2023/2024

UNIVERSITY OF SZEGED

Albert Szent-Györgyi School of Medicine

CURRICULUM

CONTENT

Study Programs

BRIEF HISTORY OF THE UNIVERSITY OF SZEGED

Before the 12th century, intellectual and scholarly life concentrated in the monasteries. With the growing professionalisation of society in the 12th and 13th centuries, demand increased for educated professionals. The universities appeared in Europe from the 11th-12th century. Medieval universities were established for the study of arts, law, theology and medicine. Universities were not defined by location and space but by individuals banded together as a corporation. The end of the medieval period signalled the arrival of modern universities where teaching and research met.

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

The academy was soon closed due to religious and political turmoil, but the Jesuits re-established it and the institute gained more stability and prestige in the 17th century.

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

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

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

After World War II the institute assumed the name University of Szeged. In **1951** the Faculty of Medicine formed an independent institution under the name *Medical University of Szeged*. The pharmacy training was started as an independent faculty (separate from the medical faculty) in **1957**, and the Division of Dentistry as part of the Faculty of Medicine in **1962**. The English-Language Program for foreign students was established in **1985**. From **1999** there is also a German-Language Program at the Faculty of Medicine. In **1987** the University assumed the name of its former Biochemistry Professor, Dean of the Faculty of Medicine, Rector, and Nobel Prize Laureate, Albert Szent-Györgyi who was first to isolate vitamin C, extracted from paprika.

In **2000** the Albert Szent-Györgyi Medical University became again an integrated part of the University of Szeged. The Faculty of Medicine and the Faculty of Pharmacy functioned as the *Albert Szent-Györgyi Medical and Pharmaceutical Center* until July 2007. In the year 2004 the English-language dentistry program was launched and the Faculty of Dentistry was founded in January **2007**.

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

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

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Head of Department: Prof. dr. LÁSZLÓ TISZLAVICZ, M.D.

Department of Pediatrics and Child Health Center
(GYERMEKGYÓGYÁSZATI KLINIKA ÉS GYERMEKEGÉSZSÉGÜGYI KÖZPONT)
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Head: Dr. CSABA BERECZKI, M.D., Ph.D.

Department of Pediatrics Child Health Center Outpatient Department Section D
(GYERMEKGYÓGYÁSZATI KLINIKA ÉS GYERMEKEGÉSZSÉGÜGYI KÖZPONT "D" RÉSZLEG GYERMEK- ÉS IFJÚSÁGPSZICHIÁTRIAI OSZÁLY)
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Head: Dr. KRISZTINA KAPORNAI

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Head of Department: Prof. habil. JÁNOS KÁLMÁN, M.D., PhD, D.Sc.

Psychiatry Unit I.
(I. sz. PSZICHIÁTRIAI OSZTÁLY)
(Szeged, Korányi fasor 8-10. 3rd floor)
Head of Unit: Dr. BETTINA KATA KÁDÁR, M.D., PhD

Psychiatry Unit II.
(II. sz. PSZICHIÁTRIAI OSZTÁLY)
(Szeged, Korányi fasor 8-10. 3rd floor)
Head of Unit: Dr. BENCE ANDRÁS LÁZÁR, M.D., PhD

Psychiatry Unit III.
(III. sz. PSZICHIÁTRIAI OSZTÁLY)
(Szeged, Korányi fasor 8-10. 2nd floor)
Head of Unit: Dr. ERIKA HAJNALKA TÓTH, M.D.

Psychiatry Unit IV.
(IV. sz. PSZICHIÁTRIAI OSZTÁLY)
(6600 Szentes, Sima Ferenc u. 44-58.)
Head of Unit: Dr. RÉKA MÁRIA SZAKÁCS, M.D., PhD

Psychiatric Outpatient Unit
(PSZICHIÁTRIAI JÁRÓBETEG-ELLÁTÁS ÉS GONDOZÁS)
(Szeged, Mars tér 20.)
Head of Unit: Dr. ANNA KISS-SZŐKE, M.D.

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Department of Radiology (RADIOLÓGIAI KLINIKA)
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Head of Department: Dr. ZSIGMOND TAMÁS KINCSES M.D., Ph.D.

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Head of Department: Prof. habil. GYÖRGY LÁZÁR, M.D., Ph.D., D.Sc.

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Head of Department: Dr. IMELDA MARTON, M.D. Ph.D.

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Head of Department: associate Prof. László Török Ph.D.

Department of Urology (UROLÓGIAI KLINIKA)
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Head of Department: Prof. habil. ZOLTÁN BAJORY, M.D., Ph.D.

LIST OF EDUCATIONAL ADVISORS AND RESEARCH CONSULTANTS

Research at the bench or on a clinical basis provides a very important perspective for future physicians. It gives the students a chance to pursue common goals with faculty mentors and may give a glimpse into potential careers. Students are strongly encouraged to consider research opportunities. See your scientific research consultant at each department.

Department	Educational advisor	Research consultant
Dept. of Anatomy, Histology and Embryology	**Dr. Endre Dobó** **+** 36 62/544 000/6496 *dobo.endre@med.u-szeged.hu*	**Dr. Krisztián Pajer**
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Dept. of Behavioural Sciences	**Prof. Dr. Bettina Pikó** +36 62/545 968 *fuzne.piko.bettina@med.u-szeged.hu*	**Dr. Oguz Kelemen**
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Department of Cell Biology and Molecular Medicine	**Prof. Dr. Károly Gulya**	**Dr. Ákos Menyhárt**
Department of Clinical Microbiology	**Dr. Anita Varga-Bogdanov** +36 62/546112 *varga-bogdanov.anita@med.u-szeged.hu*	**Dr. Gabriella Terhes**
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Dept. of Surgery	**Prof. Dr. András Petri** +36 62/545 445 *petri.andras@med.u-szeged.hu*	**Dr. Zsolt Simonka**
Dept. of Dermatology and Allergology	***Dermatology*** **Dr. Almásiné Dr. Csoma Zsanett Renáta** +36 62/545 259 *almasine.csoma.zsanett@med.u-szeged.hu*	**Dr. Almásiné Dr. Csoma Zsanett Renáta**
	Clicinal Immunology **Dr. Zsuzsanna Bata** +36 62/545-996 *bata.zsuzsa@med.u-szeged.hu*	**Dr. Zsuzsanna Bata**

1st Department of Internal Medicine	**Dr. András Rosztóczy** +36 62/545 195 *rosztoczy.andras@med.u-szeged.hu*	**Dr. Tamás Takács**
2nd Department of Internal Medicine	Cardiology: **Dr. Andrea Vass** *vass.andrea@med.u-szeged.hu* Hematology: **Dr. Tímea P. Gurbity** + 36 62/545 226 *gurbity.palfi.timea@med.u-szeged.hu*	
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Department for Medical Communication and Translation	Hungarian Language (Years I-II) **Margit Skadra** *skadra.margit@med.u-szeged.hu* Hungarian Language (Years III-IV) **Marietta Kiss** *kiss.marietta86@gmail.com* Latin based medical terminology **Anita Kruták** *krutak.anita.olga@med.u-szeged.hu*	**Dr. Endre Hamvas** PhD assistant professor
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Dept. of Oncotherapy	**Dr. Gabriella Fábián** *fabian.gabriella@med.u-szeged.hu*	**Dr. Gabriella Fábián** *fabian.gabriella@med.u-szeged.hu*
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Dept. of Child and Adolescent Psychiatry	**Dr. Enikő Kiss** *kiss@gyip.szote.u-szeged.hu*	
Dept. of Pharmacology and Pharmacotherapy	**Dr. Andrea Orosz** +36 62/545 674 *orosz.andrea@med.u-szeged.hu*	**Dr. habil Róbert Gáspár M.Pharm., Ph.D.** +36 62/545 673 *gaspar.robert@med.u-szeged.hu*
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Dept. of Psychiatry	**Dr. Bence András Lázár** lazar.bence.andras@med.u-szeged.hu Deputy-assistant education advisor **Dr. Mihály Újházi** ujhazi.mihaly@med.u-szeged.hu	

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ACADEMIC CALENDAR 2023/2024

ACADEMIC PERIODS

1st (Fall) semester:

Education period:	from September 11 to December 16, 2023
Examination period:	from December 18, 2023 to February 03, 2024
Repeat examination period:	from February 05 to February 10, 2024
Winter break:	from December 25, 2023 to January 01, 2024 (The university is closed. There are no examinations.)
Holidays:	October 23, November 1, 2023

2nd (Spring) semester:

Education period:	from February 12 to May 18, 2024
Examination period:	from May 21 to June 29, 2024
Repeat Examination period:	from July 01 to July 06, 2024
Spring break:	from March 28 to April 02, 2024
Holidays:	March 15, May 1, May 20, 2024

For other important dates and deadlines, please check the relevant Info Sheet posted on the website of the Foreign Students' Secretariat.

TUITION FEES

Students are required to pay their tuition fee according to the academic year in which they have started their first year studies at the University of Szeged. More: www.med.u-szeged.hu/fs/tuition-fee

In case the students' academic progress does not follow the suggested study plan, tuition fee is calculated according to the following:

Fee of attending three or more compulsory subjects	100% of one semester's tuition fee*
Fee of attending one or two compulsory subjects	max. 50% reduction of one semester's tuition fee can be requested*
Fee of attending solely compulsory elective / elective / criteria subject	max. 50% reduction of one semester's tuition fee can be requested
Fee of taking subject(s) that do not involve class attendance	max. 50% reduction of one semester's tuition fee can be requested

*Examination course fee / compulsory elective / elective / criteria subjects are included!

Make sure that the exact amount of your tuition fee is credited to the University's account. When transferring your tuition fee, please keep in mind that the bank commission charges have to be paid by the student. In the Remarks/Comments field please indicate your legal name, name of the program and your year.

Payment can be made by transfer to the following bank account:

USD ACCOUNT

University of Szeged
IBAN: HU94-10004012-10008016-00220332
Bank name: Hungarian State Treasury
(correspondent: Hungarian National Bank, SWIFT code: MANEHUHB)
Bank address: H-1054 Budapest, Hold u. 4.
Swift code: HUSTHUHB

EUR ACCOUNT

University of Szeged
IBAN: HU79-10004885-10002010-00120335
Bank name: Hungarian State Treasury
(correspondent: Hungarian National Bank, SWIFT code: MANEHUHB)
Bank address: H-1054 Budapest, Hold u. 4.
Swift code: HUSTHUHB

Fees are subject to change. For updates please check the relevant Info Sheet.

GENERAL GUIDELINES

1.) Registration: Students have to **register for each semester** in order to have an active student status. Students who are not registered properly are not entitled to attend the classes.

Registration requirements:

- **Tuition fee** has to be credited to the University's bank account in full before registration.
- Valid **residence permit**. Please check on the NEPTUN (under My Data/ Personal Information / Records) whether you have submitted a copy of your valid residence permit. If it was renewed recently, please present the original and a copy to the Secretariat.
- Valid **health insurance** (If it was renewed recently please present the original and a copy at the Secretariat.)
- **Summer practice** evaluation sheet (if required)
- Settled outstanding balance for **youth hostel fees** and **medical treatment costs**
- Valid **medical fitness certificate** (completed medical check-up by the occupational health doctor)

2.) Payment of the tuition fee: The deadline of payment is always specified in the information sheets published to the students before the beginning of the upcoming semester. Proof of payment has to be submitted to the Secretariat. Students have to make sure that the exact amount of the tuition fee is credited to the University's account until the deadline. Late payment is not possible.

3.) Neptun course registration: Students have to sign up for their courses in the NEPTUN (computer-based academic system) each semester. Students failing to meet this requirement are not entitled to attend the classes. The number of course registrations in a subject is limited: one course can be registered 3 times during the period of studies.

Make sure you sign up for all your courses (both the lectures and practices, examination courses, physical education -2 semesters required).

4.) Residence permit

https://www.med.u-szeged.hu/fs/current-students/student-life-in-szeged download info from 'Residence Permit'

5.) Health Insurance

All students must have a valid health insurance during their stay in Hungary.
http://www.med.u-szeged.hu/fs/medical-treatment-of/medical-treatment-of

6.) Attendance of classes: If the absence does not exceed 15% of the total number of classes, students are not obliged to provide a certificate justifying the absence. If the absence falls between 15% and 25% of the total number of classes, students may only make up for the missed classes if they provide a certificate. The departments have the right to refuse the acceptance of a semester if the student missed more than 25 % of the practicals and did not make up for the absences.

7.) Obligation to report changes to the Secretariat: If there is a change in your personal data (address, e-mail address, telephone number etc.) you are required to *notify the Secretariat and correct the data in the Neptun*.
If you have to leave Szeged for a longer period of time during the lecture period due to substantial reasons (hospitalization, extraordinary family issues), you need to request permission in writing. Applications have to be handed in at the Foreign Students' Secretariat.

8.) General information regarding the examinations:

General information before you sign up for your exams:

- All exams including date, time and place is posted in the NEPTUN.
- Exam dates can be postponed before the NEPTUN closes the registration (*usually* 24 hours before the date of the exam. Clicking the course code, one can determine the closing of registration.) However, it is your duty to secure another date and time for your exam when you make changes.
- Students not showing up on an exam will lose one chance unless their absence is justified.
- A successful examination can be improved only in one subject / semester.

Procedures for unsuccessful exams:

- Repeated exam can be scheduled at the earliest by the 3rd working day following the unsuccessful exam.
- Unsuccessful exams can be repeated 2 times during the exam period. Upon request, a repeated exam can be taken before a committee. The exam committee is appointed by the Department Chair. Repeated exams with committee can be scheduled only for exam dates announced in the Neptun.
- 3rd repeat chance can be granted to those who have **only one exam left**. (In these cases the chances should be decreased by one when students sign up for the course for the 3rd time). Requests have to be handed in at the Foreign Students' Secretariat.
- In the repeat examination period only repeated exams can be taken. First examinations – even with a former absent registration – cannot be taken in the repeat examination week!
- In exceptional cases (hospitalization, extraordinary family issues) further examination chances can be requested from the Dean. Examinations granted as an exceptional equity can be taken only till the end of second week following the repeat examination period. Supporting documents must be attached to the application.

Further details are available in the relevant Info Sheet.

EXPRESSIONS

Compulsory Elective Subject (including Behavioral Science Subjects – only for medical students): There is a given number of credit points that has to be acquired in Compulsory Elective Subjects in the certain modules. One can choose freely from the subjects offered, however it is strongly recommended to follow the Suggested Study Plan.

Compulsory Subject: It is obligatory to take the subject in the module given.

Contact hours: Contact hours are the units of time required for a teacher to present subject material and to assess a student's performance. Contact hours include lectures, seminars, practical demonstrations, consultation hours and assessment.

Course requirement: The course requirement defines the precondition of a certain course. The course requirement can either be a **subject** or an **examination requirement**. In case of the *subject requirement* a course can be signed up for only if the examination defined in the course requirement has been completed successfully. In case of the *examination requirement* the examination of a course can only be taken if the examination defined in the course requirement has been completed successfully.

Credit: Credits are standard measurement of a student's accepted study time. One credit equals thirty hours of study time.

Credit transfer: Is a procedure accorded by the University of Szeged Code of Study and Examination Regulations, whereby a partial or full exemption can be given from completing one or more subjects by acknowledging previously completed subjects and thereby award the appropriate number of credit points.

Criteria Subject: Completion of criteria subjects is a precondition for entering the next module or receiving the diploma after finishing the final year (Physical Training, Summer Practices, Hungarian Language). Criteria subjects have no credit allocated to.

Elective Subject: There is a given number of credit points that has to be acquired in the certain modules. One can choose freely from the subjects offered, however it is strongly recommended to follow the Suggested Study Plan.

Examination course: If one cannot pass an examination successfully in the semester given, the examination can be repeated in the next examination period if the Department concerned announces it in the given semester and you get permission from the Dean. This means that the student will be exempted from fulfilling the requirements of the semester (classes do not have to be attended). An examination course can be taken only once in a certain subject.

Suggested study plan: the order and timing of subjects offered to students enabling them to obtain qualification within a specified period of time.

Term Mark: TM (five-grade system)

Grading system

Five-grade system
5 - excellent
4 - good
3 - accepted
2 - passed
1 - failed

GENERAL INFORMATION REGARDING THE STRUCTURE OF STUDIES AT THE ALBERT SZENT-GYÖRGYI MEDICAL SCHOOL

I. STRUCTURE OF STUDIES

In the academic year 2022/2023, students follow the curriculum/ suggested study plan of University of Szeged, Albert Szent-Györgyi Medical School (9001AK_N_2020) introduced in 2020/2021.

In order to obtain the Doctor of Medicine diploma, students need to acquire a minimum of 360 credits (by fulfilling the study and examination requirements of the subjects listed in the suggested study plan). In the final year, students, furthermore, have to complete the Final (State Board) Examination which consists of writing and defending a thesis, passing a complex written test and an oral patient examination (theoretical and practical part).

The order of taking the courses is set in the suggested study plan which is designed for completing medical studies within 12 semesters (6 years). **It is highly recommended to take the courses according to the Suggested Study Plan.**

Teaching is performed in 4 modules: Basic Module (1st, 2nd year)
Pre-Clinical Module (3rd year)
Clinical Module (4th, 5th year)
Final Module (6th year)

Types of courses:

Compulsory Courses
Compulsory Elective Courses
Elective Courses
Criteria Subjects

Credits to be acquired:

<table>
<tr><th></th><th>Basic Module (semesters 1-4)</th><th>Pre-Clinical Module (semesters 5-6)</th><th>Clinical Module (semesters 7-10)</th><th>Final Module (semesters 11-12)</th></tr>
<tr><td>Compulsory Courses</td><td>97 credits</td><td>49 credits</td><td>116 credits</td><td>50 credits</td></tr>
<tr><td>Compulsory Elective Courses</td><td colspan="3">45* credits</td><td rowspan="3">-</td></tr>
<tr><td>Elective Courses</td><td colspan="3">18 credits</td></tr>
<tr><td rowspan="2">Criteria Subjects (no credits)</td><td>Nursing Summer Practice</td><td>Internal Medicine Summer Practice</td><td>Doctor-Patient Communication, Surgery Summer Practice</td></tr>
<tr><td colspan="3">2 semesters of Physical Education, Hungarian Language courses</td></tr>
</table>

* This number includes 10 credits for the completion of the fifth year courses Thesis Plan I. & II., the completion of which is compulsory for all the fifth year students.

All the requirements of a module have to be fulfilled in order to enter the next module.

II. SPECIAL RULES FOR BEHAVIORAL SCIENCE SUBJECTS

In the fourth year (8th semester), students have to take a final examination which covers the knowledge, skills and attitudes learned during the seven previous semesters. The precondition for taking the examination is the earlier acquisition of 11 credits from the subjects below. However, it is recommended to complete all Behavioral Science Subjects (13 credits).

Recommended schedule for acquiring 11 credits:

• 9 credits for compulsory subjects:

Introduction to Medicine
(2 credits, year 1, fall semester)
Medical Anthropology
(1 credit, year 2, spring semester)
Ethics in Medicine
(2 credits, year 4, spring semester)
Introduction to Psychology, Communication
(1 credits, year 1, spring semester)
Medical Psychology I.
(2 credits, year 4, fall semester)
Medical Psychology II.
(1 credit, year 4, spring semester)
Examination in Behavioural Science
(0 credit, comprehensive exam, year 4, spring semester)

• 2 credits for compulsory elective subjects. You can choose from the following courses:
Gerontology
(2 credits, year 3, spring semester)
• Criteria subject:
Doctor-Patient Communication
(0 credit, **criteria subject**; year 4, fall or spring semester)

SUGGESTED STUDY PLAN - MEDICINE - 2023/2024

Course Code	Course	Dept.	Head of Dept.	Theory Hrs/week	Practice Hrs/week	Seminar Hrs/ week	Form of exam	Credit	**Precondition** (**SR**: subject requirement = completion of the precondition subject(s) in a preceding semester is required; **ER**: examination requirement = passing the examination of the precondition subject(s) in the same semester is required; **P**: parallel completion = register for all subjects in the same semester)
1st (fall) semester (9001AK_N_2020)									**BASIC MODULE**
Compulsory Subjects *(* The completion of the course is obligatory in the semester given. / ** Latin Based Medical Terminology I. and II. have to be completed in the Basic Module. / *** 2 semesters of Physical Education have to be completed until the end of the Clinical Module.)*									
AOK-OAK011	Basic Life Support	Dept. of Emergency Medicine	Dr. Zoltán Pető	-	2	-	Term Mark(5)	2	-
AOK-OAK0211	Anatomy, Histology and Embryology I.	Dept. of Anatomy	Prof. Antal Nógrádi	3	-	-	Examination	3	**P:** AOK-OAK0221: Dissection Practice I., AOK-OAK0231: Histology practice I.
AOK-OAK0221	Dissection Practice I.	Dept. of Anatomy	Prof. Antal Nógrádi	-	3	-	Term Mark(5)	2	**P:**AOK-OAK0211: Anatomy, Histology and Embryology I., AOK-OAK0231: Histology practice I.
AOK-OAK0231	Histology practice I.	Dept. of Anatomy	Prof. Antal Nógrádi	-	2	-	Term Mark(5)	2	**P**:AOK-OAK0211: Anatomy, Histology and Embryology I., AOK-OAK0221: Dissection Practice I.
AOK-OAK041	Introduction to Medicine lecture	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	1	-	-	Evaluation(5)	2	**P**: AOK-OAK042: Introduction to Medicine
AOK-OAK042	Introduction to Medicine practice	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	-	1	-	Signature	-	**P:** AOK-OAK041: Introduction to Medicine
AOK-OAK101	Medical Physics I. lecture	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	1	-	-	Examination	2	**P:** AOK-OAK103: Measurements in medical physics I., AOK-OAK102: Medical Physics I. seminar
AOK-OAK102	Medical Physics I. seminar	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	-	-	1	Signature	-	**P:** AOK-OAK103: Measurements in medical physics I., AOK-OAK101: Medical Physics I. lecture
AOK-OAK103	Measurements in medical physics I.	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	-	1	-	Term Mark(5)	1	**P:** AOK-OAK101 & AOK-OAK102: Medical Physics I. lecture & seminar
AOK-OAK111	Medical Chemistry I. lecture	Dept. of Med. Chemistry	Prof. Tamás Martinek	3	-	-	Examination	6	**P**: AOK-OAK112: Medical Chemistry I.
AOK-OAK112	Medical Chemistry I. practice	Dept. of Med. Chemistry	Prof. Tamás Martinek	-	1	-	Signature	-	**P**: AOK-OAK111: Medical Chemistry I.
AOK-OAK151	Cell Biology and Molecular Genetics I. lecture	Dept. of Med. Biology	Prof. Zsolt Boldogkői	2	-	-	Examination	4	**P**: AOK-OAK152: Cell Biology and Molecular Genetics I.
AOK-OAK152	Cell Biology and Molecular Genetics I. practice	Dept. of Med. Biology	Prof. Zsolt Boldogkői	-	2	-	Signature	-	**P**: AOK-OAK151: Cell Biology and Molecular Genetics I.
AOK-OAK601	Hungarian Language I.*	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	4	-	Term Mark(5)	-	-
AOK-OAK071	Latin Based Medical Terminology I.**	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	2	-	Signature	-	-
Neptun search: Other elective subjects Subject name: From the list made available by the sport center	Physical Education (Actual courses are on neptun (e.g., yoga, badminton etc.))***	Sport Center	Dr. Margaréta Tokodi	-	2	-	Signature	-	-
Compulsory Elective Subjects *(Complete 45 credits worth of compulsory elective subjects by the end of the Clinical Module.)*									
AOK-OAKV141	Introduction to Medical Chemistry	Dept. of Med. Chemistry	Prof. Tamás Martinek	1	-	-	Evaluation(5)	2	**P:** AOK-OAKV142: Introduction to Medical Chemistry
AOK-OAKV142	Introduction to Medical Chemistry	Dept. of Med. Chemistry	Prof. Tamás Martinek	-	1	-	Signature	-	**P:** AOK-OAKV141: Introduction to Medical Chemistry
AOK-OAKV021	Basics in Molecular Biology I.	Dept. of Med. Biology	Prof. Zsolt Boldogkői	1	-	-	Evaluation(5)	1	-
AOK-OAKV211	Cytomorphology and Microtechnics	Dept. of Cell Biology and Molecular Medicine	Dr. Eszter Farkas	2	-	-	Evaluation(5)	2	-
AOK-OAKV231	Developmental Genetics I.	Dept. of Med. Biology	Prof. Zsolt Boldogkői	1	-	-	Evaluation(5)	1	-
AOK-OAKV031	Frontiers of Molecular Biology I.	Dept. of Med. Biology	Prof. Zsolt Boldogkői	2	-	-	Evaluation(5)	2	-
AOK-OAKV311	Genetic Analysis I.	Dept. of Med. Biology	Prof. Zsolt Boldogkői	1	-	-	Evaluation(5)	1	-
AOK-OAKV251	Electrophysiology: ion channels and ion transport mechanisms in the regulation of cell functions lecture	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	2	-	-	Evaluation(5)	2	**P:** AOK-OAKV252: Electrophysiology: ion channels and ion transport mechanisms in the regulatin of cell functions
AOK-OAKV252	Electrophysiology: ion channels and ion transport mechanisms in the regulation of cell functions practice	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	-	Total: 6	-	Signature	-	**P:** AOK-OAKV251: Electrophysiology: ion channels and ion transport mechanisms in the regulatin of cell functions
AOK-OAKV481	Introduction to Medical Informatics	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	1	-	-	Evaluation(5)	3	**P:** AOK-OAKV482: Introduction to Medical Informatics
AOK-OAKV482	Introduction to Medical Informatics	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	-	2	-	Signature	-	**P**: AOK-OAKV481: Introduction to Medical Informatics
Elective Subjects *(Complete 18 credits worth of elective subjects by the end of the Clinical Module.)*									
AOK-OASZVV	Clinical Voluntary Work	Departments of the Albert Szent-Györgyi Medical School		-	2	-	Term Mark(5)	2	-
AOK-OASZV191	Fundamentals of medical physics	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	-	-	Total: 14	Evaluation(5)	1	-
AOK-OASZV761	Academic English for medical students I.	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	2	-	Term Mark(5)	2	-

2nd (spring) semester (9001AK_N_2020)									**BASIC MODULE**
Compulsory Subjects *(* The completion of the course is obligatory in the semester given. / ** Latin Based Medical Terminology I. and II. have to be completed in the Basic Module. / *** 2 semesters of Physical Education have to be completed until the end of the Clinical Module.)*									
AOK-OAK0241	Anatomy, Histology and Embryology II.	Dept. of Anatomy	Prof. Antal Nógrádi	3	-	-	Comprehensive Exam	5	**ER**: AOK-OAK0211: Anatomy, Histology and Embryology I. **P**: AOK-OAK0251: Dissection Practice II., AOK-OAK0261: Histology Practice II.
AOK-OAK0251	Dissection Practice II.	Dept. of Anatomy	Prof. Antal Nógrádi	-	3	-	Term Mark(5)	2	**SR:** AOK-OAK0221: Dissection Practice I., AOK-OAK0231: Histology practice I., **P:** AOK-OAK0241: Anatomy, Histology and Embryology II., AOK-OAK0261: Histology Practice II.
AOK-OAK0261	Histology Practice II.	Dept. of Anatomy	Prof. Antal Nógrádi	-	2	-	Term Mark(5)	2	**SR:** AOK-OAK0221: Dissection Practice I., AOK-OAK0231: Histology practice I., **P:** AOK-OAK0241: Anatomy, Histology and Embryology II., AOK-OAK0251: Dissection Practice II.
AOK-OAK104	Medical Physics II. lecture	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	2	-	-	Examination	3	**ER:** AOK-OAK101 & AOK-OAK102: Medical Physics I. lecture & seminar **P:** AOK-OAK106: Measurements in medical physics II., AOK-OAK105: Medical Physics II. seminar
AOK-OAK105	Medical Physics II. seminar	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	-	-	1	Signature	-	**P**: AOK-OAK106: Measurements in medical physics II., AOK-OAK104: Medical Physics II. lecture
AOK-OAK106	Measurements in medical physics II.	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	-	1	-	Term Mark(5)	1	**P**: AOK-OAK104 & AOK-OAK105: Medical Physics II. lecture & seminar
AOK-OAK107	Medical Statistics lecture	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	1	-	-	Examination	1	**P**: AOK-OAK108: Medical Statistics
AOK-OAK108	Medical Statistics practice	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	-	2	-	Term Mark(5)	2	**P:** AOK-OAK107: Medical Statistics
AOK-OAK113	Medical Chemistry II. lecture	Dept. of Med. Chemistry	Prof. Tamás Martinek	3	-	-	Examination	6	**ER**: AOK-OAK111: Medical Chemistry I. P: AOK-OAK114: Medical Chemistry II.
AOK-OAK114	Medical Chemistry II. practice	Dept. of Med. Chemistry	Prof. Tamás Martinek	-	3	-	Signature	-	**P:** AOK-OAK113: Medical Chemistry II.
AOK-OAK131	Introduction to Psychology, Communication lecture	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	Total 7 (7*1)	-	-	Evaluation(5)	1	**P:** AOK-OAK132: Introduction to Psychology, Communication
AOK-OAK132	Introduction to Psychology, Communication practice	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	-	Total 14 (7*2)	-	Signature	-	**P:** AOK-OAK131: Introduction to Psychology, Communication
AOK-OAK153	Cell Biology and Molecular Genetics II. lecture	Dept. of Med. Biology	Prof. Zsolt Boldogkői	2	-	-	Examination	4	**ER**: AOK-OAK151: Cell Biology and Molecular Genetics I. **P**: AOK-OAK154: Cell Biology and Molecular Genetics II.
AOK-OAK154	Cell Biology and Molecular Genetics II. practice	Dept. of Med. Biology	Prof. Zsolt Boldogkői	-	2	-	Signature	-	**P:** AOK-OAK153: Cell Biology and Molecular Genetics II.
AOK-OAK602	Hungarian Language II.*	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	4	-	Term Mark(5)	-	**SR**: AOK-OAK601: Hungarian Language I.
AOK-OAK072	Latin Based Medical Terminology II.**	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	2	-	Signature	-	**SR**: AOK-OAK071: Latin Based Medical Terminology I.
AOK-OAK031	Nursing Practice*	-	-	-	Total: 120	-	Signature	-	-
Neptun search: Other elective subjects Subject name: From the list made available by the sport center	Physical Education (Actual courses are on neptun (e.g., yoga, badminton etc.))***	Sport Center	Dr. Margaréta Tokodi	-	2	-	Signature	-	-

SUGGESTED STUDY PLAN - MEDICINE - 2023/2024

Course Code	Course	Dept.	Head of Dept.	Theory Hrs/week	Practice Hrs/week	Seminar Hrs/ week	Form of exam	Credit	Precondition (SR: subject requirement = completion of the precondition subject(s) in a preceding semester is required; ER: examination requirement = passing the examination of the precondition subject(s) in the same semester is required; P: parallel completion = register for all subjects in the same semester)
Compulsory Elective Subjects *(Complete 45 credits worth of compulsory elective subjects by the end of the Clinical Module.)*									
AOK-OAKV022	Basics in Molecular Biology II.	Dept. of Med. Biology	Prof. Zsolt Boldogkői	1	-	-	Evaluation(5)	1	-
AOK-OAKV232	Developmental Genetics II.	Dept. of Med. Biology	Prof. Zsolt Boldogkői	1	-	-	Evaluation(5)	1	-
AOK-OAKV032	Frontiers in Molecular Biology II.	Dept. of Med. Biology	Prof. Zsolt Boldogkői	2	-	-	Evaluation(5)	2	-
AOK-OAKV312	Genetic Analysis II.	Dept. of Med. Biology	Prof. Zsolt Boldogkői	1	-	-	Evaluation(5)	1	-
AOK-OAKV011	Modern Instrumental Analysis and Separation Methods	Dept. of Med. Chemistry	Prof. Tamás Martinek	1	-	-	Evaluation(5)	1	-
Elective Subjects *(Complete 18 credits worth of elective subjects by the end of the Clinical Module.)*									
AOK-OASZVV	Clinical Voluntary Work	Departments of the Albert Szent-Györgyi Medical School		-	2	-	Term Mark(5)	2	-
AOK-OASZV411	Chemical Misconceptions	Dept. of Med. Chemistry	Prof. Tamás Martinek	2	-	-	Evaluation(5)	2	-
AOK-OASZV711	Medical Hungarian Language I. - English Program I. year	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	Total: 14	-	Term Mark(5)	1	-
AOK-OASZV551	Medical physics remedial course	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	-	-	Total: 28	Term Mark(5)	1	-
AOK-OASZV731	Dissection room consultation	Dept. of Anatomy	Prof. Antal Nógrádi	-	2	-	Signature	-	**SR:** successful completion of Dissection Practice II. in a previous semester, **P**: Anatomy, Histology and Embryology II.
AOK-OASZV762	Academic English for medical students II.	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	2	-	Term Mark(5)	2	-
AOK-ONKV661	Berufsfelderkundung****	Dept. Of Behav. Sciences	Dr. Oguz Kelemen	-	1	-	Term Mark(5)	1	-

**** Supplementary course/examination for students working towards obtaining the "Physikum" certificate. The language of instruction is German. You can take it only if you are fluent in German (advanced, C1 level is required).

3rd (fall) semester (9001AK_N_2020) — BASIC MODULE

Compulsory Subjects *(* The completion of the course is obligatory in the semester given. / ** 2 semesters of Physical Education have to be completed until the end of the Clinical Module.)*									
AOK-OAK0271	Head, Neck and Neuroanatomy Lecture	Dept. of Anatomy	Prof. Antal Nógrádi	2	-	-	Examination	4	**SR**: AOK-OAK0251: Dissection Practice II., AOK-OAK0261: Histology Practice II., AOK-OAK0241: Anatomy, Histology and Embryology II. **P**: AOK-OAK0281: Head, Neck and Neuroanatomy - Dissection Practice, AOK-OAK0291: Histology of the Nervous System and Sense Organs
AOK-OAK0281	Head, Neck and Neuroanatomy - Dissection Practice	Dept. of Anatomy	Prof. Antal Nógrádi	-	3	-	Term Mark(5)	2	**SR:** AOK-OAK0251: Dissection Practice II., AOK-OAK0261: Histology Practice II. **P:** AOK-OAK0271: Head, Neck and Neuroanatomy Lecture, AOK-OAK0291: Histology of the Nervous System and Sense Organs
AOK-OAK0291	Histology of the Nervous System and Sense Organs	Dept. of Anatomy	Prof. Antal Nógrádi	-	2	-	Term Mark(5)	2	**SR:** AOK-OAK0251: Dissection Practice II., AOK-OAK0261: Histology Practice II. **P**: AOK-OAK0271: Head, Neck and Neuroanatomy Lecture, AOK-OAK0281: Head, Neck and Neuroanatomy - Dissection Practice
AOK-OAK051	Biochemistry I. lecture	Dept. of Biochemistry	Dr. Tamás Csont	4	-	-	Examination	6	**SR**: AOK-OAK113 Medical Chemistry II., **ER:** AOK-OAK153: Cell Biology and Molecular Genetics II. **P:** AOK-OAK052: Biochemistry I.
AOK-OAK052	Biochemistry I. practice	Dept. of Biochemistry	Dr. Tamás Csont	-	2	-	Signature	-	**P:** AOK-OAK051: Biochemistry I.
AOK-OAK091	Medical Physiology I. lecture	Dept. of Physiology	Prof. Gyula Sáry	4	-	-	Examination	8	**SR:** AOK-OAK104 & AOK-OAK105 & AOK-OAK106: Medical Physics II., AOK-OAK107 & AOK-OAK108: Medical Statistics, AOK-OAK153 & AOK-OAK154: Cell Biology and Molecular Genetics II., AOK-OAK0241: Anatomy, Histology and Embryology II. **P:** AOK-OAK092: Medical Physiology I.
AOK-OAK092	Medical Physiology I. practice	Dept. of Physiology	Prof. Gyula Sáry	-	4	-	Signature	-	**P**: AOK-OAK091: Medical Physiology I.
AOK-OAK121	Medical Sociology seminar	Dept. of Public Health	Dr. Edit Paulik	-	-	2	Examination	2	-
AOK-OAK603	Hungarian Language III.*	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	4	-	Term Mark(5)	-	**SR**: AOK-OAK602: Hungarian Language II.
Neptun search: Other elective subjects Subject name: From the list made available by the sport center	Physical Education (Actual courses are on neptun (e.g., yoga, badminton etc.))**	Sport Center	Dr. Margaréta Tokodi	-	2	-	Signature	-	-
Compulsory Elective Subjects *(Complete 45 credits worth of compulsory elective subjects by the end of the Clinical Module.)*									
AOK-OAKV261	Medical Physiology (Seminar) I.	Dept. of Physiology	Prof. Gyula Sáry	-	-	4	Evaluation(5)	4	**P**: AOK-OAK091: Medical Physiology I.
AOK-OAKV251	Electrophysiology: ion channels and ion transport mechanisms in the regulation of cell functions lecture	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	2	-	-	Evaluation(5)	2	**P:** AOK-OAKV252: Electrophysiology: ion channels and ion transport mechanisms in the regulatin of cell functions
AOK-OAKV252	Electrophysiology: ion channels and ion transport mechanisms in the regulation of cell functions practice	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	-	Total: 6	-	Signature	-	**P:** AOK-OAKV251: Electrophysiology: ion channels and ion transport mechanisms in the regulatin of cell functions
AOK-OAKV231	Developmental Genetics I.	Dept. of Med. Biology	Prof. Zsolt Boldogkői	1	-	-	Evaluation(5)	1	-
Elective Subjects *(Complete 18 credits worth of elective subjects by the end of the Clinical Module.)*									
AOK-OASZVV	Clinical Voluntary Work	Departments of the Albert Szent-Györgyi Medical School		-	2	-	Term Mark(5)	2	-
AOK-OASZV631	Body Development and Diseases and a Molecular Biological Background	Dept. of Biochemistry	Dr. Tamás Csont	2	-	-	Evaluation(5)	2	-
AOK-OASZV731	Dissection room consultation	Dept. of Anatomy	Prof. Antal Nógrádi	-	2	-	Signature	-	**SR:** successful completion of Dissection Practice I. or III. in a previous semester, **P**: Anatomy, Histology and Embryology I. or III.
AOK-OASZV761	Academic English for medical students I.	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	2	-	Term Mark(5)	2	-
AOK-ONKV671	Einführung in die klinische Medizin***	Dept. Of Surgery	Prof. György Lázár	-	2	-	Term Mark(5)	2	-
AOK-ONKV691	Terminologie***	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	2	-	Signature	1	-

*** Supplementary course/examination for students working towards obtaining the "Physikum" certificate. The language of instruction is German. You can take it only if you are fluent in German (advanced, C1 level is required).

SUGGESTED STUDY PLAN - MEDICINE - 2023/2024

4th (spring) semester (9001AK_N_2020) **BASIC MODULE**

Course Code	Course	Dept.	Head of Dept.	Theory Hrs/week	Practice Hrs/week	Seminar Hrs/ week	Form of exam	Credit	Precondition (**SR**: subject requirement = completion of the precondition subject(s) in a preceding semester is required; **ER**: examination requirement = passing the examination of the precondition subject(s) in the same semester is required; **P**: parallel completion = register for all subjects in the same semester)
Compulsory Subjects *(* The completion of the course is obligatory in the semester given. / ** 2 semesters of Physical Education have to be completed until the end of the Clinical Module.)*									
AOK-OAK053	Biochemistry II. lecture	Dept. of Biochemistry	Dr. Tamás Csont	4	-	-	Comprehensive Exam	6	**ER**: AOK-OAK051: Biochemistry I., **P:** AOK-OAK054: Biochemistry II.
AOK-OAK054	Biochemistry II. practice	Dept. of Biochemistry	Dr. Tamás Csont	-	2	-	Signature	-	**P:** AOK-OAK053: Biochemistry II.
AOK-OAK061	Immunology	Dept. of Immunology	Dr. Krisztina Buzás	2	-	-	Examination	2	**SR**: AOK-OAK0241: Anatomy, Histology and Embryology II. AOK-OAK0251: Dissection Practice II., AOK-OAK0261: Histology II., AOK-OAK104 & AOK-OAK105 & AOK-OAK106: Medical Physics II., AOK-OAK107 & AOK-OAK108: Medical Statistics, AOK-OAK113 & AOK-OAK114: Medical Chemistry II. **ER**: AOK-OAK0271: Head, Neck and Neuroanatomy Lecture
AOK-OAK081	Medical Anthropology Seminar	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	-	-	Total 14 (7*2)	Evaluation(5)	1	**SR**: AOK-OAK041 & AOK-OAK042: Introduction to Medicine
AOK-OAK093	Medical Physiology II. lecture	Dept. of Physiology	Prof. Gyula Sáry	6	-	-	Comprehensive Exam	10	**ER:** AOK-OAK091: Medical Physiology I., **P**: AOK-OAK094: Medical Physiology II.
AOK-OAK094	Medical Physiology II. practice	Dept. of Physiology	Prof. Gyula Sáry	-	4	-	Signature	-	**P**: AOK-OAK093: Medical Physiology II.
AOK-OAK141	Basic Surgical Skills lecture	Inst. of Surgical Research	Prof. Mihály Boros	1	-	-	Examination	3	**P**: AOK-OAK142: Basic Surgical Skills
AOK-OAK142	Basic Surgical Skills practice	Inst. of Surgical Research	Prof. Mihály Boros	-	2	-	Signature	-	**P**: AOK-OAK141: Basic Surgical Skills
AOK-OAK604	Hungarian Language IV.*	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	4	-	Prel.Exam	-	**SR**: AOK-OAK603: Hungarian Language III.
Neptun search: Other elective subjects Subject name: From the list made available by the sport center	Physical Education (Actual courses are on neptun (e.g., yoga, badminton etc.))**	Sport Center	Dr. Margaréta Tokodi	-	2	-	Signature	-	-
Compulsory Elective Subjects *(Complete 45 credits worth of compulsory elective subjects by the end of the Clinical Module.)*									
AOK-OAKV631	Human Embryology: Development of the Organ Systems	Dept. of Anatomy	Prof. Antal Nógrádi	2	-	-	Evaluation(5)	2	**ER**: AOK-OAK027: Anatomy, Histology and Embryology III.
AOK-OAKV262	Medical Physiology (Seminar) II.	Dept. of Physiology	Prof. Gyula Sáry	-	-	4	Evaluation(5)	4	**P:** AOK-OAK093: Medical Physiology II.
AOK-OAKV151	Biochemistry: Selected Chapters from Medical Biochemistry	Dept. of Biochemistry	Dr. Tamás Csont	2	-	-	Evaluation(5)	2	**P:** AOK-OAK053: Biochemistry II.
AOK-OAKV441	Molecular Developmental-Biology	Dept. of Biochemistry	Dr. Tamás Csont	2	-	-	Evaluation(5)	2	**SR**: AOK-OAK153: Cell Biology and Molecular Genetics II.
AOK-OAKV581	Cardiac Electrophysiology as a Basic Property of Cardiac Function	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	1	-	-	Evaluation(5)	2	**P:** AOK-OAKV582: Cardiac Electrophysiology as a Basic Property of Cardiac Function
AOK-OAKV582	Cardiac Electrophysiology as a Basic Property of Cardiac Function	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	-	1	-	Signature	-	**P:** AOK-OAKV581: Cardiac Electrophysiology as a Basic Property of Cardiac Function
AOK-OAKV051	Biochemical Basics of Preventive Medicine	Dept. of Biochemistry	Dr. Tamás Csont	2	-	-	Evaluation(5)	2	**SR**: AOK-OAK051: Biochemistry I.
AOK-OAKV232	Developmental Genetics II.	Dept. of Med. Biology	Prof. Zsolt Boldogkői	1	-	-	Evaluation(5)	1	-
AOK-OAKV361	How to learn Biochemistry?	Dept. of Biochemistry	Dr. Tamás Csont	-	-	2	Evaluation(5)	1	**SR:** AOK-OAK113: Medical Chemistry II.
Elective Subjects *(Complete 18 credits worth of elective subjects by the end of the Clinical Module.)*									
AOK-OASZVV	Clinical Voluntary Work	Departments of the Albert Szent-Györgyi Medical School		-	2	-	Term Mark(5)	2	-
AOK-OASZV431	Clinical Anatomy***	Dept. of Anatomy	Prof. Antal Nógrádi	-	3	-	Term Mark(5)	3	**SR:** AOK-OAK0281: Head, Neck and Neuroanatomy, Dissection Practice II., AOK-OAK029: Histology Practice II.
AOK-OASZV291	Mathematical and Statistical Modelling in Medicine Lecture	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	1	-	-	Evaluation(5)	2	**SR:** AOK-OAK104 & AOK-OAK105 & AOK-OAK106: Medical Physics II., AOK-OAK107 & AOK-OAK108: Medical Statistics, **P:** AOK-OASZV292: Mathematical and Statistical Modelling in Medicine Lecture
AOK-OASZV292	Mathematical and Statistical Modelling in Medicine Practice	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	-	1	-	Signature	-	**P:** AOK-OASZV291: Mathematical and Statistical Modelling in Medicine Lecture
AOK-OASZV762	Academic English for medical students II.	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	2	-	Term Mark(5)	2	-
AOK-ONK133	Grundbegriffe in der Psychologie***	Dept. of Behav. Sciences	Dr. Oguz Kelemen	-	-	-	Comprehensive Exam	2	-
AOK-ONK123	Medizinische Soziologie Rigorosum***	Dept. of Public Health	Dr. Edit Paulik	-	-	-	Comprehensive Exam	2	-

*** Supplementary course/examination for students working towards obtaining the "Physikum" certificate. The language of instruction is German. You can take it only if you are fluent in German (advanced, C1 level is required).

