30	0		
	Microbiology II.	compulsory	20	0	0	20	5	ESE	Microbiology I.
	Microbiology II. – Block practice	compulsory	0	0	30	30	0		
	Public health medicine II.	compulsory	20	20	0	40	7	ESE	Public health medicine I.
	Public health medicine II. – Block practice	compulsory	0	0	30	30	0		
	Psychotherapeutic and Addictological Skills	compulsory	20	0	10	30	3	ESE	Basics of psychology I.
Elective subjects	elective					5			
Total			100	20	100	220	28		

ENGLISH PROGRAM BULLETIN FOR BSC IN PUBLIC HEALTH

	Subject	Subject type: compulsory/elective	Lec	Sem	Pract	TOT	Cr	Ass	Pre- requirement
V. SEMESTER	Basics of pedagogy	compulsory	10	0	0	10	1	ESE	
	Basics of sociology	compulsory	10	0	0	10	1	ESE	
	Health Policy Knowledge	compulsory	20	0	0	20	2	ESE	Health care law
	Philosophy	compulsory	10	0	0	10	1	ESE	
	Occupational health and Safety I.	compulsory	20	0	0	20	5	ESE	Basics of epidemiology Environmental health
	Occupational health and Safety I. – Block practice	compulsory	0	0	30	30	0		
	Economics and management	compulsory	20	0	0	20	2	ESE	
	Pharmacology	compulsory	20	0	0	20	2	ESE	Physiology II., Microbiology II.
	Infectology	compulsory	10	0	0	10	4	ESE	Microbiology II.
	Infectology – Block practice	compulsory	0	0	30	30	0		
	Health Care Law I.	compulsory	20	0	0	20	2	ESE	Health care law
	Public health medicine III.	compulsory	20	20	0	40	7	ESE	Public health medicine II.
	Public health medicine III. – Block practice	compulsory	0	0	30	30	0		
	Planning public health programs	compulsory	10	10	0	20	2	ESE	
Epidemiology of communicable and non-communicable diseases I.	compulsory	20	20	0	40	4	ESE	Basics of epidemiology	
	Total		190	50	90	330	33		
VI. SEMESTER	Bioethics	compulsory	10	0	0	10	1	ESE	
	Thesis I. – Basics of research methodology	compulsory	0	0	10	10	3	AW5	
	Health sociology	compulsory	20	0	0	20	2	ESE	Basics of sociology
	Occupational health and Safety II.	compulsory	20	0	0	20	5	ESE	Occupational health I.
	Occupational health and Safety II. – Block practice	compulsory	0	0	30	30	0		
	Child and adolescent health	compulsory	20	0	0	20	2	ESE	
	Infection Control	compulsory	10	0	0	10	4	ESE	
	Infection Control – block practice	compulsory	0	0	30	30	0		
	Health Care Law II.	compulsory	20	0	0	20	2	ESE	Health Care Law I.
	Public health medicine IV.	compulsory	20	20	0	40	5	ESE	Public health medicine III.

ENGLISH PROGRAM BULLETIN FOR BSC IN PUBLIC HEALTH

	Public health medicine IV. – Block practice	compulsory	0	0	30	30	0		
	Epidemiology of communicable and non-communicable diseases II.	compulsory	10	20	0	30	3	ESE	Epidemiology of communicable and non-communicable diseases I.
	Terrestrial and Aquatic environmental protection	compulsory	20	0	0	20	2	AW5	Ecology
	Elective subjects	elective					2		
Total			144	0	196	355	31		
	Subject	Subject type: compulsory/elective	Lec	Sem	Pract	TOT	Cr	Ass	Pre-requirement
VII. SEMESTER	Thesis II.	compulsory	0	0	10	10	9	AW5	Thesis I.
	Health promotion	compulsory	10	10	0	20	2	ESE	Health promotion and health policy
	Health promotion in primary care	compulsory	10	0	0	10	1	AW5	Health promotion and health policy
	Health promotion in primary care – block practice	compulsory	0	0	30	30	0		
	Professional Health Care Communication (Communication of Health Information for Not Qualified People)	compulsory	10		0	20		ESE	
	Food safety	compulsory	10	20	0	30	3	ESE	
	Epidemiological and Biostatistical Knowledge	criteria	10	0	0	10	2	ESE	Basics of epidemiology Basics of biostatistics
	Hospital Hygiene	compulsory	20	0	0	20	8	ESE	Infectology
	Hospital Hygiene – Block practice	compulsory	0	0	60	60	0		
	Epidemiology of communicable and non-communicable diseases III.	compulsory	10	10	0	20	2		
	Nutritional health and food safety	compulsory	10	20	0	30	3	ESE	Microbiology II.
	Cardiopulmonary Resuscitation (CPR)	criteria	0	0	10	10	1	AW5	
Total			90	70	110	270	33		
VIII. SE	Thesis III.	compulsory	0	0	10	10	8	AW5	Thesis II.
	Field and laboratory practice	compulsory	0	0	420	420	24	AW5	
Total			0	0	430	430	32		
Subtotal			1109	459	966	2534	240		

CHAPTER 8
ACADEMIC PROGRAMME

Subject: **APPLIED HEALTH SCIENCES I.**

Year, Semester: 1st year/1st semester

Number of teaching hours:

Lecture: **52**

Seminar: **39**

1. week

1. Basic chemical concepts, structure of atoms 2. Introduction to biophysics, types and law of radioactive decay, radioactive series 3. General cell biology, pro-and eucaryotes, basic cellular functions.

1. Basic chemical concepts, structure of atoms.

2. week

1. Chemical bonds 2. Electromagnetic waves, dual nature of light, matter waves, production of light 3. Nucleus, chromatin, chromosomes.

2. Types and law radioactive decay.

3. week

1. Water, aqueous solutions, acids, bases, buffers 2. Molecular spectra. Jablonski diagram, fluorescence, phosphorescence and their applications 3. Cell cycle and its regulation.

3. General cell biology, pro-and eucaryotes, basic cellular functions.

4. week

1. Reaction kinetics, types of chemical reactions, catalysis 2. Radiation and its interaction with absorbing matter. Detection of radiation 3. Mitosis, meiosis, the human genome, results of HGP.

1. Chemical bonds. Water, aqueous solutions, acids, bases, buffers. Reaction kinetics, types of chemical reactions, catalysis.

5. week

1. Oxidation, reduction, redox processes 2. Radiation biophysics: target theory, direct and indirect action of radiation, dosimetry, the biological effect of radiation 3. Genetic code, regulation of procaryotic gene expression.

2. Electromagnetic waves, dual nature of light, matter waves, production of light. Molecular spectra. Jablonski diagram, fluorescence, phosphorescence and their applications.

6. week

1. Types of carbon bonding, classification of organic compounds 2. Experimental, diagnostic and therapeutic applications of radioactive isotopes; accelerators 3. Regulation of eucaryotic gene expression, epigenetics.

3. Nucleus, chromatin, chromosomes, cell cycle and its regulation. Mitosis, meiosis, human genome; results of HGP. The genetic code, regulation of pro-and eucaryotic gene expression, epigenetics.

7. week

1. Hydrocarbons 2. Generation of X-rays, its absorption mechanisms; X-ray crystallography 3. Mendelian genetics, Mendel's 1st law, monogenic inheritance, monohybrid cross, genes, alleles, genotype, phenotype.

1. Oxidation, reduction, redox processes. Types of carbon bonding, classification of organic compounds.

8. week

1. Halogenated hydrocarbons, alcohols, ethers 2. Basics of nuclear magnetic resonance (NMR), NMR spectroscopy in biology and in medicine 3. Mendel's 2nd law, dihybrid cross, dominant and recessive alleles, gene interactions, epistasis, lethal genes, autosomal and X-linked genes.

2. Radiation and its interaction with absorbing matter. Detection of radiation. Radiation biophysics: target theory, direct and indirect action of radiation, dosimetry, the biological effect of radiation. Experimental, diagnostic and therapeutic applications of radioactive isotopes; accelerators.

9. week

1. Aldehydes, ketones, carboxylic acids, esters 2. X-ray diagnostics, CT, magnetic resonance imaging (MRI) 3. Population genetics.

1. Hydrocarbons. Halogenated hydrocarbons, alcohols, ethers. Aldehydes, ketones, carboxylic acids, esters.

10. week

1. Nitrogen-containing bases, nucleosides, nucleotides, nucleic acids 3. Mutations, DNA repair, DNA polymorphisms, human blood group systems, the HLA system.

3. Mendelian genetics, Mendel's 1st law, monogenic inheritance, monohybrid cross, genes, alleles, genotype, phenotype. Mendel's 2nd law, dihybrid cross, dominant and recessive alleles, gene interactions, epistasis, lethal genes, autosomal and X-linked genes. Mutations, DNA repair, DNA polymorphisms, human blood group systems, the HLA system.

11. week

1. Amines, amides, amino acids, peptides. 2. Gamma camera, SPECT, PET. 3. Molecular background of hereditary diseases.

2. Generation of X-rays, its absorption mechanisms, CT; basics of nuclear magnetic resonance (NMR), NMR spectroscopy in biology and in medicine, magnetic resonance imaging (MRI). Gamma camera, SPECT, PET.

12. week

1. Proteins. 2. Sedimentation and electrophoretic techniques, mass spectrometry. 3. Genetic background of tumors; oncogenes.

1. Nitrogen-containing bases, nucleosides, nucleotides, nucleic acids. Amines, amides, amino acids, peptides. Proteins. 2. Sedimentation and electrophoretic techniques, mass spectrometry, X-ray crystallography.