*******Without the completion of the every compulsory subject in the first and the second year (=every compulsory subject above except physical education) you cannot take any compulsory subjects from the pre-clinical module (third year) below.*******

SUGGESTED STUDY PLAN - MEDICINE - 2023/2024

Course Code	Course	Dept.	Head of Dept.	Theory Hrs/week	Practice Hrs/week	Seminar Hrs/ week	Form of exam	Credit	**Precondition** (**SR**: subject requirement = completion of the precondition subject(s) in a preceding semester is required; **ER**: examination requirement = passing the examination of the precondition subject(s) in the same semester is required; **P**: parallel completion = register for all subjects in the same semester)
5th (fall) semester (9001AK_N_2020)									**PRE-CLINICAL MODULE**
Compulsory Subjects *(* The completion of the course is obligatory in the semester given. / ** 2 semesters of Physical Education have to be completed until the end of the Clinical Module.)*									
AOK-OAK181	Basic Principles of Internal Medicine (Basics of Haematology) lecture	Dept. of Internal Medicine	Prof. Csaba Lengyel	2	-	-	Examination	4	**P**: AOK-OAK182: Basic Principles of Internal Medicine (Basics of Haematology)
AOK-OAK182	Basic Principles of Internal Medicine (Basics of Haematology) practice	Dept. of Internal Medicine	Prof. Csaba Lengyel	-	2	-	Signature	-	**P**: AOK-OAK181: Basic Principles of Internal Medicine (Basics of Haematology)
AOK-OAK201	Pathophysiology I. lecture	Dept. of Pathophysiology	Prof. Zoltán Rakonczay	3	-	-	Examination	5	**P**: AOK-OAK202: Pathophysiology I.
AOK-OAK202	Pathophysiology I. practice	Dept. of Pathophysiology	Prof. Zoltán Rakonczay	-	2	-	Signature	-	**P**: AOK-OAK201: Pathophysiology I.
AOK-OAK211	Microbiology I. lecture	Dept. of Med. Microbiology	Dr. habil Katalin Burián	3	-	-	Examination	5	**P**: AOK-OAK212: Microbiology I.
AOK-OAK212	Microbiology I. practice	Dept. of Med. Microbiology	Dr. habil Katalin Burián	-	2	-	Signature	-	**P**: AOK-OAK211: Microbiology I.
AOK-OAK221	Pathology I. lecture	Dept. of Pathology	Prof. László Tiszlavicz	3	-	-	Examination	6	**P**: AOK-OAK222: Pathology I.
AOK-OAK222	Pathology I. practice	Dept. of Pathology	Prof. László Tiszlavicz	-	3	-	Signature	-	**P:** AOK-OAK221: Pathology I.
AOK-OAK605	Hungarian Language V.*	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	3	-	Term Mark(5)	-	**SR:** AOK-OAK604: Hungarian Language IV.
Neptun search: Other elective subjects Subject name: From the list made available by the sport center	Physical Education (Actual courses are on neptun (e.g., yoga, badminton etc.))**	Sport Center	Dr. Margaréta Tokodi	-	2	-	Signature	-	-
Compulsory Elective Subjects *(Complete 45 credits worth of compulsory elective subjects by the end of the Clinical Module.)*									
AOK-OAKV351	Advanced Surgical Skills	Inst. of Surgical Research	Prof. Mihály Boros	1	-	-	Evaluation(5)	2	**SR:** AOK-OAK141 & AOK-OAK142: Basic Surgical Skills **P:** AOK-OAKV352: Advanced Surgical Skills
AOK-OAKV352	Advanced Surgical Skills	Inst. of Surgical Research	Prof. Mihály Boros	-	1	-	Signature	-	**SR:** AOK-OAK141 & AOK-OAK142: Basic Surgical Skills **P:** AOK-OAKV351: Advanced Surgical Skills
AOK-OAKV431	Microsurgery	Inst. of Surgical Research	Prof. Mihály Boros	Total: 8	-	-	Evaluation(5)	2	**SR:** AOK-OAK027: Anatomy, Histology and Embryology III., AOK-OAK093: Medical Physiology II., AOK-OAK141 & 142: Basic Surgical Skills, **P:** AOK-OAKV432: Microsurgery
AOK-OAKV432	Microsurgery	Inst. of Surgical Research	Prof. Mihály Boros	-	Total: 20	-	Signature	-	**P:** AOK-OAKV431: Microsurgery
AOK-OAKV451	Molecular Medicine	Dept. of Cell Biology and Molecular Medicine	Dr. Eszter Farkas	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK027: Anatomy, Histology and Embryology III., AOK-OAK093: Medical Physiology II.
AOK-OAKV071	Pathophysiology of Sepsis at the Bedside	Dept. of Anesthesiology and Intensive Therapy	Prof. Babik Barna	1	-	-	Evaluation(5)	1	**SR:** AOK-OAK093: Medical Physiology II.
AOK-OAKV251	Electrophysiology: ion channels and ion transport mechanisms in the regulation of cell functions lecture	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	2	-	-	Evaluation(5)	2	**P:** AOK-OAKV252: Electrophysiology: ion channels and ion transport mechanisms in the regulatin of cell functions
AOK-OAKV252	Electrophysiology: ion channels and ion transport mechanisms in the regulation of cell functions practice	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	-	Total: 6	-	Signature	-	**P:** AOK-OAKV251: Electrophysiology: ion channels and ion transport mechanisms in the regulatin of cell functions
Elective Subjects *(Complete 18 credits worth of elective subjects by the end of the Clinical Module.)*									
AOK-OASZVV	Clinical Voluntary Work	Departments of the Albert Szent-Györgyi Medical School		-	2	-	Term Mark(5)	2	-
AOK-OASZVD	Demonstrator Activity	The Dept. where the student's demonstrator activity application was accepted		-	2	-	Evaluation(5)	2	**SR:** AOK-OAK024: Anatomy, Histology and Embryology II., AOK-OAK104 & AOK-OAK105 & AOK-OAK106: Medical Physics II., AOK-OAK107 & AOK-OAK108: Medical Statistics, AOK-OAK113: Medical Chemistry II., AOK-OAK153: Cell Biology and Molecular Genetics II., AOK-OAK031: Nursing Practice
AOK-OASZV631	Body Development and Diseases and a Molecular Biological Background	Dept. of Biochemistry	Dr. Tamás Csont	2	-	-	Evaluation(5)	2	-
AOK-OASZV301	Cerebral Blood Flow and Metabolism	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK091: Medical Physiology I.

SUGGESTED STUDY PLAN - MEDICINE - 2023/2024

Course Code	Course	Dept.	Head of Dept.	Theory Hrs/week	Practice Hrs/week	Seminar Hrs/ week	Form of exam	Credit	Precondition (**SR**: subject requirement = completion of the precondition subject(s) in a preceding semester is required; **ER**: examination requirement = passing the examination of the precondition subject(s) in the same semester is required; **P**: parallel completion = register for all subjects in the same semester)
6th (spring) semester (9001AK_N_2020)									**PRE-CLINICAL MODULE**
Compulsory Subjects *(* The completion of the course is obligatory in the semester given. / ** 2 semesters of Physical Education have to be completed until the end of the Clinical Module.)*									
AOK-OAK161	Internal Medicine I. lecture	Dept. of Internal Medicine	Prof. Csaba Lengyel	3	-	-	Examination	4	**ER:** AOK-OAK181: Basic Principles of Internal Medicine (Basics of Haematology), **P:** AOK-OAK162: Internal Medicine I.
AOK-OAK162	Internal Medicine I. practice	Dept. of Internal Medicine	Prof. Csaba Lengyel	-	2	-	Signature	-	**P:** AOK-OAK161: Internal Medicine I.
AOK-OAK191	Pharmacology and pharmacotherapy I. lecture	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	3	-	-	Examination	5	**ER:** AOK-OAK201: Pathophysiology I., AOK-OAK221: Pathology I., AOK-OAK211: Microbiology I., **P:** AOK-OAK192: Pharmacology and pharmacotherapy I.
AOK-OAK192	Pharmacology and pharmacotherapy I. practice	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	-	2	-	Signature	-	**P:** AOK-OAK191: Pharmacology and pharmacotherapy I.
AOK-OAK203	Pathophysiology II. lecture	Dept. of Pathophysiology	Prof. Zoltán Rakonczay	3	-	-	Comprehensive Exam	5	**ER:** AOK-OAK201: Pathophysiology I., **P:** AOK-OAK204: Pathophysiology II.
AOK-OAK204	Pathophysiology II. practice	Dept. of Pathophysiology	Prof. Zoltán Rakonczay	-	2	-	Signature	-	**P:** AOK-OAK203: Pathophysiology II.
AOK-OAK213	Microbiology II. lecture	Dept. of Med. Microbiology	Dr. habil Katalin Burián	3	-	-	Comprehensive Exam	5	**ER:** AOK-OAK211: Microbiology I., **P:** AOK-OAK214: Microbiology II.
AOK-OAK214	Microbiology II. practice	Dept. of Med. Microbiology	Dr. habil Katalin Burián	-	2	-	Signature	-	**P:** AOK-OAK213: Microbiology II.
AOK-OAK223	Pathology II. lecture	Dept. of Pathology	Prof. László Tiszlavicz	2	-	-	Comprehensive Exam	6	**ER:** AOK-OAK221: Pathology I., **P:** AOK-OAK224: Pathology II.
AOK-OAK224	Pathology II. practice	Dept. of Pathology	Prof. László Tiszlavicz	-	4	-	Signature	-	**P:** AOK-OAK223: Pathology II.
AOK-OAK231	Surgical Propedeutics lecture	Dept. of Surgery	Prof. György Lázár	2	-	-	Examination	4	**P:** AOK-OAK232: Surgical Propedeutics
AOK-OAK232	Surgical Propedeutics practice	Dept. of Surgery	Prof. György Lázár	-	2	-	Signature	-	**P:** AOK-OAK231: Surgical Propedeutics
AOK-OAK606	Hungarian Language VI.*	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	3	-	Term Mark(5)	-	**SR:** AOK-OAK605: Hungarian Language V.
AOK-OAK171	Internal Medicine Summer Practice*	-	-	-	Total: 120	-	Signature	-	**P:** AOK-OAK161: Internal Medicine I.
Neptun search: Other elective subjects Subject name: From the list made avaible by the sport center	Physical Education (Actual courses are on neptun (e.g., yoga, badminton etc.))**	Sport Center	Dr. Margaréta Tokodi	-	2	-	Signature	-	-
Compulsory Elective Subjects *(Complete 45 credits worth of compulsory elective subjects by the end of the Clinical Module.)*									
AOK-OAKV351	Advanced Surgical Skills	Inst. of Surgical Research	Prof. Mihály Boros	1	-	-	Evaluation(5)	2	**SR:** AOK-OAK141 & AOK-OAK142: Basic Surgical Skills **P:** AOK-OAKV352: Advanced Surgical Skills
AOK-OAKV352	Advanced Surgical Skills	Inst. of Surgical Research	Prof. Mihály Boros	-	1	-	Signature	-	**SR:** AOK-OAK141 & AOK-OAK142: Basic Surgical Skills **P:** AOK-OAKV351: Advanced Surgical Skills
AOK-OAKV441	Molecular Developmental-Biology	Dept. of Biochemistry	Dr. Tamás Csont	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK153: Cell Biology and Molecular Genetics II.
AOK-OAKV421	Microbiological Problems in Med. Practice	Dept. of Med. Microbiology	Dr. habil Katalin Burián	1	-	-	Evaluation(5)	1	**ER:** AOK-OAK211: Microbiology I.
AOK-OAKV431	Microsurgery	Inst. of Surgical Research	Prof. Mihály Boros	Total: 8	-	-	Evaluation(5)	2	**SR:** AOK-OAK027: Anatomy, Histology and Embryology III., AOK-OAK093: Medical Physiology II., AOK-OAK141: Basic Surgical Skills, **P:** AOK-OAKV432: Microsurgery
AOK-OAKV432	Microsurgery	Inst. of Surgical Research	Prof. Mihály Boros	-	Total: 20	-	Signature	-	**P:** AOK-OAKV431: Microsurgery
AOK-OAKV271	Pharmacology Cases I.	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	-	2	-	Evaluation(5)	2	-
AOK-OAKV411	Pathophysiological Aspects of Laboratory Medicine	Dept. of Laboratory Medicine	Dr. Földesi Imre	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK201: Pathophysiology I.
AOK-OAKV321	Gerontology	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	1	-	-	Evaluation(5)	2	**SR:** AOK-OAK041 & AOK-OAK042: Introduction to Medicine **P:** AOK-OAKV322: Gerontology
AOK-OAKV322	Gerontology	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	-	1	-	Signature	-	**P:** AOK-OAKV321: Gerontology
AOK-OAKV181	Foundations of Evidence Based Medicine	Dept. of Public Health	Dr. Edit Paulik	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK121: Medical Sociology, AOK-OAK101 & AOK-OAK102 & AOK-OAK103: Medical Physics I.
AOK-OAKV581	Cardiac Electrophysiology as a Basic Property of Cardiac Function	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	1	-	-	Evaluation(5)	2	**P:** AOK-OAKV582: Cardiac Electrophysiology as a Basic Property of Cardiac Function
AOK-OAKV582	Cardiac Electrophysiology as a Basic Property of Cardiac Function	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	-	1	-	Signature	-	**P:** AOK-OAKV581: Cardiac Electrophysiology as a Basic Property of Cardiac Function
AOK-OAKV051	Biochemical Basics of Preventive Medicine	Dept. of Biochemistry	Dr. Tamás Csont	2	-	-	Evaluation(5)	2	-
Elective Subjects *(Complete 18 credits worth of elective subjects by the end of the Clinical Module.)*									
AOK-OASZVV	Clinical Voluntary Work	Departments of the Albert Szent-Györgyi Medical School		-	2	-	Term Mark(5)	2	-
AOK-OASZVD	Demonstrator Activity	The Dept. where the student's demonstrator activity application was accepted		-	2	-	Evaluation(5)	2	**SR:** AOK-OAK024: Anatomy, Histology and Embryology II., AOK-OAK104 & AOK-OAK105 & AOK-OAK106: Medical Physics II., AOK-OAK107 & AOK-OAK108: Medical Statistics, AOK-OAK113: Medical Chemistry II., AOK-OAK153: Cell Biology and Molecular Genetics II., AOK-OAK031: Nursing Practice
AOK-OASZV171	Basic Immunpathology	Inst. of Surgical Research	Prof. Mihály Boros	1	-	-	Evaluation(5)	1	**SR:** AOK-OAK211: Microbiology I.
AOK-OASZV241	Biotechnology from a Business Perspective	Dept. of Biotechnology	Prof. Kornél Kovács L.	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK153: Cell Biology and Molecular Genetics II.
AOK-OASZV411	Chemical Misconceptions	Dept. of Med. Chemistry	Prof. Tamás Martinek	2	-	-	Evaluation(5)	2	-
AOK-OASZV291	Mathematical and Statistical Modelling in Medicine Lecture	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	1	-	-	Evaluation(5)	2	**SR:** AOK-OAK104 & AOK-OAK105 & AOK-OAK106: Medical Physics II., AOK-OAK107 & AOK-OAK108: Medical Statistics, **P:** AOK-OASZV292: Mathematical and Statistical Modelling in Medicine Lecture
AOK-OASZV292	Mathematical and Statistical Modelling in Medicine Practice	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	-	1	-	Signature	-	**P:** AOK-OASZV291: Mathematical and Statistical Modelling in Medicine Lecture
AOK-OASZV221	Introduction to Toxicology	Dept. of Med. Chemistry	Prof. Tamás Martinek	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK053: Biochemistry II., AOK-OAK093: Medical Physiology II.
AOK-OASZV771	3D printing in life sciences	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	2	-	-	Evaluation(5)	2	-

*******Without the completion of the every compulsory subject in the pre-clinical module (except physical education) you cannot take any compulsory subjects from the clinical module below.*******

SUGGESTED STUDY PLAN - MEDICINE - 2023/2024

Course Code	Course	Dept.	Head of Dept.	Theory Hrs/week	Practice Hrs/week	Seminar Hrs/ week	Form of exam	Credit	Precondition (**SR**: subject requirement = completion of the precondition subject(s) in a preceding semester is required; **ER**: examination requirement = passing the examination of the precondition subject(s) in the same semester is required; **P**: parallel completion = register for all subjects in the same semester)
7th (fall) semester (9001AK_N_2020)									**CLINICAL MODULE**
Compulsory Subjects (** The completion of the course is obligatory in the semester given. / ** Only half of the 4th year students can register in each semester. / *** 2 semesters of Physical Education have to be completed until the end of the Clinical Module.*)									
AOK-OAK271	Internal Medicine II. lecture	Dept. of Internal Medicine	Prof. Csaba Lengyel	4	-	-	Examination	5	**P:** AOK-OAK272: Internal Medicine II.
AOK-OAK272	Internal Medicine II. practice	Dept. of Internal Medicine	Prof. Csaba Lengyel	-	2	-	Signature	-	**P:** AOK-OAK271: Internal Medicine II.
AOK-OAK291	Pharmacology and pharmacotherapy II. lecture	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	4	-	-	Comprehensive Exam	5	**ER:** AOK-OAK191: Pharmacology and pharmacotherapy I., **P:** AOK-OAK292: Pharmacology and pharmacotherapy II.
AOK-OAK292	Pharmacology and pharmacotherapy II. practice	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	-	2	-	Signature	-	**P:** AOK-OAK291: Pharmacology and pharmacotherapy II.
AOK-OAK371	Public Health and Preventive Medicine I. lecture	Dept. of Public Health	Dr. Edit Paulik	2	-	-	Examination	3	**P:** AOK-OAK372: Public Health and Preventive Medicine I.
AOK-OAK372	Public Health and Preventive Medicine I. practice	Dept. of Public Health	Dr. Edit Paulik	-	2	-	Signature	-	**P:** AOK-OAK371: Public Health and Preventive Medicine I.
AOK-OAK391	Orthopedics lecture	Dept. of Orthopedics	Dr. Krisztián Sisák	2	-	-	Examination	3	**P:** AOK-OAK392: Orthopedics
AOK-OAK392	Orthopedics practice	Dept. of Orthopedics	Dr. Krisztián Sisák	-	2	-	Signature	-	**P:** AOK-OAK391: Orthopedics
AOK-OAK421	Medical Psychology I. lecture	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	Total 5 (5*1)	-	-	Evaluation(5)	2	**P:** AOK-OAK422: Medical Psychology I.
AOK-OAK422	Medical Psychology I. practice	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	-	Total 20 (10*2)	-	Signature	-	**P:** AOK-OAK421: Medical Psychology I.
AOK-OAK451	Pulmonology lecture	Dept. of Pulmonolgy	Dr. Csaba Máthé	1	-	-	Examination	2	**P:** AOK-OAK452: Pulmonology
AOK-OAK452	Pulmonology practice	Dept. of Pulmonolgy	Dr. Csaba Máthé	-	2	-	Signature	-	**P:** AOK-OAK451: Pulmonology
AOK-OAK461	Radiology I. lecture	Dept. of Radiology	Dr. Kincses Zsigmond Tamás	1	-	-	Evaluation(5)	2	**P:** AOK-OAK462: Radiology I.
AOK-OAK462	Radiology I. practice	Dept. of Radiology	Dr. Kincses Zsigmond Tamás	-	1	-	Signature	-	**P:** AOK-OAK461: Radiology I.
AOK-OAK471	Surgery I. lecture	Dept. of Surgery	Prof. György Lázár	2	-	-	Evaluation(5)	3	**P:** AOK-OAK472: Surgery I.
AOK-OAK472	Surgery I. practice	Dept. of Surgery	Prof. György Lázár	-	2	-	Signature	-	**P:** AOK-OAK471: Surgery I.
AOK-OAK501	Obstetrics and Gynaecology I. lecture	Dept. of Obstetrics and G.	Dr. Gábor Németh	3	-	-	Examination	4	**P:** AOK-OAK502: Obstetrics and Gynaecology I.
AOK-OAK502	Obstetrics and Gynaecology I. practice	Dept. of Obstetrics and G.	Dr. Gábor Németh	-	2	-	Signature	-	**P:** AOK-OAK501: Obstetrics and Gynaecology I.
AOK-OAK607	Hungarian Language VII.*	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	3	-	Term Mark(5)	-	-
AOK-OAK401	Doctor-Patient Communication**	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	-	-	2	Signature	-	**ER:** AOK-OAK421: Medical Psychology I.
AOK-OAK505	Delivery-Room**	Dept. of Obstetrics and G.	Dr. Gábor Németh	-	Total: 72	-	Signature	-	**P:** AOK-OAK501: Obstetrics and Gynaecology I.
Neptun search: Other elective subjects Subject name: From the list made avaiable by the sport center	Physical Education (Actual courses are on neptun (e.g., yoga, badminton etc.))***	Sport Center	Dr. Margaréta Tokodi	-	2	-	Signature	-	-
Compulsory Elective Subjects *(Complete 45 credits worth of compulsory elective subjects by the end of the Clinical Module.)*									
AOK-OAKV161	Basic Biostatistics	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	2	-	-	Evaluation(5)	2	-
AOK-OAKV131	Introduction to Aviation and Space Medicine	Dept. of Aviation and Space Medicine	Prof. Sándor Szabó	2	-	-	Evaluation(5)	2	-
AOK-OAKV641	Medical Informatics I.	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	2	-	-	Evaluation(5)	2	-
AOK-OAKV491	Medical Molecular Biology and Genomics	Dept. of Med. Biology	Prof. Zsolt Boldogkői	1	-	-	Evaluation(5)	1	-
AOK-OAKV431	Microsurgery	Inst. of Surgical Research	Prof. Mihály Boros	Total: 8	-	-	Evaluation(5)	2	**SR:** AOK-OAK027: Anatomy, Histology and Embryology III., AOK-OAK093: Medical Physiology II., AOK-OAK141: Basic Surgical Skills, **P:** AOK-OAKV432: Microsurgery
AOK-OAKV432	Microsurgery	Inst. of Surgical Research	Prof. Mihály Boros	-	Total: 20	-	Signature	-	**P:** AOK-OAKV431: Microsurgery
AOK-OAKV471	Nuclear Medicine	Dept. of Nuclear Med.	Prof. László Pávics	1	-	-	Evaluation(5)	1	-
AOK-OAKV272	Pharmacology Cases II.	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	-	2	-	Evaluation(5)	2	**SR:** AOK-OAKV271: Pharmacology Cases I.
AOK-OAKV621	The Language of Effective Doctor-Patient Communication I.	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	2	-	Term Mark(5)	2	-
AOK-OAKV251	Electrophysiology: ion channels and ion transport mechanisms in the regulation of cell functions lecture	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	2	-	-	Evaluation(5)	2	**P:** AOK-OAKV252: Electrophysiology: ion channels and ion transport mechanisms in the regulatin of cell functions
AOK-OAKV252	Electrophysiology: ion channels and ion transport mechanisms in the regulation of cell functions practice	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	-	Total: 6	-	Signature	-	**P:** AOK-OAKV251: Electrophysiology: ion channels and ion transport mechanisms in the regulatin of cell functions
AOK-OAKV661	Neuropathological basis of clinical neurosciences	Dept. of Pathology	Prof. László Tiszlavicz	-	-	2	Term Mark(5)	2	**SR**: AOK-OAK223: Pathology II. lecture
Elective Subjects *(Complete 18 credits worth of elective subjects by the end of the Clinical Module.)*									
AOK-OASZV011	Self management support for patients with chronic conditions	Dept. of Medical Rehabiliation and Physical Medicine	Dr. István Kósa	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK181 & AOK-OAK182: Basic Principles of Internal Medicine
AOK-OASZVV	Clinical Voluntary Work	Departments of the Albert Szent-Györgyi Medical School		-	2	-	Term Mark(5)	2	-
AOK-OASZVD	Demonstrator Activity	The Dept. where the student's demonstrator activity application was accepted		-	2	-	Evaluation(5)	2	**SR:** AOK-OAK024: Anatomy, Histology and Embryology II., AOK-OAK104 & AOK-OAK105 & AOK-OAK106: Medical Physics II., AOK-OAK107 & AOK-OAK108: Medical Statistics, AOK-OAK113: Medical Chemistry II., AOK-OAK153: Cell Biology and Molecular Genetics II., AOK-OAK031: Nursing Practice
AOK-OASZVT	Student Science Study Group	The Dept. where the student's Student Science Study Group application was accepted		-	-	1	Evaluation(5)	2	-
AOK-OASZV751	Basics of Self-Knowledge in Professional Orientation	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	-	Total 12	-	Term Mark(5)	1	-

SUGGESTED STUDY PLAN - MEDICINE - 2023/2024

Course Code	Course	Dept.	Head of Dept.	Theory Hrs/week	Practice Hrs/week	Seminar Hrs/ week	Form of exam	Credit	**Precondition** (**SR**: subject requirement = completion of the precondition subject(s) in a preceding semester is required; **ER**: examination requirement = passing the examination of the precondition subject(s) in the same semester is required; **P**: parallel completion = register for all subjects in the same semester)
8th (spring) semester (9001AK_N_2020)									**CLINICAL MODULE**
Compulsory Subjects *(* The completion of the course is obligatory in the semester given. / ** Only half of the 4th year students can register in each semester. / *** 2 semesters of Physical Education have to be completed until the end of the Clinical Module.)*									
AOK-OAK241	Introduction to the approach to the critically ill patient-the basic bedside clinical skills lecture	Dept. of Anesthesiology and Intensive Therapy	Prof. Babik Barna	1	-		Signature	-	**ER:** AOK-OAK271: Internal Medicine II., **P:** AOK-OAK242: Introduction to the approach to the critically ill patient-the basic bedside clinical skills practice
AOK-OAK242	Introduction to the approach to the critically ill patient-the basic bedside clinical skills practice	Dept. of Anesthesiology and Intensive Therapy	Prof. Babik Barna	-	2		Term Mark(5)	2	**P:** AOK-OAK241: Introduction to the approach to the critically ill patient-the basic bedside clinical skills lecture
AOK-OAK273	Internal Medicine III. lecture	Dept. of Internal Medicine	Prof. Csaba Lengyel	5	-	-	Examination	5	**ER:** AOK-OAK271: Internal Medicine II., **P:** AOK-OAK274: Internal Medicine III.
AOK-OAK274	Internal Medicine III. practice	Dept. of Internal Medicine	Prof. Csaba Lengyel	-	2	-	Signature	-	**P:** AOK-OAK273: Internal Medicine III.
AOK-OAK341	Clinical Genetics and Genomics	Dept. of Medical Genetics	Prof. Márta Széll	1	-	-	Evaluation(5)	1	**ER:** AOK-OAK273: Internal Medicine III.
AOK-OAK351	Clinical Oncology	Dept. of Oncotherapy	Prof. Judit Oláh	2	-	-	Examination	2	-
AOK-OAK373	Public Health and Preventive Medicine II. lecture	Dept. of Public Health	Dr. Edit Paulik	2	-	-	Comprehensive Exam	3	**ER:** AOK-OAK371: Public Health and Preventive Medicine I., **P:** AOK-OAK374: Public Health and Preventive Medicine II.
AOK-OAK374	Public Health and Preventive Medicine II. practice	Dept. of Public Health	Dr. Edit Paulik	-	2	-	Signature	-	**P:** AOK-OAK373: Public Health and Preventive Medicine II.
AOK-OAK411	Ethics in Medicine lecture	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	Total 7 (7*1)	-	-	Signature	-	**P**: AOK-OAK412: Ethics in Medicine
AOK-OAK412	Ethics in Medicine practice	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	-	Total: 20 (10*2)	-	Term Mark(5)	2	**P**: AOK-OAK411: Ethics in Medicine
AOK-OAK431	Medical Psychology II. lecture	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	Total 5 (5*1)	-	-	Signature	-	**P:** AOK-OAK432: Medical Psychology II.
AOK-OAK432	Medical Psychology II. practice	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	-	Total 15 (5*3)	-	Term Mark(5)	1	**ER:** AOK-OAK421: Medical Psychology I., **P:** AOK-OAK431: Medical Psychology II.
AOK-OAK463	Radiology II. lecture	Dept. of Radiology	Dr. Kincses Zsigmond Tamás	1	-	-	Examination	2	**ER:** AOK-OAK461: Radiology I., **P:** AOK-OAK464: Radiology II.
AOK-OAK464	Radiology II. practice	Dept. of Radiology	Dr. Kincses Zsigmond Tamás	-	1	-	Signature	-	**P:** AOK-OAK463: Radiology II.
AOK-OAK473	Surgery II. lecture	Dept. of Surgery	Prof. György Lázár	2	-	-	Examination	3	**ER:** AOK-OAK471: Surgery I., **P:** AOK-OAK474: Surgery II.
AOK-OAK474	Surgery II. practice	Dept. of Surgery	Prof. György Lázár	-	2	-	Signature	-	**P:** AOK-OAK473: Surgery II.
AOK-OAK503	Obstetrics and Gynaecology II. lecture	Dept. of Obstetrics and G.	Dr. Gábor Németh	3	-	-	Evaluation(5)	4	**ER:** AOK-OAK501: Obstetrics and Gynaecology I., **P:** AOK-OAK504: Obstetrics and Gynaecology II.
AOK-OAK504	Obstetrics and Gynaecology II. practice	Dept. of Obstetrics and G.	Dr. Gábor Németh	-	2	-	Signature	-	**P:** AOK-OAK503: Obstetrics and Gynaecology II.
AOK-OAK611	Family Medicine	Dept. of Family Medicine	Prof. Albert Varga	2	-	-	Examination	2	-
AOK-OAK608	Hungarian Language VIII.*	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	3	-	Comprehensive Exam	-	**SR:** AOK-OAK607: Hungarian Language VII.
AOK-OAK481	Surgery Summer Practice*	-	-	-	Total: 120	-	Signature	-	-
AOK-OAK401	Doctor-Patient Communication**	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	-	-	2	Signature	-	**SR:** AOK-OAK421: Medical Psychology I.
AOK-OAK505	Delivery-Room**	Dept. of Obstetrics and G.	Dr. Gábor Németh	-	Total: 72	-	Signature	-	**P:** AOK-OAK503: Obstetrics and Gynaecology II.
AOK-OAK361	Examination in Behavioural Sciences*	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	-	-	-	Comprehensive Exam	-	**ER**: AOK-OAK421-422: Medical Psychology I., AOK-OAK431-432: Medical Psychology II., AOK-OAK411-412: Ethics in Medicine, AOK-OAK401: Doctor-Patient Communication
Neptun search: Other elective subjects Subject name: From the list made avaiable by the sport center	Physical Education (Actual courses are on neptun (e.g., yoga, badminton etc.))***	Sport Center	Dr. Margaréta Tokodi	-	2	-	Signature	-	-
Compulsory Elective Subjects *(Complete 45 credits worth of compulsory elective subjects by the end of the Clinical Module.)*									
AOK-OAKV171	Advanced Biostatistics	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	2	-	-	Evaluation(5)	2	**SR:** AOK-OAKV161: Basic Biostatistics
AOK-OAKV351	Advanced Surgical Skills	Inst. of Surgical Research	Prof. Mihály Boros	1	-	-	Evaluation(5)	2	**SR:** AOK-OAK141 & AOK-OAK142: Basic Surgical Skills **P:** AOK-OAKV352: Advanced Surgical Skills
AOK-OAKV352	Advanced Surgical Skills	Inst. of Surgical Research	Prof. Mihály Boros	-	1	-	Signature	-	**SR:** AOK-OAK141 & AOK-OAK142: Basic Surgical Skills **P:** AOK-OAKV351: Advanced Surgical Skills
AOK-OAKV331	Child and Adolescent Psychiatry, Mentalhygiene	Dept. of Child and Adolescent Psychiatry	Dr. Krisztina Kapornai	2	-	-	Evaluation(5)	2	-
AOK-OAKV381	Clinical Immunology	Dept. of Dermatology	Prof. Lajos Kemény	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK271: Internal Medicine II.
AOK-OAKV401	Laboratory Diagnostics: Use of Laboratory Tests in Practice	Dept. of Laboratory Medicine	Dr. Földesi Imre	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK213: Microbiology II.
AOK-OAKV431	Microsurgery	Inst. of Surgical Research	Prof. Mihály Boros	Total: 8	-	-	Evaluation(5)	2	**SR:** AOK-OAK027: Anatomy, Histology and Embryology III., AOK-OAK093: Medical Physiology II., AOK-OAK141: Basic Surgical Skills, **P:** AOK-OAKV432: Microsurgery
AOK-OAKV432	Microsurgery	Inst. of Surgical Research	Prof. Mihály Boros	-	Total: 20	-	Signature	-	**P:** AOK-OAKV431: Microsurgery
AOK-OAKV441	Molecular Developmental-Biology	Dept. of Biochemistry	Dr. Tamás Csont	2	-	-	Evaluation(5)	2	**SR**: AOK-OAK153: Cell Biology and Molecular Genetics II.
AOK-OAKV271	Pharmacology Cases I.	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	-	2	-	Evaluation(5)	2	-
AOK-OAKV591	Social and Health Policy	Dept. of Public Health	Dr. Edit Paulik	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK371: Public Health and Preventive Medicine I.
AOK-OAKV061	The Clinical Basics of Aviation and Space Medicine	Dept. of Aviation and Space Medicine	Prof. Sándor Szabó	2	-	-	Evaluation(5)	2	-
AOK-OAKV622	The Language of Effective Doctor-Patient Communication II.	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	2	-	Term Mark(5)	2	-
AOK-OAKV651	Tropical Diseases	Dept. of Clinical Microbiology	Dr. habil Katalin Burián	2	-	-	Evaluation(5)	2	-
AOK-OAKV581	Cardiac Electrophysiology as a Basic Property of Cardiac Function	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	1	-	-	Evaluation(5)	2	**P:** AOK-OAKV582: Cardiac Electrophysiology as a Basic Property of Cardiac Function
AOK-OAKV582	Cardiac Electrophysiology as a Basic Property of Cardiac Function	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	-	1	-	Signature	-	**P:** AOK-OAKV581: Cardiac Electrophysiology as a Basic Property of Cardiac Function
AOK-OAKV561	Sports Medicine	Dept. of Sports Medicine	Dr. László Török	2	-	-	Evaluation(5)	2	-
AOK-OAKV181	Foundations of Evidence Based Medicine	Dept. of Public Health	Dr. Edit Paulik	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK121: Medical Sociology, AOK-OAK101 & AOK-OAK102 & AOK-OAK103: Medical Physics I.
AOK-OAKV051	Biochemical Basics of Preventive Medicine	Dept. of Biochemistry	Dr. Tamás Csont	2	-	-	Evaluation(5)	2	-
AOK-OAKV671	Clinical neuropathology of neurodegenerative diseases	Dept. of Pathology	Prof. László Tiszlavicz	-	-	2	Term Mark(5)	2	**SR**: AOK-OAK223: Pathology II. lecture

SUGGESTED STUDY PLAN - MEDICINE - 2023/2024

Course Code	Course	Dept.	Head of Dept.	Theory Hrs/week	Practice Hrs/week	Seminar Hrs/ week	Form of exam	Credit	Precondition (SR: subject requirement = completion of the precondition subject(s) in a preceding semester is required; ER: examination requirement = passing the examination of the precondition subject(s) in the same semester is required; P: parallel completion = register for all subjects in the same semester)
Elective Subjects *(Complete 18 credits worth of elective subjects by the end of the Clinical Module.)*									
AOK-OASZVV	Clinical Voluntary Work	Departments of the Albert Szent-Györgyi Medical School		-	2	-	Term Mark(5)	2	-
AOK-OASZVD	Demonstrator Activity	The Dept. where the student's demonstrator activity application was accepted		-	2	-	Evaluation(5)	2	SR: AOK-OAK024: Anatomy, Histology and Embryology II., AOK-OAK104 & AOK-OAK105 & AOK-OAK106: Medical Physics II., AOK-OAK107 & AOK-OAK108: Medical Statistics, AOK-OAK113: Medical Chemistry II., AOK-OAK153: Cell Biology and Molecular Genetics II., AOK-OAK031: Nursing Practice
AOK-OASZVT	Student Science Study Group	The Dept. where the student's Student Science Study Group application was accepted		-	-	1	Evaluation(5)	2	-
AOK-OASZV411	Chemical Misconceptions	Dept. of Med. Chemistry	Prof. Tamás Martinek	2	-	-	Evaluation(5)	2	-
AOK-OASZV221	Introduction to Toxicology	Dept. of Med. Chemistry	Prof. Tamás Martinek	2	-	-	Evaluation(5)	2	SR: AOK-OAK053: Biochemistry II., AOK-OAK093: Medical Physiology II.
AOK-OASZV071	Travel Medicine	Dept. of Aviation and Space Medicine	Prof. Sándor Szabó	Total 30	-	-	Evaluation(5)	2	SR: Basic Module
AOK-OASZV181	English and Hungarian Terminology of Doctor-Patient Communication	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	2	-	Term Mark(5)	2	-
AOK-OASZV681	The role of sonography in the critical care	Dept. of Anesthesiology and Intensive Therapy	Prof. Babik Barna	-	-	1	Evaluation(5)	1	SR: AOK-OAK0271: Head, Neck and Neuroanatomy Lecture, AOK-OAK271: Internal Medicine II.
AOK-OASZV741	Medically Unexplained Physical Symptoms MUPS in Medical Praxis	Dept. of Behavioural Sciences	Dr. Oguz Kelemen	-	Total 24	-	Term Mark(5)	1	ER: AOK-OAK361: Examination in Behavioural Sciences
AOK-OASZV751	Basics of Self-Knowledge in Professional Orientation	Dept. of Behavioural Sciences	Dr. Oguz Kelemen	-	Total 12	-	Term Mark(5)	1	-
AOK-OASZV771	3D printing in life sciences	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	2	-	-	Evaluation(5)	2	-