13. week

1. Carbohydrates. 2. Chemical potential, Brownian motion, diffusion on molecular level, statistical interpretation, Fick's laws, osmosis. 3. Pharmacogenetics and pharmacogenomics, ecological genetics.

3. Population genetics. Genetic background of tumors; oncogenes. Genetic background of tumors, oncogenes. Pharmacogenetics and pharmacogenomics, ecological genetics.

14. week

1. Lipids 2. Structure of biological membranes, membrane transport 3. Disease-gene associations, prenatal diagnostics, genetic consulting, ethical issues.

1. Carbohydrates. Lipids. 2. Chemical potential, Brownian motion, diffusion on molecular level, statistical interpretation, Fick's laws, osmosis. Structure of biological membranes, membrane transport.

Attending lectures is recommended, attending seminars is mandatory. The maximum absence from seminars is permitted to be 1 occasion (3 hours)/semester. Participation can be made up in another group, after consulting with the seminar leader. Exceeding the permitted absence (regardless of being confirmed or unjustified) will result in a refusal of the signature. The material covered during lectures and seminars is the base of the mid-semester (week #7) and end-of-semester (week #14) written tests. Based on the achieved average scores of the two tests, the grades of the best scores (top 1/3 of ranked scores) will be offered. If a student does not receive an offered grade or if it is not adequate for him/her, he/she must take a written exam during the exam period.

Subject: ANATOMY

Year, Semester: 1st year/1st semester

Number of teaching hours:

Lecture: **39**

Seminar: **39**

1. week

1. Levels of organization of the human body, epithelium, connective tissue
2. Skin

2. week

1. Muscle tissue, bone, cartilage, skeletal system, joints
2. Anatomy of the heart, histology of blood vessels

3. week

1. Histology of the blood, the role of white blood cells in immunity
2. Lymph circulation, lymph nodes, spleen

4. week

1. Respiratory system: nasal cavity, larynx
2. Respiratory system: anatomy and histology of the trachea and lungs

5. week

1. Digestive system: oral cavity, pharynx, esophagus, stomach
2. Digestive system: anatomy and histology of the intestine, liver and pancreas

6. week

1. Organization of the urinary system
2. Anatomy of the male and female genital organs

8. week

1. Mid-term test: anatomy of inner organs, tissues
2. Embriology

9. week

1. Endocrine organs: thyroid gland, parathyroid gland, adrenal gland
2. Nervous tissue, organization of the nervous system, the spinal cord and spinal nerves

10. week

1. Structure of the brainstem
2. Cranial nerves

11. week

1. Anatomy and histology of the cerebellum
2. Diencephalon, thalamus, hypothalamus

12. week

1. Parts of the forebrain, histology of the forebrain
2. Meninges, liquor and blood circulation of the brain

13. week

1. Somatomotor system, somatosensory system
2. Visual system, auditory and vestibular system

14. week

Mid-term test: neuroanatomy, embriology, endocrine organs

Requirements

The aim of the course is to provide students with a basic anatomical knowledge of the structure and basic functions of the major organ systems of the human body.

Tantárgyi követelmények:

- Attendance at the lessons: Concerning attendance, the rules written in the Regulations Governing Admission, Education and Examinations of the University are valid. The attendance in seminars is obligatory and will be recorded.
- Allowed absences: The subject coordinator may refuse to accept the academic performance if a student is absent from more than two practices in the semester.
- Midterm examinations: Two written midterm exams will be held.
- Planned week of the midterms: Two midterm examinations will be held on 8th and 14th weeks.
- End term examinations: The first examination is in written, in case of failure to pass the written exam or failure of the written exam an oral examination will be held.
- Condition for obtaining a signature: The student fulfils the requirements written in the Regulations Governing Admission, Education and Examinations of the University, as regards the attendance at the lessons.

Compulsory reading: (max. 1, vagy témakörönként több, de jelölve a fejezeteket):

András Birinyi: Anatomy, Lecture notes, University of Debrecen

Further reading: Sobotta: Atlas of Human Anatomy

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

Year, Semester: 1st year/1st semester

Number of teaching hours:

Lecture: **13**

Seminar: **13**

1. 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.

2. 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.

3. 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.

4. 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.

5. 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.

6. week

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

7. week

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

8. 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).

9. 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.

10. 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.

11. week

Lecture: Physical examination of the respiratory and cardiovascular system.

12. week

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

13. week

Lecture: Physical examination of the locomotors system and the nervous system.

14. 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.

Subject: INTRODUCTION TO BASICS OF BIOSTATISTICS

Year, Semester: 1st year/1st semester

Number of teaching hours:

Seminar: **13**

Practical: **13**

1. week

The role and importance of statistical analysis

Demonstration of a statistical software package

2. week

Data handling, variable types. Links between biostatistics and data handling

Data handling, variable types

3. week

Mathematical basics of biostatistics (set theory, operations)

Mathematical basics of biostatistics (set theory, operations 2)

4. week

Description of sample data; numeric measures; graphs

Data handling (2)

5. week

Theoretical fundamentals of interval estimation

Theoretical fundamentals of interval estimation

6. week

Estimation of the population mean

Theoretical fundamentals of interval estimation; estimation of the population mean

7. week

Theoretical fundamentals of hypothesis testing; statistical power; type I and II error

Theoretical fundamentals of hypothesis testing; statistical power; type I and II error

8. week

Statistical inference; relation between interval estimation and hypothesis testing

Z test of the sample mean; one-sample t test

9. week

Comparison of two means, two-sample t test; paired t test

Comparison of several means

10. week

One-way ANOVA

Probability, proportion, odds

11. week

Estimation of probability

Estimation of probability; Z test of a single proportion; confidence interval

12. week

Comparison of two proportions; links with epidemiological indicators

Analysis of 2×2 contingency tables

13. week

Simple linear regression; correlation

Simple linear regression; correlation

Requirements

Students should gain insight into the role of biostatistics, its core analytic toolset, and the job of a

biostatistician in general. They should be introduced to the fundamentals of biostatistical thinking as well as the role and importance of cooperation with professional biostatisticians. They should be able to interpret common statements of a biostatistical nature and become familiar with the application areas of the most fundamental methods.

Subject requirements:

- attendance requirement: seminars and practicals are mandatory to attend
- absence allowance: up to 2 absences allowed
- midterm exam(s) type (written, oral, moodle, etc.) and number: ---
- midterm exam(s) scheduled for week nr.: ---
- end-of-term exam(s) type (written, oral, moodle, etc.): written
- requirement(s) for signature: attendance requirement satisfied

Required reading: ---

Recommended reading: Essentials of Medical Statistics 2nd Edition by B. Kirkwood and J. Sterne, ISBN-13: 978-0865428713

Subject: HEALTH INFORMATICS I.

Year, Semester: 1st year/1st semester

Number of teaching hours:

Lecture: **10**

Practical: **16**

1. week

Information, data, knowledge, communication, codes, measures, interpretation in the field of Informatics / Health Informatics. Signal processing, biometrics, digital imaging, artificial intelligence.

Introduction

Neptun: <http://neptun.unideb.hu/?page=studeng>

MOODLE: The e-learning system <https://elearning.med.unideb.hu/?lang=en>

2. week

Health care: data security and protection – data types, data management. Health and economic data.

Legal issues: Hungarian and international practice: law and judgment.

3. week

Health care: organizations, prevention, screening, health promotion and prevention (countries, regions, global issues), decisions. WHO and global organizations: data, legal and relevant sources, availability of data.

4. week

Administration, dataflow, standards, quality assurance in the Health Care. Problems, errors possible causes, uncertainties and solutions. Information systems – possibilities.

5. week

Classification, code systems, nomenclature, conversions. ICD, Procedure codes, SNOMED, TNM, RCC, metacode, bar code, QR code, PID, solution provider ID, economic data codes. Graphs, UMLS, GRAIL. Statistical models. Usage and value.

6. week

TEST (MOODLE: Multiple Choice from the Lecture material)

8. week

MS WORD: DATA import. Insert and edit text, picture, table, textbox chart. Formatting Fonts and

Paragraphs (MS WORD) / MS PowerPoint: Making a Presentation

9. week

MS WORD: Cover page, Page/Section break, Header, Footer, Footnote, Endnote, Table of Contents, List of Figures, List of Tables, Number of characters / words (Home assignment!)

10. week

MS EXCEL: DATA export and import – text file / Selection of the cells – ranges / Filling the cells / Search, Find and Replace. / Order / Filters / 3D references / Functions

11. week

MS EXCEL: statistical functions: COUNT(), COUNTIF(), AVERAGE(), AVERAGEIF(), SUM(), SUMIF(), MEDIAN(), MIN(), MAX()

12. week

MS EXCEL: IF(), VLOOKUP(), HLOOKUP(), INDEX() MATCH() search tables. text functions / LEFT(), RIGHT(), MID(), LENGTH(), CONCATENATE(), Date and time functions TODAY()

13. week

MS EXCEL: PIVOT Table + practice

14. week

TEST (Practical EXCEL (exercises solving with computer))

Requirements

Basic knowledge of concepts related to Health Informatics: Information processing, file management, data protection, text and data management, knowledge of health administration systems, health care organizations, knowledge of data quality aspects. Learn about code systems. Development of basic Word and Excel (functions, statements) skills.