9th (fall) semester (9001AK_N_2020) — CLINICAL MODULE

Compulsory Subjects *(*For groups 1, 2, 3 ** for groups 4,5,6 *** The credits for the completion of AOK-OAKVSZ1 Thesis Plan I. count towards the "compulsory elective" subject category. ****2 semesters of Physical Education have to be completed until the end of the Clinical Module.)*									
AOK-OAK243	Anesthesiology and Intensive Therapy I. lecture	Dept. of Anesthesiology and Intensive Therapy	Prof. Babik Barna	2	-	-	Evaluation(5)	1	ER: AOK-OAK291: Pharmacology and pharmacotherapy II., P: AOK-OAK244: Anesthesiology and Intensive Therapy I.
AOK-OAK244	Anesthesiology and Intensive Therapy I. practice	Dept. of Anesthesiology and Intensive Therapy	Prof. Babik Barna	-	1	-	Signature	-	P: AOK-OAK243: Anesthesiology and Intensive Therapy I.
AOK-OAK275	Infectology - Infectious Diseases	Dept. of Internal Medicine	Prof. Csaba Lengyel	2	-	-	Examination	3	ER: AOK-OAK291: Pharmacology and pharmacotherapy II., P: AOK-OAK276: Internal Medicine IV. Practice
AOK-OAK276	Internal Medicine IV. Practice	Dept. of Internal Medicine	Prof. Csaba Lengyel	-	2	-	Signature	-	P: AOK-OAK275: Infectology - Infectious Diseases
AOK-OAK352	Modern Complex Therapy of Malignant Diseases in Clinical Practice	Dept. of Oncology	Prof. Judit Oláh	-	-	1	Term Mark(5)	2	SR: AOK-OAK351: Clinical Oncology
AOK-OAK311	Pediatrics I. Practice	Dept. of Pediatrics	Dr. Csaba Bereczki	-	2	-	Signature	-	P: AOK-OAK313: Pediatrics I. Lecture, AOK-OAK312: Pediatrics I. Seminar
AOK-OAK312	Pediatrics I. Seminar	Dept. of Pediatrics	Dr. Csaba Bereczki	-	-	2	Term Mark(5)	5	ER: AOK-OAK291: Pharmacology and pharmacotherapy II., AOK-OAK273: Internal Medicine III. P: AOK-OAK311: Pediatrics I. Practice, AOK-OAK313: Pediatrics I. Lecture
AOK-OAK313	Pediatrics I. Lecture	Dept. of Pediatrics	Dr. Csaba Bereczki	1	-	-	Signature	-	P: AOK-OAK311: Pediatrics I. Practice, AOK-OAK312: Pediatrics I. Seminar
AOK-OAK331	Forensic Medicine I. lecture	Dept. of Forensic Medicine	Dr. Éva Kereszty	1	-	-	Examination	3	ER: AOK-OAK273: Internal Medicine III., P: AOK-OAK332: Forensic Medicine I.
AOK-OAK332	Forensic Medicine I. practice	Dept. of Forensic Medicine	Dr. Éva Kereszty	-	2	-	Signature	-	P: AOK-OAK331: Forensic Medicine I.
AOK-OAK381	Neurology I. lecture	Dept. of Neurology	Prof. Péter Klivényi	1	-	-	Examination	3	ER: AOK-OAK273: Internal Medicine III., AOK-OAK291: Pharmacology and pharmacotherapy II., P: AOK-OAK382:
AOK-OAK382	Neurology I. practice	Dept. of Neurology	Prof. Péter Klivényi	-	2	-	Signature	-	P: AOK-OAK381: Neurology I.
AOK-OAK441	Psychiatry I. lecture	Dept. of Psychiatry	Prof. János Kálmán	1	-	-	Evaluation(5)	2	ER: AOK-OAK273: Internal Medicine III., P: AOK-OAK442: Psychiatry I.
AOK-OAK442	Psychiatry I. practice	Dept. of Psychiatry	Prof. János Kálmán	-	1	-	Signature	-	P: AOK-OAK441: Psychiatry I.
AOK-OAK475	Surgery III. lecture	Dept. of Surgery	Prof. György Lázár	1	-	-	Evaluation(5)	2	ER: AOK-OAK473: Surgery II., P: AOK-OAK476: Surgery III.
AOK-OAK476	Surgery III. practice	Dept. of Surgery	Prof. György Lázár	-	1	-	Signature	-	P: AOK-OAK475: Surgery III.
AOK-OAK251	Oral and Maxillofacial Surgery, Stomatology lecture	Department of Oral and Maxillofacial Surgery	Prof. József Piffkó	1	-	-	Examination	2	ER: AOK-OAK273: Internal Medicine III., P: AOK-OAK252: Stomatology and Oral Surgery
AOK-OAK252	Oral and Maxillofacial Surgery, Stomatology seminar	Department of Oral and Maxillofacial Surgery	Prof. József Piffkó	-	-	1	Signature	-	P: AOK-OAK251: Stomatology and Oral Surgery
AOK-OAK281	Dermatology lecture*	Dept. of Dermatology	Prof. Lajos Kemény	2	-	-	Examination	4	ER: AOK-OAK273: Internal Medicine III., P: AOK-OAK282: Dermatology
AOK-OAK282	Dermatology practice*	Dept. of Dermatology	Prof. Lajos Kemény	-	3	-	Signature	-	P: AOK-OAK281: Dermatology
AOK-OAK491	Ophthalmology lecture*	Dept. of Ophthalmology	Dr. Edit Tóth-Molnár	2	-	-	Examination	3	ER: AOK-OAK273: Internal Medicine III., P: AOK-OAK492: Ophthalmology
AOK-OAK492	Ophthalmology practice*	Dept. of Ophthalmology	Dr. Edit Tóth-Molnár	-	2	-	Signature	-	P: AOK-OAK491: Ophthalmology
AOK-OAK301	Oto-Rhino-Laryngology lecture**	Dept. of Oto-Rhino-Laryngology	Prof. László Rovó	2	-	-	Examination	4	ER: AOK-OAK273: Internal Medicine III., P: AOK-OAK302: Oto-Rhino-Laryngology
AOK-OAK302	Oto-Rhino-Laryngology practice**	Dept. of Oto-Rhino-Laryngology	Prof. László Rovó	-	3	-	Signature	-	P: AOK-OAK301: Oto-Rhino-Laryngology
AOK-OAK521	Urology lecture**	Dept. of Urology	Dr. Zoltán Bajory	1	-	-	Examination	2	ER: AOK-OAK273: Internal Medicine III., P: AOK-OAK522: Urology
AOK-OAK522	Urology practice**	Dept. of Urology	Dr. Zoltán Bajory	-	2	-	Signature	-	P: AOK-OAK521: Urology
AOK-OAKVSZ1	Thesis plan I.***	Albert Szent-Györgyi Medical School		-	-	2	Term Mark(5)	5	-
Neptun search: Other elective subjects Subject name: From the list made avaible by the sport center	Physical Education (Actual courses are on neptun (e.g., yoga, badminton etc.))****	Sport Center	Dr. Margaréta Tokodi	-	2	-	Signature	-	-
Compulsory Elective Subjects *(Complete 45 credits worth of compulsory elective subjects by the end of the Clinical Module.)*									
AOK-OAKV161	Basic Biostatistics	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	2	-	-	Evaluation(5)	2	-
AOK-OAKV291	How to use microbiology laboratory results to diagnose and treat infectious diseases;	Dept. of Clinical Microbiology	Dr. habil Katalin Burián	2	-	-	Evaluation(5)	2	SR: AOK-OAK271: Internal Medicine II.
AOK-OAKV131	Introduction to Aviation and Space Medicine	Dept. of Aviation and Space Medicine	Prof. Sándor Szabó	2	-	-	Evaluation(5)	2	-
AOK-OAKV641	Medical Informatics I.	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	2	-	-	Evaluation(5)	2	-
AOK-OAKV491	Medical Molecular Biology and Genomics	Dept. of Med. Biology	Prof. Zsolt Boldogkői	1	-	-	Evaluation(5)	1	-
AOK-OAKV431	Microsurgery	Inst. of Surgical Research	Prof. Mihály Boros	Total: 8	-	-	Evaluation(5)	2	SR: AOK-OAK027: Anatomy, Histology and Embryology III., AOK-OAK093: Medical Physiology II., AOK-OAK141: Basic Surgical Skills, P: AOK-OAKV432: Microsurgery
AOK-OAKV432	Microsurgery	Inst. of Surgical Research	Prof. Mihály Boros	-	Total: 20	-	Signature	-	P: AOK-OAKV431: Microsurgery
AOK-OAKV471	Nuclear Medicine	Dept. of Nuclear Med.	Prof. László Pávics	1	-	-	Evaluation(5)	1	-
AOK-OAKV272	Pharmacology Cases II.	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	-	2	-	Evaluation(5)	2	SR: AOK-OAKV271: Pharmacology Cases I.
AOK-OAKV621	The Language of Effective Doctor-Patient Communication I.	Dept. for Medical Communication and	Dr. Csilla Keresztes	-	2	-	Term Mark(5)	2	-
AOK-OAKV551	Rheumatology	Dept. of Rheumatology and Immunology	Prof. László Kovács	2	-	-	Evaluation(5)	2	SR: AOK-OAK421: Medical Psychology I.
AOK-OAKV251	Electrophysiology: ion channels and ion transport mechanisms in the regulation of cell functions lecture	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	2	-	-	Evaluation(5)	2	P: AOK-OAKV252: Electrophysiology: ion channels and ion transport mechanisms in the regulatin of cell functions
AOK-OAKV252	Electrophysiology: ion channels and ion transport mechanisms in the regulation of cell functions practice	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	-	Total: 6	-	Signature	-	P: AOK-OAKV251: Electrophysiology: ion channels and ion transport mechanisms in the regulatin of cell functions
AOK-OAKV661	Neuropathological basis of clinical neurosciences	Dept. of Pathology	Prof. László Tiszlavicz	-	-	2	Term Mark(5)	2	SR: AOK-OAK223: Pathology II.

SUGGESTED STUDY PLAN - MEDICINE - 2023/2024

Course Code	Course	Dept.	Head of Dept.	Theory Hrs/week	Practice Hrs/week	Seminar Hrs/ week	Form of exam	Credit	**Precondition** (**SR**: subject requirement = completion of the precondition subject(s) in a preceding semester is required; **ER**: examination requirement = passing the examination of the precondition subject(s) in the same semester is required; **P**: parallel completion = register for all subjects in the same semester)
Elective Subjects *(Complete 18 credits worth of elective subjects by the end of the Clinical Module.)*									
AOK-OASZV011	Self management support for patients with chronic conditions	Dept. of Preventive Medicine	Dr. István Kósa	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK181 & AOK-OAK182: Basic Principles of Internal Medicine
AOK-OASZVV	Clinical Voluntary Work	Departments of the Albert Szent-Györgyi Medical School		-	2	-	Term Mark(5)	2	-
AOK-OASZVD	Demonstrator Activity	The Dept. where the student's demonstrator activity application was accepted		-	2	-	Evaluation(5)	2	**SR:** AOK-OAK024: Anatomy, Histology and Embryology II., AOK-OAK104 & AOK-OAK105 & AOK-OAK106: Medical Physics II., AOK-OAK107 & AOK-OAK108: Medical Statistics, AOK-OAK113: Medical Chemistry II., AOK-OAK153: Cell Biology and Molecular Genetics II., AOK-OAK031: Nursing Practice
AOK-OASZVT	Student Science Study Group	The Dept. where the student's Student Science Study Group application was accepted		-	-	1	Evaluation(5)	2	-
AOK-OASZV041	Biophysics of Hearing. Objective and Subjective Audiometry	Dept. of Oto-Rhino-Laryngology	Prof. László Rovó	1	-	-	Evaluation(5)	1	**SR:** AOK-OAK273: Internal Medicine III.
AOK-OASZV141	Diseases of the Temporomandibular System	Dept. of Prosthodontics and Oral Biology	Dr. Márta Radnai	1	-	-	Evaluation(5)	2	**SR:** Pre-Clinical Module **P:** AOK-OASZV142: Diseases of the Temporomandibular System
AOK-OASZV142	Diseases of the Temporomandibular System	Dept. of Prosthodontics and Oral Biology	Dr. Márta Radnai	-	1	-	Signature	-	**P:** AOK-OASZV141: Diseases of the Temporomandibular System
AOK-OASZV131	Sexual Disorders - Gynecological Aspects	Dept. of Obstetrics and G.	Dr. Gábor Németh	1	-	-	Evaluation(5)	1	**SR:** AOK-OAK231: Surgical Propedeutics
AOK-OASZV541	Modern Approach of the Gynecological Laparoscopy	Dept. of Obstetrics and G.	Dr. Gábor Németh	1	-	-	Evaluation(5)	1	**SR:** AOK-OAK231: Surgical Propedeutics
AOK-OASZV701	Medical History Taking in Hungarian I.	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	2	-	Term Mark(5)	2	**SR:** AOK-OAK608: Hungarian Language VIII.
AOK-OASZV641	Thesis writing in English-academic language and style	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	2	-	Term Mark(5)	2	**SR**: AOK-OAK373 Public Health and Preventive Medicine II. lecture
AOK-OASZV751	Basics of Self-Knowledge in Professional Orientation	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	-	Total 12	-	Term Mark(5)	1	-
AOK-OASZV781	Sexual medicine	Dept. of Obstetrics and G.	Dr. Gábor Németh	-	-	2	Evaluation(5)	2	**SR:** AOK-OAK503: Obstetrics and Gynaecology II.
AOK-OASZV801	Cerebrovascular diseases of the central nervous system (stroke, aneurysm, angioma) and their neurosurgical treatment options (surgery, intervention, conservative therapy)	Dept. of Neurosurgery	Prof. Pál Barzó	Total 14	-	-	Evaluation(5)	1	**SR**: Pre-Clinical Module

10th (spring) semester (9001AK_N_2020) **CLINICAL MODULE**

Compulsory Subjects *(* For groups 4, 5, 6 ** For groups 1, 2, 3 *** The credits for the completion of AOK-OAKVSZ2 Thesis Plan II. count towards the "compulsory elective" subject category. ****2 semesters of Physical Education have to be completed until the end of the Clinical Module.)*									
AOK-OAK245	Anesthesiology and Intensive Therapy II. lecture	Dept. of Anesthesiology and Intensive Therapy	Prof. Babik Barna	2	-	-	Examination	2	**ER:** AOK-OAK243: Anesthesiology and Intensive Therapy I., **P:** AOK-OAK246: Anesthesiology and Intensive Therapy II.
AOK-OAK246	Anesthesiology and Intensive Therapy II. practice	Dept. of Anesthesiology and Intensive Therapy	Prof. Babik Barna	-	1	-	Signature	-	**P:** AOK-OAK245: Anesthesiology and Intensive Therapy II.
AOK-OAK261	Healthcare Management	Dept. of Health Economics	Dr. Norbert Buzás	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK373: Public Health and Preventive Medicine II.
AOK-OAK277	Internal Medicine V. lecture	Dept. of Internal Medicine	Prof. Csaba Lengyel	2	-	-	Examination	3	**ER:** AOK-OAK291: Pharmacology and pharmacotherapy II., **P:** AOK-OAK278: Internal Medicine V.
AOK-OAK278	Internal Medicine V. practice	Dept. of Internal Medicine	Prof. Csaba Lengyel	-	Total 16	-	Signature	-	**P:** AOK-OAK277: Internal Medicine V.
AOK-OAK314	Pediatrics II. Practice	Dept. of Pediatrics	Dr. Csaba Bereczki	-	2	-	Signature	-	**P:** AOK-OAK315: Pediatrics II. Seminar
AOK-OAK315	Pediatrics II. Seminar	Dept. of Pediatrics	Dr. Csaba Bereczki	-	-	2	Term Mark(5)	4	**SR:** AOK-OAK313: Pediatrics I. Lecture, AOK-OAK312: Pediatrics I. Seminar, **P:** AOK-OAK314: Pediatrics II. Practice
AOK-OAK321	Neurosurgery lecture	Dept. of Neurosurgery	Prof. Pál Barzó	1	-	-	Evaluation(5)	2	**SR:** AOK-OAK475: Surgery III. **P:** AOK-OAK322: Neurosurgery
AOK-OAK322	Neurosurgery practice	Dept. of Neurosurgery	Prof. Pál Barzó	-	1	-	Signature	-	**P:** AOK-OAK321: Neurosurgery
AOK-OAK333	Forensic Medicine II. lecture	Dept. of Forensic Medicine	Dr. Éva Kereszty	1	-	-	Examination	3	**ER:** AOK-OAK331: Forensic Medicine I., **P:** AOK-OAK334: Forensic Medicine II
AOK-OAK334	Forensic Medicine II. practice	Dept. of Forensic Medicine	Dr. Éva Kereszty	-	2	-	Signature	-	**P:** AOK-OAK333: Forensic Medicine II.
AOK-OAK383	Neurology II. lecture	Dept. of Neurology	Prof. Péter Klivényi	1	-	-	Signature	-	**P:** AOK-OAK384: Neurology II.
AOK-OAK384	Neurology II. practice	Dept. of Neurology	Prof. Péter Klivényi	-	1	-	Term Mark(5)	2	**ER:** AOK-OAK381: Neurology I., **P:** AOK-OAK384: Neurology II.
AOK-OAK443	Psychiatry II. lecture	Dept. of Psychiatry	Prof. János Kálmán	2	-	-	Examination	3	**ER:** AOK-OAK442: Psychiatry I., AOK-OAK291: Pharmacology and pharmacotherapy II., **P:** AOK-OAK444: Psychiatry II.
AOK-OAK444	Psychiatry II. practice	Dept. of Psychiatry	Prof. János Kálmán	-	1	-	Signature	-	**P:** AOK-OAK443: Psychiatry II.
AOK-OAK511	Traumatology lecture	Dept. of Traumatology	Prof. Endre Varga	2	-	-	Examination	3	**ER:** AOK-OAK475: Surgery III., **P:** AOK-OAK512: Traumatology
AOK-OAK512	Traumatology practice	Dept. of Traumatology	Prof. Endre Varga	-	2	-	Signature	-	**P:** AOK-OAK511: Traumatology
AOK-OAK281	Dermatology lecture*	Dept. of Dermatology	Prof. Lajos Kemény	2	-	-	Examination	4	**ER:** AOK-OAK273: Internal Medicine III., **P:** AOK-OAK282: Dermatology
AOK-OAK282	Dermatology practice*	Dept. of Dermatology	Prof. Lajos Kemény	-	3	-	Signature	-	**P:** AOK-OAK281: Dermatology
AOK-OAK491	Ophthalmology lecture*	Dept. of Ophthalmology	Dr. Edit Tóth-Molnár	2	-	-	Examination	3	**ER:** AOK-OAK273: Internal Medicine III., **P:** AOK-OAK492: Ophthalmology
AOK-OAK492	Ophthalmology practice*	Dept. of Ophthalmology	Dr. Edit Tóth-Molnár	-	2	-	Signature	-	**P:** AOK-OAK491: Ophthalmology
AOK-OAK301	Oto-Rhino-Laryngology lecture**	Dept. of Oto-Rhino-Laryngology	Prof. László Rovó	2	-	-	Examination	4	**ER:** AOK-OAK273: Internal Medicine III., **P:** AOK-OAK302: Oto-Rhino-Laryngology
AOK-OAK302	Oto-Rhino-Laryngology practice**	Dept. of Oto-Rhino-Laryngology	Prof. László Rovó	-	3	-	Signature	-	**P:** AOK-OAK301: Oto-Rhino-Laryngology
AOK-OAK521	Urology lecture**	Dept. of Urology	Dr. Zoltán Bajory	1	-	-	Examination	2	**ER:** AOK-OAK273: Internal Medicine III., **P:** AOK-OAK522: Urology
AOK-OAK522	Urology practice**	Dept. of Urology	Dr. Zoltán Bajory	-	2	-	Signature	-	**P:** AOK-OAK521: Urology
AOK-OAKVSZ2	Thesis Plan II.***	Albert Szent-Györgyi Medical School		-	-	2	Term Mark(5)	5	**SR:** AOK-OAKVSZ1: Thesis plan I.
Neptun search: Other elective subjects Subject name: From the list made available by the sport center	Physical Education (Actual courses are on neptun (e.g., yoga, badminton etc.))****	Sport Center	Dr. Margaréta Tokodi	-	2	-	Signature	-	-

SUGGESTED STUDY PLAN - MEDICINE - 2023/2024

Course Code	Course	Dept.	Head of Dept.	Theory Hrs/week	Practice Hrs/week	Seminar Hrs/ week	Form of exam	Credit	**Precondition** (**SR**: subject requirement = completion of the precondition subject(s) in a preceding semester is required; **ER**: examination requirement = passing the examination of the precondition subject(s) in the same semester is required; **P**: parallel completion = register for all subjects in the same semester)
Compulsory Elective Subjects *(Complete 45 credits worth of compulsory elective subjects by the end of the Clinical Module.)*									
AOK-OAKV171	Advanced Biostatistics	Dept. of Med. Physics and Informatics	Prof. Ferenc Peták	2	-	-	Evaluation(5)	2	**SR:** AOK-OAKV161: Basic Biostatistics
AOK-OAKV351	Advanced Surgical Skills	Inst. of Surgical Research	Prof. Mihály Boros	1	-	-	Evaluation(5)	2	**SR:** AOK-OAK141 & AOK-OAK142: Basic Surgical Skills **P:** AOK-OAKV352: Advanced Surgical Skills
AOK-OAKV352	Advanced Surgical Skills	Inst. of Surgical Research	Prof. Mihály Boros	-	1	-	Signature	-	**SR:** AOK-OAK141 & AOK-OAK142: Basic Surgical Skills **P:** AOK-OAKV351: Advanced Surgical Skills
AOK-OAKV581	Cardiac Electrophysiology as a Basic Property of Cardiac Function	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	1	-	-	Evaluation(5)	2	**P:** AOK-OAKV582: Cardiac Electrophysiology as a Basic Property of Cardiac Function
AOK-OAKV582	Cardiac Electrophysiology as a Basic Property of Cardiac Function	Dept. of Pharmacology and Pharmacotherapy	Prof. István Baczkó	-	1	-	Signature	-	**P:** AOK-OAKV581: Cardiac Electrophysiology as a Basic Property of Cardiac Function
AOK-OAKV291	How to use microbiology laboratory results to diagnose and treat infectious diseases; interactive; problem-based case discussions	Dept. of Clinical Microbiology	Dr. habil Katalin Burián	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK271: Internal Medicine II.
AOK-OAKV331	Child and Adolescent Psychiatry, Mentalhygiene	Dept. of Child and Adolescent Psychiatry	Dr. Krisztina Kapornai	2	-	-	Evaluation(5)	2	-
AOK-OAKV381	Clinical Immunology	Dept. of Dermatology	Prof. Lajos Kemény	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK271: Internal Medicine II.
AOK-OAKV401	Laboratory Diagnostics: Use of Laboratory Tests in Practice	Dept. of Laboratory Medicine	Dr. Földesi Imre	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK213: Microbiology II.
AOK-OAKV431	Microsurgery	Inst. of Surgical Research	Prof. Mihály Boros	Total: 8	-	-	Evaluation(5)	2	**SR:** AOK-OAK027: Anatomy, Histology and Embryology III., AOK-OAK093: Medical Physiology II., AOK-OAK141: Basic Surgical Skills, **P:** AOK-OAKV432: Microsurgery
AOK-OAKV432	Microsurgery	Inst. of Surgical Research	Prof. Mihály Boros	-	Total: 20	-	Signature	-	**P:** AOK-OAKV431: Microsurgery
AOK-OAKV441	Molecular Developmental-Biology	Dept. of Biochemistry	Dr. Tamás Csont	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK153: Cell Biology and Molecular Genetics II.
AOK-OAKV591	Social and Health Policy	Dept. of Public Health	Dr. Edit Paulik	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK371: Public Health and Preventive Medicine I.
AOK-OAKV061	The Clinical Basics of Aviation and Space Medicine	Dept. of Aviation and Space Medicine	Prof. Sándor Szabó	2	-	-	Evaluation(5)	2	-
AOK-OAKV622	The Language of Effective Doctor-Patient Communication II.	Dept. for Medical Communication and	Dr. Csilla Keresztes	-	2	-	Term Mark(5)	2	-
AOK-OAKV651	Tropical Diseases	Dept. of Clinical Microbiology	Dr. habil Katalin Burián	2	-	-	Evaluation(5)	2	-
AOK-OAKV561	Sports Medicine	Dept. of Sports Medicine	Dr. László Török	2	-	-	Evaluation(5)	2	-
AOK-OAKV501	Rehabilitation medicine – basics of theory and daily practice	Dept. of Medical Rehabiliation and Physical Medicine	Dr. István Kósa	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK181: Basic Principles of Internal Medicine (Basics of Haematology)
AOK-OAKV181	Foundations of Evidence Based Medicine	Dept. of Public Health	Dr. Edit Paulik	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK121: Medical Sociology, AOK-OAK101 & AOK-OAK102 & AOK-OAK103: Medical Physics I.
AOK-OAKV051	Biochemical Basics of Preventive Medicine	Dept. of Biochemistry	Dr. Tamás Csont	2	-	-	Evaluation(5)	2	-
AOK-OAKV671	Clinical neuropathology of neurodegenerative diseases	Dept. of Pathology	Prof. László Tiszlavicz	-	-	2	Term Mark(5)	2	**SR**: AOK-OAK223: Pathology II.
Elective Subjects *(Complete 18 credits worth of elective subjects by the end of the Clinical Module.)*									
AOK-OASZVV	Clinical Voluntary Work	Departments of the Albert Szent-Györgyi Medical School		-	2	-	Term Mark(5)	2	-
AOK-OASZVD	Demonstrator Activity	The Dept. where the student's demonstrator activity application was accepted		-	2	-	Evaluation(5)	2	**SR:** AOK-OAK024: Anatomy, Histology and Embryology II., AOK-OAK104 & AOK-OAK105 & AOK-OAK106: Medical Physics II., AOK-OAK107 & AOK-OAK108: Medical Statistics, AOK-OAK113: Medical Chemistry II., AOK-OAK153: Cell Biology and Molecular Genetics II., AOK-OAK031: Nursing Practice
AOK-OASZVT	Student Science Study Group	The Dept. where the student's Student Science Study Group application was accepted		-	-	1	Evaluation(5)	2	-
AOK-OASZV702	Medical History Taking in Hungarian II.	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	2	-	Term Mark(5)	2	**SR:** AOK-OAK608: Hungarian Language VIII.
AOK-OASZV411	Chemical Misconceptions	Dept. of Med. Chemistry	Prof. Tamás Martinek	2	-	-	Evaluation(5)	2	-
AOK-OASZV071	Travel Medicine	Dept. of Aviation and Space Medicine	Prof. Sándor Szabó	Total 30	-	-	Evaluation(5)	2	**SR**: Basic Module
AOK-OASZV221	Introduction to Toxicology	Dept. of Med. Chemistry	Prof. Tamás Martinek	2	-	-	Evaluation(5)	2	**SR:** AOK-OAK053: Biochemistry II., AOK-OAK093: Medical Physiology II.
AOK-OASZV181	English and Hungarian Terminology of Doctor-Patient Communication	Dept. for Medical Communication and Translation	Dr. Csilla Keresztes	-	2	-	Term Mark(5)	2	-
AOK-OASZV741	Medically Unexplained Physical Symptoms MUPS in Medical Praxis	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	-	Total 24	-	Term Mark(5)	1	**ER**: AOK-OAK361: Examination in Behavioural Sciences
AOK-OASZV751	Basics of Self-Knowledge in Professional Orientation	Dept.of Behavioural Sciences	Dr. Oguz Kelemen	-	Total 12	-	Term Mark(5)	1	-
AOK-OASZV791	Clinical neonatology	Dept. of Pediatrics	Dr. Csaba Bereczki	-	-	Total 14	Evaluation(5)	1	**SR**: AOK-OAK312: Pediatrics I. Seminar

*******Without the completion of the every compulsory subject in the clinical module, you cannot take any compulsory subjects from the final module below.*******

Clinical Module completion requirements: completion of all basic, pre-clinical, clinical module compulsory subjects--including two semesters of physical education--, 45 credits worth of compulsory elective subjects and 18 credits worth of elective subjects over the basic, pre-clinical and clinical module

(9001AK_N_2020) **FINAL MODULE**

Compulsory Subjects									
AOK-OAKSZE	Preparation of the Thesis	Albert Szent-Györgyi Medical School	-	-	-	2	Term Mark(5)	10	**SR:** AOK-OAKVSZ2: Thesis Plan II.
AOK-OAK531	Internal Medicine	Dept. of Internal Medicine	Prof. Csaba Lengyel	-	240	-	Comprehensive Exam	10	-
AOK-OAK532	Oncological Module in Internal Medicine Practice	Dept. of Oncotherapy	Prof. Judit Oláh	-	30	-	Signature	-	-
AOK-OAK533	General Practice	Dept. of Internal Medicine	Prof. Csaba Lengyel	-	30	-	Signature	-	-
AOK-OAK541	Pediatrics	Dept. of Pediatrics	Dr. Csaba Berecki	-	210	-	Comprehensive Exam	8	-
AOK-OAK542	District Pediatric Consultation	Dept. of Pediatrics	Dr. Csaba Berecki	-	30	-	Signature	-	-
AOK-OAK551	Neurology	Dept. of Neurology	Prof. Péter Klivényi	-	120	-	Comprehensive Exam	4	-
AOK-OAK561	Psychiatry	Dept. of Psychiatry	Prof. János Kálmán	-	120	-	Comprehensive Exam	4	-
AOK-OAK571	Surgery	Dept. of Surgery	Prof. György Lázár	-	180	-	Comprehensive Exam	9	-
AOK-OAK572	Oncological Module in Surgery Practice	Dept. of Oncotherapy	Prof. Judit Oláh	-	30	-	Signature	-	-
AOK-OAK573	Traumatology	Dept. of Traumatology	Prof. Endre Varga	-	30	-	Signature	-	-
AOK-OAK574	Emergency Medicine	Dept. of Emergency Medicine	Dr. Zoltán Pető	-	30	-	Signature	-	-
AOK-OAK581	Obstetrics and Gynaecology	Dept. of Obstetrics and Gynaecology	Dr. Gábor Németh	-	120	-	Comprehensive Exam	5	-
AOK-OAK582	Oncological Module in Obstetrics and Gynaecology Practice	Dept. of Oncotherapy	Prof. Judit Oláh	-	30	-	Signature	-	-

6 th year (11th and 12th semester)
Academic year 2022/2023

The internships should be accomplished principally at the clinics and hospitals of the University; however, they can be also accomplished abroad, provided the students submit the acceptance letter of the clinic/hospital and have the permission of the department concerned before starting the practice. The accomplishment of the practices must be verified officially to the Secretariat as the precondition for starting the next practice.

Two practices can be accomplished continuously and the final examinations can be taken in the week following the accomplishment of the practices. In the sixth year interns can be assigned to duty service as physicians.

If the student fails an examination, it must be repeated together with the half of the practice period.

If the student fails to submit the thesis by the deadline given - or fails to submit it by the deadline of postponement, his/her internships and examinations must be suspended.

The State Board Examination consists of: Thesis defence, Test (Multiple Choice Questions), Oral examination (theory) and Practical examination (bedside examination).

Further details are available in the relevant Internship Guide.

COMPULSORY PRACTICES IN SUMMER

Summer practice:
1st, 3rd and 4th year students are required to complete a four-week compulsory summer practice in a hospital or clinic which must be accredited by the country concerned. At the completion of the practice an "Evaluation form" should be filled in, signed, stamped and sent directly from the hospital/clinic or submitted by the student in a sealed envelope. (The form can be downloaded from our website). A "Letter of Acceptance" issued by the hospital/clinic, furthermore a certificate that the hospital/clinic is accredited by the country concerned has to be presented at the Foreign Students' Secretariat **until May 2023. Please check the relevant Info Sheet for the exact date.**

Students should register for completing a practice at least one month before its beginning. Practice fee must be paid before starting the practice.

1st year medical students have to perform a four-week Nursing practice.

Departments at the University of Szeged:

1st Department of Internal Medicine
2nd Department of Internal Medicine
Obstetrics and Gynecology Department
Department of Surgery
Neurosurgery Department
Neurology Department
Psychiatry Department
Pediatrics Department
Ophthalmology Department
Oto-Rhino-Laryngology and Head-Neck Surgery Department
Urology Department
Pulmonology Department
Traumatology Department
Department of Oral and Maxillofacial Surgery

3rd year medical students have to perform a four-week Internal Medicine practice.

Departments at the University of Szeged:

1st Department of Internal Medicine
Division of Endocrinology
2nd Department of Internal Medicine

4th year medical students have to perform a four-week General Surgery practice.

Departments at the University of Szeged:

Department of Surgery

INTERIM PRACTICE

4th year medical students have to complete a two-day Obstetrics and Gynaecology Delivery-Room Practice in one semester.

EXTRACURRICULAR SCIENTIFIC ACTIVITY

Department of Anatomy, Histology and Embryology Department

1. Fostering the regenerative processes in the central nervous system
Prof. Antal Nógrádi

2. Regenerative capacity of neural stem cells
Dr. Krisztián Pajer

3. Molecular mechanisms leading to axon degeneration
Dr. Róbert Adalbert

4. Cellular and molecular changes in hippocampal sclerosis
Prof. András Mihály

Department Medical Biology

1. ***Host-Microbe Interactions in Obesity and Comorbidities***
   Prof. Dr. Zsolt Boldogkői (MSc, PhD, DSc) and Dr. habil. Dóra Tombácz (MSc, PhD)
2. ***Transcriptional analysis of herpesviruses***
   Prof. Dr. Zsolt Boldogkői (MSc, PhD, DSc) and Dr. habil. Dóra Tombácz (MSc, PhD)
3. ***Analysis of Transcriptional Interference Networks (TINs)***
   Prof. Dr. Zsolt Boldogkői (MSc, PhD, DSc) and Dr. habil. Dóra Tombácz (MSc, PhD)
4. ***Virome and aging: a longitudinal multi-OMICS study using dog as a model***
5. ***Organization principles of the transcriptome: an integrated study using virus models***

Department for Medical Communication and Translation Studies

Supervisor	Topic
Eszter Asztalos-Zsembery	Neuroimaging of second-language reading comprehension
Eszter Asztalos-Zsembery in collaboration with dr. Attila Nagy, Assistant Professor	Language localization of 3D Slicer image computing platform

(Department of Medical Physics and Informatics)	
Gergely Brandl	History of Medicine and the Healthcare System with Special Regards to Modern Times
Réka Csenki-Bozsó	Medical students' mother tongue, second language and early start in foreign language(s)
dr. Endre Hamvas	Magical backgrounds of misconceptions of modern pseudo-medical theories
Margit Skadra	Communication barriers in the German healthcare system
Andrea Stötzer	Surveying learning strategies among Medical Students

Department of Nuclear Medicine

1. Theranostics in Oncology, Dr. László Pávics, Professor of Nuclear Medicine.

2. Hybrid Imaging (PET/CT; SPECT/CT) in clinical praxis, Dr. Zsuzsanna Besenyi MD, PhD

3. New Nuclear Medicine investigations in oncology, Dr, Besenyi Zsuzsanna MD, PhD

Department of Otolaryngology and Head & Neck Surgery

1. **Pathogenesis and treatment of laryngeal tumors**
2. **Pathophysiology and treatment of vocal cord functional disorders**

Department of Behavioural Sciences

1. **The role of culture in reactions to disease**
   Prof. Bettina Pikó MD. Dsc.

Department of Oto-Rhino Laryngology and Head & Neck Surgery

Supervisor	Topic
Prof. Dr. habil. László Rovó Ph.D., head of department	Objective and subjective functional examination methods of the therapy of laryngeal diseases
Prof. Dr. habil. László Rovó Ph.D., head of department	Evaluation of the efficiency of modern implantable hearing aids
Dr. habil. József Géza Kiss Ph.D, scientific advisor	Methods of objective audiometry / Brainstem evoked response tests
Dr. habil. József Géza Kiss Ph.D, scientific advisor	Methods of objective audiometry/ Examination of P300
Dr. habil. József Géza Kiss Ph.D, scientific advisor	Methods of objective audiometry/ Otoacoustic emission
Dr. habil. József Géza Kiss Ph.D, scientific advisor	Methods of objective audiometry/ Diseases of the inner ear, cochlear implantation
Dr. László Iván Ph.D., associate professor	Surgical therapy of pharyngeal-laryngeal tumors

Dr. László Iván Ph.D., associate professor	Function-sparing surgery of the larynx
Dr. László Iván Ph.D., associate professor	Complex oncological therapy of patients with head and neck malignancies
Dr. Miklós Csanády Ph.D., associate professor	Endolaryngeal laser surgery
Dr. Miklós Csanády Ph.D., associate professor	Partial resection of the larynx and the pharynx
Dr. Miklós Csanády Ph.D., associate professor	Evaluation of the oncological therapy of patients with head and neck malignancies
Dr. Zsolt Bella Ph.D., senior lecturer	Endoscopic surgery of the skullbase
Dr. Zsolt Bella Ph.D., senior lecturer	Endoscopic surgery of the paranasal sinuses
Dr. Zsolt Bella Ph.D., senior lecturer	Evaluation and therapy of sleep related breathing disorders
Dr. Balázs Sztanó Ph.D., senior lecturer	Modern evaluation of upper airway stenoses
Dr. habil. József Géza Kiss Ph.D, scientific advisor / Roland Nagy., research assistant	Cochlear implant fitting
Dr. habil. József Géza Kiss Ph.D, scientific advisor / Balázs Dimák., research assistant	Objective electrophysiological examinations in audiology
Dr. János Jarabin senior lecturer	Audiological examinations of bone anchored hearing aid systems
Dr. János Jarabin senior lecturer	Differential diagnostics of vestibular disorders
Dr. Gábor Vass senior lecturer	Surgical methods of the tumors of the sinuses with covert approaches „ the facial degloving technique”.
Dr. Gábor Vass senior lecturer	Disturbed wound healing following the surgeries of implantable hearing aid systems – surgical methods and the possibilities of prevention
Dr. Diána Szabó – senior lecturer	New therapentie options in peripherae n. facialis palsy
Dr. Ádám Perényi – senior lecturer	Implanted devices and imaging diagnostics in ENT – what examinations can be performed with what expectations and limitations?
Dr. Ádám Perényi – senior lecturer	Speech discrimination, directional hearing, quality of life, social status and satispaction of patients with cochlear implants
Dr. Ádám Perényi – senior lecturer	Speech discrimination, directional hearing, quality of life, social status and satispaction of patients with middle ear implants
Dr. Zsófia Bere senior lecturer	Surgical Techniques of Bone Conductive Hearing Implants — Introduction of Minimally Invasive Surgical Procedures.
Dr. Zsófia Bere senior lecturer	Audiological examination of Bone Conduction Hearing Aided patients
Dr. Zsófia Bere senior lecturer	Health and Quality of Life Outcomes of Bone Conduction Hearing Aided patients
Dr. Roland Nagy research fellow	Pupillometry in audiology

Dr. Roland Nagy research fellow	Sound localization test for implantable hearing aid patients
Dr. Roland Nagy research fellow	Electrophysiology measurents of Cochlear Implant (CI)
Dr. Roland Nagy research fellow	3D reconstruction in ear surgery
Dr. Balázs Dimák research fellow	Objective electrophysiological measurements on implantable hearing aids
Dr. Balázs Dimák research fellow	Software development of hungarian speechtest
Dr. Balázs Dimák research fellow	Construction and validation of hungraian speechtest
Rebeka Anna Schulcz psychologist	Quality of life among hearing aid users
Rebeka Anna Schulcz psychologist	Quality of life among cochlear implant users

Department of Family Medicine

1. The implementation of Point-of-care ultrasound in family medicine
2. Point-of-care ultrasound in the differential diagnosis of dyspnoea in general practice

Department of Forensic Medicine

1. Illegal drug use
Éva Sija PhD., Katalin Kovács MD.

2. Laboratory investigation of drug abuse
László Institóris Phar.D, PhD.

3. Drunk driving
Éva Kereszty MD.

4. Heart-brain crosstalk in cranial injuries
Beáta Havasi MD.

5. Thanatochemistry *(postmortem detection of metabolic disorders; estimation time of death)*
Beáta Havasi MD., Éva Sija PhD

6. Forensic histopathology
Roland Weiczner MD. PhD

7. Evaluation of permanent disability
Beáta Havasi MD.

8. Fitness to drive
Beáta Havasi MD

9. Problems of the health legislation
Éva Kereszty MD.

10. Death detection in the clinical practice
Éva Kereszty MD.

11. Sudden cardiac death
Alíz Hernádi MD.

12. Identification
Árpád Szabó MD.

13. Unnatural death *(e.g. traffic accidents, suicide, family violence, drowning*)
Árpád Szabó MD., Katalin Kovács MD. Beáta Havasi MD.

14. Medical law (*e.g. informed consent, assisted suicide, malpractice*)
Éva Kereszty Dr., Máté Julesz Dr.

2nd Department of Internal Medicine

Prognostic factors in multiple myeloma
Szabolcs Modok, MD, PhD

Pharmacologic and interventional treatment of atrial fibrillation
Dr. Róbert Pap

Atrial flutter after open heart surgery
Dr. Attila Makai

Long-term efficacy of slow pathway ablation for atrioventricular nodal reentrant tachycardia
Dr. László Sághy

Heart failure and pacemaker therapy
Dr. Gábor Bencsik

1st Department of Internal Medicine

Dr. Péter Hegyi and Dr. Zoltán Rakonczay
1. The regulation of pancreatic ductal HCO3- secretion. 2
2. The role of pancreatic ducts in the process of acute pancreatitis.
3. Acid secretion from human gastric glands.
4. The regulation of human intestinal ion secretion.
5. Characterisation of lacrimal gland epithelial cells.
6. Viral transfection of epithelial cells.

Department of Pharmacology and Pharmacotherapy

Supervisor	Topic
Dr. Andrea Orosz, MD, PhD	Investigation of cardiac ventricular repolarization parameters in different clinical conditions
Dr. habil. Norbert Nagy, PhD	Investigation of Ca^{2+}-dependent arrhythmogenesis in ventricular myocardium
Dr. habil. Norbert Nagy, PhD	Investigation of the sinus-node pacemaking
Dr. habil. Norbert Nagy, PhD	Investigation of the positive inotropic effect of selective Na/Ca exchanger inhibition in ventricular myocardium
Dr. habil. Péter Bencsik, MD, PhD	Cardioprotection induced by ischemic pre- or postconditioning in acute myocardial infarction and in chronic heart failure models
Dr. habil. Péter Bencsik, MD, PhD	Investigation of cardioprotective mechanisms against ischemia/reperfusion injury after myocardial infarction
Dr. habil. Péter Bencsik, MD, PhD Dr. habil. Anikó Görbe, MD, PhD	Effects of hyperlipidemia on ischemic adaptation of the heart
Dr. habil. Péter Bencsik, MD, PhD Dr. habil. Anikó Görbe, MD, PhD	Role of matrix metalloproteinases in adaptation of the heart and in disease models
Dr. habil. Péter Bencsik, MD, PhD Dr. habil. Péter Ferdinady, MD, DSc	Exploration of microRNA network and target analysis is cardiovascular disease models
Dr. habil. Anikó Görbe, MD, PhD	Cardiocytoprotection in in vitro cell culture models

Dr. Zoltán Husti, MD, PhD Dr. Tibor Hornyik, MD, PhD	Investigation of hidden cardiotoxicity of different compounds on rabbit right ventricular papillary muscle
Dr. Tibor Hornyik, MD, PhD Dr. Zoltán Husti, MD, PhD	Investigation of the mechanisms of athlete's sudden cardiac death using training induced canine athlete's heart model
Dr. habil. Róbert Gáspár, MPharm,PhD	Investigation of drugs affecting the pregnant uterine contractions in rats
Dr. Kálmán Szűcs, MPharm, PhD Dr. habil. Róbert Gáspár, MPharm, PhD	Electromyographic investigation of the gastrointestinal motility is anesthetized and awake rats
Dr. habil Viktória Venglovecz, DSc	Effect of alcohol on ion transport processes of esophageal epithelial cells
Dr. habil Viktória Venglovecz, DSc	Investigation of exocrine and endocrine interactions in the pancreas under normal and pathological conditions
Dr. habil Viktória Venglovecz, DSc	Investigations of ion transport processes of esophageal organoids

Department of Medical Physics and Informatics

Supervisor	Topic
Prof. Ferenc Peták	Respiratory consequences of mechanical ventilation in experimental models
Prof. Ferenc Peták	Respiratory consequences of cerebral hypoperfusion in experimental models
Prof. Ferenc Bari	Experimental modelling of cerebral hypoperfusion
Prof. Ferenc Bari	Nanomedicine as therapeutic option for stroke
Prof. Tibor Nyári	Investigation of the pattern of deaths in Hungary
Dr. József Tolnai	Monitoring of physiological processes with telemedicine tools
Dr. Gergely Fodor	Respiratory mechanical investigations in small animal models
Dr. Mónika Szűcs	Application of statistical methods in biological and medical research
Dr. Tibor Szabó	Redox proteins for biosensor application
Dr. László Égerházi and Dr. Tibor Szabó	3D printed microfluidic devices for biophotonic applications
Dr. János Lückl	The electrophysiological analysis of the ictal-interictal continuum in acute and subacute encephalopathies
Dr. János Lückl	Analysis of the spreading depolarizations with electrophysiological methods in animal and clinical research
Dr. Árpád Márki and Dr. Attila Nagy	Applications of 3D printing in medicine
Dr. Ferenc Rárosi	Application of classification methods and prediction models in biomedical research
Dr. Ferenc Rárosi	Statistical hypothesis testing in biomedical research

Department of Cell Biology and Molecular Medicine

1. **Neuroprotection in ischemic stroke: mechanisms and potential targets**
Dr. Eszter Farkas

2. **The role of carbohydrate binding proteins in neuroinflammation**
Dr. Ádám Légrádi

3. The mechanisms of impaired post-ischemic reperfusion
Dr. Ákos Menyhárt

4. Cerebral blood flow responses in the ischemic and aging brain
Dr. Szilvia V. Kecskés

5. Brain edema models in live brain slice preparations
Dr. Rita Frank

Department of Medical Chemistry

1. Blocking of protein-protein interactions, development of novel potential drug molecules
Prof. Tamás Martinek

2. Cell delivery of therapeutic macromolecules
Prof. Tamás Martinek

3. Development of novel antimicrobial strategies and potential therapeutics
Prof. Tamás Martinek, Dr. Edit Wéber

4. Posttranslational modification of natural peptides by chemical methods
Prof. Gábor Tóth

5. Synthesis of peptide toxins with multiple disulfide bridges
Prof. Gábor Tóth, Dr. Zsolt Bozsó

6. Antibiotic adjuvants: mechanism of action and development
Dr. Anasztázia Hetényi

7. Synthesis and examination of multiple disulfide bond-containing antifungal peptides and proteins
Dr. Györgyi Váradi

8. Investigation of structure-activity relationships of antifungal proteins
Dr. Györgyi Váradi

9. Synthesis of nucleosides
Dr. Lajos Kovács

10. Synthesis and investigation of highly-ordered, guanine-containing structures
Dr. Lajos Kovács

11. Synthesis of modified nucleosides
Dr. Zoltán Kupihár

12. Investigation of peptides and proteins by mass spectrometry
Dr. Zoltán Kele

13. Identification of protein biomarkers using the methods of proteomics
Dr. Zoltán Szabó

14. Development of liquid chromatography and mass spectrometry methods for the quantitative determination of proteins
Dr. Zoltán Szabó

Institute of Surgical Research

1. Pathomechanism of small bowel ischemia-reperfusion. Monitoring of microcirculatory changes with intravital videomicroscopy and OPS technique
Prof. Mihály Boros, M.D., Ph.D., D.Sc.

2. Biological activity of phospholipids in inflammatory diseases

Prof. Mihály Boros, M.D., Ph.D., D.Sc.

3. Protective effects of biological gases in circulatory disorders
Prof. Mihály Boros, M.D., Ph.D., D.Sc.
Dr. József Kaszaki, Ph.D.

4. Neuroprotection in the enteral nervous system
Dr. József Kaszaki, Ph.D.

5. Examination of microcirculation under septic conditions
Dr. József Kaszaki, Ph.D.

6. Assessment of hemodynamic and biochemical consequences of experimental pericardial tamponade
Dr. József Kaszaki, Ph.D.

7. Examination of macro- and microhemodynamic consequences of volume therapy in circulatory shock
Dr. József Kaszaki, Ph.D.

8. Examination of mechanical parameters of the lung under normal and pathologic conditions
Dr. József Kaszaki, Ph.D.

9. Assessment of biochemical and microcirculatory consequences of disorders of the locomotor system using intravital videomicroscopy and OPS technique
Dr. Andrea Szabó, M.D., Ph.D.

10. Assessment and treatment of biochemical and microcirculatory consequences of urogenital diseases
Dr. Andrea Szabó, M.D., Ph.D.

6. Assessment and treatment of the oral surgical complications of chronic bisphosphonate exposure
Dr. Andrea Szabó, M.D., Ph.D.

Department of Physiology

After successful completion of the Medical Physiology I course, interested students can inquire about available student research projects by the principal investigators of departmental research units found at https://www.phys.szote.u-szeged.hu/index.php?lap=20&id=en.

Department of Pathophysiology

Student research program consultant: Dr Krisztina Anna Csabafi
telephone number: + 36 62 545 993
E-mail: *csabafi.krisztina@med.u-szeged.hu*

Thesis & scientific circle Topics (TDK)	
Tutor	**Topic**
Júlia Szakács M.D., Ph.D.	Study of the behavioral effects of neuropeptides
Miklós Jászberényi, M.D., Ph.D., D.Sc.	The Pathophysiology of Alzheimer's Disease
	The role of neuropeptide mediators in the control off affective, emotional and cognitive processes
	The Effect of Neuropeptides on the Hypothalamus-Pituitary-Adrenal system
Zsolt Bagosi, M.D., Ph.D.	The role of CRF and urocortins in anxiety, depression and social interaction

	The effects of urocortins and its fragments in anxiety and depression
	The hypothalamic and extra hypothalamic regulation of CRF
	The role of CRF and urocortins in alcohol, nicotine and cannabis addiction
Krisztina Anna Csabafi, M.D., Ph.D.	The effect of kisspeptin on amyloid-beta neurotoxicity
	Effect of Kisspeptins on carbohydrate metabolism
	Effect of neuropeptides on nociception and morphine induced analgesia, tolerance
Krisztina Anna Csabafi, M.D., Ph.D. Katalin Eszter Ibos, M.D.	Role of neuropeptides in anxiety and the development of anxious phenotype
Zoltán Rakonczay, M.D., Ph.D. D.Sc. Lóránd Kiss Ph.D.	The pathomechanism of experimental acute pancreatitis and therapeutic investigations

Department of Laboratory Medicine

The scientific activity at the Department of Laboratory Medicine mainly focuses on the evaluation of CYP19 aromatase enzyme expression in different cell types such as ovarian granulosa cells and microglial cells. In both cell types aromatase plays a key role in the steroidogenesis (estradiol biosynthesis). In granulosa estrogens are responsible for follicle maturation and in microglial cells estrogens are deeply involved in cell-cell communications and cellular repair mechanisms. We investigate the basic endocrine mechanisms and the effects of different molecules (e.g. aromatase inhibitors) on aromatase in primary cell cultures. We apply different techniques (e.g. immunohistochemistry, western blot, PCR, ELISA) for the investigation. It is possible to join us to perform experimental work in the frame of student science study group project or to write your diploma work (theoretical or experimental topics are offered).

RECOMMENDED TEXTBOOKS FOR MEDICAL STUDENTS

FIRST YEAR

It is recommended to purchase the latest edition of the following textbooks!

ANATOMY, HISTOLOGY AND EMBRYOLOGY

- Richard L. Drake, A. Wayne Vogl, Adam W. M. Mitchell: Gray's Anatomy For Students (ELSEVIER, 14th Edition, 2020) ISBN: 978-0-323-39304-1
- Leslie P. Gartner, James L. Hiatt: Concise Histology (SAUNDERS ELSEVIER, 2011) ISBN: 978-0-702031114-4
- F. Hajdu, Gy. Somogyi: Histology - Practical Manual (Semmelweis Publisher, 5th Corrected Edition, 2014) ISBN 978-963-331-244-5
- T.W. Sadler: Langman's Medical Embryology (Williams § Wilkins, 13th Edition) ISBN-13: 978-1451191646
- M. Schuenke, E. Schulte, Udo Schumacher: Thieme Atlas of Anatomy: General Anatomy and Musculoskeletal System, Head and Neuroanatomy, Internal Organs (Thieme)

CELL BIOLOGY AND MOLECULAR GENETICS

Obligatory:

- William K. Purves, Gordon H. Orians: Life: The Science of Biology,W.H. Freeman and Company, New York
- J. Darnell H. Lodish D. Baltimore: Molecular Cell Biology, W.H. Freeman and Company, New York
- B. Alberts, D.B.J. Lewis, M. Raff. K. Roberts, J.D. Watson: Molecular Biology of the Cell, Garland Publishing, Inc. New York

Recommended:

- Bruce Alberts et al: Essential Cell Biology with Ebook, Smartwork5, and Animations, 9780393680393

BASIC LIFE SUPPORT

- Brent, Karren: First Aid for Colleges and Universities, Brady Morton Series

INTRODUCTION TO MEDICINE
- Bettina Pikó : Introduction to Medicine. Basic Principles of Behavioral Sciences and, Preventive Medicine. University of Szeged

INTRODUCTION TO PSYCHOLOGY, COMMUNICATION
- Nolen-Hoeksema S., Fredrickson B.L., Loftus G.R., Wagenaar W.A.: *Atkinson and Hilgard's Introduction to Psychology*. Cengage Learning EMEA, 2009.
- János Pilling (ed): *Medical Communication*. Medicina, 2011

LATIN BASED MEDICAL TERMINOLOGY
- Gergely Brandl – Imre Áron Illés – Márta Marancsik – Edit Vágvölgyi: *Latin Based Medical Terminology,* JPress Szeged, 2021

MEDICAL CHEMISTRY
Obligatory:
- Ebbing-Hart: General Chemistry /Organic Chemistry, Houghton Mifflin Company

Recommended:
- Harold Hart: Organic Chemistry (A Short Course), Houghton Mifflin Company, Boston
- P. Gergely: Organic and Bioorganic Chemistry for Medical Students, University Medical School of Debrecen,
- John McMurry: Fundamentals of Organic Chemistry, Brooks/Cole Publishing Company, ITP, An International Thomson Publishing Company

MEDICAL PHYSICS
- S Damjanovich, J Fidy and J Szöllősi (eds): Medical Biophysics. Medicina, 2009.
- Paul Davidovits: Physics in Biology and Medicine. Fourth edition. Academic Press, 2013.

MEDICAL STATISTICS
Students can download course material (handouts, lecture notes, R scripts) from the Coospace.

Suggested textbook:
- Michael J. Campell – David Machin – Stephen J. Walters: Medical Statistics. A Textbook for the Health Sciences (2012) ISBN: 978-1-118-30061-9

MEDICAL DICTIONARIES
- Mosbey's: Mosbey's Medical, Nursing and Allied Health, Mosbey
- Stedmans: Medical Dictionary, Williams and Wilkins

HUNGARIAN LANGUAGE
- Erzsébet Balogh & Margit Skadra: Multikulti Magyar nyelv külföldieknek – Hungarian for foreigners. ISBN: 978 963 226 599 5. Medicina, 2016

SECOND YEAR

ANATOMY, HISTOLOGY AND EMBRYOLOGY

I. **Obligatory textbooks:**

- K. Won Chung: **Gross Anatomy**, Lippincott Williams & Wilkins
- Douglas J. Gould; James D. Fix: **BRS Neuroanatomy 5th;** Lippincott Williams & Wilkins **ISBN 13:** 9781451176094
- Crossman & Neary: **Neuroanatomy: an Illustrated Colour Text**; *ELSEVIER*
- Mtui, Gruener & Dockery: Fitzgerald's **Clinical Neuroanatomy and Neuroscience;** *ELSEVIER*
- **Sobotta Atlas of Human Anatomy: Volume 1, 15th ed., English;** *ELSEVIER*
- **Sobotta Atlas of Human Anatomy: Volume 2, 15th ed., English;** *ELSEVIER*
- **Sobotta Atlas of Human Anatomy: Volume 3, 15th ed., English;** *ELSEVIER*
- M. Loukas, B. Benninger, R. S. Tubbs : **Gray's Clinical Photographic Dissector of the Human Body;** *ELSEVIER*
- L. P. Gartner,J. L. Hiatt: **Concise Histology;** *ELSEVIER*
- K. Moore & T. V. N. Persaud: **The Developing Human**; *ELSEVIER*

II. **Recommended textbooks:**

- W. Platzer: **Color Atlas of Human Anatomy, Volume 1**: Locomotor System; *THIEME*
- H. Fritsch, W. Kuehnel: **Color Atlas of Human Anatomy, Volume 2**: Internal Organs; *THIEME*
- W. Kahle, M. Frotscher: **Color Atlas of Human Anatomy, Volume 3**: Nervous System and Sensory Organs; *THIEME*
- M. Schuenke, E. Schulte, U. Schumacher: **THIEME Atlas of Anatomy, Head and Neuroanatomy**; *THIEME*
- M. Schuenke, E. Schulte, U. Schumacher: **THIEME Atlas of Anatomy, General Anatomy and Musculoskeletal System**; *THIEME*
- M. Schuenke, E. Schulte, U. Schumacher: **THIEME Atlas of Anatomy, Neck and Internal Organs**; *THIEME*
- Junqueira, Carneiro, Kelley: **Basic Histology**, Prentice Hall, International Student Edition, Mc Graw-Hill
- Netter, Frank H.: **Atlas of Human Anatomy**, Icon Learning Systems; *ELSEVIER*
- L. R. Cochard: **Netter's Atlas of Human Embryology;** *ELSEVIER*
- Sadler: **Langman's Medical Embryology**, with Simbryo CD, *Lippincott Williams & Wilkins*
- Moore, Persaud & Torchia: **Before We Are Born**, Essentials of Embryology and Birth Defects; *ELSEVIER*
- Cochard: **Netter's Atlas of Human Embryology**; *ELSEVIER*

BIOCHEMISTRY, BIOCHEMISTRY SEMINAR

Obligatory:
- Robert K.Murray, Daryl K. Ganner, Peter A. Mayers, Vicot W. Rodwell: Harper's Illustrated Biochemistry 29th Edition 2012 ISBN: 978-0-07-176576-3

Recommended for 1st semester:
- W. J. Marshall, S. K. Bangert: Clinical Chemistry 6th Edition 2008 ISBN:9780723434559
- P.C. Champe, R. A. Harvey: Lippincott's Illustrated Reviews Biochemistry 4th Edition 2008 ISBN-13: 978-07817-6960-0
- J.W. Baynes, M. H. Dominiczak: Medical Biochemsitry 4th Edition, 2014-06-04 ISBN: 978-1-4557-4580-7

BIOCHEMICAL BASICS OF PREVENTIVE MEDICINE
- Janet Christian and Janet Greger: Nutrition for Living, Addison-Wesley

CARDIAC ELECTROPHYSIOLOGY AS A BASIC PROPERTY OF CARDIAC FUNCTION
- Macfarlane PW, van Oosterom A, Janse MJ, Camm J, Kligfield P, Pahlm O, eds. Comprehensive Electrocardiology, 2nd Ed. Springer, London

IMMUNOLOGY
- Abbas et al., Cellular and Molecular Immunology, Sanders, Elsevier; 8th Edition, 2015
- Janeway's Immunobiology 9th Edition, 2007

MATHEMATICAL AND STATISTICAL MODELLING IN MEDICINE
- Mark Woodward: Epidemiology –Study design and Data analysis, Chapman & Hall/CRC 1999
- Interesting mathematical problems in every-day life. Electronic handout in Teaching Mathematics and Statistics in Sciences HU-SRB/0901/221/088

MEDICAL ANTHROPOLOGY
- C.G.Helman: Culture, Health and Illness, Oxford University Press

MEDICAL PHYSIOLOGY
- Arthur C.Guyton, John E. Hall: Textbook of Medical Physiology, Elsevier Science
- Kim Barrett, Heddwen Brooks, Scott Biotano, Susan Barman: Ganong's Review of Medical Physiology, McGraw Hill Publishers
- Walter F. Boron, Emile L. Boulpaep: Medical Physiology, Saunders Elsevier
- William F. Ganong: Review of Medical Physiology by The McGraw-Hill Companies Inc.
- Fonyó Attila: Principles of Medical Physiology, Medicina Kiadó Zrt.
- Albert Szent-Györgyi Medical University, Department of Physiology, Physiology Laboratory Manual, (handout)

- Linda S Costanzo Physiology Elsevier

MEDICAL SOCIOLOGY

- *Obligatory*:
    - Molnár Regina, Erdős Csaba: Guide for studying medical sociology. 2022. University of Szeged, Department of Public Health
- *Recommended*:
    - Cockerham W.C. (2021). Medical Sociology. University of Alabama at Birmingham, Routledge. (5th e.)
    - Giddens, A. & Sutton, P. W. (2017). Sociology. (8th ed.). Polity Press

HUNGARIAN LANGUAGE

- Erzsébet Balogh & Margit Skadra: Multikulti Magyar nyelv külföldieknek – Hungarian for foreigners. ISBN: 978 963 226 599 5. Medicina, 2016
- Margit Skadra: Elsősegély a magyar orvosi nyelvhez - First Aid for Medical Hungarian. ISBN: 978 963 226 846 0 Medicina, 2022

THIRD YEAR

HUNGARIAN LANGUAGE

- Hungarian for medical purposes (Csilla Keresztes, Marietta Kiss, Eszter Asztalos-Zsembery, Andrea Stötzer, Rita Vástyán, Zsuzsanna Szűcs, Krisztina Helle, Bernadett Borda – University of Szeged; Gabriella Hild, Zoltán Krommer, Gabriella Nagy, Judit Sávay, Tímea Németh – University of Pécs; Medical editor: Attila Farkas, MD) Tiszapress, Szeged 2023

INTERNAL MEDICINE (CLINICAL DIAGNOSTICS)

Obligatory:

- Barbara Bates': A Guide to Physical Examination and History Taking, 8th ed. with bonus CD, Lippincott Williams & Wilkins, ISBN: 078175819X

or

- Bates' Guide to Physical Examination and History Taking, Authors: Lynn S. Bickley, M.D. , Barbara Bates, Peter G. Szilagyi, Peter Gabor Szilagyi, Publication Date: December 2005., ISBN: 0781767180

Recommended:

- Harrison's Principles of Internal Medicine, Authors: Kasper, Dennis L. Braunwald, Eugene Fauci, Anthony Hauser, Stephen Longo, Dan Jameson, J. Larry, ISBN: 0071391401, Publication Date: 2004-07-27, Edition:16
- Te-Chuan Chou: Chou's Electrocardiography Clinical Practice, 5th ed., W.B. Saunders, 2001., ISBN: 0721686974
- Brostoff: Clinical Immunology – An Illustrated Outline, Mosby, 1994, ISBN: 1563756641
- Kumar, Parveen, Clark, Michael: Clinical Medicine, 5th ed., W. B. Saunders, 2002, ISBN: 0702025798
- Current Medical Diagnosis and Treatment 2006, Author(s): Lawrence M. Tierney, Jr., MD; Stephen J. McPhee, MD; Maxine A. Papadakis, MD, ISBN: 0071454101, Publication date: 2005, Edition 45th
- Stone: Current Emergency Diagnosis & Treatment, 5th ed., Appleton & Lange, 2004., ISBN: 0071219757

MICROBIOLOGY

- Greenwood et al., Medical Microbiology; 18th Edition, 2012
- Murray et al., Medical Microbiology, Elsevier, Mosby; 8th Edition, 2015
- Practical Notes (Edited by R. Pusztai, University of Szeged, 2002)

MICROSURGERY

- Szabó, A., Vass, G., Zádor, Z., Boros, M.: Basics of Microsurgery. Manual for Medical Students, Szeged, 2004. (handout)

PATHOLOGY

- Kumar, Abbas, Aster, Deyrup - Robbins & Kumar Basic Pathology, Elsevier, 2023, 11th Edition, ISBN: 9780323790185

PATHOPHYSIOLOGY

Obligatory

- Gary D. Hammer, Stephen J. McPhee. **Pathophysiology of Disease: An Introduction to Clinical Medicine** 8th Edition, (2019) LANGE McGraw-Hill Education.

- Krisztina Csabafi et al. ECG guide, (2020) - notes

Recommended

- Vinay Kumar, Abul K. Abbas, Jon C. Aster. Robbins and Cotran Pathologic basis of disease 9th edition, (2014) Elsevier Books.
- Malcolm S. Thaler. Only EKG book you'll ever need, (2018) Wolters Kluwer Health.

SURGERY (CLINICAL DIAGNOSTICS)

- Ed.: Norton, Barie, Bollinger, Chang, Lowry, Mulvihill, Pass, Thompson, Shirazi: Surgery: Basic Science and Clinical Evidence (Book with CD-ROM), Springer, 2000., ISBN: 038798447X
- Ed. Norton, Barie, Bollinger, Chang, Lowry, Mulvhill, Pass, Thompson, Shirazi: Surgery: Basic Science and Clinical Evidence 2nd ed. 2008 Edition, Springer 2008, ISBN-13: 978-0387308005 /ISBN-10: 0387308008

SURGICAL PROPEDEUTICS

- Towsend CM.: Sabiston Textbook of Surgery. The Biological Basis of Modern Surgical Practice. 21st Edition, Elsevier, 2021,

  Hardback ISBN: 9780323640626 Other ISBN: 9780323640640

BASICS OF EMERGENCY MEDICINE

- Boros, M. (Ed.): Monitoring in Medical Practice. Basic Medical Skills. Innovariant Ltd., Szeged, 2007. ISBN 963-482-787-X
- Boros, M. (Ed.): Practical Skills Syllabus. Innovariant Ltd., Szeged, 2007. ISBN 978-963-482-840-2

MICROSURGERY

- Szabó, A., Vass, G., Zádor, Z., Boros, M.: Basics of Microsurgery. Manual for Medical Students. Szeged, 2004. (handout)

BASIC SURGICAL SKILLS, ADVANCED SURGICAL SKILLS

- Boros, M. (Ed.): Surgical Techniques. Medicina, Budapest, 2009. ISBN 978-963-226-256-7
- Boros, M. (Ed.): Practical Skills Syllabus. Innovariant Ltd., Szeged, 2007. ISBN 978-963-482-840-2
- Kirk, R. M.: Basic Surgical Techniques, 6th Edition. Churchill Livingstone, 2010. ISBN: 978-0-7020-3390-2

BASIC IMMUNOPATHOLOGY

- Abbas, A. K., Lichtman, A. H., Pillai, S: Cellular and Molecular Immunology. 7th Edition. Elsevier, Saunders, Philadelphia, 2011. ISBN: 978-0-8089-2425-8

LABORATORY MEDICINE

- William J. Marshall: Clinical Chemistry, 4th, 5th or 6th Edition, MOSBY – Harcourt Publishers Ltd. 2008, ISBN 0-72-34-3159-0

FOURTH AND FIFTH YEAR

ANAESTHESIOLOGY AND INTENSIVE THERAPY

Recommended:

- Keith G. Allman, Iain H. Wilson: Oxford Handbook of Anaesthesia, Oxford University Press, 2006. ISBN 0-19-856606-3
- Tim Craft, Jerry Nolan, Mike Parr: Critical Care, BIOS Scientific Publishers Ltd. 2009. ISBN 1-85996-2229-7

For fifth year students

Obligatory:

- Zsolt Molnár (Edited by): Anaesthesiology and Intensive Therapy (Medicina Könyvkiadó Zrt., 2013)

Recommended:

- Smith and Aitkenhead's Textbook of Anaesthesia
- Morgan and Mikhail's Clinical Anesthesiology

CHILD AND ADOLESCENT PSYCHIATRY

- Robert Goodman and Stephen Scott, Child Psychiatry, 1998

CLINICAL IMMUNOLOGY

- Spickett, Gavin: Oxford Handbook of Clinical Immunology, Oxford University Press, 2006, ISBN:019262721x

CLINICAL ONCOLOGY

- The principles of the complex management of cancer. Lecture notes University of Szeged, Faculty of Medicine Department of Oncotherapy, Edition 3, 2018.

CLINICAL GENETICS

***Obligatory textbooks*:**

1. Lecture notes
2. *Emery's Elements of Medical Genetics. Peter Turnpenny, 15th edition, Elsevier, 2017*

***Recommended textbooks*:**

1. SMITH'S: Recognisable patterns of human malformation 2006
2. Human *Genetics.* A problem-based *approach.* Korf BR, 2nd ed, 2000, 2007.
3. Thompson and Thompson Genetics in Medicine by Robert L. Nussbaum, M.D. , Ada Hamosh, M.D. (Contributor), Huntington F. Willard, Ph.D., Margaret W. Thompson, Roderick R. McInnes, M.D., Paperback, Elsevier Science Health Science div 2007

DERMATOLOGY

- James Dinulos: Habif's Clinical Dermatology 7th Edition. A Color Guide to Diagnosis and Therapy. eBook ISBN: 9780323612708. Free access with ClinicalKey through the Klebelsberg Library.

FAMILY MEDICINE

- The Color Atlas and Synopsis of Family Medicine, 3rd Edition by Richard P. Usatine
- Bratton's Family Medicine Board Review 5th Edition by Robert A. Baldor

FORENSIC MEDICINE

Compulsory:

- Reinhard B. Dettmeyer, M.A. Verhoff, Harald F. Schütz Forensic Medicine Fundamentals and Perspectives, Springer-Verlag Berlin Heidelberg 2014 ISBN 978-3-642-38817-0, ISBN 978-3-642-38818-7 (eBook)

Recommended:

- Jason Payne-James ed.: Simson's Forensic Medicine 14th Edition, 2019 CRC Press ISBN-9781498704298
- Lecture Notes of Forensic Medicine (Ed.: P. Sótonyi, E. Keller), Semmelweis Publisher, 2008. ISBN 978 963 9656 92 5

HUNGARIAN LANGUAGE

- Hungarian language for 4th year medical students (Csilla Keresztes, Marietta Kiss, Andrea Stötzer, Rita Vástyán – University of Szeged; Gabriella Hild, Zoltán Krommer, Gabriella Nagy, Judit Sávay, Tímea Németh – University of Pécs) Jpress, Szeged 2022

INTERNAL MEDICINE

Obligatory:

- Hoffbrand, Moss: Essential Haematology, Wiley, 6th edition
- Harrison's Principles of Internal Medicine (2 Volume Set), Kasper, Dennis L. Braunwald, Eugene Fauci, Anthony Hauser, Stephen Longo, Dan Jameson, J., Larry, 16th ed., 2004, McGraw-Hill, ISBN: 0071391401
- Gibson, Costabel: Respiratory Medicine (2 Volume Set), 3rd ed., W. B. Saunders, 2002., ISBN: 0702026131
- Te-Chuan Chou: Chou's Electrocardiography Clinical Practice, 5th ed., W.B. Saunders, 2001., ISBN: 0721686974
- Forster T., Csanády M.: Atlas of Colour Doppler Echocardiography, Szeged, 1991.,
- I.J. Mazza: Manual of Clinical Hematology, Oxford Textbook of Nephrology JS Cameron, AM Davison et al, Oxford University Press, 2001., ISBN: 078172907
- The Merck Manual of Diagnosis and Therapy, Merck and Co. Inc. 2006., ISBN: 0911910182

Recommended:

- Stone: Harrison's Principles of Internal Medicine: Self Assessment and Board Review: ISE, International Student Edition, McGraw-Hill, 2001., ISBN: 0071203591
- Brostoff: Clinical Immunology – An Illustrated Outline, Mosby, 1994, ISBN: 1563756641
- Stone: Current Emergency Diagnosis & Treatment, 5th ed., Appleton & Lange, 2004., ISBN: 0071219757
- Cheitlin: Clinical Cardiology, 7th ed. (to be published in January 2006), Appleton & Lange, ISBN: 0838513859
- Current Medical Diagnosis and Treatment 2006, Author(s): Lawrence M. Tierney, Jr., MD; Stephen J. McPhee,

MD; Maxine A. Papadakis, MD, ISBN: 0071454101, Publication date: 2005, Edition 45th, ISBN: 034061370X

LABORATORY DIAGNOSTICS: USE OF LABORATORY TESTS IN PRACTICE

- William J. Marshall: Clinical Chemistry, 4th , 5th or 6th Edition, MOSBY – Harcourt Publishers Ltd., 2008, ISBN: 0-72-34-3159-0

MEDICAL PSYCHOLOGY

- *Lecture handouts* (will be posted on the homepage of the Behavioral Sciences Institute)
- Márta Csabai – Péter Molnár: *Health, Illness, and Care. A textbook of medical psychology.* Budapest, 2000. Springer (available in the library of the Behavioral Sciences Institute)
- Suls J.M. – Davidson, K. – Kaplan, R.M. (eds): *Handbook of Health Psychology and Behavioral Medicine.* The Guilford Press, 2010. (available in the library of the Behavioral Sciences Institute)
- János Pilling (ed): *Medical Communication.* Budapest, 2011. Medicina (available in the library of the Behavioral Sciences Institute)

NEUROLOGY

Literature:

- Mumenthaler, M.: Neurology. Thieme (latest edition)

Suggested books:

- Rowland, L.P.: Merritt¢s Textbook of Neurology. Lea and Febiger, Philadelphia, London (latest edition)
- Simon, R.P., Aminoff, M.J., Greenberg, D.A.: Clinical Neurology. Appleton and Lange (latest edition)
- Adams, R.D., Victor, M.: Principles of Neurology.McGraw Hill (latest edition)

NEUROSURGERY

- Andrew Kaye: Essential Neurosurgery, Churchill Livingstone, ISBN: 0443043507, available online: https://archive.org/details/EssentialNeurosurgery
- Mark S. Greenberg – Handbook of Neurosurgery (ISBN: 978-1-60406-326-4)

NUCLEAR MEDICINE

Recommended textbooks for fourth and fifth year medical students

- Biersack-Freeman: Clinical Nuclear Medicine (May 6, 2020 2nd edition), Publischer Springer,ISBN 9783030394554
- European Nuclear Medicine Guide, 2020 edition; The European Nuclear Medicine guide is a joint publication by the EANM and Nuclear Medicine Section of the European Union of Medical Specialists (UEMS/EBNM). Access the free online version here: nucmed-guide.app,
- Nuclear Medicine Clinical Decision Support, EANM, 2018; Free access via: nucmed-cds.app

OBSTETRICS AND GYNAECOLOGY

- M. M. Garrey, A. D. T. Govan, C. Hodge, R. Callander: Obstetrics Illustrated, Fourth Edition, Churchill Livingstone, 1993., ISBN: 0443041806
- Fundamentals of Obstetrics, Zth ed., 1999, ISBN: 0723431507
- E. Malcolm Symonds: Essential Obstetrics and Gynaecology, Churchill Livingstone 1992, ISBN: 044304337X
- Hacker & Moore's Essentials of Obstetrics and Gynecology, 5th Edition ISBN-13: 978-1416059400

ORTHOPAEDICS

- Miklós Szendrői: Orthopedics. Semmelweis, Budapest 2008

OPHTHALMOLOGY

- Thieme Flexi Book, Gerhard K. Lang, Ophthalmology, A Pocket Textbook Atlas, Thieme 2000., ISBN: 313126161-7 (GTV), ISBN: 0865779368 (TNY)

- Differiential Diagnosis in Ophthalmology, Stephen A. Vernon, Manson Publishing 1999., ISBN: 1874545901

OTO-RHINO-LARYNGOLOGY

- W. Becker, H.H. Naumann, C.R. Pfaltz: Ear, Nose and Throat Diseases, A Pocket Reference, Georg Thiemes Verlag Stuttgart, New York 1996., ISBN 3-13671201-3
- Sziklai: Oto-Rhino-Laryngology Lecture notes 1994. (handout), Order from: Semmelweis Orvostudományi Egyetem Képzéskutató, Oktatástechnológiai és Dokumentációs Központ, Budapest
- Carl RudolfPfaltz: Ear, Nose and Throat Diseases –A Pocket Reference, Thieme Medical Publishers, Inc., 1994., ISBN: 3136712021

- Simson Hall, Bernard H. Colman: Diseases of the Nose, Throat and Ear, A Handbook for Students and Practitioners, 1992., ISBN: 0443045631

PHARMACOLOGY
- Katzung: Basic & Clinical Pharmacology 15e, 2021
- Rang & Dale's Pharmacology 9e 2020
- Dale's Pharmacology Condensed 3e 2021
- Lippincott's Illustrated Reviews: Pharmacology 8e 2022

PUBLIC HEALTH AND PREVENTIVE MEDICINE

Obligatory:
- Paulik E (ed.): Public Health and Preventive Medicine. Medicina Publishing House, Budapest, 2013

Recommended:
- Tulchinsky TH, Varavikova EA: The New Public Health. 2nd ed. Elsevier Academic Press, 2009, ISBN: 978-0-12-370890-8
- Donaldson LJ, Donaldson RJ: Essential Public Health. 2nd ed. Petroc Press, 2003, ISBN:1900603B7X
- Matthew L. Boulton, Robert Wallace: Maxcy-Rosenau-Last Public Health and Preventive Medicine: Sixteenth Edition 16th Edition, McGraw Hill / Medical, 2021, ISBN-10 1259644510, ISBN-13 978-1259644511

PULMONOLOGY
- Isselbacher: Harrisons's: Principles of Internal Medicine I–II., 14th Edition, McGraw-Hill Book Company, 1998., ISBN: 0071133801
- S.J. Bourke: Lecture Notes On Respiratory Medicine, Sixth Edition, Blackwell Publishing, 2003

PAEDIATRICS
- Tom Lissauer, Will Carroll: Illustrated textbook of Paediatrics, 5th Edition, 2018, ISBN: 978-0-7234-3871-7
- Karen Marcdante, MD and Robert M. Kliegman, MD: Nelson Essentials of Pediatrics, 8th Edition 2019, ISBN: 978-0-323-51145-2

PSYCHIATRY
- Donald W. Black, Nancy C. Andreasen: Introductory Textbook of Psychiatry – Sixth Edition, ISBN: 9789386217899

REHABILITATION MEDICINE

Obligatory textbooks:
- Ward AB, Barnes MP, Stark SC, Ryan S: Oxford Handbook of Clinical Rehabilitation, 2nd edition. Oxford University Press, 2010. ISBN 978 0 19 955052 4, DOI:10.1093/med/9780199550524.003.0001 – available also online

Recommended textbooks:
- Cifu DX. Braddom's Physical Medicine and Rehabilitation, 5th edition, Elsevier, 2015. ISBN: 9780323280464 – available also as e-book
  or:
  Cifu DX. Braddom's Physical Medicine and Rehabilitation, 6th edition, Elsevier, 2021. ISBN: 9780323625395

RHEUMATOLOGY

The Department has prepared a handbook-sized handout which is an extended format of the lecture presentations. This is updated annually, contains lots of Figures, Tables, follows the list of topics for the end-semester exam and is sufficient and necessary for the exam.

RADIOLOGY
- Richard B. Gunderman, Essential Radiology, 3rd edition, Thieme, New Yorik, Stuttgart, 2007

SURGERY
- Ed.: Norton, Barie, Bollinger, Chang, Lowry, Mulvihill, Pass, Thompson, Shirazi: Surgery: Basic Science and Clinical Evidence (Book with CD-ROM), Springer, 2000., ISBN: 038798447X
- Ed. Norton, Barie, Bollinger, Chang, Lowry, Mulvhill, Pass, Thompson, Shirazi: Surgery: Basic Science and Clinical Evidence 2nd ed. 2008 Edition, Springer 2008, ISBN-13: 978-0387308005 /ISBN-10: 0387308008

UROLOGY

- Smith: General Urology, Appleton and Lange, 14th ed. 1994., ISBN: 0838586139

TRAUMATOLOGY

- The Trauma Manual: Trauma and Acute Care Surgery, Third edition, Editors: Andrew B. Peitzman, Michael Rhodes, C. William Schwab, Donald M. Yealy, Timothy C. Fabian, Publisher: Wolters Kluwer / Lippincott Williams & Wilkins

TROPICAL DISEASES

- Manson's Tropical Diseases Edited by G. C. Cook and A. I. Zumla, 23rd Edition.
- Atlas of Tropical Medicine and Parasitology, By Wallace Peters and Geoffrey Pasvol, 6th Edition

THE LANGUAGE OF EFFECTIVE DOCTOR-PATIOENT COMMUNICATION

- Keresztes, Cs., Demeter, É., Borda, B. 2017. The language of effective doctor–patient communication. Part 1. Szeged: JATEPress. ISBN:978-963-315-322-2

THESIS WRITING IN ENGLISH-ACADEMIC LANGUAGE AND STYLE

- Keresztes, Cs. (2017): Medical English genres and text types. Szeged: JATEPress. ISBN: 978-963-315-316-1
- Keresztes, Cs. (2020) Writing and Publishing in English – The Linguistic Aspects of Writing a Scientific Paper, (Széchenyi 2020 pályázat alapján SZTE Repozitóriumban elérhető)

BASIC MODULE SYLLABUS

Academic English for medical students I.

Semester:	1st or 3rd	**Code:**	AOK-OASZV761
Course type:	Practice	**Category:**	elective
Hours/week:	2	**Department:**	Med. Comm. and Translation
Credit:	2	**Form of Exam:**	Term Mark

topic

* Placement test and Breaking news;
* Introduction to scientific and medical language use: note-taking techniques and word formation (definitions, word order, collocations);
* Understanding a text: reading (scan/skim/read for detail);
* Writing with a purpose: essays (with special attention to paragraphs, topic sentences and hedging and descriptions (graphs, figures, tables);
* Oral skills: ppt and presentation (including all knowledge gained with special attention to signpos and presentation skills).

Academic English for medical students II.

Semester:	2nd or 4th	**Code:**	AOK-OASZV762
Course type:	Practice	**Category:**	elective
Hours/week:	2	**Department:**	Med. Comm. and Translation
Credit:	2	**Form of Exam:**	Term Mark

topic

* An introduction to medical English
* Cohesion and coherence in written language: essay writing
* Nouns and noun combinations in medical English
* Reading for data (graphs and tables)
* Comparison in scientific language
* Cause and effect in medical language use
* Most practical verb tenses in science
* Modal verbs in medicine
* Linking words and meaning construction in writing

Anatomy, Histology and Embryology I. (+Dissection Practice I. & Histology Practice I.)

Semester:	1st	**Code:**	AOK-OAK0211OAK0221/OAK(
Course type:	Lecture/Practice/Practice	**Category:**	compulsory
Hours/week:	2/3/2(16 hrs total)	**Department:**	Anatomy
Credit:	5/3/-	**Form of Exam**	Exam/Term Mark/Signatur(

week	**Anatomy I.** **(90-min lecture/wee**	**Anatomy I.** **(45-min lecture/week, held on every 2nd week online)**	**Dissection I. topic**	**Histology I. topic**
1.	Introduction to huma anatomy (anatomical nomenclature, planes directions, axes). General osteology. General syndesmolog	Basic tissues, part 1: Epithelial tissues	*General information on the classes and exams.* *Injury preventive rules and dissecting room regulations* Bones of the upper limb.	Use of light microscope. Introduction to histological methods. Interpretation of histological preparations.
2.	General myology. General angiology.		Joints of the upper limb (UL Cross-sectional anatomy of	**Epithelial tissues, part 1** Kidney (HE) Jejunum (HE) Trachea (HE)
3.	General neuroanatom Spinal cord segment. Formation of the plex from the spinal nerve	Basic tissues, part 2: Connecting and supportin tissues	Dissection of the muscles o upper limb. Cross-sectional anatomy of	**Epithelial tissues, part 2** Oesophagus (HE) Finger pad (HE) Unicellular gland (PAS+H) Submandibular gland (HE)
4.	Nerves of the upper l		Blood vessels of the upper l Cross-sectional anatomy of	**Connective tissues** Finger pad (HE) Tendon (HE) Adipose tissue (HE) Adipose tissue (frozen se Sudan Red)
5.	Functional anatomy o upper limb.	Basic tissues, part 3: Muscle tissues	Nerves of the upper limb. Cross-sectional anatomy of	**Supporting tissues** Hyaline cartilage (HE) Elastic cartilage (orcein) Fibrocartilage (HE) Bone (ground section) Endochondral ossification (H
6.	Nerve tissue, part 1.		**1st practical assessment** Anatomy of the upper limb.	**Muscle tissue** Smooth muscle (HE) Skeletal muscle (cross sectio HE) Skeletal muscle (longit. secti HE) Cardiac muscle (HE) Cardiac muscle (iron hemato
7.	Nerve tissue, part 2.	Formed elements of blooc Haematopoiesis.	Bones of the pelvis and the lower limb. Joints of the pelvis and the lower limb.	**Nerve tissue, part 1** Sensory ganglion (HE) Spinal cord (HE) Cerebral cortex (HE) Cerebellum (HE) Vegetative ganglion (Ag)

8.	Structure (bone, joint muscles) of the trunk Layers of the thoracic Surface projections o thoracic organs.		Muscles of the pelvis and th lower limb (LL). Cross-sectional anatomy of	**Nerve tissue, part 2** Peripheral nerve (longit. sect HE) Peripheral nerve (cross secti HE) Peripheral nerve (longit. sect Os) Peripheral nerve (cross secti Os) Astrocyte (GFAP IHC)
9.	Biomechanical feature the trunk. Functional sectional anatomy of thorax.	Immune and lymphatic systems. Thymus: anatomy and histology.	Blood vessels and nerves of lower limb. Cross-sectional anatomy of	**1st practical assessment** Basic tissues.
10.	Mediastinum: division layers, contents. Heart: chambers and valves.		**2nd practical assessmen** Anatomy of the lower limb.	**Blood vessels:** Aorta (HE) Aorta (resorcin-fuchsin) Artery, vein (HE) Artery, vein (Orcein) Spermatic cord (HE)
11.	Intrinsic vessels of th heart. Impulse generating a conducting system of heart. Innervation of heart. Anatomy of the pericardium.	Vegetative nervous syster	Bones, joints of the trunk. Anatomy of the thoracic cag Superficial and deep back muscles. The diaphragm. Related cross-sectional anat	**Blood** Blood smear (MGG) **Haematopoiesis** Red bone marrow (HE) **Lymphoid organs, part 1** Thymus (HE)
12.	General embryology. Development of the embryo: gastrulation neurulation.		Superior mediastinum. Surface projections of the h and the thoracic organs ont anterior thoracic wall. External features of the hea The absolute and relative ca dullness.	**Lymphoid organs, part 2** Spleen (HE) Lymph node (HE) Palatine tonsil (HE) Root of tongue (HE)
13.	Development of the amnion and the yolk Fetal blood circulatior	Radiology of the limbs an chest.	Middle mediastinum. Dissec of the heart, cardiac vessels pericardium. The interior of the opened h Posterior mediastinum. Related cross-sectional anat	**Embryology** Spermatic cord (HE) Placenta (HE) Chicken embryo (HE)
14.	Embryology of heart a great vessels.		**3rd practical assessmen** Anatomy of the trunk, thora mediastinum and heart.	**1st practical assessment** Histology of circulation, bloo smear, haematopoiesis, lymp organs and embryology.

Anatomy, Histology and Embryology II. (+Dissection Practice II. & Histology Practice II.)