Subject requirements:

- Class Attendance: Attendance to lectures is optional. Attendance to the practical classes is mandatory.
- Permitted absences: 3 occasions may be missed for practical classes. If you are missing more than 3 occasions, you will not receive a signature. If you do not have a signature, you will not receive a grade.
- Form and number of mid-year examination (s) (written, oral, moodle, etc.): Two exam must be completed, each exam must be at least 60% to obtain a grade. The first exam is a multiple-choice test from the theoretical part, the second exam is a set of practical tasks to be written in front of computer. The first exam counts 40 and the second 60 percent weight into the end-of-semester grade.
- planned week of mid-year examination (s): 6th week (Theoretical exam), 14th (Practical exam)
- form of end-of-semester examination (s) (written, oral, moodle, etc.): Solving a series of practical tasks in front of a computer (14th week)
- condition (s) for obtaining a signature: Adherence to mandatory class attendance.

Required reading (max. 1 or more per topic, but with chapters):

Robert E. Hoyt Ann K. Yoshihashi: Health Informatics: Practical Guide for Healthcare and Information Technology Professionals (Sixth Edition)

Ramona Nelson, Nancy Staggers: Health Informatics: An Interprofessional Approach, 1e 1st Edition

Dimitrios Zikos, Data Driven Health Informatics (Digital Lecture), 29.06.2021.

https://www.academia.edu/39212760/Data_Driven_Health_Informatics_Digital_Lecture_Companio

n

E. Kékes, Gy. Surján, L. Balkányi, Gy. Kozmann: Health Informatics. Medicine, Bp. 2000.

Recommended reading:

Microsoft Support, Microsoft, 29.06.2021. (Word, Excel, PowerPoint)

<https://support.microsoft.com/hu-hu/office?ui=hu-hu&rs=hu-hu&ad=hu>

Subject: **BASICS OF PHYSIOTHERAPY**

Year, Semester: 1st year/1st semester

Number of teaching hours:

Lecture: **26**

Subject: **ROGER'S CONVERSATION**

Year, Semester: 1st year/1st semester

Number of teaching hours:

Lecture: **13**

Subject: **PHYSICAL EDUCATION I.**

Year, Semester: 1st year/1st semester

Number of teaching hours:

Lecture: **26**

Content:

Practical: Sports events: Aerobic, Basketball, Handball, Horse-riding, Ice-skating, Skiing, Soccer, Spinning, Swimming, Tennis, Volleyball. Spare time sports: body building, badminton, floorball, Pilates, Speed Minton, cardio-workout

Requirements

The subject is a criterion condition for getting Certificate of Completion.

Registering for the Physical Education courses:

Step 1: register in Neptun system – you have to choose course

Step 2: you have to come in the P.E. Department (Móricz Zsigmond körút 22, 3rd Youth Hostel) to choose sport course.

If you have any question don't hesitate to ask: nvkata@med.unideb.hu

Subject: **HUNGARIAN LANGUAGE I.**

Year, Semester: 1st year/1st semester

Number of teaching hours:

Practical: **28**

Subject: **APPLIED HEALTH SCIENCES II.**

Year, Semester: 1st year/2nd semester

Number of teaching hours:

Lecture: **52**

Seminar: **39**

1. week

1. Metabolism, storage of biological energy 2. Thermodynamic equilibrium potentials (Nernst-, Donnan-potential). Diffusion potential (Goldman-Hodgkin-Katz equation) 3. Intracellular transport

processes, nuclear envelope, nuclear transport

2. week

1. Digestion and absorption of carbohydrates, glycolysis 2. Action potential and electric excitability. Measurement of the membrane potential 3. Intracellular membrane systems: lysosome, peroxysome, ER, Golgi, endo- and exocytosis

3. week

1. The citric acid cycle, terminal oxidation 2. Ion channels (gating, selectivity) "patch-clamp" technique 3. Energy transduction, mitochondrion

4. week

1. Gluconeogenesis, synthesis of glycogen, glycogenolysis 2. Physical basics of ECG and EEG I. 3. Cytoskeleton, microtubules, intermediate and microfilaments

5. week

1. Digestion and absorption of lipids, lipid transfer particles 2. Physical basics of ECG and EEG II. 3. Cell motility

6. week

1. Beta-oxidation, lipid biosynthesis 2. Basic geometrical optics. Optical microscopy. Electron microscopy 3. Cell membrane, membrane transport, ABC transporters

7. week

1. Digestion of proteins, amino acid degradation, urea cycle 2. The human eye as an optical system. Photoreceptors. Molecular mechanism of vision 3. Ion channels, membrane potential

8. week

1. Synthesis of amino acids, nitrogen balance 2. Mechanism of hearing, Weber-Fechner law. Electrical properties of auditory receptors, coding of sound 3. Signaling I: general concepts, nuclear receptors, GPCR

9. week

1. Digestion of nucleic acids, purine and pyrimidine metabolism 2. Biomechanics I. 3. Signaling II: TK, proteolytic signals, signaling pathways to the nucleus

10. week

1. Synthesis of purines, pyrimidines, nucleosides and nucleotides 2. Biomechanics II. 3. Cellular aging, cell death

11. week

1. Integrated metabolic pathways, starving, obesity, hormonal regulation of circadian rhythm 2. Flow of fluids, basics of blood circulation 3. Stem cells, from genes to cellular functions

12. week

1. Coagulation and the complement system 2. Biophysics of respiration 3. Intracellular Ca²⁺

13. week

1. Iron and hemoglobin metabolism. Extracellular matrix and muscle biochemistry

14. week

1. Biochemistry of bones and cartilages. Vitamins

Subject: **GENERAL PRINCIPLES IN NURSING AND CLINICAL PROPEDEUTICS –
SUMMER PRACTICE**

Year, Semester: 1st year/2nd semester

Number of teaching hours:

Practical: **39**

Subject: **BASICS OF BIOSTATISTICS**

Year, Semester: 1st year/2nd semester

Number of teaching hours:

Lecture: **13**

Seminar: **26**

Subject: **BASICS OF DIETETICS**

Year, Semester: 1st year/2nd semester

Number of teaching hours:

Lecture: **26**

8. week

Introduction of dietetic nutrition. Basic definitions. Energy and food requirements. Nutrients.

9. week

Characteristics for the nutrition of the Hungarian population. Hungarian nutrition recommendation.

10. week

Food product knowledge. Food preparation methods. Basics of menu planning.

11. week

Counting appropriate energy and nutrient intake for individuals.

12. week

Obesity. Opportunities the healthy losing weight.

13. week

Diet of Diabetes mellitus. Diet in Osteoporosis. Diet in Celiac Disease.

14. week

Eating disorders. Possibilities of roboration. Food allergies treatment.

Subject: **HEALTH INFORMATICS II.**

Year, Semester: 1st year/2nd semester

Number of teaching hours:

Lecture: **10**

Practical: **16**

1. week

Concepts of database systems, database and database manager, historical overview of its development, Requirements for information systems, Structure of data storage, Access to data, Application programs.

2. week

Formation of a relational data model, Relational data structure (getting to know its elements), Operations of a relational data model. Normalization.

3. week

An insight into the relational algebra that forms the basis of queries. Structural description of SQL language. Data security, Data protection in healthcare - data types, data management, disposal rights.

4. week

New data storage, collection and processing procedures. (Big Data, Machine Learning, Data Mining, Artificial Intelligence) Representation of results, interpretation of health statistics Getting to know data sources: HFA database, OECD database, EUROSTAT, KSH.hu, www.cdc.gov

5. week

TEST (MOODLE: Multiple Choice from the Lecture material)

6. week

MS EXCEL: Search functions: INDEX (MATCH()) knowledge and comparison with the already known FKERES, VKERES search functions + problem solution

7. week

MS EXCEL: Pivot table (creation of groups, filters, multi-level tables, slicers)

8. week

MS EXCEL: Exercise solution (search functions and pivot tables)

9. week

DATABASE MANAGEMENT: Learn about MS Access database manager. Learn about other database management systems: Apache OpenOffice, LibreOffice Data Import, Export. Creating a data table, Linking data tables

10. week

DATABASE MANAGEMENT: Queries (SQL) I. (Understanding the structure of SQL, Simple queries, Sorting result rows, Alias)

11. week

DATABASE MANAGEMENT: Queries (SQL) II. (Select rows, query with search criteria: Simple criteria, Criteria in sets, Advanced search criteria, Precedence of operations)

12. week

DATABASE MANAGEMENT: Queries (SQL) III. (Grouping, Group Functions, Nested SELECT Instructions, Linking Tables)

13. week

DATABASE MANAGEMENT: Task Solution I.

14. week

DATABASE MANAGEMENT: Task solution II.

15. week

TEST (practical exercise EXCEL + ACCESS (problem solving with a computer)

Subject: **PHYSIOLOGY I.**

Year, Semester: 1st year/2nd semester

Number of teaching hours:

Lecture: **26**

Seminar: **13**

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-semester tests 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.

Subject: **BASICS OF EPIDEMIOLOGY**

Year, Semester: 1st year/2nd semester

Number of teaching hours:

Lecture: **13**

Seminar: **13**

1. week

Introduction, history of epidemiology

Student demonstrations - classical epidemiology

2. week

Population observation: basics of demography

Demographic measures

3. week

Epidemiological measures 1: frequency measures

Epidemiological measures 1: frequency measures

4. week

Epidemiological measures 2: association measures

Epidemiological measures 2: association measures

5. week

Study types

Study types

6. week

Descriptive studies: cross-sectional, ecological

Descriptive studies: cross-sectional, ecological

7. week

Cohort study

Cohort study

8. week

Case control study

Case control study

9. week

Interventional study

Interventional study

10. week

Standardization

Standardization

11. week

Random error, selection bias

Random error, selection bias

12. week

Accuracy, validity

Accuracy, validity

13. week

Confounders

Confounders

14. week

Information bias, causation

Information bias, causation

Subject: **COMMUNICATION**

Year, Semester: 1st year/2nd semester

Number of teaching hours:

Seminar: **13**

1. week

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

2. week

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

3. week

Lecture: Aggressive, passive and assertive communication. Effective communication techniques

4. week

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

5. 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.