Semester:	2nd	**Code:**	AOK-OAK0241/OAK0251/OAK0261
Course type:	Lecture/Practice/Practice	**Category:**	compulsory
Hours/week:	2/3/2	**Department:**	Anatomy
Credit:	3/3/2	**Form of Exam**	Exam/Term Mark/Term Mar

wee	**Anatomy II.** **(90-min lecture/week)**	**Anatomy II.** **(45-min lecture/week, held on every 2nd week online)**	**Dissection II. topic**	**Histology II. topic**
1.	Anatomy of the upper airways.	Anatomy of the lower airways. Development of the respiratory system.	Summary of mediastinum: divisions and contents. Rela cross-sectional anatomy.	**Recapitulation.**
2.	Anatomy, histology and development of the ora cavity, teeth and tongu		Nasal cavity, paranasal sinu larynx, trachea, lungs and t pleura.	**Respiration** Trachea (HE) Lung (HE) Lung (orcein+H)
3.	Anatomy, histology and development of the oropharyngeal isthmus pharynx and esophagu	Anatomy, histology and development of the larg salivary glands.	Cross-sectional anatomy of nasal cavity, paranasal sinu larynx, trachea, lungs	**Digestive system** Lip (HE) Dorsum of tongue (HE) Circumvallate papilla (HE) Parotid gland (HE) Submandibular gland (HE) Sublingual gland (HE)
4.	Blood supply, lymphati drainage, innervation a topographical relations of the abdominal organ		Muscles of the abdominal w rectus sheath. Surface projections of the abdominal organs. Topographic division of the abdominal cavity. Peritoneum, omental bursa	*General structure of the alime tract.* Esophagus (HE)
5.	Anatomy of the stomac small and large intestir	Histology and embryolo the stomach, small and intestines.	Midsagittal plane section of head: oral cavity, pharynx, esophagus.	Cardia (HE) Fundus, corpus (HE) Pylorus (HE) Duodenum (HE) Jejunum (HE) Jejunum (HE+PAS) Ileum (HE)
6.	Anatomy, histology and development of the live extrahepatic duct syste gall bladder and pancre		Stomach. Blood supply to the abdom organs. Branches of the abdominal aorta. Related cross-sectional ana	Large intestine (HE) Vermiform appendix (HE) Anal canal (HE)
7.	Anatomy of the retro-peritoneum. Anatomy and histology the urinary system.	Investigation of the alimentary system by m of imaging techniques.	Topography and anatomy c small and large intestines. Related cross-sectional ana	Liver (HE) Liver (Ag) Liver (Kupffer cells) Gallbladder (HE) Pancreas (HE)
8.	Anatomy of the female genital organs.		Anatomy of the liver, extrahepatic ducts, pancrea spleen. Anatomy of the hep portal vein and the inferior cava. Related cross-sectional ana	**1st practical assessment** Respiratory and digestive syst

9.	Anatomy of the male g organs. The sacral parasympat system.	Anatomy of the female male genitalia.	**1st practical assessmen** Respiratory and digestive systems, spleen and abdon wall.	**Urogenital systems** Kidney (HE) Ureter (HE) Urinary bladder (HE) Penile urethra (HE)
10.	Development of the urogenital system.		Posterior abdominal wall. Retroperitoneal organs and surface projections. Anatomy and topography t kidneys and ureters.	Ovary (HE) Uterine tube (HE) Uterus (HE) Cervix of uterus (HE)
11.	Pelvic connective tissue structures (subperitone spaces). The perineum.	Endocrine organs, part	Female genital organs. Study of mid-sagittal plane preparations of the female and perineum. Related cross-sectional ana	Testis-epididymis (HE) Spermatic cord (HE) Seminal vesicle (HE) Prostate (HE) Penis (HE)
12.	Endocrine organs, part		Male genital organs. The inguinal canal. Study of mid-sagittal plane preparations of the male pe and perineum. Related cross-sectional ana	**Endocrine organs** Diencephalon (oxytocin IHC) Hypophysis (HE) Pineal gland (HE)
13.	Endocrine organs, part	Investigation of uropoie system by means of ima techniques.	Female and male perinea, ischioanal fossa, pudendal Related cross-sectional ana	Thyroid gland (HE) Parathyroid gland (HE) Suprarenal gland (HE) Pancreas (HE) Corpus luteum (HE)
14.	Investigation of the fer and male genitalia by r of imaging techniques.		**2nd practical assessmer** Urogenital organs, lesser p and perineum.	**2nd practical assessment** Urogenital and endocrine orga

Anatomy, Histology and Embryology III. (+Dissection Practice III. & Histology Practice III.)

Semester:	3rd	**Code:**	AOK-OAK027/OAK028/OAK029
Course type:	Lecture/Practice/Practice	**Category:**	compulsory
Hours/week:	2/3/2	**Department:**	Anatomy
Credit:	3/3/2	**Form of Exam:**	Comprehensive Exam/Term Mark/Term Mark

week	**Anatomy III. lect. topic**	**Dissection prac. III. topic**	**Histology pract II. topic**
1.	Anatomy and blood supply of the cord. Fine structure of the grey matter a white matter. Rexed's laminae and correspondin nuclei. Arrangement of the spinal cord tra Reflex arcs of the spinal cord.	*Injury preventive rules and dissec room regulations.* Cerebral hemispheres: gyri and su Blood supply to the brain, the cere arterial circle.	*General information, rules and regulations.* Peripheral nerve (longit. & cross sections, HE) Peripheral nerve (longit. & cross sections, Os) Sensory nerve ending (HE) Sensory nerve ending (Ag) Motor end-plate (AChE)

2.	Neuroanatomy and blood supply c medulla oblongata, pons and mesencephalon. Cranial nerve nuclei and the reticu formation.	Duplications of the dura mater, meningeal spaces. Vertebral canal, meninges of the s cord and spinal cord preparation. Cross-sectional anatomy of CNS.	Sensory ganglion (HE) Vegetative ganglion (Ag) Spinal cord (HE) Spinal cord (myelin staining)
3.	Diencephalon: organization. Thalamus and hypothalamus. Blood supply to the diencephalon.	Structure of the brainstem, the fo ventricle, rhomboid fossa. Exits of the cranial nerves (from tl brainstem and the skull). Cross-sectional anatomy of CNS.	Diencephalon (oxytocin IHC) Hypophysis (HE) Pineal gland (HE)
4.	Anatomy, histology and synaptolo the cerebellum. Neuroanatomy of cerebellar movement regulation. Morphological and functional ba the regulation of the blood circula the brain: the blood-brain barrie the CSF.	Diencephalon. Lateral and third ventricles. Flechsig's cut. The extreme, external and interna capsules. Basal nuclei (ganglia). Cross-sectional anatomy of CNS.	Thyroid gland (HE) Parathyroid gland (HE) Suprarenal gland (HE) Pancreas (HE) Corpus luteum (HE)
5.	Neuroanatomy of the cerebral cor The 'module concept' in the cereb cortex architecture. The limbic system incl. the hippocampus.	Cerebellum: topography, parts an blood supply. Cerebellar nuclei. Cerebellar peduncules. Cross-sectional anatomy of CNS.	Cerebellum (HE) Cerebellum (Ag) Neocortex (HE) Astrocytes (GFAP IHC)
6.	Basal forebrain: amygdaloid comp Basal nuclei: anatomy and their functions in the movement regula	**1st practical assessment** Macroscopic anatomy of the CNS.	Recapitulation.
7.	Development of the nervous syste	Muscles of neck. Regions of neck: cervical triangles. Fascial system of the neck. Surface anatomy of the neck. Facial and masticatory muscles. Related cross-sectional anatomy.	**1st MTO** The nervous and endocrine syster
8.	The cranial nerves V, VII, VIII, IX and XII: ganglia and peripheral branches.	Skull, part 1: The temporal and sphenoid bones The maxilla and mandible. The facial (frontal) and lateral asp of the skull. The cranial base: external and int surfaces.	Eye (HE) Lacrimal gland (HE)
9.	Anatomy and histology of the eye Parts, layers and blood supply of t retina. Accessory visual structures: eyelid lacrimal apparatus and extraocula muscles.	Skull, part 2: Calvaria. Bony nasal and oral cavities. Infratemporal and pterygopalatine fossae.	Finger pad (HE) Hairy skin (HE) Eyelid (HE) Cochlea (HE)
10.	Neuroanatomy of the visual pathw Light reflex of the pupil. Accomodation reflex. Horizontal and vertical gaze contr	Regions of head. Arterial supply, venous and lymph drainage of the head and cervical regions.	Resting mammary gland (HE) Lactating mammary gland (HE) Umbilical cord (HE) Placenta (HE) Chicken embryo (HE)

11.	Anatomy and histology of the exte and middle ears. Anatomy of the i ear: osseous and membranous labyrinths.	Topography of the orbit. Anatomy of the eye. Anatomy of the external and midd ears. Related cross-sectional anatomy.	**2nd MTO** Skin, mammary gland, sensory or embryology.
12.	Organ of Corti. Fine structures of the cristae and maculae. Auditory and vestibular pathways.	Cervical plexus. Cervical part of the sympathetic tr Organization of the peripheral parasympathetic system in the he Pterygopalatine fossa. Thyroid gland. Cross-sectional anatomy of neck.	Recapitulation 1: The essential histological preparat of the comprehensive exam's entr part: 1-18
13.	Development of the eye and ear.	**2nd practical assessment** Skull. Regions of the head and neck.	Recapitulation 2: The essential histological preparat of the comprehensive exam's entr part: 19-36
14.	The branchial apparatus: formatio development and derivatives of th pharyngeal arches, pouches and grooves.	General recapitulation before the course exam.	Recapitulation 3: The essential histological preparat of the comprehensive exam's entr part: 37-53

Basic Immunopathology

Semester:	6th	**Code:**	AOK-OASZV171
Course type:	Lecture	**Category:**	elective
Hours/week:	1	**Department:**	Surgical Research
Credit:	1	**Form of Exam:**	Evaluation(5)

topic

* General informations. Introduction to immunopathology. Transplantation immunology: transplanta antigens, allogeneic recognition, effector mechanisms of graft rejection
* Histocompatibility testing. Immunological investigations before and after transplantation.
* Immunosuppressive therapy
* Immunology of organ transplantation. Immunology of bone marrow transplantation: graft-versus disease. Xenogeneic transplantation
* Reproductive immunology
* Tumor immunology: tumor antigens, antitumor immune responses. Evasion of immune responses tumors. Immunotherapy for tumors
* Immunological tolerance. Self tolerance: central and peripheral tolerance. Mehanisms of T and B c tolerance
* Pathomechanisms of autoimmunity: failure of self tolerance, genetic factors, role of infections and other factors; effector mechanisms. Systemic and organ specific autoimmune diseases
* Written test exam

Basic Life Support

Semester:	1st	**Code:**	AOK-OAK011
Course type:	Practice	**Category:**	compulsory
Hours/week:	2	**Department:**	Emergency Medicine
Credit:	2	**Form of Exam:**	Term Mark

week	topic
1.	Principles of first aid. Emergency situations. Victim assessment routine. Assessing respiration pulses. Normal and abnormal pulse rates per minute.
2.	The unresponsive patient. Terms of position. Extrication of the injured patient (Rautek manoeuvre).
3.	Basic life support. Victim assessment and positioning. Determine unresponsiveness. Assess fo breathlessness. Provide rescue breathing. Circulation. Esmarch-Heiberg manoeuvre.
4.	BLS (one-person CPR, two-person CPR)
5.	Obstructed airway emergencies. Heimlich manoeuvre.
6.	Paediatric basic life support.
7.	Bleeding (haemorrhage). Bleeding from an artery, from a vein. General procedures for contro bleeding. Direct and indirect pressure. Arterial pulse points.
8.	Recognition of patients with shock condition. Body positioning for preventing shock.
9.	Classification of open wounds. Bandaging.
10.	Burn injuries. Electrical injuries. Heat and cold emergencies. Water accident.
11.	Mechanism of injury. Types of injury to joints and bones. Splints. Head injuries. Injuries to th spine. Injuries to the chest. Injuries to the abdomen.
12.	Poisoning.
13.	Heart attack. Respiratory emergencies.
14.	Revision of BLS.

Basic Surgical Skills

Semester:	4th	**Code:**	AOK-OAK141/AOK-OAK142
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	1/2 (both every 2nd week)	**Department:**	Surgical Research
Credit:	3/-	**Form of Exam:**	Exam/Signature

	Lecture	Practice
*	Asepsis and antisepsis. Historical background. Surgic infections, sources of infections. Types, classification and prevention of wound contaminations. Sterilizatio disinfection. Preparation of the patient before operat scrub preparation and isolation of the surgical site. Scrubbing, disinfection, gowning and gloving of the operating team. Personnel attire and movement. Bas rules of asepsis in the operating room. Postoperative wound management. Surgical antisepsis. Design and equipments of the operating room, basic technical background. Operating room personnel and their dut Positioning of the patient on the operating table. Positioning.	1- 2. General information. Scrubbing, gowning and glov Practical rules of asepsis in the operating room. Behavi and movement in the operating room

* Surgical instruments. Basic surgical instruments, spe surgical tools and technologies, suture materials. Wo closure (sutures, clips, adhesive strips). Imperfection suturing techniques. Removal of sutures. Drainage.	2 – 3. Basic surgical instruments, suture materials, text Scrubbing, gowning and gloving. Scrub preparation and draping of the surgical site. Making incisions (on skin p wound closure with sutures or clips. Practicing instrume knots by means of the Suture Tutor program.
* The operation. Basic surgical interventions. Indicatio an operation, informed consent, operative risk, the surgeon's responsibility. Preoperative investigations. Preoperative preparation of the patient. Basics of minimally invasive surgical interventions. Historical background. Components of the laparoscopic tower, laparoscopic instruments. Local anesthesia (drugs, ty of local anesthesia, complications). Perioperative fluic balance, fluid requirements and fluid therapy.	4 – 5. Tying surgical knots. Tying surgical knots (hand instrument knots). Knotting under tension and in cavitie
* Wounds. Types and classification of accidental wo Wound healing, scar formation. Surgical wounds. V closure and its complications. Management of acci wounds. Dressings, types of bandages. Innovatic wound treatment.	6 – 7. Skin incision, handling bleeding, closing wou separate layers with sutures or with wound clips. Drair wounds. Knotting with an instruments using the Suture program.
* Bleeding. Types and classification of hemorrhage. Sig and consequences of blood loss. Bleeding in surgery intra- and postoperative bleeding). Factors influencin operative blood loss. Surgical hemostasis (mechanica thermal, chemical-biological methods). Blood replace in surgery, autotransfusion.	8 – 9. Management of accidental wounds. Dressing, typ dressing. Changing dressing under aseptic conditions. Removal of sutures.
* Complications. Definition and classification of complications. Complications of anaesthesia. Complications of wound healing. Complications relate surgery. Haemorrhagic complications. Pathophysiol signs and treatment of hemorrhagic shock	10 – 11. Basics of minimally invasive surgery. Compone of the laparoscopic tower, laparoscopic instruments. Eupractic movements, handling of laparoscopic instrum knotting.
* Basics of minimally invasive surgical interventions. Historical background. Components of the laparoscop tower, laparoscopic instruments.	12 – 13. Practical exam. (1) Surgical scrubbing and gov (2) Knotting under tension and in a deep cavity (3) Sur suture (mounting of a needle holder, closure of a 5 cm incision with Donati-stitches, instrumental knotting (ma min)

Biochemistry I.

Semester:	3rd	**Code:**	AOK-OAK051/AOK-OAK052
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	4/2	**Department:**	Biochemistry
Credit:	6/-	**Form of Exam:**	Exam/Signature

week	Lecture	Practice
1.	Biochemistry of the blood. RBC Biochemistry of the blood. White blood cells	PRACTICE: General information, refresment
2.	Biochemistry of the blood. blood plasma	PRACTICE: Determination of bilirubin.

3.	Biomembranes.	SEMINAR: Blood, membranes
4.	Biochemistry of the muscle	PRACTICE: electrophoresis of serum proteins
5.	Biochemistry of the connective tissue. Adhesive glicoproteins	PRACTICE: ion det. by colorimetry, blood gas analyis
6.	Biochemistry of cell adhesion, cytoskele Biochemistry of liver. First pass metabolism, LFT	PRACTICE: Diagnosis of heart attack and determinati cardiovascular risk factors (chol,TG, lipoproteines)
7.	Biochemistry of liver. Biotransformation Biochemistry of the nervous tissue. Neurotransmitters.	SEMINAR: (connective tissue, cell adhesion and cytoskeleton, nutrition)
8.	Biochemistry of the nervous tissue. Neurotransmitters. Biochemistry of the nervous tissue. Neurotransmitters.	PRACTICE: Biochemistry of liver Determination of ALAT and ASAT
9.	Biochemistry of the endocrine system.	SEMINAR: liver, muscle, nervous tissue
10.	holiday	PRACTICE: Cholinerg neurotransmission Determination of cholinesterase enzyme activity
11.	Biochemistry of the endocrine system. Regulation of gene expression.	PRACTICE: Cholinerg neurotransmission Determination of cholinesterase enzyme activity
12.	Regulation of gene expression	PRACTICE: determination of blood glucose and HbA1
13.	Biological signalization, second messen systems.	PRACTICE: determination of mRNA isoform levels by PCR
14.	Biological signalization, second messen systems. General principles of biochemical adapt limits of adaptation.	SEMINAR: endocrine system, cell signalling

Biochemistry II.

Semester:	4th	**Code:**	AOK-OAK053/AOK-OAK054
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	4/2	**Department:**	Biochemistry
Credit:	6/-	**Form of Exam:**	Comprehensive Exam/Signatu

week	**Lecture**	**Practice**
1.	Proteins and bioenergetics: structure and functio proteins, thermodynamics of living systems	General information, work safety, principles of lab wo
2.	Enzymology: enzyme classes, coenzymes, characterisation of enzymes, isoenzymes, multien systems	**Determination of protein concentration**
3.	Enzymology: molecular mechanism of catalysis, enzyme kinetics, modulation and regulation of en activity	Substrate specificity and temperature optimum of am enzyme activity

4.	Carbohydrate metabolism: Digestion and absorpt carbohydrates, glycolysis, pyruvate dehydrog enzyme complex, gluconeogenesis	**SEMINAR (proteins, enzymes)**
5.	Carbohydrate metabolism: Fructose and galactos metabolism, glycogen metabolism, pentose phosp cycle and glucuronide shunt	**Assay of activity of alkaline phosphatase**
6.	Carbohydrate metabolism: regulation of blood glu level, glycoproteins Lipid metabolism: Eicosanoids, digestion and absorption of lipids, lipoprotein metabolism	**SEMINAR (carbohydrate metabolism)**
7.	Lipid metabolism: lipid mobilisation, oxidation of f acids, ketone bodies, diabetes mellitus	**Determination of glucose-6-phosphatase activi**
8.	Lipid metabolism: Synthesis of fatty acids, synthe triacyl glycerols and phospholipids, sphingolipids, cholesterol and steroid metabolism	**1st MTO**
9.	Amino acid metabolism: Digestion and absorption proteins, catabolism of essential amino acids, fate amino group, urea cycle	SEMINAR (lipid metabolism)
10.	Amino acid metabolism: metabolism of non-esse amino acids, fate of carbon skeleton of amino aci one-carbon units, glutathione	Determination of triacyl glycerol and cholesterol
11.	Amino acid metabolism: **Synthesis of hem and porphyrine, enterohe circulation of hem degradation products**	SEMINAR (amino acid metabolism)
12.	Citric acid cycle: steps and regulation of the cycle relationship between the cycle and other metabol pathways	**SEMINAR (citric acid cycle, respiratory chain, oxidative phosphorylation)** 2nd MTO
13.	Mitochondrial transport systems, mechanism of respiratory chain and oxidative phosphorylation	**Investigation of the oxygen consumption of isolated mitochondria**
14.	Nucleotide metabolism: synthesis and degradatio purine and pirimidine nucleotides, salvage pathwa synthesis of deoxyribonucleotides	Nucleotide metabolism Determination of uric acid concentration

Cell Biology and Molecular Genetics I.

Semester:	1st	**Code:**	AOK-OAK151/AOK-OAK152
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/2	**Department:**	Medical Biology
Credit:	4/-	**Form of Exam:**	Exam/Signature

week	**Lecture**	**Practice**
1.	Structure and operation of the cell	Handling of technical devices
2.	The DNA	Microscopy-1
3.	Transcription, translation & proteins	Microscopy-2
4.	Mutation &jumping genes	DNA and RNA purification
5.	Bacterial genetics	Genetic exercises
6.	Genetic regulation in eukaryotes	Separation techniques

7.	Mendelian and non-Mendelian genetics	Lac operon & consultation
8.	Epigenetics	
9.	Genes and traits	
10.	Genetic diseases	
11.	Evolution	
12.	Cytoskeleton & membrane processes	
13.	Molecular biology of viruses	
14.	Frontiers of molecular and cell biology	

Cell Biology and Molecular Genetics II.

Semester:	2nd	**Code:**	AOK-OAK153/AOK-OAK154
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/2	**Department:**	Medical Biology
Credit:	4/-	**Form of Exam:**	Exam/Signature

week	**Lecture**	**Practice**
1.	Human genome	Molecular cloning
2.	Genetically modified organisms & cloning	PCR & DNA sequencing
3.	Cell cycle & tumor formation	Detection of DNA and RNA
4.	Molecular medicine	Detection of proteins
5.	Cell signalling-1	DNA and protein chips, DNA finger printing
6.	Cell-signalling-2	Genetic exercises
7.	Cell communication & tissue differentiation	Reporter genes & consultation
8.	Genetic regulation of ontogenesis	
9.	Neural communication & consciousness	
10.	Molecular biology of sensation	
11.	Immunogenetics	
12.	Molecular evolution	
13.	Genetics of behaviour	
14.	Genetic disease of brain and psyche	

Chemical Misconceptions

Semester:	2nd-10th	**Code:**	AOK-OASZV411
Course type:	Lecture	**Category:**	elective
Hours/week:	2	**Department:**	Medical Chemistry
Credit:	2	**Form of Exam:**	Evaluation(5)

week	topic
1.	Fear of the Unknown: Chemicals. Life as a Risky Business. Natural Products: a Delusion of Safety.
2.	Man-Made Commodities and Safety Issues. The Cholera Pandemonium: the Blind Leading the Blin Regulating Chemicals: Maybe or Maybe Not.
3.	Biowaste: Biotechnology in Perspective. Vedic Wisdom: Lead and Ayurveda. Manipulating Weather Ocean Fertilization.
4.	Test Your Cranberry Pie: Vitamin C and Benzoates. Food Dyes: the Good, the Bad, and the Ugly. T Add or Not to Add? Food Additives.
5.	The Organic Vegetable Hype. Fat Matters: Margarine vs. Butter. Fake Food and Kidney Stones.
6.	The Coming Shortage: Vanilla and Menthol. Red Alert: Meat Colors. Moldy Business: Whole-Grain Cereals.
7.	Sweet Dreams without Sugar: Artificial Sweeteners. Sweet as Birch: Xylitol. The Thickening Stuff: Gum Gumbo.
8.	Is Caffeine Free of Risk? Perfect Timing: Egg Cooking. The Biofuel Dilemma.
9.	Food Fraud: Then and Now. The Vitamin that Never was: B17. Joint Efforts: Glucosamine and Chondroitin.
10.	Is the Use of Cyanogen Bromide Forbidden in Hospitals? Poison in Groundwater: Arsenic. Was Napoleon Murdered with Arsenic?
11.	Don't Touch the Spilled Mercury! Was DDT of More Harm Than Use? Could Dioxin be the Most Tox Substance?
12.	The Great Hungarian Red Mud Deluge. The Erin Brockovich Mystery: Chromium Salts. The Fluoride War. Nonsense du jour: Food Babe
13.	What Was the Gulf War Syndrome? The Strange Case of Bisphenol A. Is grapefruit a medicinal pla

Cytomorphology and Microtechnics

Semester:	1st, 3rd or 5th	**Code:**	AOK-OAKV211
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Cell Biology
Credit:	2	**Form of Exam:**	Evaluation(5)

week	topic
1.	Evolution of cellular organisms. General morphology of the eukaryotic cell: size, shape. Resea methods for structural cell biology.
2.	Intracellular compartmentalization. Structure of the cell membrane. The endomembranes. Membrane dynamics (membrane fusion and fission).
3.	Membrane modifications: cell surface modification (microvilli, stereocilia, cilia), coupling struc (belt-, spot-, hemidesmosome), impermeable junction (tight junction), communication junctio (gap junction, chemical synapse).
4.	Structure and functions of the extracellular matrix. The lamina basalis. Cell adhesion molecul
5.	Structure and functions of the cytoskeleton. General characteristics of cytoskeletal proteins. A filaments/microfilaments. Microtubules and intermedier filaments.
6.	Light- and electron microscopic structure of the cell nucleus and nucleolus. Organization of th chromatin. Chromosomes.

7. The cell cycle. Growth and division of the cell. Mitotic and meiotic cell divisions.
8. The endomembranes: endoplasmic reticular systems, Golgi complex. Targeted intracellular transport of ptoteins. The vesicular transport and secretion.
9. Transport across membranes. Internalization of macromolecules and viruses. Phagocytosis. Receptor-indiced endocytosis, exocytosis, transcytosis. The lysosomes.
10. Mitochondria: general characteristics and types.
11. Cyto- and histotechnics I. Nuclear / chromatin staining methods. Light- and electron microsco enzyme histochemical methods.
12. Cyto- and histotechnics II. Light- and electron microscopic immunocytochemical and – histochemical methods.
13. Scanning electron microscopic techniques (freeze-etching, freeze-fracturing, etc.).

Fundamentals of Medical Physics

Semester:	1st	**Code:**	AOK-OASZV191
Course type:	Seminar	**Category:**	elective
Hours/week:	14 hrs total	**Department:**	Medical Physics
Credit:	1	**Form of Exam:**	Evaluation(5)

topics

* The SI unit system
* Mathematical background
* Kinematics
* Dynamics
* Energy, work
* Oscillations
* Waves
* Thermodynamics
* Optics
* Electricity
* Magnetism

Hungarian Language I.

Semester:	1st	**Code:**	AOK-OAK601
Course type:	Practice	**Category:**	compulsory
Hours/week:	4	**Department:**	Med. Comm. and Translation
Credit:	-	**Form of Exam:**	Term Mark

week **topic**

1. Introduction. Basic expressions. Vowels, consonants, vowel harmony. The Hungarian alphabe
2. Definite and indefinite articles. Numbers. Money and measurements.
3. Personal pronouns; to be present tense; the –nak, -nek ending. Nationalities, jobs, adjectives Greetings, address forms.
4. Usage of the verb van; the –ban, -ben ending; the –n, -on, -en, -ön ending; telling the Buildings, places and venues; expressions with the verb van.
5. Revision 1

6. Indefinite conjugation 1 (present tense)
7. the –t ending; yes-no questions.
8. Subjects, food, drinks, vegetables, fruits.
9. Indefinite conjugation 2
10. the –val, -vel ending. Cooked food. Some Hungarian dishes.
11. Revision 2
12. Verb formation; the infinitive –ni and its usage; the –ul, -ül ending; the –lak, -lek ending.
13. Verbs, modal verbs. Festivals, fairs, events.
14. Oral tests

Hungarian Language II.

Semester:	2nd	**Code:**	AOK-OAK602
Course type:	Practice	**Category:**	compulsory
Hours/week:	4	**Department:**	Med. Comm. and Translation
Credit:	-	**Form of Exam:**	Term Mark

week **topic**

1. General revision
2. Conjugation of jönni and menni (present tense); the –ba, -be and –ra, -re endings; the –ból, and –ról, -ről endings.
3. Means of transportation, other words in connection with transportation. Public transport in cit travelling in Hungary.
4. Revision 3.
5. The possessive endings. Body parts, time expressions (past tense).
6. The verb fáj(t); to be past tense.
7. Past tense (first person singular only, indefinite conjugation)
8. the –kor ending; the –tól, -től and the –ig endings.
9. The –s, -os, -as, -es, -ös ending
10. linking words. Word formation. Holidays.
11. Revision 4
12. Question words; ordinal numbers. The house.
13. The –n, -on, -en, -ön ending (meaning on). Rooms and furniture.
14. Oral tests

Hungarian Language III.

Semester:	3rd	**Code:**	AOK-OAK603
Course type:	Practice	**Category:**	compulsory
Hours/week:	4	**Department:**	Med. Comm. and Translation
Credit:	-	**Form of Exam:**	Term Mark

week **topic**

1. General revision
2. Indefinite conjugation (past tense). Postpositions.
3. Usage of postpositions of place and time. Geography.
4. Revision 5
5. The –nál, nél, -hoz, -hez, -höz, -tól, -től endings.
6. Jobs, family.
7. Comparative and superlative forms of adjectives. Clothing, colours.
8. The possessive structure; the plural –k ending. Describing what somebody looks like.
9. Verbs
10. Definite conjugation (present tense).
11. Verbal prefixes.
12. Usage of verbal prefixes.
13. Revision 7
14. Oral tests

Hungarian Language IV.

Semester:	4th	**Code:**	AOK-OAK604
Course type:	Practice	**Category:**	compulsory
Hours/week:	4	**Department:**	Med. Comm. and Translation
Credit:	-	**Form of Exam:**	Preliminary Examination

week **topic**

1. General revision
2. Definite conjugation (past tense). Accusative case of personal pronouns.
3. Telling the date, the weather, the school year
4. Revision 8
5. Body parts, organs, bones
6. Symptoms
7. Health care workers, buildings and places
8. Medicaments
9. Expressions of time
10. Question words
11. Doctor’s instruction
12. Parts of the medical history
13. Pain, at the doctor’s, at the dentist’s, at the pharmacy
14. Practising role-play
15. Practising role-play

Immunology

Semester:	4th	**Code:**	AOK-OAK061
Course type:	Lecture	**Category:**	compulsory
Hours/week:	2	**Department:**	Immunology
Credit:	2	**Form of Exam:**	Exam

topic

* The structure and working principle of the immune system. Central and peripheral lymphoid organs (Definition of antigen, epitope, hapten, pathogen)
* Characteristics of innate immunity. The relationship between innate and adaptive immunity.
* Complement system. Cell types and mediators involved in inflammation and acute phase response.
* The structure of MHC molecules, polymorphism. Antigen presentation. Development of T and B cell
* Antigen recognition function of T lymphocytes. The T cell mediated immune response. T cell types, effector functions.
* B lymphocytes. B cell activation, antigen-dependent differentiation of B cells. The structure of antibodies, antibody-mediated effector functions.
* TEST FOR RECOMMENDED GRADE
* Immune responses against extracellular pathogens. Immune responses against intracellular pathog Immunescape. Immunological memory. Vaccination.
* Autoimmunity. Peripheral and central immune tolerance.
* Tumor immunology. Immunotherapies and their role in tumor therapy.
* Types and characteristics of hypersensitivity reactions. Allergic reactions.
* Transplantation, pregnancy immunology, immunodeficiency pathology.
* 2. TEST FOR RECOMMENDED GRADE
* The structure and working principle of the immune system. Central and peripheral lymphoid organs (Definition of antigen, epitope, hapten, pathogen)

Introduction to Medical Chemistry

Semester:	1st	**Code:**	AOK-OAKV141/AOK-OAKV142
Course type:	Lecture/Practice	**Category:**	compulsory elective
Hours/week:	1/1	**Department:**	Medical Chemistry
Credit:	2/-	**Form of Exam:**	Evaluation(5)/Signature

week	**Lecture**	**Practice**
1.	Review of course requirements. Summary of the program	Basic terms: symbols and formulas, chemical equati stoichiometry, the mole concept, Avogadro's numbe atomic and mass numbers, and isotopes.
2.	Structure of atoms. Quantum mechanical model of atoms, quantum numbers. Practicing quantum num and electron configurations.	The periodic table, the relationship between electro configuration and the periodic table. Periodic prope
3.	Chemical bonds and intermolecular forces.	Geometry of molecules. Practicing structural formul The polarity of molecules.
4.	The most important monatomic and polyatomic ion charges and nomenclature. Formula writing and nomenclature of salts. The most important acids ar bases.	Practicing metathesis reactions involving precipitate gas formation.

5.	Solutions. Types of solutions. Solubility, effects of temperature and pressure on solubility. Expressing composition of solutions.	Practicing calculations on the composition of solutio
6.	Chemical equilibrium. Equilibrium constant. LeChat principle.	Application of LeChatelier's principle.
7.	Calculating the pH of strong acid and base solution	Calculating the pH of weak acid and base solutions.
8.	Acid-base titration.	Acid-base titration problems.
9.	Buffers.	Buffer problems.
10.	Basic terms in thermodynamics.	Practicing redox reaction equations. The spontaneit redox reactions.
11.	Voltaic cells. Types of electrodes.	Calculations involving the Nernst equation.
12.	General principles of organic chemistry. Classificati organic compounds, functional groups, isomerism.	Practicing nomenclature, structural formulas, and chemical reactions of alkanes, alkenes, and alkynes
13.	Inductive and conjugative effects.	Structure and chemical reactions of aromatic hydrocarbons.
14.	Hydroxyl group-containing organic compounds: alc phenols, and enols. Chemical reactions of these compounds.	Ethers and sulfur-containing organic compounds.

Introduction to Medical Informatics

Semester:	1st	**Code:**	AOK-OAKV481/AOK-OAKV482
Course type:	Lecture/Practice	**Category:**	compulsory elective
Hours/week:	1/2	**Department:**	Medical Physics
Credit:	3/-	**Form of Exam:**	Evaluation(5)/Signature

week	**Lecture**	**Practice**
1.	Informatics revolutionized medicine and mec research	General information, hardware and software environment of the practice, CooSpace, eduID, 365, MS Teams
2.	Computer architecture: from personal compu to supercomputers and smart devices	Smart telemedicine devices and applications in practice (data collection)
3.	Computer software, Operating Systems, viru	Introduction to spreadsheets using MS Excel (da input, data validation, autofill)
4.	Medical image processing	Evaluation of medical data with spreadsheets (references, calculations, functions)
5.	Integrated hospital information systems (MedSol), standards, medical digital image networks	Evaluation of medical data with spreadsheets (b statistics, advanced functions)
6.	Computer networks	Evaluation of medical data with spreadsheets (charts, sorting, filtering)
7.	Internet, cloud computing and data security	Evaluation of medical data with spreadsheets (regression, large tables, pivot table)
8.	Deep Learning, AI for medicine	1st practical test

9.	Data presentation	Creating scientific presentation (PowerPoint, Pre Mentimeter)
10.	Telemedicine	Medical data on the web. Creating online medica surveys and forms. How do we use AI in life sciences?
11.	Perspectives of telemedicine	Documents, formatting large documents (styles, table of contents, figures and captions, list of figures)
12.	Medical applications of 3D design and printir	Advanced document editing (header, footer, footnote, endnote, cross reference, references)
13.	3D bioprinting	2nd practical test
14.	Medical applications of virtual and augmente reality	MedSol demonstration

Introduction to Medicine

Semester:	1st	**Code:**	AOK-OAK041/AOK-OAK042
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	1/1	**Department:**	Behavioural Sciences
Credit:	2/-	**Form of Exam:**	Evaluation(5)/Signature

week	**topic (lectures)**
1.	Introduction
2.	Modern concept of health and illness
3.	What influences health?
4.	Community diagnosis and descriptive epidemiology
5.	Analytic epidemiology, concept of risk
6.	Prevention, screening
7.	Health promotion, behavioral medicine, stress management
8.	History of Medicine I. Earliest medicine, antique times
9.	History of Medicine II. Medicine in middle ages, Renaissance, Enlightenment
10.	History of Medicine III. Science and technology in the 19th-20th centuries
11.	Medical Ethics I. Basic principles of bioethics
12.	Medical Ethics II. Medical profession and the Hippocratic oath
13.	Medical Ethics III. Ethics, morality and ethical theories

topic (practices)

* Introduction I-II.
* Health and illness I-II.
* What influences health? Stress and lifestyle I-II.
* Epidemiology I-II.

* Prevention and health promotion I-II.
* Basic principles and practice of medical ethics I-II.
* Consultation

Introduction to Psychology, Communication

Semester:	2nd	**Code:**	AOK-OAK131/AOK-OAK132
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	1(total 7)/2(total 14)	**Department:**	Behavioural Sciences
Credit:	1/-	**Form of Exam:**	Evaluation(5)/Signature

week	Lecture	Practice
1.	Scope of psychology. Contemporary themes, perspectives of psychology	Levels and elements of the communication prc
2.	Sensation, perception, top-down processes /Attention and memory	Factors that influence communication
3.	The psychology of social interactions	Means of verbal and nonverbal communicatior
4.	Motivation. Emotions /Attitudes and cognitive dissonance	CLASS-model: setting up the context
5.	The mechanism of human behavior I-II.	Situational exercises
6.	Intelligence	Situational exercises
7.	Personality theories I-II.	Consultation

Latin Based Medical Terminology I.

Semester:	1st	**Code:**	AOK-OAK071
Course type:	Practice	**Category:**	compulsory
Hours/week:	2	**Department:**	Med. Comm. and Translation
Credit:	-	**Form of Exam:**	Signature

week	topic
1.	General course description. Basic information about the typical issues of the language. Phonological aspects of the language, writing and pronunciation. The general features of the Latin noun (number, case and gender).
2.	Major rules of the declensions. The dictionary forms of the Latin nouns in all declensions. General features of different medical texts. General information about medical phrases containing Greek elements. Anatomical terminology: the body parts
3.	Latin words and Greek elements used parallel in medical terminology. Translation of posses phrases with the usage of dictionary forms (the usage of sing. nom. and sing. gen.). Anatomi terminology: the skeletal system
4.	Typical endings of the dictionary forms and irregularities of the usages. Construction of posse phrases in all declensions with multiple elements. Anatomical terminology: the muscular sys

5. Irregularities of the declensions. The typical endings of the third declension. Usage of the plu nominativus in all declensions. Greek elements of diseases.

6. Usage of the pluralis genitivus in all declensions. Translating and constructing possessive phr in plural with multiple elements. The special usage of the third declension. Practising for the midterm test. Anatomical words.

7. Midterm test.

8. Basic information about the adjectives. Dictionary form and usage of the 3 ending adjectives Translation and construction of adjective phrases with the usage of the agreement rule in th singular. Anatomical terminology: the arteries and veins

9. General information about the 2 ending adjectives. Irregularities of the 2 ending adjectives. Construction of phrases with 1 and 2 ending adjectives. Anatomical terminology: the respira system

10. The practice of adjective phrases and combining them with possessive structures. Translatin and constructing adjective phrases in the plural.

11. Constructive complex phrases with the combination of adjective and possessive phrases.

12. Translational practices (diagnoses, processes, diseases and reports)

13. Exercise and summary. Overview of the trial test for the final.

14. Final exam

Latin Based Medical Terminology II.

Semester:	2nd	**Code:**	AOK-OAK072
Course type:	Practice	**Category:**	compulsory
Hours/week:	2	**Department:**	Med. Comm. and Translation
Credit:	-	**Form of Exam:**	Signature

week **topic**

1. General course description. Repetition: Usage of the I-II and III. declension adjectives. Practi the rule of agreement. Basic features of the Greek elements in Medical Latin and elements connecting to the abdominal organs and upper body. Anatomical terminology: the heart

2. Repetition: Constructing complex phrases with adjective and possessive phrases. Translation basic diagnoses. Basic features of the Greek elements in Medical Latin. and elements connec to genitals and general expressions. Anatomical terminology: the digestive system

3. General features of the accusative case. Usage of prepositions with accusative. Usage of the neutral rule of the Latin nouns.

4. Constructing complex phrases with prepositions, translating medical reports with prepos with accusative. Greek and Latin elements about general clinical terms.

5. General features of the ablative case. Usage of prepositions with ablative. Different roots of third declension, the appearance of the “i” root. Construction and translation of phrases combining ablatives and accusative case prepositions. Practice of Greek and Latin elements.

6. Exercise and summary. Completion and discussion of a sample test.

7. Midterm test.

8. General features of the Latin numerals. Practice of phrases with the usage of Latin ordinals a cardinals. Translation and construction of adjective phrases with the usage of the agreemen in the singular. Anatomical terminology: the reproductive system

9. Basic information about the prescriptions. Construction of basic prescriptions and terms of b materials. Anatomical terminology: the urinary system

10. Construction and translation of complex prescriptions. Typical abbreviations, pharmaceutica phrases, and clinical terms of prescriptions. Translation of different short prescriptions. Anatomical terminology: the endocrine system

11. Construction of complex prescriptions. Basic information about medical reports. Translation medical reports and improvement of Latin reading skills.

12. Translational practices (diagnoses, processes, diseases, and reports)

13. Exercise and summary. Overview of the trial test for the final. Practice of the grammatical ba Practice of the Greek and Latin elements of medical Latin.

14. Final exam.

Medical Anthropology

Semester:	4th	**Code:**	AOK-OAK081
Course type:	Seminar	**Category:**	compulsory
Hours/week:	2 (14 hrs total)	**Department:**	Behavioural Sciences
Credit:	1	**Form of Exam:**	Evaluation(5)

week	topic
1.	Introduction to cultural and medical anthropology
2.	Cultural anthropology of anatomy and physiology (lay beliefs)
3.	Medical anthropology of stress and stress-related disease
4.	Medical anthropology of pain and nutrition
5.	Medical anthropology of sexuality and gynecology
6.	Cultural aspects of health care
7.	Medical anthropology of death and dying

Medical Chemistry I.

Semester:	1st	**Code:**	AOK-OAK111/AOK-OAK112
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	3/1	**Department:**	Medical Chemistry
Credit:	6/-	**Form of Exam:**	Exam/Signature

week	Lecture	Practice
1.	Basic terms. The mole concept. The basic structure atoms. Electronic structure of atoms. Atomic theori The periodic table. Explanation of periodic propertie	Important terms: atomic mass, molar mass, moles, chemical formulas, chemical reactions, stoichiometr

2.	Chemical bonding. Octet rule. Ionic, covalent, and metallic bondings. Intermolecular forces: hydrogen bonding, van der Waals forces (dipole-dipole and L forces).	Atomic models, electronic configuration of atoms. T periodic table.
3.	Introduction to inorganic chemistry. Properties of tl most important elements and their compounds. Biological importance and usage. Types of metathesis reactions: precipitation and ga formation, neutralization.	Chemical bonds and intermolecular forces.
4.	States of matter. The gaseous state: gas laws, The state: properties of liquids, the dependence of phas changes on pressure and temperature. The solid-st properties of solids, types of crystalline lattice. Homogenous and heterogeneous systems. Colloids.	Inorganic chemistry. Complexes. Summary of inorg chemical reactions.
5.	Solutions. Types of solutions. The solution process. Ways of expressing concentration. Osmosis and its biological importance.	Solutions. Calculations involving the concentration c solutions.
6.	Chemical equilibrium. LeChatelier's principle. Equilil in electrolytes, pH, and pOH. Acid-base ionization equilibrium. Salts.	Chemical equilibrium. Application of LeChatelier's principle.
7.	Electrolytic dissociation, strong and weak electrolyt Acid-base concepts. Acid-base titration. Buffers and biological importance.	Acid-base concepts. The pH concept. pH calculation
8.	Thermodynamics. Basic terms. First, second, and tl laws of thermodynamics. Entropy and disorder. Cha in Gibbs free energy and spontaneity of a reaction. Electrochemistry. Oxidation-reduction reactions.	Acid-base titration. Acid-base titration problems.
9.	Voltaic cells, types of electrodes. Glass electrodes, measurement of pH. Reaction kinetics. Rate, order, molecularity, and mechanism of reactions. Complex chemical reactions. Catalysis. Enzymes as biocataly	Buffers. Calculations involving buffers.
10.	General principles of organic chemistry. Classificatic organic compounds. Functional groups. Types of or chemical reactions: substitution, addition, and elimination. Alkanes (paraffin hydrocarbons). Cycloalkanes.	A brief summary of thermodynamics. Electrochemis The spontaneity of redox reactions.
11.	Alkenes. Alkynes. Conjugated dienes, isoprene. Terpenes, vitamin A. The photochemistry of vision.	Voltaic cells. Calculations involving the Nernst equat A brief summary of reaction kinetics.
12.	Aromatic hydrocarbons. Structure and stability of benzene and its derivatives. Chemical reactions of aromatic compounds.	Types of organic chemical reactions. Saturated and unsaturated hydrocarbons.
13.	Organic halogen compounds. Hydroxyl group-conta organic compounds: alcohols, enols, and phenols. Classification, nomenclature, and chemical properti alcohols. Some important alcohols.	Inductive and conjugative effects in organic compou Aromatic hydrocarbons.
14.	Phenols. The acidity of phenols. Nomenclature and chemical reactions of phenols. Oxidation of phenols quinones. Ethers. Sulfur-containing organic compou thioalcohols and thioethers.	Organic halogen compounds. Alcohols and phenols. Ethers and sulfur-containing organic compounds.

Medical Chemistry II.

Semester:	2nd	**Code:**	AOK-OAK113/AOK-OAK114
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	3/3	**Department:**	Medical Chemistry
Credit:	6/-	**Form of Exam:**	Exam/Signature

week	Lecture	Practice (seminar 1hr, practice 2hrs/w)
1.	Classification and nomenclature of amines. Basicity amines, salt formation. Reactions of amines. Biolog important amines and aminoalcohols. Amines as neurotransmitters. Classification and nomenclature heterocyclic compounds. Three- and four-membere heterocycles. Five-membered heterocycles with one two heteroatoms.	seminar: Review of organic chemical reactions practice: Review of requirements. Fire and safety precautions. The principle of photometry, Lambert-I law.
2.	Six-membered heterocycles with one heteroatom. S membered heterocycles with two heteroatoms. Poly heterocyclic compounds.	seminar: Amines practice: Volumetric analysis. Using a pipette and a burette, measuring pH. Acid-base titration, titration curve.
3.	Oxo compounds. Structure of the carbonyl group. Chemical reactions of aldehydes and ketones. Impo oxo compounds. Classification and nomenclature of carboxylic acids. Homologous series of carboxylic acids. Acidity, salt formation, and other chemical reactions.	seminar: Heterocyclic compounds practice: Graded practice
4.	Three-dimensional structure of molecules: constitut configuration, and conformation. Optical isomerism Enantiomers, racemates. Configuration: D-L and R-systems. Molecules with more than one chiral cente Diastereomers.	seminar: Oxo compounds practice: Graded practice
5.	Dicarboxylic acids. Unsaturated and hydroxy carbox acids. Oxo acids, "ketone bodies". Derivatives of carbonic acid. Carboxylic acid derivatives: esters, thioesters, acyl halides, anhydrides, and amides. Acylation reaction acylating agents.	seminar: Chirality, optical isomerism practice: Modeling of chirality
6.	Lipids. Triglycerides. Fatty acids. Saponification. Glycerophospholipids. The structure of biological membranes.	seminar: Carboxylic acids. Dicarboxylic acids. Substi carboxylic acids practice: Graded practice
7.	Classification and nomenclature of amino acids. Proteinogenic amino acids. Amphoteric character: isoelectric points. Chemical properties. Peptides. Stereochemistry of the peptide bond. Biological importance. Naturally occurring peptides. Importan peptide hormones, analogs, and peptide antibiotics	seminar: Carboxylic acid derivatives. Lipids practice: Graded practice
8.	Proteins. Classification of proteins by structure and function. The three-dimensional structure of protei Protein folding. Denaturation of proteins. Biological importance of proteins.	seminar: Amino acids practice: Graded practice

9.	Classification of carbohydrates. Monosaccharides. Configuration, cyclic structures. Chemical properties monosaccharides. Important monosaccharides.	seminar: Peptides and proteins practice: Graded practice
10.	Structure of disaccharides. Reducing and nonreducing disaccharides. Oligosaccharides. Polysaccharides.	seminar: Monosaccharides practice: Graded practice
11.	Steroids. Classification of steroids. Cholesterol. Vitamin D3. Bile acids and their detergent effect. Steroid hormones.	seminar: Di-, oligo- and polysaccharides practice: Graded practice
12.	Structure and properties of nucleosides and nucleotides. Nucleotide coenzymes. Nucleic acids: RNA and DNA. Biological importance of nucleic acids.	seminar: Nucleosides, nucleotides, and nucleic acids practice: Examination of some important functional groups
13.	Vitamins. Water-soluble vitamins and their coenzymes. Fat-soluble vitamins. Hypo- and hypervitaminosis. Alkaloids: definition, occurrence. The most important representatives.	seminar: Steroids and vitamins practice: Make-up laboratory practice
14.	Antibiosis. Classification and the most important representatives of antibiotics. Porphin-ring-containing compounds. Heme, hemoglobin, myoglobin, and chlorophyll.	seminar: Peptides and proteins practice: Make-up laboratory practice

Note: In the 3rd, 4th, 6th, 7th, 8th, 9th and 10-11th weeks of the semester students work in rotation and conduct the following graded practices:

- Bromatometric determination of ascorbic acid content of vitamin C powder
- Quantitative determination of cholesterol by enzymatic colorimetric method
- Complexometric determination of calcium ions
- Determination of Fe^{3+} with UV/VIS spectrophotometry
- Determination of acid dissociation constant and buffer capacity by titration
- Determination of concentration of monosaccharides by polarimetry
- Photometric determination of proteins

Medical Hungarian Language I.

Semester:	2nd	**Code:**	AOK-OASZV711
Course type:	Practice	**Category:**	elective
Hours/week:	1	**Department:**	Med. Comm. and Translation
Credit:	1	**Form of Exam:**	Term mark

week **topic**

Communication-centered revision and practice of topics learnt in general Hungarian lessons with minor extensions to specialize for medical communication:

* greetings,
* numbers,
* questions regarding personal data,
* adjectives describing physical condition,
* healthy food and drink,
* body parts, possessives, common complaints,
* directions inside a building (hospital).

Medical Physics I. (+Measurements in Medical Physics I.)

Semester:	1st	**Code:**	AOK-OAK101/OAK102/OAK103
Course type:	Lecture/Seminar/Practice	**Category:**	compulsory
Hours/week:	1/1/1 (each 2 hrs/2 w)	**Department:**	Medical Physics
Credit:	2/-/1	**Form of Exam:**	Exam/Signature/Term Mark

	Med. Physics. I. lecture	**Med. Physics. I. practice**	**Measurements in M.P.I.**
*	Biomechanics. The physics of musc	Biomechanics.	Anthropometric measurements Fundamental aspects of measurements: derived quanti measurement errors
*	Hearing.	Oscillations, waves and hearing	Sound as a mechanical wave
*	Vision	Optics and vision.	Optics of the eye
*	Fluid mechanics: principles and m applications	Fluid mechanics.	Blood pressure measure principles and their application
*	Thermodynamics	Thermodynamics	Analysis of blood pressure data
*	Transport processes. Diffusion, osm Biomedical signal processing and si analysis.	Consultation	
*	Signals, signal processing, and data visualization		

Medical Physics II. (+Measurements in Medical Physics II.)

Semester:	2nd	**Code:**	AOK-OAK104/OAK105/OAK106
Course type:	Lecture/Seminar/Practice	**Category:**	compulsory
Hours/week:	2/1/1	**Department:**	Medical Physics
Credit:	3/-/1	**Form of Exam:**	Exam/Signature/Term Mark

week	**Med. Physics. II. lecture**	**Med. Physics. II. practice**	**Measurements in M.P.II.**
1.	Electricity	Electricity	Electrophysiology 1: Electromyography
2.	Magnetism and electromagnet		
3.	Bioelectric phenomena	Magnetism, electromagnetism, bioelectricity	Electrophysiology 2: Electrocardiography
4.	Quantum physical phenomena life (and medical) sciences		
5.	Spectroscopy (optical, with an outlook to general spectroscop Atomic physics. Atomic spectra Electromagnetic radiation. Luminescence	The electromagnetic spectrum. Spectroscopy. Lasers	Spectroscopy
6.	Principles of the laser. Medical applications of lasers		
7.	X-rays: general properties, use diagnostics. Absorption of X-radiation. Producing X-rays, interaction with living substanc	X-rays	Nuclear medicine

8.	Nuclear physics. Radioactivity. Nuclear radiation, dosimetry		
9.	Practical application of radioac isotopes. Particle accelerators medical practice.	Nuclear physics; radioactivity	Medical imaging techniques 1: tomography
10.	Medical imaging techniques I.: ultrasound, infrared diagnostic		
11.	Medical imaging techniques II. CT, MRI/NMR, PET	Imaging and therapeutic meth	Medical imaging techniques 2: ultrasound
12.	Physical basis of therapeutic methods: laser-, light, radio-, l therapy, therapeutic use of electricity		
13.	Physical methods in physiologi research: microscopy (optical-, scanning-, electron-), mass spectrometry		
14.	Molecular and cellular diagnost sedimentation, electrophoretic methods, flow cytometry		

Medical Physiology I.

Semester:	3rd	**Code:**	AOK-OAK091/AOK-OAK092
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	4/4	**Department:**	Physiology
Credit:	8/-	**Form of Exam:**	Exam/Signature

	Lecture	**Practice**
*	Membrane physiology: membrane transport, signal systems, cellular electrophysiology	Membrane electrophysiology (computer simula
*	Nerve and muscle physiology: primary sensory neu autonomic nervous system, motor neurons, striate muscle and smooth muscle.	Electromyography (EMG)
*	Blood physiology: fluid compartments, blood plasm erythropoesis and degradation of red blood cells, A and Rh blood groups	Blood tests: RBC, WBC, platelet counts, differe leucocyte count, reticulocyte count, ABO/Rh bl groups, bleeding time, clotting time, prothrom time, INR. RBC osmotic resistance, RBC sedimentation rate
*	Respiratory physiology: ventilation, gas exchange, regulation	Human spirometry
*	Cardiovascular physiology: the cardiac cycle, cellul electrophysiology and ECG, hemodynamics, the microcirculation, autonomic and hormonal regulatic the systemic and local circulation.	Experiments using the isolated rat heart (Langendorff's perfusion)
*	Renal physiology	Electrocardiography Sphygmomanometry, determination of pulse qualities with palpation, cold pressor test

Medical Physiology (Seminar) I.

Semester:	3rd	**Code:**	AOK-OAKV261
Course type:	Seminar	**Category:**	compulsory elective
Hours/week:	4	**Department:**	Physiology
Credit:	4	**Form of Exam:**	Evaluation(5)

description

The course serves to discuss the study material lectured on the Medical Physiology I. course, in an interactive small study group environment. In this semester, the discussed topics include nerve and muscle physiology, blood, respiration, cardiovascular and renal function.

Medical Physiology II.

Semester:	4th	**Code:**	AOK-OAK093/AOK-OAK094
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	6/4	**Department:**	Physiology
Credit:	10/-	**Form of Exam:**	Comprehensive Exam/Signatu

	Lecture	**Practice**
*	Physiology of the gastrointestinal tract	Study of cardiovascular adaptation to physical exerc
*	Metabolism and nutrition.	Urine tests: physical examination, microscopic investigation of urine sediment, detection of protein calcium, glucose, ketone bodies, bile pigments, bloc and pus in the urine. Strip tests.
*	Endocrine systems: hypophysis, thyroid gland, adrenal g endocrine pancreas	GI tract: study of the saliva: pH, protein content, digestion. Study of gastric juice.
*	Integrative physiology: regulation of energy metabolism, osmoregulation, volume regulation, potassium, calcium, homeostasis, Thermoregulation.	Endocrinology: Oral glucose tolerance test, demonst of the antidiuretic effect of vasopressin, pregnancy
*	Sports physiology	Determination of motor reaction time to visual and auditory stimulation, polygraphy. Study of human m reflexes.
*	Reproductive physiology: sexual function, physiology of pregnancy, parturition, growth and development.	Sensory systems: threshold audiometry, tuning fork tests, otoscopy. Study of gustatory and olfactory perception. Study of somatosensory systems: study different modalities, determining two point discrimi threshold, demonstration of Weber's 3 basin test. S of vision: determination of visual acuity, visual field, critical flicker fusion frequency. Study of accommod pupil light reflex, light adaptation, color vision, and movements (postrotatory and optokinetic nystagmu
*	CNS physiology: introduction, the cerebral circulation	Study of human EEG
*	Sensory systems: somatosensory system, pain, vision, hearing, olfaction and taste:	Cognitive tests
*	Motor systems: spinal, brainstem, cortical integration of functions. The vestibular system. The role of the cerebel and the basal ganglia in motor functions.	
*	Sleep/wake cycle, the EEG. Circadian rhythms.	
*	Physiology of emotions, motivation, reward and punishm	
*	Physiology of learning and memory. Physiology of speec	

Medical Physiology (Seminar) II.

Semester:	4th	**Code:**	AOK-OAKV262
Course type:	Seminar	**Category:**	compulsory elective
Hours/week:	4	**Department:**	Physiology
Credit:	4	**Form of Exam:**	Evaluation(5)

description

The course serves to discuss the study material lectured on the Medical Physiology II. course, in an interactive small study group environment. In this semester, the discussed topics include gastrointestinal physiology, metabolism and nutrition, thermoregulation, homeostasis of inorganic substances, sports physiology, reproductive physiology, special senses and the central nervous sys

Medical Sociology

Semester:	3rd	**Code:**	AOK-OAK121
Course type:	Seminar	**Category:**	compulsory
Hours/week:	2	**Department:**	Public Health
Credit:	2	**Form of Exam:**	Exam

week	topic
1.	Description of requirements. Sociology in the medical curriculum.
2.	How to study the society?
3.	Where sociology and medicine meets.
4.	Doctors as professionals. Becoming a doctor.
5.	Doctors and patients. Our little family.
6.	Health experience. Mid-term demonstration.
7.	The society we live in.
8.	How does society affect our health?
9.	Poverty around us.
10.	Rule breakers.
11.	Who is disabled? The individual or the society? The power of social stigma.
12.	Research project 1. Mid-term demonstration.
13.	Research project 2.
14.	Consultation.

Medical Statistics

Semester:	2nd	**Code:**	AOK-OAK107/AOK-OAK108
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	1/2	**Department:**	Medical Physics
Credit:	1/2	**Form of Exam:**	Exam/Term Mark

week	Lecture	Practice

1.	The basics of probability theory. The concept probability, rules of probability calculus. Diagr tests and conditional probabilities.	The basics of probability theory. The concept probability, rules of probability calculus. Diagr tests and conditional probabilities.
2.	Population, statistical sample. The distribution categorical and continuous variables, the dens function.	Population, statistical sample. The distribution categorical and continuous variables, the dens function.
3.	Density function, the normal distribution. The normal distribution. Standardisation, practical examples.	Density function, the normal distribution. The normal distribution. Standardisation, practical examples.
4.	Binomial distribution. Odds Ratio	Binomial distribution. Odds Ratio
5.	Statistical estimation, confidence interval. The standard error of mean. The use of Student's table	Statistical estimation, confidence interval. The standard error of mean. The use of Student's t table
6.	Statistical inference, one-sample t-test. Significance test by confidence interval, t-stati or p-value. Type I and II error, statistical pow	1st MTO.
7.	T-tests (one-sample, paired, Student and Wel two-sample t-test)	T-tests (one-sample, paired, Student and Welc two-sample t-test)
8.	Analysis of variance (principle of one-way ANC F-test, pairwise comparisons)	Analysis of variance (principle of one-way ANC F-test, pairwise comparisons)
9.	Correlation-regression analysis	Correlation-regression analysis
10.	The chi-squared test for independence (assumptions, Fisher exact test)	The chi-squared test for independence (assumptions, Fisher exact test)
11.	Nonparametric methods based on ranks (Wilc test, Mann-Whitney test, Kruskal-Wallis test)	Nonparametric methods based on ranks (Wilcc test, Mann-Whitney test, Kruskal-Wallis test)
12.	Measure of agreement; 2x2 tables in epidemic (Cohen-Kappa, relative risk)	Measure of agreement; 2x2 tables in epidemic (Cohen-Kappa, relative risk)
13.	Survival analysis	2nd MTO
14.	Summary	Survival analysis Summary

Molecural Medicine

Semester:	5th	**Code:**	AOK-OAKV451
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Cell Biology
Credit:	2	**Form of Exam:**	Evaluation(5)

topic

* Molecular genetic and cell biology methods in diagnosis and therapy.
* Diagnostic methods based on immunological techniques (RIA, ELISA, Western blot analysis, immunocyto citotoxicity tests, etc.).
* Diagnostic methods beased on nucleic acid hybridization (Northern and Southern analysis, in situ hybidiz DNA chip technology, etc.).
* Diagnostic methods based on specific endonuclease activity (fragment length polymorphism, pedigree an etc.).
* Gene sequencing and analysis, genomic and proteomic techniques. Cell and tissue culture methods.
* Antisense pharmacology. RNA interference/silencing. Small interfering RNAs. Molecular chaperons.
* Gene therapy, viral vectors, DNA-liposome complexes.

* Molecular markers in human disorders. Biomarkers for neurological and psychiatric disorders.
* Molecular interactions between pathogens and host.
* Stem cell therapy. Embryonal and adult stem cells. Induced pluripotent stem cells. Neuronal stem cells.
* In vitro differentiation of stem cells to the desired phenotype. Transfection of stem cells.
* Regulation of cell cycle and cell differentiation. Regulation of transcriptional and translational control of g expression.
* Telomerase-directed molecular therapy.
* Immunotherapy. Antitumour immune responses.
* Bioinformatic and computer-assisted methods in diagnosis and therapy: functional genomics and proteor

PRECLINICAL MODULE SYLLABUS

Advanced Surgical Skills

Semester:	5th-10th	**Code:**	AOK-OAKV351/AOK-OAKV352
Course type:	Lecture/Practice	**Category:**	compulsory elective
Hours/week:	1/1	**Department:**	Surgical Research
Credit:	2/-	**Form of Exam:**	Evaluation(5)/Signature

Lecture	**Practice (4 hrs every 2nd week)**
* Laparotomy I. Abdominal pain. History of abdomi surgery. Technical background and basic principle abdominal incisions. Anatomy, vessels and nerves the abdominal wall. Factors affecting wound heal Prevention of wound complications. Surgical intervention: anesthesia, positioning, skin prepara drapinclinical modg, incisions, supplies	Scrubbing. Basic knotting and suturing techniqu (2 hours) (Surgical theatre, computer room)
* Laparotomy II. Abdominal incisions. Major types, characteristics, advantages, disadvantages. Wour dehiscence (characteristics, types, repair). Basic gastrointestinal operations. Appendectomy (histo anatomy). Open appendectomy. Laparoscopic appendectomy.	Advanced suturing techniques. Would closure techniques with multiple layers. Enterotomy. Intestinal anastomosis. (2 hours) (Surgical theat
* Advances suturing methods. Anastomoses (types factors influencing healing). Anastomosis techniq Intestinal anastomoses. Indications, principles an steps of bowel resection and anastomosis. Mecha anastomosis – staplers. Postoperative care. Conicotomry. Tacheostomy.	The Minor Skin Procedures computer program. I anesthesia. Ellipse excision of skin. Removal of encapsulated structures (cysts, tunors). Incision abscesses. Minimally invasive surgery. (4 hours (Surgical theatre, computer room)
* Surgical hemostasis. Basics of vascular surgery. tract surgery. Itraoperative endoscopy.	
* Minimally invasive surgery I. Technical backgrour Equipments and instruments. Robotic and fetosc surgery	Advanced forms of surgical hemostasis and sutu techniques on a large animal model. Tracheosto Laparotomy. (4 hours) (Surgical theatre)
* Minimally invasive surgery II. Pneumoperitoneum (pathophysiology, complications, diagnosis, treatment). Gastro-enteroanastomoses. Laparosc surgery. Laparoscopic cholecystectomy	

Biochemical Basics of Preventive Medicine

Semester:	4th	**Code:**	AOK-OAKV051
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Biochemistry
Credit:	2	**Form of Exam:**	Evaluation(5)

week	**topic**
1.	Introduction to preventive medicine (importance of nutrition, physical activity and stress in th development of „civilization diseases”)

2. Biochemistry of oxidative stress and its importance in physiological and pathological processe (formation of free radicals and their effects)
3. Antioxidant mechanisms (vitamins, vitaminlike substances, enzymes and their cofactors invol in antioxidant protection)
4. Stress adaptation of the heart (early and late preconditioning)
5. General importance of balanced nutrition (macro- and micronutrients, alimentary fibers; addi
6. Pathobiochemistry of atherosclerosis and possibilities of prevention
7. Role of oxidative stress in respiratory diseases
8. Role of free radicals and antioxidant protective mechanisms in physiological and pathological function
9. Background and prevention of obesity, metabolic syndrome and diabetes mellitus
10. Altered requirements for nutrients in physiological and pathological conditions; diets (theory a practice)
11. Sport biochemistry: general importance of physical activity (oxidative stress and role of antioxidants; changes in blood plasma parameters)
12. Psychological stress, oxidative stress, and importance of stress management
13. Biochemical basics of preventive medicine in the light of the most recent medical literature (interactive seminar and test)
14. Biochemical basics of preventive medicine in the light of the most recent medical literature (interactive seminar and test)

Cardiac Electrophysiology as a Basic Property of Cardiac Function

Semester:	4th or 6th	**Code:**	AOK-OAKV581/OAKV582
Course type:	Lecture/Practice	**Category:**	compulsory elective
Hours/week:	1/1	**Department:**	Pharmacology
Credit:	2/-	**Form of Exam:**	Evaluation(5)/Signature

week **topic**

1. Introduction.
2. Basic principles of electrophysiology, the impulse propagation in the heart I.
3. Basic principles of electrophysiology, the impulse propagation in the heart II.
4. The action potential of myocytes and the ionic channels determining the action potential I.
5. The action potential of myocytes and the ionic channels determining the action potential II.
6. Methods and techniques in cardiac electrophysiology.
7. Electro-mechanical coupling in the heart I.
8. Genetic background of ion-channel disturbances in the heart.
9. Electro-mechanical coupling in the heart II.
10. The mechanism of developing cardiac arrhythmias
11. Electrophysiological changes after the disturbances in blood supply to the myocardium.
12. Experimental methods and clinical relevance to investigate cardiac arrhythmias.
13. Investigational techniques in cardiac cellular electrophysiology
14. Practical and consultation

Cerebral Blood Flow and Metabolism

Semester:	5th	**Code:**	AOK-OASZV301
Course type:	Lecture	**Category:**	elective
Hours/week:	2	**Department:**	Cell Biology
Credit:	2	**Form of Exam:**	Evaluation(5)

topic

* The blood-brain barrier
* The cerebral metabolism
* Regulation of cerebrovascular tone: endothelial mechanism
* Regulation of cerebrovascular tone: nervous innervation
* Regulation of cerebrovascular tone: cerebrovascular smooth muscle cells
* Regulation of cerebrovascular tone: neurovascular coupling
* Cerebral blood flow in the neonatal brain
* The impairment of cerebral blood flow: aging
* The impairment of cerebral blood flow: stroke
* Principles of clinical neuroimaging
* The impairment of cerebral blood flow: dementia, small vessel disease

Gerontology

Semester:	6th	**Code:**	AOK-OAKV321/OAKV322
Course type:	Lecture/Practice	**Category:**	compulsory elective
Hours/week:	1/1	**Department:**	Behavioural Sciences
Credit:	2/-	**Form of Exam:**	Evaluation(5)/Signature

week	**topic (Lecture/Practice)**
1.	General principles of geriatric medicine
2.	History taking with elderly patients
3.	Physical examination
4.	Mental status examination
5.	Evaluation of functional capacity in him elderly
6.	Laboratory examination
7.	Progressive constriction of each organ systems
8.	Intellectual impairment
9.	Immobility
10.	Iatrogenic drug reactions
11.	Community of care
12.	Quality of life and therapeutic objectives
13.	Legal and ethical issues
14.	Care of the dying patient

Foundations of Evidence Based Medicine

Semester:	8th or 10th	**Code:**	AOK-OAKV181
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Public Health
Credit:	2	**Form of Exam:**	Evaluation(5)

topic

* Introduction of the course. Study requirements.
* Evidence-based medicine/healthcare: concepts, steps in practicing EBM.
* Asking structured questions (PICO), classification of clinical questions. The hierarchy of evidence.
* Observational epidemiological studies: ecological, cross-sectional, case-control, cohort studies.
* Interventional studies, clinical trials (RCT).
* Translational medicine: from basic research to clinical practice.
* Search the evidence – theoretical and practical knowledge.
* Critical appraisal process – theoretical and practical knowledge.
* Grading quality of evidence and strength of recommendations, GRADE approach.
* Development of evidence-based practice guidelines.
* Implementation of practice guidelines in clinical practice and prevention.
* Health economic aspects of evidence-based medicine.
* Reporting scientific results – requirements of scientific papers, presentations.

Hungarian Language V.

Semester:	5th	**Code:**	AOK-OAK605
Course type:	Practice	**Category:**	compulsory
Hours/week:	3	**Department:**	Med. Comm. and Translation
Credit:	-	**Form of Exam:**	Term Mark

week	**topic**
1.	Revision
2-3.	Taking history, Doctor's questions
4.	Giving instructions and examination Week 5-13: Internal Medicine – Diseases
5-6.	Doctor-patient dialogues: high BP, diabetes, thyroid
5-6.	Field practice 1 (Internal Medicine)
7.	Doctor-patient dialogues: IBD
8.	Doctor-patient dialogues: reflux, esophageal varices
7-8.	Oral exam (history taking)
9-10.	Doctor-patient dialogues: cirrhosis, pancreatitis, ascites, ulcerative cholitis, cholecystitis
9-10.	Field practice 2 (Internal Medicine)
11.	History taking: Crohn's disease
12.	History taking: melena
13.	Cardiology diseases

12-13. Field practice 3 (Internal Medicine)

14. Oral exam (history taking)

Hungarian Language VI.

Semester:	6th	**Code:**	AOK-OAK606
Course type:	Practice	**Category:**	compulsory
Hours/week:	3	**Department:**	Med. Comm. and Translation
Credit:	-	**Form of Exam:**	Term Mark

week	topic
1-2	**Revision** (*Cardiology*)
3-13	Surgery: Doctor-patient dialogues and cases
3-5	**General Surgery:** *appendicitis, colon cancer, gall stones*
5.	Field practice 1 (General Surgery Department)
6-9	**Vascular Surgery:** *arterial stenosis, grafts*
8.	Field practice 2 (Vascular Surgery Department)
10-11	Oral exam (history taking)
10-11	**Thoracic Surgery:** *lung tumor, empyema, lobectomy*
12.	Field practice 3 (Thoracic Surgery Department)
14.	Oral exam (case summary)

Internal Medicine I.

Semester:	6th	**Code:**	AOK-OAK161/AOK-OAK162
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	3/2	**Department:**	Internal Medicine
Credit:	4/-	**Form of Exam:**	Exam/Signature

week	Lecture	Practice
1.	Gastroesophageal Reflux Disease (GERD) Diagnostic endoscopy	Problem oriented evaluation of the symptoms patients with esophageal disorders
2.	Extraesophageal manifestations of GERD, esophageal motility disorders Barrett's oesophagus, esophageal malignancie	Practical aspects of the functional evaluation o patients with esophageal disorders (esophagea manometry, 24 h pH-metry, evaluation of the biliary reflux)
3.	Gastroduodenal ulcer disease (H.pylori, NSAID Gastric malignancies	Upper gastrointestinal endoscopy
4.	Functional Dyspepsia (EPS, PDS) Irritable Bowel Syndrome (IBS)	Symptomatic evaluation of the liver pa Problem oriented laboratory investigation of the patient.
5.	Chronic hepatitis Endosonography	Symptoms of biliary obstruction, investigative methods for patients with biliary obstruction (symptoms, biochemistry, ultrasonography, ER

6.	Cirrhosis of the liver Diseases of the gallbladder and the biliary trac	Symptoms of patients with acute pancreatitis Diagnostic work up of patients with acute pancreatitis
7.	Tumors of the liver and other liver diseases Acute pancreatitis	Diagnostic work up of patients with chronic pancreatitis and pancreatic cancer
8.	Chronic pancreatitis, maldigestion Pancreatic cancer	Diagnostic work up of patients with CU and Cr disease.
9.	Crohn's disease Ulcerative colitis	Early identification of patients with colorectal cancer. Diagnostic methods.
10.	Malabsorption syndrome Gastrointestinal bleeding	Symptoms of malabsorption, maldigestion, Diagnostic workup: Hydrogen, c13 urea and st breath tests
11.	Nutritional support Tumors of the large intestine	Practical aspects of the diagnosis and therapy patients with diabetes mellitus; the patient education.
12.	Chronic constipation Colonic diverticular disease, Anorectal Hyperuricemia, gout	Practical aspects of insulin therapy. Treatment dyslipoproteinemias
13.	Therapeutic endoscopy Gastrointestinal manifestations of systemic diseases	Physical examination of patients with rheumat diseases
14.	Translational pancreatology	Consultation

Introduction to Toxicology

Semester:	6th-10th	**Code:**	AOK-OASZV221
Course type:	Lecture	**Category:**	elective
Hours/week:	2	**Department:**	Medical Chemistry
Credit:	2	**Form of Exam:**	Evaluation(5)

week	topic
1.	INTRODUCTION. Historical aspects. Types of toxic substances. Types of exposure. Dose-response relationship.
2.	DISPOSITION OF TOXIC COMPOUNDS. Absorption of toxic compounds. Distribution of tc compounds. Excretion of toxic compounds.
3.	METABOLISM OF FOREIGN COMPOUNDS. Factors affecting toxic responses.
4.	TYPES OF EXPOSURE AND RESPONSE. Types of exposure. Route of exposure. Types of response. Biomarkers.
5.	DRUGS AS TOXIC SUBSTANCES. Paracetamol. Aspirin (salicylate). Hydralazine. Halothan Debrisoquine. Thalidomide. Drug interactions. Altered responsiveness: glucose-6-phosph dehydrogenase deficiency.
6.	INDUSTRIAL TOXICOLOGY. Industrial chemicals. Means of exposure. Toxic effects. Vinyl chloride. Cadmium. Aromatic amines. Asbestos. Legislation.
7.	FOOD ADDITIVES AND CONTAMINANTS. Tartrazine. Saccharin. Food contaminants.
8.	PESTICIDES. DDT. Organophosphorus compounds. Paraquat. Fluoroacetate.

9. ENVIRONMENTAL POLLUTANTS. Air pollution. Particulates. Acid rain. Lead pollution. Wat pollution. Arsenic. Food chains. Endocrine disruptors. Mercury and methylmercury.

10. NATURAL PRODUCTS. Plant toxins. Animal toxins. Fungal toxins. Microbial toxins.

11. HOUSEHOLD PRODUCTS. Carbon monoxide. Antifreeze: ethylene glycol. Cyanide. Alcohc Glue sniffing and solvent abuse. Antidotes and the treatment of poisoning.

12. TOXICITY TESTING AND RISK ASSESSMENT. Evaluation of toxicity. Acute toxicity tests. acute toxicity tests. Chronic toxicity tests. Testing in vitro. Risk assessment and interpret of toxicological data.

Mathematical and Statistical Modelling in Medicine

Semester:	4th or 6th	**Code:**	AOK-OASZV291/OASZV292
Course type:	Lecture/Practice	**Category:**	elective
Hours/week:	1/1	**Department:**	Medical Physics
Credit:	2/-	**Form of Exam:**	Evaluation(5)/Signature

week	**Lecture**	**Practice**
1.	Elementary mathematical functions (The logar and exponential functions). Definitions and gra Geometric meaning of the derivative and defir integral.	Elementary mathematical functions (The logar and exponential functions). Definitions and gra Geometric meaning of the derivative and defin integral.
2.	Discrete (Poisson–) and continuous (exponent Weibull–, normal and t-) distributions	Discrete (Poisson–) and continuous (exponenti Weibull–, normal and t-) distributions
3.	Ratios, proportions and rates in epidemiology	Ratios, proportions and rates in epidemiology
4.	Conditional probability, testing proportions: th relative difference	Conditional probability, testing proportions: relative difference
5.	One- and Two-way ANOVA	One- and Two-way ANOVA
6.	Repeated measurement ANOVA	Repeated measurement ANOVA
7.	Nonparametric ANOVA. Kruskall-Wallis, Jonckheere-Terpstra and Nemenyi tests	Nonparametric ANOVA. Kruskall-Wallis, Jonckh Terpstra and Nemenyi tests
8.	Linear-by-linear method. Kendall tau statistic. Logrank test	Linear-by-linear method. Kendall tau statistic. Logrank test
9.	Logistic and Poisson regression models (ROC curves)	Logistic and Poisson regression models (ROC curves)
10.	Harmonic trend and·seasonality (Edward and Walter-Elwood test, logistic regression and Co method)	Harmonic trend and·seasonality (Edward and Walter-Elwood test, logistic regression and Cos method)
11.	Area under curve methods	Area under curve methods
12.	Non-linear regression models (Michaelis–Ment kinetics, RIA, Scatchard plots)	Non-linear regression models (Michaelis–Mente kinetics, RIA, Scatchard plots)
13.	Internal and external quality control methods	Internal and external quality control methods
14.	Decision and cost-effectiveness analysis with probabilities.	Exam

Microbiology I.

Semester:	5th	**Code:**	AOK-OAK211/AOK-OAK212
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	3/2	**Department:**	Medical Microbiology
Credit:	5/-	**Form of Exam:**	Exam/Signature

week	Lecture (1hr/week)	Lecture (2hr/week)	Practice
1.	Introduction to microbiology. Characterization and classification bacteria.	Structure of bacteria. Growth and nutrition of bacteria.	Introduction to microbiology. Laboratory safety. Aseptic techniq Wet-mount preparation.
2.	*Staphylococcus aureus*	Microbial genetics.	Preparation of bacterial smear. Sir and Gram staining.
3.	Shigella, Proteus	*Neisseria* genus, Coagulase negati staphylococci	Ziehl-Neelsen, Schaffer-Fulton and Neisser staining.
4.	Human pathogenic salmonellae	*Streptococcus* genus	Culture media. Preparation of blood agar.
5.	*E. coli*. *Klebsiella* genus	*Vibrio cholerae*, Campylobacter, Helicobacter	Colony morphology. Handling bacterial cultures (inocul and plating). Methods for counting bacteria.
6.	*Brucella, Francisella*	*Listeria, Yersinia*	Biochemical diagnostic tests. Anaerobic cultivation
7.	*Burkholderia, Pseudomonas*	*Chlamydia, Mycoplasma*	*Staphylococcus, Streptococcus* AST
8.	*Corynebacterium*	*Bordetella, Haemophilus, Nocardi*	*Neisseria, E. coli, Klebsiella*
9.	*Bacillus, Legionella*	*Treponema, Leptospira, Borrelia*	*Yersinia, Samonella, Shigella, Pro*
10.	Anaerobic bacteria I.	Anaerobic bacteria II.	*Pseudomonas, Campylobacter, Helicobacter*
11.	*Mycobacterium, Nocardia*	*Rickettsia, Coxiella, Bartonella*	*Mycobacterium, Haemophilus, Bacillus*
12.	Antimicrobial chemotherapy I.	Antimicrobial chemotherapy II.	Antimicrobial susceptibility testing
13.	HACEK	Pathogenesis of bacterial infectior	*Corynebacterium, Bordetella, List*

Microbiology II.

Semester:	6th	**Code:**	AOK-OAK213/AOK-OAK214
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	3/2	**Department:**	Medical Microbiology
Credit:	5/-	**Form of Exam:**	Comprehensive Exam/Signatu

week	Lecture (1hr/week)	Lecture (2hr/week)	Practice
1.	General characteristics of virus viral replication, antiviral thera	Structure of viruses and classification	Laboratory safety. Methods of sterilization. Sterilit testing.
2.	Herpesviridae I	Herpesviridae II	Differential diagnosis of bacter

3.	Arenaviridae, Filoviridae	Orthomyxoviridae, Paramyxovi	Serological reactions I. (Precipitation, CFT)
4.	Parvoviridae, Bunyaviridae	Papilloma and polyoma viruses	Serological reactions II. Agglutination. Laboratory methods for detect cellular immunity.
5.	Poxviridae, Rhabdoviridae	Togaviridae, adenoviridae	Clinical Microbiology
6.	Retroviridae I	HIV	Virology I. Cultivation of viruse Signs of viral replication.
7.	Retroviridae II	Slow" viruses.	Virology II. Quantitation of viru
8.	Flaviviridae	Hepatitis viruses	
9.	Picornaviridae	Oncoviruses	Virology III. Virus serology (HA ELISA, IF) Neutralization test
10.	Reoviridae, Astroviridae, Coronaviridae	Immune response against pathogens.	Bacteriophages
11.	Human pathogenic fungi I.	Human pathogenic fungi II.	Molecular methods in the diagı of infectious diseases.
12.	Human pathogenic protozoa I.	Human pathogenic protozoa II	Mycology
13.	Human pathogenic helminths I	Human pathogenic helminths I	Parasitology
14.	Immunization I.	Immunization II.	

Microsurgery

Semester: 5th-10th **Code:** AOK-OAKV431/AOK-OAKV432
Course type: Lecture/Practice **Category:** compulsory elective
Hours/week: 8/20 hrs total **Department:** Surgical Research
Credit: 2/- **Form of Exam:** Evaluation(5)/Signature

Lecture	**Practice**
* General information. introduction to microsurg (1 hrs)	Appropriate posture at the operating microscope and adjustment of the microscope. Movement coordinatic the hands: interlacing threads under microscope (1 h
* Indications of microsurgery. Clinical applicatio microsurgery I. (2 hours)	Tying basic microsurgical knots under macroscopic a microscopic conditions (2 hrs)
* Clinical applications of microsurgery (2 hrs)	Stitching and tying knots with microsurgical instrume on rubber gloves (3 and 2 hrs)
* The operating microscope (1 hr)	Suture of tubes (2 x 3 hrs)
* Basic suturing techniques, sutures of vessels nerves (2 hrs)	End-to-end anastomosis of rat carotid artery *ex vivo* 3 hrs)

Molecular Developmental Biology

Semester: 4th or 6th **Code:** OK-OAKV441
Course type: Lecture **Category:** compulsory elective

Hours/week:	2	**Department:**	Biochemistry
Credit:	2	**Form of Exam:**	Evaluation(5)

topic

* The molecular developmental aspect of medical biology
* General mechanisms of embryonic development
* The formation of body pattern (polarity, segment polarity, body domains) and appendix developm
* Seminary (lectures 1-3)
* Cell movement and body formation in vertebrates, neural development
* The formation of the epiderm and its renewal from stem cells. Sensory epithel, airway system, gu liver development.
* Seminary (lectures 5,6)
* Blood vesels and endothel cells, multipotent stem cells, blood cell renewal. Fibroblasts and their transformations. The movement and muscle types. The origin a nd potency of stem cells.
* Seminary (lecture 8)
* The cancer as a microevolutionary process.
* Tumor formation nand its molecular background
* Seminary (lecture 10,11)
* The molecular biology of nutrition and life span
* Seminary (lecture 13)

Molecular Medicine

Semester:	5th	**Code:**	AOK-OAKV451
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Cell Biology
Credit:	2	**Form of Exam:**	Evaluation(5)

week	topic
1.	Introduction
2.	Immunological methods
3.	Apoptosis
4.	Intracellular signalling and gene expression
5.	RNA based therapy
6.	Gene therapies
7.	Next generation sequencing
8.	Tumor diagnostics
9.	Imaging methods in molecular medicine
10.	Somatic stem cells
11.	Pluripotent stem cells

12. 2D and 3D stem cell based models
13. Stem cell based regeneration medicine
14. Test

Pathology I.

Semester:	5th	**Code:**	AOK-OAK221/AOK-OAK222
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	3/3	**Department:**	Pathology
Credit:	6/-	**Form of Exam:**	Exam/Signature

week	Lecture	Organdemonstration	Practice
1.	Pathology of cellular injury and death. Cellular adaptations of growth and differentiation. Postmortem changes. Calcifica Oedema, hyperaemia, congest Hemorrhage.	Occupational safety and health education.	Autopsy / Histology of the cellu injury and cell death.
2.	Thrombosis. Embolism. DIC. S	Pathology of cell death.	Autopsy / Histology of thecellu injury and cell death.
3.	Pathology of acute inflammatic and chronic inflammation.	Pathology of inflammation.	Autopsy / Histology of the cellu degeneration.
4.	Tissue repair and wound he Immunopathology. AIDS. Path of transplant rejection.	Pathology of tissue repair.	Autopsy / Histology of the ce degeneration.
5.	Neoplasia.	Pathology of tumors.	Autopsy / Histology of the inflammation.
6.	Carcinogenesis. Clinical aspect neoplasia.	Pathology of tumors.	Autopsy / Histology of the inflammation.
7.	Pathology of prolonged bed re smoking, alcoholism and obesi Diabetes.		
8.	Pathology of aging. Cystic fibr Marfan's syndrome. Amyloidos	Pathology of obesity, smoking diabetes.	Autopsy / Basic histology of th tumors.
9.	Vascular pathology.	Pathology of the vessels.	Autopsy / Basic histology of th tumors.
10.	Heart failure.	Pathology of the heart.	Autopsy / Histology of the hea diseases.
11.	Pathology of the heart.	Pathology of the heart.	Autopsy / Histology of the hea diseases.
12.	Pathology of the kidney.	Pathology of the kidney.	Autopsy / Histology of the kidr diseases.
13.	Pathology of the lung.	Pathology of the lung.	Autopsy / Histology of the kidr diseases.
14.	Pathology of the upper airway Pathology of the oral cavity.	Pathology of the upper airway	Autopsy / Histology of the lung diseases.