6. week

Practical: Review of the basic concepts of communication, communication channels.

7. week

Practical: Verbal and non-verbal communication.

8. week

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

9. week

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

10. week

Practical: Film – the doctor.

11. week

Practical: Film – analyzing its communicational aspect.

12. week

Practical: Field practice – observation (no course).

13. week

Practical: Persuasive communication Effective communications techniques. Presentation of the field practice and feedbacks.

14. week

Practical: Presentation of the field practice and feedbacks.

Subject: **BASICS OF QUALITY ASSURANCE**

Year, Semester: 1st year/2nd semester

Number of teaching hours:

Lecture: **26**

1. week

Lecture: Importance of quality management in healthcare, general definitions of quality, evolution of quality thinking

2. week

Seminar: What quality means to me?

3. week

Lecture: Dimensions and structure of quality in healthcare, definition of criteria, standard, guideline, protocol, indicator

4. week

Seminar: Discussion of Donabedian model

5. week

Lecture: Assessment of quality of healthcare services, types of audit

6. week

Seminar: Measurement of quality of healthcare by Donabedian model

7. week

Lecture: Quality problems in healthcare

8. week

Seminar: Prioritizing quality problems

9. week

Lecture: Quality improvement and quality tools

10. week

Seminar: Planning a quality improvement project

11. week

Lecture: Importance of clinical effectiveness in the improvement of healthcare service; Steps of clinical effectiveness in the improvement of healthcare service

12. week

Lecture: Clinical audit

13. week

Seminar: Planning of a clinical audit projects by teams

14. 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: **ECOLOGY**

Year, Semester: 1st year/2nd semester

Number of teaching hours:

Lecture: **26**

Seminar: **13**

1. week

Lecture: Introduction to the course

Seminar: Mountain Sickness

2. 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”

3. week

Lecture: Island biogeography

Seminar: The Large Hadron Collider.

4. week

Lecture: Conservation and management of grassland ecosystems

Seminar: Thermoregulation, blood glucose homeostasis and osmoregulation.

5. week

Lecture: First exam and consultation

Seminar: Relationships between species: African trypanosomes.

6. week

Lecture: Ecological succession

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

7. week

Lecture: Application of remote sensing in ecology

Seminar: Orchid Habitat Restoration and Preservation.

8. week

Lecture: Ecosystem ecology, ecological systems

Seminar: Coral reefs in danger

9. week

Lecture: Ecosystem services and ecological footprint

Seminar: Water ecosystems

10. week

Lecture: Second exam and consultation

Seminar: Social life of ants.

11. week

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

Seminar: Genetically modified organisms.

12. week

Lecture: Urbanisation, urban ecology

Seminar: Origin of the Earth's atmosphere

13. week

Lecture: Third exam

Seminar: Industrially important bacteria

14. week

Lecture: 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: **HUNGARIAN LANGUAGE II.**

Year, Semester: 1st year/2nd semester

Number of teaching hours:

Practical: **28**

1. week

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

2. week

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

3. 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)

4. week

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

5. week

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

6. week

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

7. week

Practical: Midterm test

8. week

Practical: 8. lecke (everyday objects, food and drink, adverbs of frequency)

9. week

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

10. week

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

11. week

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

12. week

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

13. week

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

14. 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: **PHYSICAL EDUCATION II.**

Year, Semester: 1st year/2nd semester

Number of teaching hours:

Lecture: **26**

Content:

Practical: Sports events: Aerobic, Basketball, Handball, Horse-riding, Iceskating, Skiing, Soccer, Spinning, Swimming, Tennis, Volleyball. Spare time sports: body building, badminton, floorball, Pilates, Speed Minton, cardio-workout etc.

Requirements

The subject is a criterion condition for getting Certificate of Completion.

Registering for the Physical Education courses:

Step 1: register in Neptun system – you have to choose course

Step 2: you have to come in the P.E. Department (Móricz Zsigmond körút 22, 3rd Youth Hostel) to choose sport course

If you have any question don't hesitate to ask: nvkata@med.unideb.hu

Subject: BASICS OF PSYCHOLOGY I.

Year, Semester: 2nd year/1st semester

Number of teaching hours:

Lecture: **26**

1. week

Introduction, course requirements. Topics, fields, history and methods of psychology. Psychological functions and behavior.

2. week

Object and subject. Sensation and perception. Attention, memory, wakefulness and sleep. Stages of sleep.

3. week

Thinking, intelligence, creativity. Arousal, affect, emotion, mood, instinct. Basic emotions. Recognition and control of emotions, impulse control.

4. week

Drive, impulse, motivation. Hierarchy of motivation (Maslow, Ryan&Deci). Stimulation and incentive.

5. week

Stress and coping: stressful events, psychological and physiological reactions to stress. Acute and chronic stress and their impact on health. Coping skills.

6. week

Learning and conditioning. Classical and operant conditioning. Teaching and learning.

7. week

Personality. Theories of personality.

8. week

Stages of psychological development. Expected competences and behaviours by age during normal development. Gender differences in psychology and behavior.

9. week

Social behavior. Attachment, mother-baby relationship, intimate relationship. Family, socialization.

10. week

Basics of health psychology.

11. week

Interrelationship of body and mind. (Psychosomatic diseases, impact of belief on the body.)

11. week

Basics of clinical psychology.

13. week

How to improve/treat psychological dysfunctions. (Psychotherapy, pharmacotherapy, relaxation techniques)

Subject: PROFESSIONAL HUNGARIAN LANGUAGE I.

Year, Semester: 2nd year/1st semester

Number of teaching hours:

Seminar: **26**

1. week

Practical: 1. fejezet: Emlékszik?

2. week

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

3. week

Practical: 2. fejezet: Tegezés-Önözés

4. week

Practical: 3. fejezet: Élelmiszerek 1.

5. week

Practical: 4. fejezet: Élelmiszerek 2.

6. week

Practical: 5. fejezet: Étkezések, étteremben 1.

7. week

Practical: 6. fejezet: Étkezések étteremben 2.

8. week

Practical: 7. fejezet: Összefoglalás, midterm test

9. week

Practical: 8. fejezet: A városban 1.

10. week

Practical: 9. fejezet: A városban 2.

11. week

Practical: 10. fejezet: Édes otthon 1.

12. week

Practical: 11. fejezet: Édes otthon 2.

13. week

Practical: 12. fejezet: Összefoglalás

14. 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.

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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
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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.

Subject: PHYSIOLOGY II.

Year, Semester: 2nd year/1st semester

Number of teaching hours:

Lecture: **26**

Practical: **13**

1. week

Basic neuronal functions: resting membrane potential and excitatory processes; electrotonic potential, receptor potential, postsynaptic potential

Function of neuronal networks, properties of impulse propagation, injury of nerves, regeneration

2. week

Significance and mechanisms of pain sensation; specific and aspecific ascending sensory systems; function of the sensory cortex

Principles of cell physiology

3. week

Somatomotor function of CNS: reflex activity at different levels; proprioceptive and exteroceptive spinal cord reflexes; Reflex control of posture

Sensory function of the nervous system in normal and pathologic conditions

4. week

Role of the brainstem in the movement regulation; cortical mechanisms; role of the cerebellum in the coordination of movement; dysfunction of motoric system at various level of regulation

Neurological examinations

5. week

Neuromuscular synaptic transmission; myasthenia gravis; dysfunctions of skeletal muscles with myogenic and neurogenic origin; denervation and inactivity atrophy Electrical activity of the cortex, EEG, Higher function of CNS: sleeping, emotions, learning, memory

Motor function of the nervous system in normal and pathologic conditions Myasthenia gravis; dysfunctions of skeletal muscles with myogenic and neurogenic origin

6. week

Impulse generation and conduction in the heart in normal and pathological conditions; myogenic

and neural regulation of cardiac output; factors affecting cardiac performance

Analysis of ECG records

8. week

Discussion of clinical relations of ECG

Analysis of abnormal ECG records

9. week

Main features of coronary circulation; pathologic coronary flow, oxygen consumption and physical work. Aspects of cardiac performance; metabolic demand for physical activity. Vitium cordis, cardiomyopathies. Cardiac decompensation

Pulse qualities, blood pressure measurement, heart sounds

10. week

Characteristic of the circulation in pathologic conditions Hypertension, hypotension, pathologic venous circulation, disorders of the lymphatic circulation, circulatory shock

Mechanical aspects of respiration: resistance of airways; factors affecting respiratory minute volume; effects of physical exercise on respiration Obstructive and restrictive respiratory disorders, pathophysiology, analysis of respiratory parameters; Alveolar gas exchange in normal and pathological conditions Normal and pathological breathing patterns

11. week

Short and long term adaptation of the cardiorespiratory system to the physical activity

Characteristics of circulation in exercise, metabolic changes during exercise; physical activity and thermoregulation

Cardiac parameters during exercise, metabolic rate, BMI

12. week

Nutrition-related pathologic condition I: role of the nutrition in the progression of the cardiovascular disease and cancer, food allergy, food intolerance, eating disorders

Pathologic condition related to the nutrition

13. week

Nutrition-related pathologic condition II: obesity, nutrition as a risk factor of diabetes mellitus,

metabolic syndrome

Nutrition-related pathologic condition

14. week

Disorder of motility and secretion of the gastrointestinal system, disorders of liver function

Interactions among pathological conditions of organs

Subject: **FIRST AID**

Year, Semester: 2nd year/1st semester

Number of teaching hours:

Lecture: **13**

Practical: **13**

Subject: **FOOD PROCESSING TECHNOLOGIES**

Year, Semester: 2nd year/1st semester

Number of teaching hours:

Lecture: **13**

Practical: **16**

Subject: **INTRODUCTION TO LAW**

Year, Semester: 2nd year/1st semester

Number of teaching hours:

Lecture: **26**

1. week

Introduction to law, concept of law

2. week

The legal system, legal norm

3. week

Sources of law, scope of legislation

4. week

The state and its functions

5. week

Branches of governance, separation of powers

6. week

The parliament, the government

7. week

The president, the constitutional court

8. week

The judicial system

9. week

Legal relationships; civil, political and personal rights

10. week

Corporations

12. week

Property law

12. week

Contractual law

13. week

Civil law - Criminal law

Requirements

Obtaining general legal knowledge and defining the role of law. To present the legal systems, the law, the functioning of the state, the role of legal entities. Overview of the branches of power and the structure of the state, its institutional system, principles of operation and legal framework, knowledge of different legal sources. Providing comprehensive knowledge on law enforcement, enforcement, and the role of the courts. Understanding the rights of individuals, the importance of different legal relationships and the presentation of the general principles of civil law and legal institutions, the legal relevance of property, and the importance of contracts in our everyday lives.