Pathology II.

Semester:	6th	**Code:**	AOK-OAK223/AOK-OAK224
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/4	**Department:**	Pathology
Credit:	6/-	**Form of Exam:**	Comprehensive Exam/Signatu

week	Lecture	Organdemonstration	Practice
1.	Pathology of the lower GI trac	Pathology of the small intestin	Autopsy / Histology of the GI t diseases.
2.	Pathology of the lower GI trac	Pathology of the small intestin	Autopsy / Histology of the GI t diseases.
3.	Pathology of the liver.	Pathology of the liver.	Autopsy / Histology of the live diseases.
4.	Pathology of the gall bladde pancreas.	Pathology of the gall bladde pancreas.	Autopsy / Histology of the diseases.
5.	Anemia. Myeloid tumors.	Pathology of the leukemias.	Autopsy / Histology of the hematological diseases.
6.	Lymphomas.	Pathology of the lymphomas.	Autopsy / Histology of the hematological diseases.
7.	Neuropathology I.	Pathology of the brain tumors	Autopsy / Histology of the neurological diseases.
8.	Neuropathology II.	Dementias.	Autopsy / Histology of the neurological diseases.
9.	Pathology of the urinary tract male genital organs.	Pathology of urinary tract.	Autopsy / Histology of urinary diseases.
10.	Pathology of the female genit organs I.	Pathology of the uterus.	Autopsy / Histology of urinary diseases.
11.	Pathology of the female genit organs II. and breast.	Pathology of the ovary and br	Autopsy / Histology of the fem genital organs' diseases.
12.	Pathology of endocrine glands	Pathology of the lung.	Autopsy / Histology of the fem genital organs' diseases.
13.	Pathology of the autoimmune diseases.	Pathology of the upper airway	Autopsy / Histology of endocri diseases.
14.	Pathology of the bones and so tissues.	Pathology of the upper GI trac	Autopsy / Histology of endocri diseases.

Pathophysiological Aspects of Laboratory Medicine

Semester:	6th	**Code:**	AOK-OAKV411
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Laboratory Medicine
Credit:	2	**Form of Exam:**	Evaluation(5)

week	topic

1. Introduction to laboratory medicine
Preanalytical processes, test requesting, sampling, common preanalytical errors
Analytical processes: quality control, traceability of measurements, precision, biological variation, refere range, point of care testing.
Postanalytical processes: interpretation of results, sensitivity, specificity, predictive values, pre- and pos probability, clinically significant change values, alarming or critical values, evidence based laboratory medicine
2. Visit at the Department of Laboratory Medicine
3. POCT: basics, blood-gas examination, acid-base balance disorders
4. Laboratory diagnosis of coagulation disorders:
basic coagulation tests, monitoring of anticoagulant therapy, testing for congenital and acquired thrombo
5. Laboratory diagnosis of sodium and water metabolism
Hypo- and hypernatremia: causes and differential diagnosis, SIADH, diabetes insipidus, laboratory diagı of oedema. Effect of diuretics on sodium and water balance, disorders of osmolar regulation
Disorders of potassium metabolism
Hypo-, and hyperkalemia: causes and differential diagnosis, diagnostic algorithms and treatment
6. Laboratory diagnosis of liver diseases
7. Hematology
8. Inflammatory parameters in laboratory practice
9. Laboratory diagnosis of disorders of lipid metabolism
Primary, and secondary hyperlipidemia, clinical significance of cholesterol, TG, HDL-C, LDL-C, classificat hyperlipidemias. Risks of atherosclerosis: clinical significance of ApoA, ApoB, Lp (a), homocystein, fibrin
10. Laboratory diagnosis and monitoring of diabetes mellitus
11. Laboratory diagnosis of renal diseases
Laboratory tests of glomerular and tubular functions, laboratory diagnosis of proteinuria, acute and chr renal failure, nephrosis syndrome, differentiation of distal and proximal renal tubular acidosis
12. Laboratory diagnosis of myocardial infarction and acut coronary syndrome
Classical markers: CK, LDH isoenzymes, myoglobin. New markers: Troponin I, Troponin T, significance point of care testing, diagnostic algorithms.

Pathophysiology I.

Semester:	5th	**Code:**	AOK-OAK201/AOK-OAK202
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	3/2	**Department:**	Pathophysiology
Credit:	5/-	**Form of Exam:**	Exam/Signature

week	**Lecture**	**Practice/Seminar**
1.	**Inflammation I.:** Basic concepts and types of inflammation, inflammatory cells and mediators. Pathomechanism of acute inflammation. *Lecturer: Zoltán Rakonczay, Substitute lecturer: Kr Csabafi*	Requirements and safety instructions. Review of ba physiology and ECG.
2.	**Inflammation II.:** Pathomechanism of chronic inflammation, local and systemic symptoms/signs o inflammation, basic concepts of pain. *Lecturer: Zoltán Rakonczay, Substitute lecturer: Kr Csabafi*	**Inflammation I.:** Basic concepts and types of inflammation, inflammatory cells and mediators. Pathomechanism of acute inflamma ***In the practice room:*** ***Registration and analysis of ECG.***
3.	**Immunology I.:** Hypersensitivity reactions autoimmune diseases. *Lecturer: Zoltán Rakonczay, Substitute lecturer: Mi Jászberényi*	***Classroom switched between groups!*** **Inflammation II.:** Pathomechanism of chronic inflammation, local and systemic symptoms/signs of inflammation, basic concepts of **ECG: Premature beats.**

4.	**Immunology II.:** Autoimmune diseases, primary secondary immunodeficiencies. *Lecturer: Zoltán Rakonczay, Substitute lecturer: Mi Jászberényi*	***Classroom switched between groups!*** **Immunology I.:** Hypersensitivity reactions and autoimmune diseases. **ECG: Arrhythmias of the sinus node.**
5.	**Endocrinology I.:** Disorders of the hypothal pituitary and thyroid gland. *Lecturer: Miklós Jászberényi, Substitute lecturer: Z Bagosi*	**Immunology II.:** Primary and secondary immunodeficiencies. **ECG: Preexcitation syndromes.**
6.	**Endocrinology II.:** Disorders of the parathyroid g adrenal cortex and medulla, male and female gona *Lecturer: Miklós Jászberényi, Substitute lecturer: Z Bagosi*	**Endocrinology I.:** Disorders of the hypothalamus, pituitary and thyroid gland. **ECG: Atrial and AV nodal arrhythmias.**
7.	**Nutritional Diseases:** Malnutrition syndromes, starvation, vitamin deficiency, obesity. *Lecturer: Krisztina Csabafi, Substitute lecturer: Mik Jászberényi*	**Endocrinology II.:** Disorders of the parathyroid g adrenal cortex and medulla, male and female gonads. **ECG: Ventricul arrhythmias.**
8.	**Diabetes mellitus, metabolic syndrome, hypoglycemia**: Pathophysiology of diabetes mellit prediabetes, concept of insulin resistance and meta syndrome, hypoglycemia. *Lecturer: Krisztina Csabafi, Substitute lecturer: Mik Jászberényi*	**Nutritional Diseases:** Malnutrition syndromes, starvation, vitamin deficiency, obesity. **ECG: AV bl**
9.	**Hyperlipidemias, atherosclerosis:** Primary secondary hyperlipidemias, pathophysiology atherosclerosis. *Lecturer: Zsolt Bagosi, Substitute lecturer: Júlia Sza*	**Diabetes mellitus, metabolic syndrome, hypoglycemia**: Pathophysiology of diabetes mellitus, prediabetes, concept of insulin resistance and metabolic syndrome, hypoglycemia. **ECG: Bundle branch bl**
10.	**Cardiovascular system I.:** Angina pectoris, acut coronary syndrome, myocardial infarction, chronic diseases. *Lecturer: Márta Sárközy, Substitute lecturer: Julia Szakács*	**Cardiovascular system I.:** Congenital and acquir heart defects, pathophysiology of compensated and decompensat heart failure. **ECG: Myocardial infarction.**
11.	**Cardiovascular system II.:** Congenital and acqu heart defects. *Lecturer: Márta Sárközy, Substitute lecturer: Zsolt*	**Cardiovascular system II.:** Volume expansion (hypervolemia), primary and secondary hypertension. **ECG: Hypertrophies**.
12.	**Cardiovascular system III.:** Primary and secc hypertension, volume expansion (hypervol pathophysiology of compensated and decompe heart failure. *Lecturer: Zsolt Bagosi, Substitute lecturer: Júlia Sza*	**Hyperlipidemias, atherosclerosis:** Primary and secondary hyperlipidemias, pathophysiology of atherosclerosis. **Electrolyte abnormalities and pulmonary embolism.**
13.	**Cardiovascular system IV.:** Volume depletion (hypovolemia, hypotension), syncope, circulatory sl *Lecturer: Júlia Szakács, Substitute lecturer: Zsolt B*	**Cardiovascular system III.:** Angina pectoris, acu coronary syndrome, myocardial infarction, chronic heart diseases. **ECG: review**.
14.	**Thermoregulation:** Definition, types, phases consequences of hypothermia and hyperthermia. *Lecturer: Júlia Szakács, Substitute lecturer: Zsolt B*	**Cardiovascular system IV.:** Volume depletion (hypovolemia, hypotension), syncope, circulatory shock.

Pathophysiology II.

Semester: 6th **Code:** AOK-OAK203/AOK-OAK204

Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	3/2	**Department:**	Pathophysiology
Credit:	5/-	**Form of Exam:**	Comprehensive Exam/Signatu

week	Lecture	Practice/Seminar
1.	**Pulmonary diseases I:** Spirometry, obstructive pulmonary diseases: obstructive sleep apnea, COPI asthma bronchiale, cystic fibrosis. *Lecturer: Zsolt Bagosi, Substitute lecturer: Júlia Sza*	Safety regulation. **Thermoregulation. ECG revie**
2.	**Pulmonary diseases II:** Restrictive pulmonary diseases**:** pneumothorax and pleural effusion, acute pulmonary edema and embolism, pulmonary hypertension, cor pulmonale, respiratory failure. *Lecturer: Zsolt Bagosi, Substitute lecturer: Júlia Sza*	**Pulmonary diseases I:** Dyspneas, general characterization of obstructive and restrictive pulmc diseases, asthma bronchiale, COPD, cystic fibrosis.
3.	**Kidney diseases I.:** Disturbances of glomerular a tubular functions, nephrolithiasis. *Lecturer: Krisztina Csabafi, Substitute lecturer: Mik Jászberényi*	**Pulmonary diseases II:** Restrictive pulmonary diseases**:** chest wall and pleura disorders, pulmonar edema, pulmonary hypertension, pulmonary emboli hypoxia, respiratory failure.
4.	**Kidney diseases II.:** Acute and chronic renal failu *Lecturer: Krisztina Csabafi, Substitute lecturer: Mik Jászberényi*	**Kidney diseases I.:** Disturbances of glomerular ar tubular functions, nephrolithiasis.
5.	**Disturbances of acid-base metabolism:** Respir acidosis and alkalosis, metabolic acidosis and alkalc *Lecturer: Krisztina Csabafi, Substitute lecturer: Mik Jászberényi*	**Kidney diseases II.:** Acute and chronic renal failu
6.	**Electrolyte disturbances:** Salt-water balance disorders, pathophysiology of potassium, calcium, phosphate, iron, and copper. *Lecturer: Miklós Jászberényi, Substitute lecturer: Krisztina Csabafi*	**Disturbances of acid-base metabolism:** Respira acidosis and alkalosis, metabolic acidosis and alkalo
7.	**CNS disorders I.:** Circulatory diseases of the CNS cerebral edema, headache, epilepsy. *Lecturer: Miklós Jászberényi, Substitute lecturer: Krisztina Csabafi*	**Electrolyte disturbances:** Salt-water balance disorders, pathophysiology of potassium, calcium, phosphate, iron, and copper.
8.	**CNS disorders II.:** Multiple sclerosis, neurodegenerative diseases: Alzheimer's, Parkinsor and Huntington's disease, motoneuron diseases, myasthenia gravis. *Lecturer: Miklós Jászberényi, Substitute lecturer: Krisztina Csabafi*	**CNS disorders I.:** Circulatory diseases of the CNS, cerebral edema, headache, epilepsy.
9.	SPRING BREAK	SPRING BREAK
10.	**Gastrointestinal diseases I.:** Nausea, vomiting, dysphagia, GERD, abnormalities of gastric juice secretion, peptic ulcer, acute and chronic pancreati *Lecturer: Professor Zoltán Rakonczay, Substitute lecturer: Zsolt Bagosi*	**CNS disorders II.:** Multiple sclerosis, neurodegenerative diseases: Alzheimer's, Parkinson Huntington's disease, motoneuron diseases, myasth gravis.
11.	**Gastrointestinal diseases II.:** Diseases of absor diarrhea, constipation: Irritable bowel syndrome, intestinal obstruction. *Lecturer: Professor Zoltán Rakonczay, Substitute lecturer: Zsolt Bagosi*	**Gastrointestinal diseases I.:** Nausea, vomiting, dysphagia, GERD, abnormalities of gastric juice secretion, peptic ulcer, acute and chronic pancreatit

12.	**Diseases of liver and biliary tract:** Liver dysfun diseases of bilirubin metabolism: jaundice, hepatic cirrhosis, liver failure, alcoholic, immune and geneti liver diseases, cholelithiasis. *Lecturer: Professor Zo Rakonczay, Substitute lecturer: Júlia Szakács*	**Gastrointestinal diseases II.:** Diseases of absor diarrhea, constipation: Irritable bowel syndrome, intestinal obstruction.
13.	**Pathophysiology of leukocytes II.:** Leucopenia proliferative diseases: reactive and malignant disea (leukemias, lymphomas), qualitative disturbances o leukocytes. *Lecturer: Krisztina Csabafi, Substitute lecturer: Júli Szakács*	**Diseases of liver and biliary tract:** Liver dysfun diseases of bilirubin metabolism: jaundice, hepatic cirrhosis, liver failure, alcoholic, immune and geneti diseases, cholelithiasis.
14.	**Red blood cell disorders:** Anemias - ineffective erythropoesis, blood loss, hemolysis. *Lecturer: Júlia Szakács, Substitute lecturer: Krisztin Csabafi*	**Pathophysiology of leukocytes II.:** Leucopenia, proliferative diseases: reactive and malignant disea (leukemias, lymphomas), qualitative disturbances o leukocytes.
15.	**Hemostasis:** Bleeding disorders (platelet, vascula clotting factor disturbances), thrombosis. *Lecturer: Júlia Szakács, Substitute lecturer: Krisztin Csabafi*	**Red blood cell disorders:** Anemias - ineffective erythropoesis, blood loss, hemolysis.

Pathophysiology of Sepsis at the Bedside

Semester:	5th	**Code:**	AOK-OAKV071
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	1	**Department:**	Anesthesiology
Credit:	1	**Form of Exam:**	Evaluation(5)

topic

* Sepsis: a problem what existed, exists and will exist
* Is there any infection? - the role of biomarkers in the diagnosis of sepsis
* Heart, PICCO, hemostasis
* Failure of the respiratory system
* Antibiotics - a double edge sword
* Abdominal sepsis
* Test

Pharmacology and pharmacotherapy I.

Semester:	6th	**Code:**	AOK-OAK191/AOK-OAK192
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	3/2	**Department:**	Pharmacology
Credit:	5/-	**Form of Exam:**	Exam/Signature

week	**Lecture**	**Practice**
1.	Introduction to pharmacology. Drug-receptor interaction I. Drug-receptor interaction II.	Requirements.

2.	Passage across membranes. Absorption. Distribution of drugs.	Drug-receptor interaction.
3.	Elimination of drugs. Drug interactions.	Pharmacokinetics I.
4.	Individual drug response. Dependence. Development of new drugs. Prelinical and clini investigations.	Pharmacokinetics II. Drug interactions. Dependence.
5.	Cholinomimetics. Cholinolytic drugs.	MTO I.: General pharmacology. Introduction t ANS.
6.	Sympathomimetic drugs. Sympatholytic drugs.	Drugs of parasympathetic nervous system.
7.	Antihistamines. Expectorans, antitussives.	Sympathomimetic drugs.
8.	Local anaesthetics. Smooth muscle relaxants.	Sympatholytics. Expectorans, antitussives.
9.	Glucocorticoids. Treatment of asthma bronchiale.	MTO II.: ANS, expectorants, antitussives, loca anaesthetics and antihistamines.
10.	Non-steroidal antiinflammatory drugs I. Non-steroidal antiinflammatory drugs II.	Smooth muscle relaxants.
11.	Peripheral muscle relaxants. Antiviral drugs.	Glucocorticoids. Antiasthmatics.
12.	Antibacterial drugs I.: Introduction. Cell wall synthesis inhibitors. Antibacterial drugs II.: Protein synthesis inhibi	NSAIDs. Peripheral muscle relaxants.
13.	Antibacterial drugs III.: Sulfonamides, kinolon Antifungal drugs.	Antiviral drugs. Antibacterial drugs.
14.	The basis of antihelmintic therapy. Ectoparasit Treatment of mycobacterium and protozoon infections.	MTO III.: SAIDs, NSAIDs, antiasthmatics, smo muscle relaxants, antiviral drugs, peripheral m relaxants and antibacterial drugs. Antifungal and antiparasitic drugs

Surgical Propedeutics

Semester:	6th	**Code:**	AOK-OAK231/ OAK232
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/2	**Department:**	Surgery
Credit:	4/-	**Form of Exam:**	Examination/signature

week	**Lecture**	**Practice/Seminar**
1.	The origins and development of surgery	Demonstration,investigation of surgical patient Consultation about the topics of lectures.
2.	Observation and documentation of surgical patients	Demonstration,investigation of surgical patient Consultation about the topics of lectures.
3.	The significance and role of asepsis and antise in the surgical practice	Demonstration,investigation of surgical patient Consultation about the topics of lectures.
4.	Bleeding and haemostasis, surgical devices	Demonstration,investigation of surgical patient Consultation about the topics of lectures.
5.	Types of wounds and the basic principles of w healing	Demonstration,investigation of surgical patient Consultation about the topics of lectures.

6.	**National Holiday**	
7.	Basic wounds treatment, classical and modern wound dressing materials	Demonstration,investigation of surgical patient Consultation about the topics of lectures.
8.	Perioperative complications	Demonstration,investigation of surgical patient Consultation about the topics of lectures.
9.	Surgical infections. Modern antibiotic treatmer	Demonstration,investigation of surgical patient Consultation about the topics of lectures.
10.	Enteral and parenteral feeding	Demonstration,investigation of surgical patient Consultation about the topics of lectures.
11.	The role of endoscopy in surgery	Demonstration,investigation of surgical patient Consultation about the topics of lectures.
12.	Significance of radiology in surgical diagnostic	Demonstration,investigation of surgical patient Consultation about the topics of lectures.
13.	Surgical oncology	Demonstration,investigation of surgical patient Consultation about the topics of lectures.
14.	Surgical immunology	Demonstration,investigation of surgical patient Consultation about the topics of lectures.

CLINICAL MODULE SYLLABUS

Advanced Biostatistics

Semester:	8th or 10th	**Code:**	AOK-OAKV171
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Medical Physics
Credit:	2	**Form of Exam:**	Evaluation(5)

week	Lecture (1 hr/week)	Practice (1 hr/week)
1.	Introduction: summary of basic biostatistics	The mean concepts of ogisticccs. Statistical computer systems.
2.	Nonparametric methods for two ore more dependent or independent data	The choice of the appropriate statistical metho and its evaluation
3.	Multiple linear regression, linear models	Data sets with several independent variables (risc factors)
4.	Comparison of several independent group-me two-way ANOVA	Data sets and problems when two-way ANOV appropriate
5.	Two-way ANOVA with interaction	Understanding the concept of interaction
6.	Comparison of several related group-menad: repeated measures ANOVA	Data sets and problems for repeated measurements ANOVA
7.	Summary	TEST I: solving two problems, main results an interpretation
8.	Diagnostic tests. Specificity, sensitivity, PPV, N Accuracy	Calculation of the diagnostic measures
9.	Biostatistical methods in epidemiology, relative risk, odds ratio	Calculation of RR and OR by hand and by computer. Comparison of methods.
10.	Logistic regression: equation, use, meaning	Simple logistic regression problem soving by computer program
11.	Logistic regression: ogisticc accuracy ROC cu	Examples from the medical literature: the use ogistic regression to find risc factors of an illne
12.	Multivariate methods: discriminant analysis	Examples from the medical literature: decision making by computer
13.	Multivariate methods: cluster analysis	Examples from the medical literature: classifica of cases or variables
14.	Summary	TEST II: solving two simple problems, main re and interpretation.

Anaesthesiology and Intensive Therapy I.

Semester:	9th	**Code:**	AOK-OAK243/ AOK-OAK244
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/1	**Department:**	Anaesthesiology & Int. Ther.
Credit:	1/-	**Form of Exam:**	Evaluation/Signature

week	topic
1.	Introducing anaesthesiology and intensive therapy
2.	Applied physiology –I. Circulation, circulation management

3. Applied physiology – I. Breathing, oxygen therapy
4. Applied pharmacology
   I. Clinical pharmacology
   II. Anaesthesiological pharmacology
5. Anaesthesia machine, breathing systems
6. Assessment of perioperative risks, preoperative preparation
7. General anaesthesia, anaesthetics
8. Regional anaesthesia, local anesthetics
9. Airway management
10. Monitoring during anaesthesia
11. Postoperative patient care, complications, PACU
12. Postoperative acute and chronic analgesia
13. Test

Anesthesiology and Intensive Therapy II.

Semester:	10th	**Code:**	AOK-OAK245/AOK-OAK246
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/1	**Department:**	Anaesthesiology & Int. Ther.
Credit:	2/-	**Form of Exam:**	Exam/Signature

topics

* Fluid therapy, fluid resuscitation, electrolytes
* Blood gas analysis, diabetic ketoacidosis
* Acute respiratory failure, mechanical ventilation
* Acute cardiovascular diseases
* Intoxication, blood purification
* Clinical nutrition, pancreatitis, liver failure
* ALS, BLS, postresuscitation care
* Infection and infection control
* Catastrophic central nervous system disorders
* Sepsis, septic shock

Basic Biostatistics

Semester:	7th or 9th	**Code:**	AOK-OAKV161
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Medical Physics
Credit:	2	**Form of Exam:**	Evaluation(5)

week	**Lecture (1 hr/week)**	**Practice (1 hr/week)**
1.	Data definition, types of data, displaying data. Sample characteristics.	Bar chart, histogram. Calculation of the mean standard deviation.

2.	Probability, random variables and their types, distributions.	Calculation of ogisticccs. The use of a compute program.
3.	Binomial, Poisson, uniform and normal distribu and their properties.	The use of statistical tables – standard normal distribution.
4.	Statistical estimation, confidence intervals.	Calculation of the confidence interval for a population mean. The use of the t-table.
5.	Testing hypotheses, significance. One-sample test.	Practice of one-sample t-test using experiment data.
6.	Paired and Independent samples t-tests.	Practice of t-tests using experimental data. Th meaning of significance, p-value.
7.	Errors in hypothesis tests	TEST I.
8.	Comparing the mean of several gourps: one-w analysis of variance.	Independent t-tests and one-way ANOVA. Mul comparisons.
9.	Relationship between continuous variables, correlation, linear regression.	Scatterplot, trend-line in EXCEL. http://www.ruf.rice.edu/~lane/stat_sim/reg_by_eye
10.	Relationship between categorical variables: th square test for independence	Evaluation of a 2x2 table by hand calculation a by computer
11.	The use of 2x2 tables in diagnostic tests. The square-test for goodness of fit.	Calculation of sensutitvity, specificity, positive negative predictive value.
12.	Nonparametric methods.	Statistical tests on ranks.
13.	Summary	TEST II.
14.	Examples from the literature	Practical questions of applied biostatistics.

Basics of Self-Knowledge in Professional Orientation

Semester:	7th	**Code:**	AOK-OASZV751
Course type:	Practice	**Category:**	elective
Hours/week:	12 hrs total	**Department:**	Behavioural Sciences
Credit:	1	**Form of Exam:**	Term Mark

week	**topic (2 hrs for 6 weeks)**
1.	Conditions for proper and successful career choice, the role of self-knowledge in the developm of professional identity
2.	Mapping own preferences and priorities and self-reflection on them
3.	Self-reflection through situations
4.	Own values and the role of personal attachment in specialization choice
5.	A personal narrative with a focus on professional choice
6.	Summary of experiences, recapitulative self-reflection

Biophysics of Hearing. Objective and Subjective Audiometry

Semester:	9th	**Code:**	AOK-KA1521
Course type:	Lecture	**Category:**	elective
Hours/week:	1	**Department:**	Oto-Rhino-Laryngology
Credit:	1	**Form of Exam:**	Evaluation(5)

week	**topic**
1.	Introduction

2. Basics of physics
3. The anatomy of ear
4. The physics of sounds
5. Hearing tests, screening
6. Subjective audiometry
7. Objective audiometry
8. Vestibular tests
9. Hearing aids
10. Middle-ear Implants
11. Cochlear implantation
12. Rehabilitation
13. Case studies
14. Practice

Cardiac Electrophysiology as a Basic Property of Cardiac Function

Semester:	8th or 10th	**Code:**	AOK-OAKV581/OAKV582
Course type:	Lecture/Practice	**Category:**	compulsory elective
Hours/week:	1/1	**Department:**	Pharmacology
Credit:	2/-	**Form of Exam:**	Evaluation(5)/Signature

week	**topic of Lecture and Practice**
1.	Introduction.
2.	Basic principles of electrophysiology, the impulse propagation in the heart I.
3.	Basic principles of electrophysiology, the impulse propagation in the heart II.
4.	The action potential of myocytes and the ionic channels determining the action potential I.
5.	The action potential of myocytes and the ionic channels determining the action potential II.
6.	Methods and techniques in cardiac electrophysiology.
7.	Electro-mechanical coupling in the heart I.
8.	Genetic background of ion-channel disturbances in the heart.
9.	Electro-mechanical coupling in the heart II.
10.	The mechanism of developing cardiac arrhythmias
11.	Electrophysiological changes after the disturbances in blood supply to the myocardium.
12.	Experimental methods and clinical relevance to investigate cardiac arrhythmias.
13.	Investigational techniques in cardiac cellular electrophysiology
14.	Practical and consultation

Cerebrovascular diseases of the central nervous system (stroke, aneurysm, angioma) and their neurosurgical treatment options (surgery, intervention conservative therapy)

Semester:	9th	**Code:**	AOK-OASZV801
Course type:	Lecture	**Category:**	elective
Hours/week:	14 hrs total	**Department:**	Neurosurgery
Credit:	1	**Form of Exam:**	Evaluation(5)

topics

* Anatomy of the cerebral vascular system, variation of vascular system, physiology of cerebral blood circulation and their clinical implications.
* Cerebrovascular disease/pathologiesl
* Surgical interventions of ruptured and silent cerebral aneurysm.
* Neuorinterventional treatment of ruptured and silent cerebral aneurysm.
* Acut treatment of ischemic stroke (imaging techniques, thrombolysis, indication of mechanica thrombectomy
* Mechanical thromectomy (history, indications, methods)
* Ischemic stroke, stroke prevention (surgical treatment of carotid artery stenosis), surgical thrombectomy
* Endovascular stroke prevention (endovascular treatment of carotid stenosis)
* Surgical treatment of arteriovenous malformations (AVM).
* Radiotherapy of AVM.
* The role of neurointervention in the treatment of AVM.
* Surgical treatment of arteriovenous malformations (AVM).
* Tumor embolisation, drug administration by using superselective catheter, hormone level determination, embolization of subdural hematoma
* Arterial approches neurointervention

Child and Adolescent Psychiatry, Mentalhygiene

Semester:	8th or 10th	**Code:**	AOK-OAKV331
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Child Psychiatry
Credit:	2	**Form of Exam:**	Evaluation(5)

week	topic
1.	Introduction to child and adolescent psychiatry
2.	Assessment, diagnosis and formulation in child psychiatry
3.	Psychological assessment
4.	Neurodevelopmental disorders I: Intellectual disability and specific learning disorders
5.	Neurodevelopmental disorders II: Attention deficit-Hyperactivity disorder, Tic disorder, Toure disorder
6.	Neurodevelopmental disorders III: Communication disorders, Pervasive developmental disord
7.	Anxiety disorders I (Separation anxiety, Specific phobia, Social anxiety disorder, GAD)
8.	Anxiety disorders II (Agoraphobia, Panic disorder, Selective mutism, OCD, PTSD, BDD)

9. Mood disorders (Depressive disorder, Bipolar disorder), Suicidal behavior, Non-suicidal self-in
10. Schizophrenia spectrum disorders
11. Disruptive, impulse control and conduct disorders
12. Eating disorders (Anorexia nervosa, Bulimia nervosa)
13. Elimination disorders (Enuresis, encopresis)
14. Psychoactive substance use and addictive disorder

Clinical Immunology

Semester:	10th	**Code:**	AOK-OAKV381
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Dermatology
Credit:	2	**Form of Exam:**	Evaluation(5)

week	**topic**
1.	The structure and the functions of the immune system. The biological significance of the self recognition.
2.	Methods for clinical immunological investigations.
3.	Immune-mediated tissue damage. The role of cytokines.
4.	Immunology of allergic diseases.
5.	Autoimmunity - Health and disease. The autoimmune diseases.
6.	Immunhaematology.
7.	Connective tissue disorders and joint diseases.
8.	Organ specific autoimmune diseases.
9.	Detection of histocompatibility antigens and their pathogenetic significance. Transplantation immunology. Reproductive immunology.
10.	Immundeficiencies. The immunology of HIV infection.
11.	Tumor immunology.
12.	Neuroimmunology.
13.	Immune manipulation.

Clinical Neonatology

Semester:	10th	**Code:**	AOK-OASZV791
Course type:	Seminar	**Category:**	elective
Hours/week:	14 hrs total	**Department:**	Pediatrics
Credit:	1	**Form of Exam:**	Evaluation(5)

	topics
*	Limit of viability in 2021. Where is the threshold?
*	State-of-the-art neonatal respiratory support. Is mechanical ventilation an evil act?

* Neonatal chronic lung disease. Can it be ever prevented?
* Necrotising enterocolitis in babies. Why did fifty years of research not deliver therapies that v
* Neonatal sepsis: can we minimise risk and avoid medicalisation of the newborn period at the same time?
* How to break bad news to parents in neonatology?
* Multidisciplinary decision making in neonatology: how to work together with Obstetricians an Surgeons?
* The golden first hour of life – Why is it so important?
* Unique challenges in the care of the extremely low birth weight infant – How can we improve their care?
  Genetic abnormalities of the newborn - diagnosis, management and ethical considerations.
* Resuscitation of the newborn – simulation

Clinical Oncology

Semester:	8th	**Code:**	AOK-OAK351
Course type:	Lecture	**Category:**	compulsory
Hours/week:	2	**Department:**	Oncotherapy
Credit:	2	**Form of Exam:**	Exam

topic

* Carcinogenesis, cancer etiology, epidemiology; Tumor prevention; The importance of pathology a diagnostic imaging in oncology; Cancer staging; ; Therapy response.
* Chemotherapy; Endocrine therapy; Molecular targeted therapy and immune therapy.
* Basic terms, the forms and physical effects of ionozing radiation; Radiotherapy equipments. Chemical and biological effects of ionizing radiation;the aims, effects and side effects of radiothera Irradiation techniques, fractionation and schedule. Teletherapy/brachyterapy
* Breast cancer
  Breast cancer cases
* Emergencies in oncology
  Head and neck cancers; Oesophagus cancer
* Gynaecological cancers
  Gynecological cancer caeses
* Hepatobiliar and pancreatic cancers
  Colorectal and anal cancers
* Supportive, palliative therapy, Hospice,
  Lung Cancers
* Complex therapy of urological tumours
* Sof tissue tumors Brain and childhood malignancies
  Skin tumours, Multidisciplinary team-work

Dermatology

Semester:	9th or 10th	**Code:**	AOK-OAK281/AOK-OAK282
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/3	**Department:**	Dermatology

Credit: 4/- **Form of Exam:** Exam/Signature

week	Lecture	Practice
1.	Introduction. The anatomy and physiology of t skin. Types of skin lesions.	Examination of patients with dermatological diseases. Case presentations.
2.	Basic immunpathologic reactions. Urticaria. Dr allergy.	Primary and secondary lesions. Case presentat
3.	Atopic dermatitis. Contact der-matitis and oth eczematous reactions. Viral diseases.	Special tools and techniques in Dermatology (Wood-lights, diascopy, dermatoscopy) Case presentations.
4.	Bacterial diseases with cutan involvement. Fur diseases with cutaneous involvement.	Special tests in Dermatology I.In vitro and in v (skin) tests in allergic disorders. Case presentations.
5.	Tuberculosis of the skin. Sexually transmitted diseases. Syphilis. Gonorrhoea.	Special tests in Dermatology II. Diagnosis of infectious diseases. Case presentations.
6.	AIDS. Scabies, pediculosis. Tropical skin disea	Special tests in Dermatology. Diagnosis and treatment of STD. Case presentations.
7.	Psoriasis. Papulosquamosus diseases. Therma injured skin.	Special tests in Dermatology III. Diagnosis of autoimmune diseases. Case presentations.
8.	Vesiculobullosus diseases. Acne, rosacea, peri dermatitis.	Skin biopsy, histological examinations in Dermatology. Case presentations.
9.	Disorders of collagen and tissue. Vasculitis, purpuric conditions.	Topical therapy in Dermatology. Case presentations.
10.	Cutaneous manifestations in metabolic disorde Benign malign tumours of the skin.	Physical therapies in Dermatology I. Surgical excision, currettage, electrodessication, cryotherapy, radiotherapy. Case presentations
11.	Tumours of mesodermal origin. Melanoma malignum. Differential diagnosis of pigmented lesions.	Physical therapies in Dermatology II. Photothe lasertherapy. Case presentations.
12.	Disorders of the vasculature. Granulomas. Disorders with abnormal keratinization. The sk systemic disease.	Physical therapies of venous and lymphatic insufficienties. Case presentations.
13.	Disorders of the hair and nails. UV-induced dermatoses. Laser therapy in dermatology.	Systemic therapy in Dermatology. Case presentations.
14.	Local therapy in dermatology. Systemic therap dermatology. Dermatosurgery.	Case presentations and discussions.

Doctor-Patient Communication

Semester: 7th or 8th **Code:** AOK-OAK401
Course type: Seminar **Category:** compulsory
Hours/week: 2 **Department:** Behavioural Sciences
Credit: - **Form of Exam:** Signature

The aim of the subject:

* Students attain the skills needed for doctor-patient consultation and for selecting from the approp consultation models.
* By the end of the course students will be aware of the importance of doctor-patient communicatic and its critical points.

* They should acquire the ethical principles of doctor-patient communication and they should be ab integrate them into their consultation behaviour. Students should know the ethical and communic methods of commitment to providing medical information.
* They should be able to carry out a 10-minute doctor-patient consultation, and afterwards to analy and evaluate their performance from the video recording at a group meeting. They should be able elaborate a medical case.

Electrophysiology: ion channels and ion transport mechanisms in the regulation of cell functions

Semester:	9th	**Code:**	AOK-OAKV251/AOK-OAKV252
Course type:	Lecture/Practice	**Category:**	compulsory elective
Hours/week:	2/6 hrs total	**Department:**	Pharmacology
Credit:	2	**Form of Exam:**	Evaluation(5)/Signature

week **Topic:**

1. Basic principles of electrophysiology
2. Regulation of pancreatic excretory function by ion channels
3. Electrophysiology of the brain I.
4. Electrophysiology of the brain II.
5. Molecular structures of ion channels I.
6. Molecular structures of ion channels II.
7. Ion transport mechanisms of blood-brain barrier
8. Modulation of ion channels by changing the lipid composition of the cell membrane
9. Experimental modification of ion channels: transgenic animal models
10. Diversity of potassium channel functions
11. Electric function of skeletal muscle; ionic mechanisms
12. Differences in cardiac atrial and ventricular ion channels
13. Ion channels in the regulation of smooth muscle tone
14. Discussion.

English and Hungarian Terminology of Doctor–Patient Communication

Semester:	7th or 8th	**Code:**	AOK-OASZV181
Course type:	Practice	**Category:**	elective
Hours/week:	2	**Department:**	Med. Comm. and Translation
Credit:	2	**Form of Exam:**	Evaluation (5)

week **Topic:**

1. Introduction, placement test (for research purposes not part of the evaluation) for both grou
2. Basic vocabulary: names of body parts, common diseases, fields of specialty, specialists, mec documents in Hungarian and in English.
3. Taking history ("SOCRATES") relevant expressions with special regard to ways of introductior greetings in Hungarian and in English. Revision of Hungarian question words.
4. Complaints of the patient. Vocabulary related to signs, symptoms especially pain. Revision of related adjectives in Hungarian and in English.
5. Polite forms of conversation, signposting, eliciting information in Hungarian and in English. Cultural differences in the way of asking questions.
6. Vocabulary of previous diseases – past medical history, names of surgical interventions. Revi of the past tense in Hungarian.

7. Vocabulary of family history (familial relationships, hereditary diseases, common diseases in Hungarian and in English). Revision of the possessive case.
8. Vocabulary of social history. Intercultural differences in doctor-patient conversation. Revision Hungarian conjugation. Common suffixes in medical English.
9. Vocabulary of referrals. Explaining examinations, results – explaining causal relationship. Futu tenses in Hungarian and in English.
10. Terminology of physical examinations. Giving instructions in both languages. Imperative case its alternative („tessék + főnévi igenév"). Linguistic devices for being polite in both languages
11. Names of medications – related terminology. Instructions about dosing (mikor, hányszor, mennyit, meddig) in both languages. Terminology of allergies. Linguistic devices for expressi possibility.
12. Discussing the diagnosis with the patient and related terminology. Lay vs. medical terms. Linguistic methods for emphasis. Revision of conditionals in both languages.
13. Special communication situations: bad news, aggressive patients. Communication with the he interpreters. Linguistic devices for expressing empathy. ways of arguing for and against.
14. Assessing the semester. Output test. Oral presentation: role-playing a doctor-patient (33.3% the final grade).

Ethics in Medicine

Semester:	8th	**Code:**	AOK-OAK411/AOK-OAK412
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	7 hrs/ 20 hrs total	**Department:**	Behavioural Sciences
Credit:	-/2	**Form of Exam:**	Signature/Term Mark

week	**Lecture (1hr for 7 weeks)**	**Practice (2hrs for 10 weeks)**
1.	Introduction to Bioethics - A Case Based Approach (Ethical Theories; Bioethical Principles	Introduction to Medical Ethics
2.	Informed Consent and the Hungarian and International Patient Rights	Basic Principles of Bioethics (Non-maleficence, Beneficence, Justice, Autonomy) – Case based appro
3.	Ethics of Human Reproduction I. (Contraception, Childbirth)	Informed Consent and Ethics of Share-Decision-Maki
4.	Ethics of Human Reproduction II. - Abort	Hungarian and International Patient Rights
5.	Ethical issues in Psychiatry	Reproductive Ethics I. – Contraception and Childbirth
6.	Ethics of Tissue and Organ Donation	Reproductive Ethics II. – Abortion, Assisted Human Reproduction
7.	Ethical Issues at the End of Life (Palliativ Medicine; Euthanasia)	Ethical Aspects of Biomedical Research and Medical Genetics
8.	-	Ethical Issues of Tissue and Organ Transplantation
9.	-	Ethics of End-of-Life Decisions – Main Types of Euthanasia
10.	-	Ethics of End-of-Life Decisions – Palliative Medicine a Hospice

Forensic Medicine I.

Semester:	9th	**Code:**	AOK-OAK331/AOK-OAK332
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	1/2	**Department:**	Forensic Medicine

Credit: 3/- **Form of Exam:** Exam/ Signature

	Lecture (2hrs/every 2nd week)	Practice
*	Introduction to criminal and civil law	Autopsy (3 occasions)
*	Recommendation on autopsy rules	How to fill in a death certificate?
*	Changes after death (determination of postmortem interval)	Changes after death
*	Classification of injuries I. (blunt force, sharp pointed object trauma)	Medical report of injuries
*	Classification of injuries II. (shot wounds, explosives, heat and cold, electrocution)	DNA – Biologial sample collection
*	DNA in forensic medicine	Duties of the doctor – rights of the patiens
*	Alcohol in forensic medicine (metabolism, detection, related crimes)	Toxicology - Alcohol analysis, sample collection
*		Histology (vital signs)
*		Poisoning (agricultural chemicals, alcaloids, corrosive alcohols)
*		Suicide
*		Case reports

Forensic Medicine II.

Semester: 10th **Code:** AOK-OAK333/AOK-OAK334
Course type: Lecture/Practice **Category:** compulsory
Hours/week: 1/2 **Department:** Forensic Medicine
Credit: 3/- **Form of Exam:** Exam/ Signature

	Lecture (2hrs/every 2nd week)	Practice
*	Medical malpractice	Autopsy (3)
*	Forensic aspects of illegal drug use	Medical malpractice case presentation
*	Identification	Sudden death in adults
*	Battered child, infanticide, criminal abortion, sudden infant death	Identification
*	Forensic psychiatry	Asphyxia, drowning
*	Forensic psychology	Sexual offences (adults)
*	Transportation medicine, traffic accident	Toxicology – the detection of illegal drugs
*		Facial and dental injuries DNA in forensic medicine (paternity testing)
*		Prison health care
*		Healing and residual conditions of injuries
*		DNA profiling
*		Assessment of disability. Fitness to drive.