Tantárgyi követelmények:

- óralátogatási kötelezettség: in accordance with the Academic and Examination Code of the University of Debrecen
 - hiányzások megengedett mértéke: in accordance with the Academic and Examination Code of the University of Debrecen
 - évközi számonkérés(ek) formája (írásbeli, szóbeli, moodle, stb.) és száma: -
 - évközi számonkérés(ek) tervezett oktatási hete: -
 - félév végi számonkérés(ek) formája (írásbeli, szóbeli, moodle, stb.): written
 - aláírás megszerzésének feltétele(i): -
- Kötelező irodalom (max. 1, vagy témakörönként több, de jelölve a fejezeteket):
Lucy Jones: Introduction to Business Law. Oxford University Press, 2013.

Subject: **MICROBIOLOGY I.**

Year, Semester: 2nd year/1st semester

Number of teaching hours:

Lecture: **13**

Seminar: **13**

1. week

History of microbiology. Structure of bacterial cells. Essential and nonessential components. Cell walls of Gram-positive and Gram-negative bacteria. Virulence factors (capsule, enzymes). Microscopic examination.

2. week

Bacterial metabolism. Aerobic and anaerobic bacterial growth. Fermentation of sugars. Iron metabolism. Aerobic and anaerobic cultivation. Sterilization and disinfection.

3. week

The human microbiome. Types of bacterial infections. Bacterial pathogenesis. Toxin production: exotoxins and endotoxins. Infectious diseases and host defenses. Innate and adaptive immunity.

4. week

Laboratory diagnosis of bacterial infections. Rules for collecting clinical specimens. Serological reactions: precipitation, agglutination, and complement activation. Enzyme-linked immunosorbent assay (ELISA), fluorescent-antibody assay.

5. week

Bacterial vaccines. Antimicrobial drugs. Chemoprophylaxis. Antibiotic sensitivity.

6. week

Overview of the major Gram-positive bacteria: Staphylococci, Streptococci, Bacillus, Clostridia.

Epidemiology and clinical findings. Laboratory diagnosis.

7. week

Overview of the major and Gram-negative bacteria. Enterobacteriaceae and non-fermentative Gram-negative bacilli. Zoonotic infections. Epidemiology and clinical findings. Laboratory diagnosis.

8. week

Skin and soft tissue infections caused by bacteria: *Staphylococcus aureus*, *Streptococcus pyogenes*, *Clostridium perfringens*.

9. week

Respiratory tract infections caused by bacteria. *Streptococcus pyogenes*, *Haemophilus influenzae*, *Corynebacterium diphtheriae*, *Bordetella pertussis*, *Streptococcus pneumoniae*, *Mycobacterium tuberculosis*, *Legionella pneumophila*, *Mycoplasma pneumoniae*.

10. week

Intestinal infections caused by bacteria: *Campylobacter jejuni*, *Salmonella* spp., *Shigella* spp., *Yersinia* spp., *Escherichia coli*, *Vibrio cholerae*, *Clostridium difficile*.

11. week

Urinary tract infections caused by bacteria: *Escherichia coli*, *Enterococcus faecalis*, *Staphylococcus saprophyticus*, *Proteus* spp., *Klebsiella* spp., *Enterobacter* spp., *Pseudomonas aeruginosa*.

12. week

Sexually transmitted bacterial diseases. *Neisseria gonorrhoeae*, *Haemophilus ducreyi*, *Treponema pallidum*, *Chlamydia trachomatis*

13. week

Central nervous system diseases caused by bacteria: *Neisseria meningitidis*, *Escherichia coli*, *Streptococcus pneumoniae*, *Streptococcus agalactiae*, *Listeria monocytogenes*.

14. week

General mycology. Medically important fungi. General properties of fungi. Dermatomycoses, Subcutaneous mycoses. Systemic and opportunistic mycoses. Clinical diagnosis.

The students are required to attend the seminars. The Department may refuse to sign the students' Microbiology subject if they are absent more than two seminars in a semester.

Subject: **WORK AND FIRE REGULATIONS**

Year, Semester: 2nd year/1st semester

Number of teaching hours:

Seminar: **6**

Subject: **PUBLIC HEALTH MEDICINE I.**

Year, Semester: 2nd year/1st semester

Number of teaching hours:

Lecture: **52**

1. week

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

2. week

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

3. week

Lecture: Haematological diseases. Anaemia, myeloproliferative diseases

4. 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

5. week

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

6. week

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

7. week

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

8. week

Lecture: Infectious diseases. Acute and chronic infectious diseases

9. week

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

10. week

Lecture: Endocrinological diseases

11. week

Lecture: Diseases of the kidney

12. week

Lecture: Neurological diseases

13. week

Lecture: Psychiatry. Psychosis, schizophrenia, alcoholism, delirium.

14. 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).

Subject: **LATIN LANGUAGE**

Year, Semester: 2nd year/1st semester

Number of teaching hours:

Seminar: **26**

Subject: **PROFESSIONAL HUNGARIAN LANGUAGE II.**

Year, Semester: 2nd year/2nd semester

Number of teaching hours:

Seminar: **26**

6. week: Ismétlés, Emlékszel?

7. week: Testrészek, Tünetek

8. week: Tünetek, Gyógyszerek

9. week: Klinikák és szakorvosok

10. week: Lassítsunk egy kicsit! Összefoglalás

11. week: Zárthelyi dolgozat, Szoktál kanapészörfölni?, Jó és rossz szokások

12. week: Tessék mondani

13. week: Anamnézis

14. week: Összefoglaló, Zárthelyi dolgozat; Szóbeli vizsga

Subject: **PRINCIPLES OF HEALTH SCIENCES**

Year, Semester: 2nd year/2nd semester

Number of teaching hours:

Lecture: **10**

1. week

lecture: Anatomy of the skeletal system

2. week

lecture: Anatomy of the organs

3. week

lecture: Neuroanatomy

4. week

lecture: Membrane potential, electrical and mechanical properties of the heart, neural and humoral

regulation of the cardiac function in normal and pathophysiological conditions.

5. week

lecture: Functional characteristics and regulation of the peripheral circulation in normal and pathophysiological conditions. Blood. Functional characteristics of the respiratory system, neural and humoral regulation.

6. week

lecture:

Physiology of the gastrointestinal tract, motoric and secretory function, general aspects of renal function,

7. week

lecture:

Principles of the hormonal regulation. Morphology and motor function of nervous system.

Function and regulation of skeletal muscle. Pathology of motor function. Autonomic nervous system.

Requirements

Prerequisites: Cardiorespiratory and Exercise Physiology, Neurophysiology, Physiology.

To attend the lectures is strongly recommended. The participation in the e-learning activity is compulsory. If you miss the e-learning activity and/or more than 2 lectures the signature of Lecture Book will be refused.

Subject: **HEALTH CARE LAW**

Year, Semester: 2nd year/2nd semester

Number of teaching hours:

Lecture: **10**

1. week

Introduction to administrative law

Sources of administrative law

2. week

Management and control in public administration

Principles of public administration

3. week

Administrative proceedings

Types of cases

4. week

Significance of administrative proceedings

Administrative sanctioning measures

5. week

Application, request, suit

Nonsuit

6. week

Probative proceedings

7. week

The president, the constitutional court

Evidence

8. week

Closure of the procedure

Termination

9. week

Representation and suspension

Agency

10. week

Rulings

Case study

11. week

Procedural documents

Documents, public documents, official certificates

12. week

Fines

Sanctions of public administration

13. week

Timeline

Deadlines

14. week

Licensing health care services. Minimum requirements of health care services

Medical practices – GPs' clusters (GPC). Administrative control

Subject: **ENVIRONMENTAL HEALTH**

Year, Semester: 2nd year/2nd semester

Number of teaching hours:

Lecture: **20**

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

2. week

Lecture: Introduction to toxicology

Seminar: The disaster of Seveso – case study

3. week

Lecture: Air pollution and health

Seminar: The London smog of December 1952 – case study

4. week

Lecture: Water pollution and health

Seminar: Environmental arsenic poisoning – case study

5. week

Lecture: Soil contamination and health

Seminar: Environmental cadmium poisoning – case study

6. week

Lecture: Health effects of non-ionising radiation and electromagnetic fields

Seminar: Mobile phone use and brain cancer risk

7. week

Lecture: Health effects of ionising radiation and radioactive substances

Seminar: Nuclear accidents and protection of the general public

8. week

Lecture: Food-borne diseases, food poisoning

Seminar: Midterm test

9. week

Lecture: Health effects of noise and vibration

Practice: Chemical and microbiological examination of drinking water
(laboratory practice for small group)

10. week

Lecture: Hazardous substances in the environment

Practice: Chemical and microbiological examination of drinking water
(laboratory practice for small group)

11. week

Lecture: Body defence mechanisms against the adverse effects of environmental exposures

Seminar: Environmental lead poisoning – case study

12. week

Lecture: Health implications of waste and hazardous waste

Seminar: Chemical safety

13. week

Lecture: Global environmental changes and human health

Seminar: Environmental PCB poisoning – case study

14. week:

Lecture: Environmental justice and environmental health policy

Seminar: Student presentations

Subject: **ENVIRONMENTAL HEALTH- Block practice**

Year, Semester: 2nd year/2nd semester

Number of teaching hours:

Practical: **30**

Subject: **MICROBIOLOGY II.**

Year, Semester: 2nd year/2nd semester

Number of teaching hours:

Lecture: **20**

1. week

Lecture: The microbial world. Cell-mediated and antibody-mediated (humoral) immunity. Active and passive immunization

2. week

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

3. week

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

4. week

Lecture: Overview of the major Gram- positive bacteria

5. week

Lecture: Overview of the major and Gram-negative bacteria

6. week

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

7. week

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

8. week

Lecture: General mycology. Medically important fungi

9. week

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

10. week

Lecture: Respiratory tract infections caused by viruses

11. week

Lecture: Agents of viral gastroenteritis. Hepatitis viruses

12. week

Lecture: Agents of viral skin rash. Congenital virus infections

13. week

Lecture: The protozoal diseases

14. 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.

Subject: **MICROBIOLOGY II. - Block practice**

Year, Semester: 2nd year/2nd semester

Number of teaching hours:

Practical: **30**

Subject: **PUBLIC HEALTH MEDICINE II.**

Year, Semester: 2nd year/2nd semester

Number of teaching hours:

Lecture: **20**

Seminar: **20**

1. week

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

2. week

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

3. week

Lecture: Haematological diseases. Anaemia, myeloproliferative diseases

4. 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

5. week

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

6. week

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

7. week

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

8. week

Lecture: Infectious diseases. Acute and chronic infectious diseases

9. week

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

10. week

Lecture: Endocrinological diseases

11. week

Lecture: Diseases of the kidney

12. week

Lecture: Neurological diseases

13. week

Lecture: Psychiatry. Psychosis, schizophrenia, alcoholism, delirium

14. 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).

Subject: **PUBLIC HEALTH MEDICINE II.- Block practice**

Year, Semester: 2nd year/2nd semester

Number of teaching hours:

Practical: **30**

Subject: **PSYCHOTHERAPEUTIC AND ADDICTOLOGICAL SKILLS**

Year, Semester: 2nd year/2nd semester

Number of teaching hours:

Lecture: **20**

Practical: **10**

Subject: **BASICS OF PEDAGOGY**

Year, Semester: 3rd year/1st semester

Number of teaching hours:

Lecture: **10**

1. week

Lecture: Basic concepts of pedagogy

2. week

Lecture: Principles of pedagogical activity

3. week

Lecture: Theories and trends in pedagogy

4. week

Lecture: Elements of pedagogical influence

5. week

Lecture: Values and aims Process of pedagogical influence

6. week

Lecture: Fields of personality development

7. week

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

8. week

Lecture: Process of teaching and learning

9. week

Lecture: Edifying conduct

10. week

Lecture: Methodology (basics, influencing factors, methods, differentiation)

11. week

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

12. week

Lecture: Key participants and their communication

13. week

Lecture: Consultation

14. week

Lecture: Theoretical and practical issues of planning

Subject: **BASICS OF SOCIOLOGY**

Year, Semester: 3rd year/1st semester

Number of teaching hours:

Lecture: **10**

1. week

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

2. week

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

3. week

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

4. week

Lecture: Culture, norms and deviance

5. week

Lecture: Marriage, family and kinship

6. week

Lecture: Global sociology, global poverty

7. week

Lecture: Sociological research methods

Requirements

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

Subject: **HEALTH POLICY KNOWLEDGE**

Year, Semester: 3rd year/1st semester

Number of teaching hours:

Lecture: **20**

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: **PHILOSOPHY**

Year, Semester: 3rd year/1st semester

Number of teaching hours:

Lecture: **10**

1. week

Lecture: Martin Heidegger: What is Metaphysics?

2. week

Lecture: Martin Heidegger: What is Metaphysics?

3. week

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

4. week

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

5. week

Lecture: The Philosophical Questions of Health and Disease. Part 1

6. week

Lecture: The Philosophical Questions of Health and Disease. Part 2

7. week

Lecture: The Philosophical Questions of Health and Disease. Part 3

8. week

Lecture: The Philosophical Questions of Health and Disease. Part 4

Requirements

The attendance at lectures is strongly recommended, because the exam covers the lectured topics.

Subject: **OCCUPATIONAL HEALTH AND SAFETY I.**

Year, Semester: 3rd year/1st semester

Number of teaching hours:

Lecture: **20**

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: **OCCUPATIONAL HEALTH AND SAFETY I. – Block practice**

Year, Semester: 3rd year/1st semester

Number of teaching hours:

Practical: **30**

Subject: **ECONOMICS AND MANAGEMENT**

Year, Semester: 3rd year/1st semester

Number of teaching hours:

Lecture: **20**

1. week

Lecture: The background of the Hungarian health system in the aspect of law. Basic definitions.

2. week

Lecture: The construction and the levels of the health system, its conditions of functions and obligations.

3. week

Lecture: The constitution of financing according to the sources (OEP, state support, own income or other sources) in health institutes.

4. week

Lecture: The actual questions and the background of patient documentation according to the rules of law. The patient documentation system of the UDMHSC.

5. week

Lecture: The basic rules of employing manpower in the health system.

6. week

Lecture: The tools of human resource from recruitment to labor development.

7. week

Lecture: Conflict management – amicable settlement of disputes during work.

8. 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.

9. week

Lecture: PR as Public Affairs, connection with the media and press, relations to the government, issue management/conflict management.

10. week

Lecture: Effective communication in connection with tenders in the projects' preparatory, effectuate and later stages.

11. week

Lecture: Tendering possibilities in public health nowadays.

12. week

Lecture: Quality control and quality assurance in health institutes (tasks and opportunities). Quality assurance as a supportive tool of decision preparation.

13. week

Lecture: The social circumstances and the background of quality assurance in the aspect of law, profession and economy.

14. 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.

Subject: **PHARMACOLOGY**

Year, Semester: 3rd year/1st semester

Number of teaching hours:

Lecture: **20**

1. week

Lecture: Introduction to general pharmacology (molecular aspects, excitation, contraction and secretion)

2. week

Lecture: Introduction to general pharmacology: pharmacokinetics and pharmacodynamics

3. week

Lecture: Chemical mediators and the autonomic nervous system. Cholinergic transmission. Effects of drugs on cholinergic transmission

4. week

Lecture: Noradrenergic transmission and other peripheral mediators

5. week

Lecture: The heart. Drugs that affect cardiac function

6. week

Lecture: The vascular system. Atherosclerosis and lipoprotein metabolism

7. week

Lecture: Respiratory pharmacology. The kidney

8. week

Lecture: Drugs used in the treatment of infections

9. week

Lecture: Pharmacology of gastrointestinal system. Blood sugar and diabetes mellitus

10. week

Lecture: Endocrine drugs

11. week

Lecture: Pharmacology of CNS drugs (transmitters and modulators, neurodegenerative disorders, general anaesthetic agents, anxiolytic and hypnotic drugs)

12. week

Lecture: Pharmacology of CNS Drugs (antipsychotic drugs, drugs used in affective disorders, antiepileptic drugs, CNS stimulants and psychotomimetic drugs)

13. week

Lecture: Analgesic drugs, local anaesthetics, anti-inflammatory drugs

14. week

Lecture: Muscle relaxants

Requirements

Prerequisites: Pathology

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

Subject: **INFECTOLOGY**

Year, Semester: 3rd year/1st semester

Number of teaching hours:

Lecture: **10**

Subject: **INFECTOLOGY– Block practice**

Year, Semester: 3rd year/1st semester

Number of teaching hours:

Practical: **30**

Subject: **HEALTH CARE LAW I.**

Year, Semester: 3rd year/1st semester

Number of teaching hours:

Lecture: **20**

1.week

Introduction to administrative law Sources of administrative law

2.week

Management and control in public administration Principles of public administration

3.week

Administrative proceedings Types of cases

4.week

Significance of administrative proceedings Administrative sanctioning measures

5.week

Application, request, suit Nonsuit

6.week

Probative proceedings

7.week

The president, the constitutional court Evidence

8.week

Closure of the procedure Termination

9.week

Representation and suspension Agency

10.week

Rulings Case study

11.week

Procedural documents, Documents, public documents, official certificates

12.week

Fines Sanctions of public administration

13.week

Timeline Deadlines

14.week

Licensing health care services. Minimum requirements of health care services

Medical practices – GPs' clusters (GPC). Administrative control

Subject: **PUBLIC HEALTH MEDICINE III.**

Year, Semester: 3rd year/1st semester

Number of teaching hours:

Lecture: **20**

Seminar: **20**

1. 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.

2. 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.

3. week

Lecture: Important disorders in obstetrics (Premature birth. Complications, prevention and treatment)

Practical: General obstetrical examination. Taking a proper obstetrical history. Obstetrical check-ups.

4. week

Lecture: Different types of gastrointestinal infections (gastroenteritis)

5. week

Lecture: Hepatitis

6. week

Lecture: Nosocomial infections

7. week

Lecture: The commonest disorders and causes of death in Pediatrics, Prevention in Pediatrics

Practical: Case reports

8. week

Lecture: Oncology in Pediatrics, Prevention and rehabilitation

Practical: Case reports

9. week

Lecture: Diseases of the periodontium

Practical: Prevention of periodontal disorders

10. week

Lecture: The commonest disorders in Dentistry (caries)

Practical: Dental screening, prevention and treatment

11. week

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

Practical: Case presentations connected to lecture topics between

12. week

Lecture: Prevention and diagnosis in Oncology

Practical: Case presentations connected to lecture topics between

13. 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

14. 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).

Subject: **PUBLIC HEALTH MEDICINE III. – Block practice**

Year, Semester: 3rd year/1st semester

Number of teaching hours:

Practical: **30**

Subject: **PLANNING PUBLIC HEALTH PROGRAMS**

Year, Semester: 3rd year/1st semester

Number of teaching hours:

Lecture: **10**

Seminar: **10**

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

Year, Semester: 3rd year/1st semester

Number of teaching hours:

Lecture: **20**

Seminar:**20**

Subject: **BIOETHICS**

Year, Semester: 3rd year/2nd semester

Number of teaching hours:

Lecture: **10**

1. week

Lecture: Introduction to modern ethics. The basics of bioethics

2. week

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

3. week

Lecture: Ethical theories and principles

4. week

Lecture: Patients' Rights

5. week

Lecture: Confidentiality and privacy in healthcare

6. week

Lecture: Autonomy and self-determination

7. week

Lecture: Ethics of clinical research

8. week

Lecture: Ethics of animal experimentation

9. week

Lecture: Ethics at the beginning of life

10. week

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

11. week

Lecture: Ethics of organ transplantation

12. week

Lecture: Ethical theory and moral judgement

13. week

Lecture: Ethical case presentation

14. 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: THESIS I. – BASICS OF RESEARCH METHODOLOGY

Year, Semester: 3rd year/2nd semester

Number of teaching hours:

Practical: **10**

1. week

Basics of research

2. week

Features of applied research work in the health sciences

3. week

Hypothesis

4. week

Evidence based practice

5. week

Evidence based databases

6. week

Data collection in electronic research data base

8. week

Analysis of applied research article

9. week

Analysis of review article

10. week

Interpretation of the results

11. week

Statistical analysis

12. week

Presentations of applied research results

13. week

Literature citation

14. week

Test

Subject: HEALTH SOCIOLOGY

Year, Semester: 3rd year/2nd semester

Number of teaching hours:

Lecture: **20**

1. week

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

2. week

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

3. week

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

4. week

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

5. week

Lecture: Social structure and health-gender, age and ethnicity

6. week

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

7. week

Lecture: Health behaviour and illness behaviour, the case of chronic illness

8. week

Lecture: The sociology of health care organisations

9. week

Lecture: Informal health care, community care and self help

10. week

Lecture: Medicalisation

11. week

Lecture: Deviance, sick role, anomie and stigma

12. week

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

13. week

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

14. week

Lecture: Summary, conclusions

Subject: **OCCUPATIONAL HEALTH AND SAFETY II.**

Year, Semester: 3rd year/2nd semester

Number of teaching hours:

Lecture: **20**

Subject: **OCCUPATIONAL HEALTH AND SAFETY II. – Block practice**

Year, Semester: 3rd year/2nd semester

Number of teaching hours:

Practical: **30**

Subject: **CHILD AND ADOLESCENT HEALTH**

Year, Semester: 3rd year/2nd semester

Number of teaching hours:

Lecture: **20**

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%).

Subject: **INFECTION CONTROL**

Year, Semester: 3rd year/2nd semester

Number of teaching hours:

Lecture: **10**

Subject: **INFECTION CONTROL –Block practice**

Year, Semester: 3rd year/2nd semester

Number of teaching hours:

Practical: **30**

Subject: **HEALTH CARE LAW II.**

Year, Semester: 3rd year/2nd semester

Number of teaching hours:

Lecture: **20**

1. week

Introduction to administrative law

Sources of administrative law

2. week

Management and control in public administration

Principles of public administration

3. week

Administrative proceedings

Types of cases

4. week

Significance of administrative proceedings

Administrative sanctioning measures

5. week

Application, request, suit

Nonsuit

6. week

Probative proceedings

Evidence

7. week

Closure of the procedure

Termination

8. week

Representation and suspension

Agency

9. week

Rulings

Case study

10. week

Procedural documents

Documents, public documents, official certificates

11. week

Fines

Case study

12. week

Sanctions of public administration

Case Study

13. week

Timeline

Deadlines

Requirements

Defining the role of law in public health and health. Getting acquainted with the legal framework governing the operation of health care, the legal regulation of the health administration system, the fundamental rights, and the related areas of law. In addition to the general legal framework, administrative law and administrative procedural principles and rules affecting the field, presentation of official roles and tasks in general, as well as health care and public health.

- óralátogatási kötelezettség: in accordance with the Academic and Examination Code of the University of Debrecen

- hiányzások megengedett mértéke: in accordance with the Academic and Examination Code of the University of Debrecen

- évközi számonkérés(ek) formája (írásbeli, szóbeli, moodle, stb.) és száma: -

- évközi számonkérés(ek) tervezett oktatási hete: -

- félév végi számonkérés(ek) formája (írásbeli, szóbeli, moodle, stb.): written

- aláírás megszerzésének feltétele(i): -

Kötelező irodalom (max. 1, vagy témakörönként több, de jelölve a fejezeteket):

Donna Hammaker: Health Care Management and the Law: Principles and Applications. Delmar Cengage, 2011.

Ajánlott irodalom:

Patyi A, Rixer A: Hungarian Public Administration and Administrative Law. Schenk Verlag, 2014. (tankonyvtar.hu)

Subject: **PUBLIC HEALTH MEDICINE IV.**

Year, Semester: 3rd year/2nd semester

Number of teaching hours:

Lecture: **20**

Seminar: **20**

1. week

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

2. week

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

3. week

Lecture: Haematological diseases Anaemia, myeloproliferative diseases

4. 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

5. week

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

and pancreas

6. week

Lecture: Metabolic diseases Diabetes, Hyperlipidaemia, Gout, Porphyria

7. week

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

8. week

Lecture: Infectious diseases Acute and chronic infectious diseases

9. week

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

10. week

Lecture: Endocrinological diseases

11. week

Lecture: Diseases of the kidney

12. week

Lecture: Neurological diseases

13. week

Lecture: Psychiatry Psychosis, schizophrenia, alcoholism, delirium

14. 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,

ENGLISH PROGRAM BULLETIN FOR BSC IN PUBLIC HEALTH

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).

Subject: **PUBLIC HEALTH MEDICINE IV. – Block practice**

Year, Semester: 3rd year/2nd semester

Number of teaching hours:

Practical: **30**

Subject: **EPIDEMIOLOGY OF COMMUNICABLE AND NON-COMMUNICABLE**

DISEASES II.

Year, Semester: 3rd year/2nd semester

Number of teaching hours:

Lecture: **10**

Seminar: **20**

1. week

Vaccinations, Vaccines

2. week

Levels of prevention, preventive strategies

3. week

Emerging and re-emerging infectious diseases

4. week

The theoretical basis for screening programs

5. week

Public Health Databases

6. week

Health monitoring

7. week

Literature Research

8. week

Study Writing

9. week

Epidemiology of metabolic disorders

10. week

The epidemiology and prevention of accidents and musculoskeletal disorders

11. week

Epidemiology of liver and gastrointestinal diseases

12. week

Epidemiology of cancer

13. week

Epidemiology of chronic respiratory diseases

1. week

Vaccine efficacy

2. week

HFA database

3. week

Public Health Databases

4. week

Levels of prevention, preventive strategies

5. week

Screening programs

6. week

Epidemiology and prevention of cardiovascular diseases

7. week

Study design- a measurement the frequency of a non-communicable disease - a theoretical

framework

8. week

Study design- a measurement the frequency of a non-communicable disease - presentation

9. week

Study design- a measurement the frequency of a non-communicable disease - presentation

10. week

Study design- a measurement the frequency of a non-communicable disease - presentation

11. week

Study design- a measurement the frequency of a non-communicable disease - presentation

12. week

Study design- a measurement the frequency of a non-communicable disease - presentation

13. week

Consultation

Subject: TERRESTRIAL ENVIRONMENTAL PROTECTION

Year, Semester: 3rd year/2nd semester

Number of teaching hours:

Lecture: **20**

1. week

Introduction to the aquatic environment protection. Legal background. General characteristics of the hydrosphere. Distribution of water resources on Earth, the global water cycle.

2. week

The concept, tasks and forms of water management. Characteristics of water resource management. Water supply, water demand and water balance.

3. week

The aim of the EU Water Framework Directive (WFD), the main steps of its implementation. Water quality, water quality. Water quality protection.

4. week

Possibilities of water procurement in Hungary. Characterization of surface and groundwater bodies, their potential pollutant components. The concept of drinking water, requirements for drinking water. Drinking water service. Surface and groundwater water treatment and water treatment technologies.

5. week

Water pollution. The concept and origin of wastewater. Types of wastewater and their characterization. Natural cleaning, artificial cleaning.

6. week

Concept, criteria and types of wetlands. Characteristics of wetlands and causes of destruction. Wetland values

Requirements

The aim of teaching the subject is to acquaint students with the theoretical foundations of aquatic environmental protection, the complex objectives of water management and water protection, and the connections between its sectors. The specific aim of the education is to acquaint the students with the overview of the concept, institutional, procedural system and set of methods of water protection and water management.

Subject requirements:

- obligation to attend classes: attendance of lectures is recommended
- permissible number of absences: -
- form and number of mid-year examinations (written, oral, moodle, etc.): preparation and presentation of a presentation on the topic of aquatic environmental protection
- planned educational week of the mid-year examination (s): the topic of the presentation, the conditions of the structure of the presentation, the date of the presentation of the presentation will be given to the students by name during the semester
- form of the end-of-semester examination (s) (written, oral, moodle, etc.): the condition for obtaining the term mark is to write a piece of indoor dissertation on a moodle interface
- conditions for obtaining a signature: holding an oral presentation, uploading the prepared presentation to the moodle system

Subject: **THESIS II.**

Year, Semester: 4th year/1st semester

Number of teaching hours:

Practical: **10**

Subject: **HEALTH PROMOTION**

Year, Semester: 4th year/1st semester

Number of teaching hours:

Lecture: **10**

Seminar: **10**

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: **HEALTH PROMOTION IN PRIMARY CARE**

Year, Semester: 4th year/1st semester

Number of teaching hours:

Lecture: **10**

1. week

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

2. week

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

3. week

Practical: Health promotion at settings. Prevention

4. week

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

5. week

Practical: Public health projects

6. week

Practical: Physiotherapist in the healthcare system

7. 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.

Subject: **HEALTH PROMOTION IN PRIMARY CARE– Block practice**

Year, Semester: 4th year/1st semester

Number of teaching hours:

Practical: **30**

Subject: **PROFESSIONAL HEALTH CARE COMMUNICATION (Communication of Health Information for Not Qualified People)**

Year, Semester: 4th year/1st semester

Number of teaching hours:

Lecture: **10**

Seminar: **10**

Subject: **FOOD SAFETY**

Year, Semester: 4th year/1st semester

Number of teaching hours:

Practical: **10**

Seminar: **20**

Subject: **EPIDEMIOLOGICAL AND BIostatistical KNOWLEDGE**

Year, Semester: 4th year/1st semester

Number of teaching hours:

Lecture: **10**

Subject: **HOSPITAL HYGIENE**

Year, Semester: 4th year/1st semester

Number of teaching hours:

Lecture: **20**

Subject: **HOSPITAL HYGIENE– Block practice**

Year, Semester: 4th year/1st semester

Number of teaching hours:

Practical: **60**

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

Year, Semester: 4th year/1st semester

Number of teaching hours:

Lecture: **10**

Practical: **10**

Subject: **NUTRITIONAL HEALTH AND FOOD SAFETY**

Year, Semester: 4th year/1st semester

Number of teaching hours:

Lecture: **10**

Seminar: **20**

Basic knowledge

Food guide pyramids

Nutr. Requirement of population

What is healthy eating?

Dietary and diseases risks

Assessment of nutritional status

Nutritional disorders

Prevention of the malnutrition

Food related diseases

Hygiene in catering

Food intoxications

Toxins produced by microorganisms

Summary

Control on topic

Principles of HACCP

Safety requirements in communal feeding

Obesity

Diabetes mellitus

Summary: food safety

Control on topic

Subject: **CARDIOPULMONARY RESUSCITATION (CPR)**

Year, Semester: 4th year/1st semester

Number of teaching hours:

Practical: **10**

Subject: **THESIS III.**

Year, Semester: 4th year/2nd semester

Number of teaching hours:

Practical: **10**

Subject: **FIELD AND LABORATORY PRACTICE**

Year, Semester: 4th year/2nd semester

Number of teaching hours:

Practical: **420**

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

ENGLISH PROGRAM BULLETIN FOR BSC IN PUBLIC HEALTH

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

CHAPTER 9
LIST OF TEXTBOOKS

Hungarian Language:

Gerő Ildikó-Kovács Judit: Színesen magyarul.2017.

Psychology:

Segerstrale, U., Peter Molnár: Non-verbal communication: where nature meets culture. .

Lawrence Erlbaum Associate, Mahwah, New Jersey, 1997.

Hergenhahn, B. R.: An Introduction to the History of Psychology. 7th edition. Cengage Learning, 2013. ISBN: 978-1133958093.

Nolen-Hoeksema, S., Fredrickson, B., Loftus, G., Wagenaar, W.: Atkinson and Hilgard's Introduction to Psychology. 15th edition. Wadsworth Pub. Co, 2009.

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:

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.

Basics of 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.

Health informatics:

Handbooks of MS Office applications, Internet sources.

Latin language:

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

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

Philosophy:

Gaardner, 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.

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.

Basics of biostatistics:

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

Swinscow TDV, Campbell MJ: Statistics at Square One.
(<http://resources.bmj.com/bmj/readers/statistics-at-square-one/>).

Rothman KJ. Epidemiology: An introduction. Oxford University Press, New York, 2002.

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

Health informatics I:

Handbooks of MS Office applications. Internet sources.

Hungarian Language II:

Gyórfy Erzsébet, Ph.D.: Hogy s mint? I. .2013.

Basics of sociology:

Barry, A-M. – Yuill, Ch. : Understanding the Sociology of Health SAGE. , 2012. ISBN: (Chapters 1., 2.). Helman, C. G. : Culture, Health and Illness. CRC Press.(Chapter 1.), .

K. White: An Introduction to the Sociology of Health and Illness. 2nd edition. SAGE Publications Ltd, 2009. ISBN: 978-1412918794.

W.C. Cockerham: The Blackwell Companion to Medical Sociology. Wiley-Blackwell, 2001.

Introduction to law I:

David Kelly, Gary Slapper: Law: The Basics.1th edition.2011.

Jeffrey F. Beatty: Introduction to Business Law. Cengage Advantage Books, 2010.

Lucy Jones: Introduction to Business Law. Oxford University Press, 2013.

Richard A. Mann, Barry S. Roberts: Smith and Roberson's Business Law. Cengage Learning, 2011.

Physiology:

Koeppen, B. M., Stanton, B. A.: Berne & Levy Physiology. 7th edition. Elsevier, 2017. ISBN: 9-78032339394-2. Hall, J. E.: Guyton and Hall Textbook of Medical Physiology.

13rd edition. Saunders, 2015. ISBN: 1-4557-7005-1.

Basics of epidemiology:

Rothman, K.J. : Epidemiology: An Introduction. 2nd edition. Oxford University Press, 2012. ISBN: 0-1997-5455-1.

Woodward M.: Epidemiology: Study design and data analysis. Chapman & Hall/CRC, Boca Raton, Florida, USA, 1999.

Hennekens CH., Buring JE.: Epidemiology in Medicine.Little, Brown and Company, Boston, Toronto.

Microbiology I:

Levinson, W.: Review of Medical Microbiology and Immunology. 10th edition. McGraw-Hill Medical, 2008. ISBN: 0-071-49620-3.

Health informatics II:

Parker, J.C., Thorson, E.: Health Communication in the New Media Landscape. 1st edition. Springer Publishing Company, 2008. ISBN: 978-0-826-10122-8.

Greenhalgh T. : How to Read a Paper: The Basic of Evidence Based Medicine. 3rd edition. Wiley-Blackwell, 2006. ISBN: 1-405-13976-5.

Professional Hungarian I:

Fodor Marianna - Rozman Katalin: Beszélék magyarul?! I.2016. ISBN: 978-963-12-6413-5.

Basics of research methodology:

Keshav,S.: How to Read a Paper.

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CHAPTER 10
TITLES OF THESES

Attila Nagy M.D., PhD

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

Gábor Bányai-Márton, MA

Thesis and TDK:

History of international health organizations
Bioterrorism and global health security

Klára Bíró, D.MD., PhD

Thesis and TDK:

Increasing expectations among healthcare consumers
Challenges for healthcare managers

Judit Zsuga, M.D. , PhD

Thesis and TDK

Workplace stress in health care
Performance and workplace stress

Klára Boruzs, MA, 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, MSc, PhD.

Effect of physical activity on cardiovascular health in young adults
Falls in the elderly: risk factors and prevention

Anita Spisákné Balázs, PhD.

Assesment and treatment options for postural problems in school-age children
The role of pelvic floor muscle training during childbirth and postnatal recovery
Epidemiology, diagnosis and treatment of breast cancer
Study on the eating habits of secondary school students

Csilla Tatai, MSc

Eating disorders and the psychological aspects of nutrition
Mental disorders
Quality of life in chronic illnesses

Gergő József Szöllősi, MSc

Influenza vaccination coverage in Hungary based on the European Health Interview Survey
Investigation of the influencing factors of chronic kidney disease in Hungary based on the

European Health Interview Survey
Investigation of the influencing factors of obesity

Emilia Zsanda, MSc

Evaluating and comparing fashion diets to healthy eating

Éva Csepregi, MSc

Assessment of ratio of spinal problems and improvement of posture and spinal mobility in young college students

Andrea Hunyadi, MSc, PhD

Development of eye-hand coordination with ball among preschool children

Development of balance and coordination skills in preschool age

Development of movement coordination among hearing-impaired children

Examination of hip joint movement and the effect of intense training among 13-14-year old children

The practice of proprioceptive training in the treatment of pes planus and its effect on posture among primary school students

Ágnes Tóth, MSc, PhD

Celiac disease and its causes

Nutritional consequences of celiac disease

László Kardos, MD, PhD

Cutoff optimization of classification systems by misclassification cost minimization (for students with a strong inclination towards mathematics and computer programming)

Róbert Bata, MSc

The processing of health related databases