Healthcare Management

Semester: 10th **Code:** AOK-OAK261
Course type: Lecture **Category:** compulsory
Hours/week: 2 **Department:** Health Economics

Credit: 2 **Form of Exam:** Evaluation(5)

topic

* The socio-economic context of health care: characteristics of health care; state involvement, solidarity and insurance; fair distribution and social expectations
* Principles in health economics: economic problems in health care; marginal utility; substitutions; scarcity; supply-demand equilibrium; elasticities
* The healthcare market: Consumer knowledge and perfectly competitive markets; consumption o healthcare services, derived demand; the impact of information asymmetry; Akerlof's "Market fc lemons"; the regulated market in health
* Healthcare finance: Money flows in healthcare; moral hazard; fundamentals of Health Insurance Schemes, the role of the private sector; setting up a well-functioning health insurance system; pa payment; type of healthcare systems
* Healthcare systems in the world: structure and financing of different healthcare levels in differer countries: financing of family doctor care; outpatient care; financing of inpatient care (HBCS); adoption of new technologies
* Decision Economics: costs and benefits of free resources and resource allocation; funding thresh health economics decision support
* Health economics analyses and methods: classification of health economics analyses (cost-minimization, cost-effectiveness, cost-benefit, cost-benefit analysis); allocation and collection of costs; quantification of health gains: QALY, DALY; health-related quality of life (EQ-5D questionna
* Quality in health care: the concept of quality; quality development model; risk and risk managem performance evaluation in health care
* Pharma economics: basic concepts; drug expenditures; characteristics and international trends ir pharmaceutical industry; economics of orphan dugs; drug supply in developing world; Pharma m players, market reorganization; focusing therapeutic areas; advancement of biological therapies, pricing of medicines; the value of therapy; background to the price support decision
* Behavioral economics of healthcare service delivery: The impact of behavior on the organization, acceptance, and effectiveness of therapy; adherence; the psychosocial pathway of personalized therapy; defensive medicine and overdiagnosis
* Healthcare marketing: the marketing mix in health services; consumer behavior in health marke loyalty; marketing communication in health care

How to use microbiology laboratory results to diagnose and treat infectiou diseases; interactive; problem-based case discussions

Semester:	9th or 10th	**Code:**	AOK-OAKV291
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Clinical Microbiology
Credit:	2	**Form of Exam:**	Evaluation(5)

week	**topic**
1.	Principles of microbiological sample collection and handling. Procedures for the transport of microbiological specimens. Cases will be discussed where these procedures have a great influ on the outcome of laboratory investigations.
2.	Upper and lower respiratory tract infections. Community-acquired and nosocomial pneumonia cases will be discussed in details. How to choose adequate antibiotic therapy? The value of microbiological tests in these cases will be discussed.

3. Upper and lower urinary tract infections. Differences in antibiotic resistances of pathogens ca urinary tract infections. Pitfalls in laboratory tests.
4. Differences in gastrointestinal diseases caused by bacteria, viruses and parasites. Possibilities laboratory diagnosis and treatment of these infections.
5. Infection or colonization. How to distinguish them using microbiological laboratory tests? Difficulties in the interpretation of laboratory results and findings.
6. Nosocomial infections, nosocomial epidemics, and laboratory methods which are suitable to f the spread of nosocomial pathogens in a hospital environment. Cases involved in nosocomial epidemics will be discussed, together with measures taken to stop the spread of nosocomial pathogens.
7. Neuroinfections and joint infections. Laboratory methods, including molecular techniques to s the diagnoses of central nervous system infections.
8. Infections of immunocompromised patients, special aspects of infections in case of patients v haematologic malignancy. Problems in the laboratory diagnosis of these infections.
9. Sexually-transmitted diseases and their consequences, classic and newly recognized sexually· transmitted infections. Diagnostic possibilities in case of STIs.
10. Infections caused by anaerobic bacteria, diagnostic problems and anaerobic culture possibiliti
11. Sepsis and its consequences, and blood culture techniques in the diagnosis of sepsis. Treatm possibilities in case of bloodstream infections. The spread of antibiotic resistance worldwide, development of resistance to certain antibiotics during therapy.
12. General principles of specimen collection and handling in case of viral infections. Emerging ar emerging viral infections. Cases will be discussed where these procedures have a great influe on the outcome of laboratory investigations.
13. How to use molecular biological methods in routine clinical microbiological diagnostics? The v of these methods? Cases will be discussed where molecular techniques can help to set up the diagnosis.
14. General principles of detection and identification of infections caused by parasites.

Hungarian Language VII.

Semester:	7th	**Code:**	AOK-OAK607
Course type:	Practice	**Category:**	compulsory
Hours/week:	3	**Department:**	Med. Comm. and Translation
Credit:	-	**Form of Exam:**	Term Mark

week **topic**

1. Revision
2-3. Revision (Internal medicine) + Field practice (Internal medicine)
4-8. Pulmonology. The structure of the respiratory system.

The most frequent abnormal conditions and diseases in Pulmonology. Revising the vocabul breathing problems, coughing and sputum. Practicing doctor–patient communication: role history taking and examination of patients with respiratory problems. Giving advice to pa concerning medication. Reading simple Hungarian case histories taken from the fie Pulmonology.

8. Oral exam – history taking (Pulmonology)
9. Field practice (Pulmonology)

10-12. Orthopedics.

The structure of the skeletal system. Revising the name of bones and joints. The most fre abnormal conditions and diseases in Orthopedics. Practicing doctor–patient situations: role history taking in Orthopedics. Briefing English case histories taken from the field of Orthopec Hungarian.

13. Field practice (Orthopedics)

14. Oral test – case summaries (Internal medicine, Pulmonology, Orthopedics)

Hungarian Language VIII.

Semester:	8th	**Code:**	AOK-OAK608
Course type:	Practice	**Category:**	compulsory
Hours/week:	3	**Department:**	Med. Comm. and Translation
Credit:	-	**Form of Exam:**	Comprehensive Exam

week **topic**

1-4. Gynecology. The external and internal female genital organs.

The most frequent complaints and diseases in the field of gynecology. Practicing basic dc patient situations: role-play, history taking in Gynecology.
Asking the patient about her menstruation cycle and history. Revision of Wh-questions.
Obstetrics. Taking history concerning previous pregnancies. Deliveries and abortions. Compla during pregnancy.

5. Field practice.

6-8. Urology.

Urology. The most common conditions and diseases in the field of Urology: cystitis, kidney st pyelonephritis.
Practicing doctor–patient situations: role-play, history taking in Urology. Briefing English histories taken from the field of Urology in Hungarian.

9. Oral exam

10-14. General revision. Practicing doctor–patient dialogues in all covered medical fields. Rev Practicing doctor–patient situations that can emerge at medical and surgical departm Interviewing and examining patients, sending them for further investigations, giving advice or life style, and medication.

Infectology - Infectious Diseases (Internal Medicine IV.)

Semester:	9th	**Code:**	AOK-OAK275/AOK-OAK276
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/2	**Department:**	Internal Medicine
Credit:	3/-	**Form of Exam:**	Exam/Signature

week **Lecture** **Practice**

1.	Introduction. History, principles, classification infectious diseases. Antibiotic prophylaxis, antibiotic policy	History, principles, distribution of infectious diseases. Epidemiological problems. Pathogene agents.
2.	Tropical diseases	Pathophysiology and diagnosis of infectious diseases.
3.	Infection control	Infections of the respiratory organs.
4.	Exanthematous infectious diseases	Infections of the gastrointestinal tract
5.	Gastrointestinal and abdominal infections	Neuroinfections
6.	Sexually transmitted, gynecologial and urinary infections	Hepatitis
7.	Infections of the respiratory organs	AIDS
8.	Antropozoonoses, Bioterrorism	Sepsis
9.	Joint and bone infections. Fungal infections.	Prevention of infectious diseases
10.	Cardiovascular infections. Infections and their prophylaxis during interventions.	Exanthematous infectious diseases
11.	Neuroinfections. Skin and soft tissue infections	Antropozoonoses (Lyssa, Brucellosis, Tularemi etc.)
12.	Infections in immunosuppression. AIDS. Vaccination.	Antimicrobal therapy
13.	Sepsis, septic shock	Nosocomial infections
14.	Antimicrobal therapy, antibiotic policy	Tropical diseases

Internal Medicine II.

Semester: 7th
Code: AOK-OAK271/AOK-OAK272
Course type: Lecture/Practice
Category: compulsory
Hours/week: 4/2
Department: Internal Medicine
Credit: 5/-
Form of Exam: Exam/Signature

	Lecture	**Practice**
*	Echocardiography	Methods in echocardiography, reading an echocardiographic record.
*	Infective endocarditis. Tumors of the heart	Taking the case history the physical examination.
*	Hypertension in cardiologic aspect. Aortic dissection	Performing percussion, auscultation.
*	Aortic stenosis +Aortic incompetence.	Performing percussion, auscultation.
*	Mitral stenosis + Mitral incompetence	Performing percussion, auscultation.
*	Tricuspid stenosis and incompetence. Combin valvular heart disease. Prosthetic valve.	Performing percussion, auscultation.
*	Rheumatic fever. Myocardtitis and pericarditis	The physical findings of rheumatic fever and inflammatory diseases.
*	Adult congenital heart diseases	Performing percussion, auscultation.
*	Hypertrophic and dilatative cardiomyopathy: diagnosis and treatment	Performing percussion, auscultation. The physical findings of cardiomyopathies.

*	Electrocardiography	Reading ECG records.
*	Cardiac arrhythmias	Reading ECG records learning modern antiarrhythm treatment and procedures.
*	Ischemic heart diseases	Non invasive and invasive technics in the diagnosis ischemic heart disease.
*	Invasive diagnostic and theraputic methods in cardiology	Non invasive and invasive technics in the diagnosis ischemic heart disease.
*	Restrictive and obliterative cardiomyopathy. Chronic heart failure	Performing percussion, auscultation. The physical findings of cardiomyopathies and chronic heart failu
*	Pulmonary embolism. Pulmonary hypertensior	Physical findings of pulmonary embolism and hypertension.
*	Cardiac rehabilitation	Possibilities in rehabilitation program.
*	Special cardiac conditions: women, athletics, elders. Cardiac risk stratification in non cardia surgery	Non invasive and invasive technics in cardiology.
*	Acute heart failure. Failure of periferial circula	The signs and treatment of heart failure and perifer circulation disturbances.
*	Revascularization in cardiac surgery	Visiting at operation theatre.
*	Basic hematology	Evaluation of laboratory data
*	Anemias	Inspection of patients with anaemia
*	Anemias. Hemolytic anemia	Microscopic evaluation of red cells morphology
*	Pancytopenias (Myelodysplastic	Bone marrow smears examination, physical signs o pancytopenic patients
*	syndromes. Aplastic anemia)	
*	Acut leukemia	Examination of blood and bone marrow smears wit acute leukemias
*	Stem cell transplantation	Discussion of indications for stem cell transplantatic
*	Myeloproliferative diseases	Palpation of spleens and enlarged livers
*	Malignant lymphomas.	Lymp nodes palpation
*	(Classification, Hodgkin disease)	
*	Aggressive lymphomas	Examination of blood and bone marrow smears wit lymphomatic infiltration
*	Malignant lymphomas.	X ray consultation, physical examinations
*	(Indolent lymphomas, multiple myeloma)	
*	Coagulation abnormalities. (Thrombophilias)	Bleeding manifestations

Internal Medicine III.

Semester:	8th	**Code:**	AOK-OAK273/AOK-OAK274
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	5/2	**Department:**	Internal Medicine
Credit:	5/-	**Form of Exam:**	Exam/Signature

Lecture **Practice**

*	Investigative methods	Problem oriented evaluation of the symptoms of patients with esophageal disorders
*	Nephrosis syndrome, non proliferative glomerulonephritises Proliferative glomerulonephritises	Practical aspects of the functional evaluation of pat with esophageal disorders (esophageal manometry, h pH-metry, evaluation of the biliary reflux)
*	Hypertension I: etiology and pathomechanism Renal failure (acute, chronic, dialysis treatmer	Upper gastrointestinal endoscopy
*	Hypertension II: therapy and complications Tubulointerstitial nephritis (bacterial, non bacterial), polycystic kidney disease	Symptomatic evaluation of the liver patient. Problem oriented laboratory investigation of the live patient.
*	Renal involvement in systemic diseases, kidne neoplasias Pregnancy and nephropathy	Symptoms of biliary obstruction, investigative meth for patients with biliary obstruction (symptoms, biochemistry, ultrasonography, ERCP)
*	Hyperlipidaemia Diabetes mellitus	Symptoms of patients with acute pancreatitis Diagnostic work up of patients with acute pancreati
*	Diabetes mellitus (acute and chronic complications) Diabetes mellitus (therapy) Introduction to endocrinology. Endocrine regulation. Anterior pituitary	Diagnostic work up of patients with chronic pancrea and pancreatic cancer Diagnostic work up of patients with CU and Crohn's disease.
*	Neurohypophysis	
*	Thyroid: developmental errors, inflammation, normofunctional goiter, tumors	Early identification of patients with colorectal cance Diagnostic methods.
*	Thyrotoxicosis	
*	Hypothyroidism	Symptoms of malabsorption, maldigestion, Diagnos workup: Hydrogen, c13 urea and starch breath test
*	Spring Holiday	Practical aspects of the diagnosis and therapy of patients with diabetes mellitus; the patient educatic
*	Parathyroid disorders	
*	Adrenal cortex: hypadrenia	Practical aspects of insulin therapy. Treatment of dyslipoproteinemias
*	Adrenal cortex: Cushing and Conn	
*	Obesity	Physical examination of patients with rheumatoid diseases
*	Hypogonadism	
*	Multiple endocrine neoplasias, paraneoplastic endocrinopathies,	
*	polyglandular autoimmune syndrome, Carcino syndrome	
*	Adrenal cortex: adrenogenital syndrome	
*	Osteoporosis	
*	Consultation	

Internal Medicine V.

Semester:	10th	**Code:**	AOK-OAK277/AOK-OAK278
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/16 hrs total	**Department:**	Internal Medicine
Credit:	3/-	**Form of Exam:**	Evaluation(5)/Signature

	Lecture	**Practice**
*	Degenerative diseases of the spine, gout	Medical thinking, general principles of differential diagnostics
*	Spondylarthritis	Differential diagnostics of diarrhea and constipation
*	Rheumatoid arthritis	Differential diagnostics in patients with abdominal p
*	Systemic lupus erythematodes, antiphospholip sy., principles of immunsuppressive therapy	Differential diagnostics of ascites
*	Fever, ion abnormalities	Differential diagnostics of occult and manifest gastrointestinal bleedings
*	Sjögren's syndrome, myositises, systemic scle (scleroderma)	Differential diagnostics of jaundice
*	Edema, hematuria, proteinuria	Differential diagnostics of the gastrointestinal motili disorders
*	Cyanosis, dyspnea	differential diagnostics of hypertension
*	Chest pain, syncope	differential diagnostics of chest pain and syncope
*	Spring Holiday	differential diagnostics of edema, cyanosis, dyspno
*	Anaemia, lymphadenomegaly, hematologic disorders	differential diagnostics of anaemias and lymph nod enlargement
*	Abdominal pain, acute abdomen	differential diagnostics in patients with renal diseas
*	National holiday	selected differential diagnostic problems, consultati
*	Jaundice, ascites	selected differential diagnostic problems, consultati
*	Diarrhoea, constipation, GI motility disorders	

Introduction to the approach to the critically ill patient-the basic bedside clinical skills

Semester:	8th	**Code:**	AOK-OAK241/AOK-OAK242
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	1/2	**Department:**	Anesthesiology
Credit:	-/2	**Form of Exam:**	Signature/Term Mark

Description

Our goal is to transfer a usable, bedside knowledge through simple situational simulation exercises for the fourt medical students. The basis of our practical training is the quick examination of the ABCDE of a critical patient a skilful acquisition of SBAR as a communication tool. By teaching the ABCDE quick test, we maintain the urgency subject, and we also try to establish the ability to create a "group diagnosis" that is so popular in the Anglo- countries.
We intend to introduce and promote SBAR as a unified communication tool at the university level. This tool is for quick, aggregated referrals and requests for help within and across disciplines.
The manual and practical skills defined by the curriculum will be embedded in short and simple situations complexity of situational exercises ranges from simple to complex. It provides an excellent opportunity to int previously acquired ECG analysis, pathophysiological and pharmacological knowledge. Initially, we aim to p simple cases (conscious patient) and then there is an increasing emphasis on truly critical situations. Towards th of the semester, we will integrate more severe arrhythmias and their effects on circulation, and then, in case of development, we will also simulate in an intensive classroom environment, focusing mainly on what moni opportunities the student may encounter there.
The writing of the situations was preceded by the study of the third-, and fourth-year curriculum.
We intend to introduce the concept of so-called non-technical skills. In addition to practicing the use of the too seeing the clinical context, we will place great emphasis on getting to know human factors (recognizing limita asking for help, communication, leadership, task delegation…).
Our goal is that by the end of the semester, the students will not see the life-threatening physiological differer pieces, but will experience and understand their effects on other organ systems, and recognize where and h intervene, when and from whom can ask for help. The students will use the available tools with sufficient confi or learn the methodology of reflective practice, which they can then use throughout their career.

Introduction to Aviation and Space Medicine

Semester:	7th or 9th	**Code:**	AOK-OAKV131
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Aviation and Space Medicine
Credit:	2	**Form of Exam:**	Evaluation(5)

week	**topic**
1.	The history, subject, position and role of aviation and space medicine in medical sciences.
2.	The effect of the dynamic factors of aviation on the pilot's body. The pilot's life-saving equipment.
3.	The effects of noise and vibration on the human body during flight.
4.	The basics of aerodynamics. The composition, layers and main physical properties of the atmosphere.
5.	The medical qualification of pilots and parachuters. The ergonomical characters of the cockpi an aircraft.
6.	The effects of short- and long-range flights from the passenger's point of view.
7.	Medical Evacuation by Air (MEDEVAC) Transportation of Sick and Wounded Patients by Air.
8.	The pilot's lifestyle, nutrition and sports.
9.	The adverse effects of changes in baropressure on the human body. The effect of reduction i partial oxygen pressure on the human body, its importance in aviation. Pressure oxygen breathing. The pressurized cabin.
10.	The psychophysiological characters of the pilot's personality. The fatigue and overload of airc
11.	Decompression sickness.
12.	Spatial alertness in flight, flight illusions. Motion sickness in aviation.
13.	The physiological effects of space flight on the human body. The basic principles of astronaut selection and training.

Laboratory Diagnostics: Use of Laboratory Tests in Practice

Semester:	8th or 10th	**Code:**	AOK-OAKV401
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Laboratory Medicine
Credit:	2	**Form of Exam:**	Evaluation(5)

week	topic
1.	Introduction to laboratory diagnostics
2.	Visit at the Department of Laboratory Medicine
3.	Endocrinology I. Case presentations in endocrinology – a case oriented approach: Functional tests and diagno algorithms in the investigation of endocrine abnormalities
4.	Endocrinology II. Case presentations in endocrinology – a case oriented approach: Functional tests and diagno algorithms in the investigation of endocrine abnormalities
5.	Laboratory diagnosis of renal diseases: Managing patients with acute and chronic renal failur diagnosis of impaired glomerular and tubular function. Differential diagnosis of proteinuria
6.	Cardiovascular risk assessment and laboratory management of patients with cardiovascular diseases: case discussions – Evidence-based practice of AMI, acute coronary syndrome and congestive heart failure. Differential diagnosis of acute chest pain and dyspnoea.
7.	Clinical significance and application of tumor markers
8.	Laboratory diagnosis of coagulation disorders: Cases on the diagnosis of thrombo-embolic ev (DVT, PE, congenital thrombophilias, lupus anticoagulant and anti-phospholipid syndrome) ar bleeding disorders
9.	Haematology cases: differential diagnosis of anaemia, diagnosis of monoclonal gammopathie of flow cytometry in haemato-oncology
10.	Autoimmun disorders
11.	Therapeutic drug monitoring: Role of TDM in patients treated with lithium, digoxin, antibiotic immunosuppressive medications.Toxicology: Cases on drug overdose and ingestion of substances.
12.	Postanalytical cases

Medical history-taking in Hungarian I.

Semester:	9th	**Code:**	AOK-OASZV701
Course type:	Practice	**Category:**	elective
Hours/week:	2	**Department:**	Med. Comm. and Translation
Credit:	2	**Form of Exam:**	Evaluation (5)

week	topic
1.	Revision: the structural format of history-taking, an overview
2.	**Neurology**: the most frequent neurological diseases and their associated complaints

3. Performing a neurological physical examination; a brief description of the most frequently use investigations in neurology
4. Taking a focused history in neurology: falls, loss of consciousness
5. Taking a focused history in neurology: different types of headaches
6. Taking a focused history in neurology: weakness, numbness/paresthesia
7. Taking a focused history in neurology: dizziness, hearing loss, speech disorders
8. Oral exam: history taking and physical examination in neurology
9. **Pediatrics**: a set of unique challenges; the components of pediatric history
10. Developmental milestones in children; the ways of inquiring about these milestones
11. Taking a focused history in pediatrics: vomiting and diarrhea
12. Taking a focused history in pediatrics: cough, dyspnea, failure to thrive, behavioral abnormal
13. Taking a focused history in pediatrics: accidents, convulsions
14. Oral exam: case summaries in neurology and pediatrics - the students' oral case reports base their own clinical practice

Medical history-taking in Hungarian II.

Semester:	10th	**Code:**	AOK-OASZV702
Course type:	Practice	**Category:**	elective
Hours/week:	2	**Department:**	Med. Comm. and Translation
Credit:	2	**Form of Exam:**	Evaluation (5)

week **topic**

1. **Dermatology**: the skin and its appendages; the most typical dermatological diseases and th symptoms
2. Approaching skin lesions: duration, location, provoking or relieving factors, associated sympt underlying malignancies, etc.
3. Taking a focused history in dermatology: an itchy rash
4. Taking a focused history in dermatology: a nevus that has enlarged
5. **Ophthalmology**: vision, visual disorders, the most frequent diseases of the eyes
6. Eye injuries, the patients' complaints, ophthalmological examinations
7. Taking a focused history in ophthalmology: red and itchy eye, cataract, glaucoma
8. Oral exam: history taking in dermatology an ophthalmology
9. **ENT**: the most frequent ENT diseases and their associated complaints
10. Performing ENT examinations, giving instructions to patients
11. Taking a focused history in ENT: otalgia and hearing loss
12. Taking a focused history in ENT: hoarseness and sore throat
13. Selected case summaries in the clinical fields covered in the semester
14. Oral exam: case summaries in the medical fields covered in the semester.
    The students' oral case reports based on their own clinical practice

Medical Psychology I.

Semester:	7th	**Code:**	AOK-OAK421/AOK-OAK422
Course type:	Lecture/Practice	**Category:**	compulsory

Hours/week:	1 (for 5 weeks)/ 2 10 weeks)	**Department:**	Behavioural Sciences
Credit:	2/-	**Form of Exam:**	Signature/Signature

	Lecture	**Practice**
*	Medical psychology and border areas	Adherence in type patient–physician relationsh
*	Communication Strategies e.g. suggestive communication	CLASS model, bio-psycho-social model, systen theory
*	Health promotion, Health protective behavior	Active listening skills and Acknowledgement of Emotion strategies
*	Symptoms and illness: perception (pain, place Health and illness related beliefs / The psychological process of becoming ill	Suggestive Communication
*	Stress and Health / Chronic illness, death, dyi	Motivational interview I-II.
*		Building competence through video analyses
*		Clinical Practices (8-10. week)
*		SKILL lab practice I-II.

Medical Psychology II.

Semester:	8th	**Code:**	AOK-OAK431/AOK-OAK432
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	1/3(for 5/5 weeks)	**Department:**	Behavioural Sciences
Credit:	2/-	**Form of Exam:**	Signature/Term Mark

week	**Lecture**	**Practice**
1.	Introduction. Psycho-neuro-immunology, Psychosomatic Perspective	Review. Medically unexplained symptoms (MU
2.	Attachment. Personality. Personality Disorders	Management of upset patient
3.	Anxiety Disorders	Communication with different age groups
4.	Psychological Interventions I-II.	Burnout
5.	Counseling	Situational exercises

Modern Complex Therapy of Malignant Diseases in Clinical Practice

Semester:	9th	**Code:**	AOK-OAK352
Course type:	Seminar	**Category:**	compulsory
Hours/week:	1	**Department:**	Oncolotherapy
Credit:	2	**Form of Exam:**	Term Mark

topic

* The essentials of medical therapy: chemotherapy, endocrine therapy, biological agents
* Radiotherapy, The technical basics of radiotherapy
* Supportive and palliative therapy, holistic care
* Gastrointestinal malignancies

* Breast cancer
* Gynecological malignancies
* Genitourinaryl malignancies
* Head and neck cancers
* Dermatological cancers, melanoma
* Central nervous system, and pediatric malignancies
* Lung cancer
* Rare malignant diseases
* Multidiscplinary approaches and team-work
* Psychooncological aspects
* Final report (online)

Rehabilitation medicine – basics of theory and daily practice

Semester:	8th, 10th	**Code:**	AOK-OAKV501
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Medical Rehabilitation
Credit:	2	**Form of Exam:**	Evaluation(5)

topic

* The approach of disability
* Concept of comprehensive rehabilitation
* The rehabilitation process, term and content of the rehabilitatio programme
* The rehabilitation consultation
* The functional assessment
* Main interventions used in rehabilitation
* Prevention and rehabilitation
* The main types of rehabilitation: post stroke, brain injury, spinal cord injury, post orthopedic-traumatological surgery, amputees, rheumatological, cardiological, pulmonological, rehabilitation of children
* Medical aids used in rehabilitation

Neurology I.

Semester:	9th	**Code:**	AOK-OAK381/AOK-OAK382
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	1/2	**Department:**	Neurology
Credit:	3/-	**Form of Exam:**	Exam/Signature

week **Lecture** **Practice**

1.	Neurological examination. Evidence-based medicine, personalised medicine.	Introduction, the procedure of medical diagnos (history, physical examination, instrumental examinations, therapy, limitations), history of neurology and its place in medicine, special iss in neurology (limitations of direct examination, interpretation of indirect symptoms and signs, neurological localisation). Central and peripher nervous system.
2.	Spinal cord: neurological localisation.	Resting potential, electrotonic potential, action potential, neurotransmitters, receptors. Tendo reflexes, exteroceptiv reflexes, muscle tone. Tl anatomy and function of pyramidal tract, pyra signs. Neuromuscular junction. The symptoms upper and lower motor neuron damage. Muscl strength scale.
3.	Pyramidal and extrapyramidal systems.	Basal ganglia: anatomy, function, symptoms, testing (parkinsonism, chorea, ballismus, athet dystonia). Symptoms of peripheral nerve dama most important peripheral nerves, symptomatology, roots
4.	Somatosensory system. Pain.	Goll-Burdach tract, spinothalamic tract, pain– anatomy, function, symptoms, testing.
5.	Brain stem, cranial nerves: neurological localisation.	Neck stiffness, meningeal irritation signs (Kern Brudzinski), irritation of the roots (Lasegue an femoral traction sign). Cranial nerves: I-VI, anatomy, function, testing. Supranuclear gaze disturbances.
6.	Cerebral lobes: neurological localisation.	Cranial nerves: VII-XII anatomy, function, symptoms, testing. Peripheral and central facia and hypoglossal palsy. Bulbar and pseudobulb symptoms.
7.	Circulation of the nervous system.	Cerebral lobes: frontal, temporal, occipital, par lobar functions, symptoms, testing. Liberation reflexes. Speech disturbances: aphasia, dysarhtria, aph
8.	Cerebellum: neurological localisation.	Buffer for the first MTO
9.	Autonomic nervous system. Limbic system.	Brain circulation. Cerebellum: anatomy, functic symptoms (archi, paleo, neocerebellum), testir
10.	Impaired awareness. Brain death.	Vegetative system: anatomy, function, sympto tests. Limbic system
11.	Neuroradiological diagnostics.	Alteration of the consciousness, Causes, differentiation, examination of the patients wit impaired consciousness, brain death.
12.	Neurophysiological examinations.	Instrumental exams in neurology: imaging (ultrasound, CT, MRI, angiography etc), electrophysiology: EEG, evoked potentials, EN EMG
13.	CSF diagnostics.	Cerebrospinal fluid, indication of spinal tap, interpretation of results.

Neurology II.

Semester:	10th	**Code:**	AOK-OAK383/AOK-OAK384
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	1/1	**Department:**	Neurology
Credit:	-/3	**Form of Exam:**	Signature/Term Mark

week	**Lecture**	**Practice**
1.	Ischemic stroke.	Cerebrovascular diseases (TIA, ischaemic strok apoplexy, subarachnoideal hemorrhage, sinus thrombosis)
2.	Hemorrhagic stroke.	
3.	Epilepsy. Sleep disturbances.	Epilepsy (epileptic seizures epilepsy, classificat diagnosis, therapy)
4.	Neurocognitive disorders.	
5.	Extrapyramidal/Movement disorders I.	Extrapyramidal diseases (Parkinson disease, Parkinson syndromes, Huntington chorea, Wils disease, essential tremor)
6.	Extrapyramidal/Movement disorders II.	
7.	Neuropathic pain.	
8.	Diagnosis and treatment of headaches.	Headaches (migraine, cluster, tension type headache), tumors of the CNS
9.	Tumors of the central nervous system.	
10.	Muscle and motoneuron disorders.	
11.	Autoimmune neurological disorders.	Neurological diseases of immunological origin (multiple sclerosis, myasthenia gravis, Guillain-Barré syndrome), ALS
12.	Neuroinflammatory disorders.	Inflammatory diseases of the CNS – meningitis encephalitis
13.	Case presentations	Repetition, feedback

Neurosurgery

Semester:	10th	**Code:**	AOK-OAK321/AOK-OAK322
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	1/1	**Department:**	Neurosurgery
Credit:	2/-	**Form of Exam:**	Evaluation(5)/Signature

week	**Lecture (2 hrs/every 2nd week)**	**Practice (2 hrs/every 2nd week)**
1.	Introduction to neurosurgery, Emergency neurosurgical cases I.: Traumatic Brain Injury	Material of the lecture in practice.
2.	Diagnostic procedures in neurosurgery, Emerg neurosurgical cases II: Head I (intracranial ma lesions, infection)	Material of the lecture in practice.

3.	Emergency neurosurgical cases III: Head III (cerebrovascular), Spine (trauma, degenerativ infection)	Material of the lecture in practice.
4.	Cerebrovascular diseases	Material of the lecture in practice.
5.	Neurosurgical treatment of central nervous sy tumors	Material of the lecture in practice.
6.	Spine surgery: traumatic injuries, degenerativ disorders, infections	Material of the lecture in practice.
7.	Other: Endovascular treatment, movement disorder and pain surgery, pediatric neurosurg and hydrocephalus	Material of the lecture in practice.

Nuclear Medicine

Semester:	7th or 9th	**Code:**	AOK-OAKV471
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	1	**Department:**	Nuclear Medicine
Credit:	1	**Form of Exam:**	Evaluation (5)

week	**topic**
1.	Nuclear medicine physics History Basic principles of nuclear physics and radiation biology
2.	Instrumentation of nuclear medicine Radiation detector systems Gamma camera Single pl emission computed tomography Positron emission computed tomography (PET), PET/CT
3.	Radiopharmacology Tracer principle Production of radionuclides Radiopharmaceutical chemist
4.	Nuclear medicine in disorders of bones and joints Bone scintigraphy Joint scintigraphy Bone ma scintigraphy Complementary investigations of the bones and joints
5.	Nuclear cardiology I. Myocardial perfusion studies Curriculum 2017/2018 Faculty of Medic Clinical Module
6.	Nuclear cardiology II. Radionuclide ventriculography (RNV) at rest RNV during stress ECG-RNV with SPECT Miscellaneous nuclear cardiological methods
7.	Nuclear medicine investigations of the respiratory system Lung perfusion investigation ventilation investigations Diagnosis of pulmonary embolism
8.	Nuclear medicine in gastroenterology Hepatobiliary scintigraphy Differential diagnostics of foca lesions Scintigraphy of the salivary glands Oesophagus passage study Gastric motility Gastrointestinal bleeding site detected by radioisotopes Meckel's diverticulum dete Investigations of intestinal inflammations Investigations in malabsorption (Schilling test)
9.	In vitro nuclear medicine assays with radionuclides Principles of immunoassays Clinical applica of immunoassays
10.	Endocrinological aspects of nuclear medicine Thyroid scintigraphy Parathyroid scintigraphy Ad scintigraphy Neuroendocrine tumor imaging techniques
11.	Nuclear medicine in urogenital disorders Static renal scintigraphy Dynamic studies Vesicour reflux study Evaluation of renal transplants Scrotum scintigraphy Radionu hysterosalpingography * Nuclear medicine of the central nervous system (CNS) angioscintigraphy and blood-brain barrier scintigraphy Cerebrospinal fluid scintigraphy Brain S studies Neuroreceptor SPECT Brain tumors evaluated by SPECT Brain PET studies
12.	Nuclear oncology Tumour markers Tumouraffin radiopharmaceuticals and their applica Oncological aspects of bone marrow scintigraphy Scintigraphy of the lymphatic system, se lymph node detection Oncological aspects of PET, PET/CT and SPECT/CT studies

13. Nuclear medicine in therapy Thyroid disorders treated with radioisotopes Radiosynovec Palliative treatment of bone metastases Possibilities in radioimmunotherapy Neuroendc tumours treated with 131-I-MIBG 32-P treatment in polycythaemia vera

14. Nuclear medicine physics History Basic principles of nuclear physics and radiation biology

Obstetrics and Gynaecology I.

Semester:	7th	**Code:**	AOK-OAK501/AOK-OAK502
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	3/2	**Department:**	Obstetrics and Gynaecology
Credit:	4/-	**Form of Exam:**	Exam/Signature

Lecture	**Practice**
* Introduction. Concepts of obstetrics and gynaeco and its role in modern medicine. Historical review	Prenatal care. Obstetrical history, physical examination.
* Development and function of the placenta. Development of the fetus.	Pregnancy tests
* Endocrinology of pregnancy.	Induction of labour
* Obstetrical anatomy. Diagnosis of pregnancy.	Ultrasonography
* Genital and extragenital changes during pregnan	Follow up examinations during pregnancy
* Signs of the fetal life. The mature placenta, umbi cord, membranes and amniotic fluid.	Genetics, CVS, AC, Cordocentesis
* Intrauterine position of the fetus.	Preparation for labour
* Antenatal care and examinations.	CTG, OCT, AS, X ray
* Normal mechanism of labour.	Normal delivery
* Patient care during labour.	Induced abortion. Surgical aspects.
* Pharmacokinetics in pregnancy. Registration of th uterine activity.	Forceps delivery, vacuum extraction
* Diseases of the trophoblast.	Breech presentation
* Monitoring of the fetus and placenta.	Postpartal hemorrhage
* Physiology of the uterus.	Caesarean section
* Obstetrical ultrasonography.	
* The newborn. Care and management. The puerperium.	
* Abortion.	
* Ectopic pregnancy.	
* EPH-gestosis.	
* Breech presentation and delivery.	
* Multiple pregnancy.	
* Premature labour.	
* Management of delivery. Induction of labour.	

* Intrauterine death. Postmaturity. Dysmaturity.
* Alternative delivery methods.

Obstetrics and Gynaecology II.

Semester:	8th	**Code:**	AOK-OAK503/AOK-OAK504
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	3/2	**Department:**	Obstetrics and Gynaecology
Credit:	4/-	**Form of Exam:**	Evaluation(5)/Signature

Lecture	**Practice**
* Uterine rupture, postpartal haemorrhage, abnorm puerperium.	Gynaecological history taking, physical and pelvic examinations.
* Causes of 3rd trimester bleeding (premature separation of the placenta, DIC, plac. praevia).	Screening methods for cervical cancer: cytology.
* Dysmaturity. Hyperemesis.	Screening methods for cervical cancer: colposcop
* Erythroblastosis fetalis.	Curettage, cervical biopsy, electrocauterisation, conisation.
* Dystocia (difficult labor) pelvic dystocia due to ut dysfunction, dystocia of fetal origin, dystocia of placental origigin.	Female infertility, diagnostic procedures.
* Infectious diseases and pregnancy.	Infertility study of the male partner.
* Respiratory, renal, neurologic, endocrine and metabolic diseases.	Labor procedures of infertility.
* Benign tumors of the uterus.	Conception control.
* Diseases of the cervix. Cancer screening.	Endoscopy.
* Pelvic inflammatory diseases. Diseases of the Fallopian tube.	Abdominal gynaecological operations.
* Medical complications during pregnancy. (Heart, haematologic, gastrointestinal diseases.)	Vaginal surgical procedures.
* Genetic disorders.	Adolescent gynaecology.
* Birth control. Contraception.	Physiotherapy in gynaecology.
* Abnormalities of the menstruation.	Radio- and chemotherapy.
* Climacteric.	Psychosexual diseases.
* Ethical aspects of Obstetrics-Gynaecology.	
* Endometriosis.	
* Assisted fertilization in the female.	
* Gynaecological endoscopy.	
* Infertility of the female.	
* Benign ovarian tumors.	
* Malignant ovarian tumors.	

* Adolescent gynaecology.
* Infertility of the male.
* Diseases of the vulva and vagina.

Ophthalmology

Semester:	9th or 10th	**Code:**	AOK-OAK491/AOK-OAK492
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/2	**Department:**	Ophthalmology
Credit:	3/-	**Form of Exam:**	Exam/Signature

week	**Lecture**	**Practice**
1.	General introduction	VA (visual acuity)
2.	Ocular anatomy and physiology	Pupil reactions/eye movments/color saturation
3.	Lids, lacrimal system	VF (visual fields)
4.	Glaucoma	Instruments (ophthalmoscope, slit lamp, tonor etc)
5.	Conjunctiva	Emergencies (CRAO, palsies, injuries, A-AION)
6.	Cornea	Surgeries
7.	Lens	Photos
8.	Sclera and orbit	Ocular injuries and acute red eye
9.	Uvea	Contact lens
10.	Retina	Lasers (argon, YAG, diode, excimer, femto)
11.	Retinal detachment and vitreous	Pediatric and eye movements
12.	Neuro-ophthalmology	OCT and angio
13.	Eye and systemic diseases	Ultrasound
14.	Pediatric	Consultations

Oral and Maxillofacial Surgery, Stomatology

Semester:	9th	**Code:**	AOK-OAK251/AOK-OAK252
Course type:	Lecture/Seminar	**Category:**	compulsory
Hours/week:	1/1	**Department:**	Oral and Maxillofacial Surgery
Credit:	2/-	**Form of Exam:**	Exam/Signature

topics:

- Cleft lip and palate surgery
- Anatomy of the oral cavity. General principles of dentistry. Pediatric dentistry.
- Principles of trauma management. Conservative treatment of facial trauma. Mandibular fracture
- Midface, frontal skull base fractures
- Etiology and diagnosis of oral cancer
- Medication related osteonecrosis of the jaws
- Dental and facial prostheses
- Implantology. Preprosthetic surgery.
- Medical consequences of oral and dental diseases
- Dental trauma

- Orthognathic surgery
- Distraction osteogenesis
- Trismus
- Temporomandibular joint surgery
- Oral symptoms of health conditions
- Periodontal disease and general consequences
- Surgical management of oral cancer
- Salivary gland diseases
- Virtual planning in maxillofacial and dental surgery
- Dentoalveolar surgery. Cysts.
- Orthodontics
- Reconstruction of orofacial defects
- Differential diagnosis of facial pain
- General medicine in perioperative oral and maxillofacial care
- Odontogenic infections
- Emergencies in oral and maxillofacial surgery.
- Craniofacial disorders
- Plastic and cosmetic surgery in the maxillofacial region

Orthopedics

Semester:	7th	**Code:**	AOK-OAK391/AOK-OAK392
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/2	**Department:**	Orthopedics
Credit:	3/-	**Form of Exam:**	Exam/Signature

week	**Lecture**	**Practice**
1.	Field of orthopaedics, history. Diagnosis and treatment of orthopaedic disorders.	The course of the examination of the patients locomotor system diseases. Diagnostic means. ray demonstration. Case report.
2.	Disorders of the spine in childhood. Scoliosis.	Examination of the neck and cervical spine. Disorders of the neck and cervical spine. X-ray demonstration. Case report.
3.	General affections of the skeleton	Examination of the trunk and spine. Disorders the trunk and spine. X-ray demonstration. Cas report.
4.	Congenital deformities and disabilities	Examination of the scoliosis. Diagnostic means ray demonstration. Case report.
5.	Disorders of the foot (congenital club foot, pes planovalgus)	Examination of the shoulder and elbow. Disorc of the shoulder and elbow. X-ray demonstratic Case report.
6.	Arthritis, osteomyelitis, tuberculous arthritis	Examination of the forearm, wrist and the han Disorders of the forearm, wrist and the hand. demonstration. Case report.
7.	Bone tumors	Examination of the hip regio. Disorders of the Messuring the length of the limbs. X-ray demonstration. Case report.
8.	Infections and degenerative disorders of the s Spondylolysis, spondylolisthesis.	Examination of the osteoarthritis of the hip an the knee. X-ray demonstration. Case report.

9.	Disorders of the neck and upper limbs	Examination of the knee. Disorders of the knee ray demonstration. Case report.
10.	Congenital dislocation and dysplasia of the hip	Examination of the leg, ankle and foot. Disorde the leg, ankle and foot. X-ray demonstration. C report.
11.	Other hip disorders in childhood (Perthes disea slipped upper femoral epiphysis. Transient arth of the hip.)	Infections of the bone. Arthritis. Bone tumors. ray demonstration. Case report.
12.	Osteoarthritis of the hip. Idiopathical necrosis capitis femoris.	Osteoarthrosis. General affections of the skele (Neurological disorders). X-ray demonstration. report.
13.	Disorders of the knee.	
14.	Neuromuscular diseases, general affections of skeleton	

Oto-Rhino-Laryngology

Semester:	9th or 10th	**Code:**	AOK-OAK301/AOK-OAK302
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/3	**Department:**	Oto-Rhino-Laryngology
Credit:	4/-	**Form of Exam:**	Exam/Signature

	Lecture	**Practice**
*	Oto-rhino-laryngology in medicine.	Examination equipment in oto-rhino-laryngolo
*	History of oto-rhino-laryngology.	
*	Anatomy and physiology of the ear.	Practice in use of forehead mirror and ear speculum.
*	Diseases of the external ear and their treatment.	Examination of the external auditoy meatus ar eardrum.
*	Acute inflammation of the middle ear.	Practice in cleaning the external meatus. Disea of the external meatus. Ear drops. Examinatio the Eustachian tube.
*	Complications of acute otitis media.	Demonstration of eardrum perforations and va ear diseases.
*	Non-suppurative diseases of the middle ear.	X-ray, CT, MR pictures of the ear.
*	Chronic otitis media. Complications of chronic otitis media.	Examination of hearing by means of tuning fo
*	Reconstruction of the hearing mechanism.	Measurement of hearing loss. The usual meth recording hearing by audiometer. Demonstrati various types of pure-tone audiograms. Hearin aids.
*	Anatomy of the inner ear. The vestibular and cochl system.	Demonstrations of otoneurological examinatio
*	Examination of hearing and the vestibular system.	Clinical examination of the nose and nasal cav Practice in using nasal speculum. Posterior rhinoscopy. Demonstration of diseases of nasa cavity. Treatment of nasal injuries.

* Diseases of the inner ear: toxic damage to the ear, inflammatory and vascular lesions of the inner ear. Acoustic trauma. Meniere's disease.	Haemorrhage from the nose. Treatment of epistaxis.. Demonstration of Bellocq pack.
* Diseases of the inner ear: acoustic neuroma, temp bone fractures.	Treatment of sinusitis. Nasal drops. X-ray, CT, pictures of nasal sinuses. Demonstration of puncture of the maxillary sinus. Differential diagnosis of headache.
* Anatomy of the nose and nasal sinuses.	Examination of the mouth and pharynx. Demonstration of pharyngeal diseases.
* Diseases of the external nose and the nasal cavity.	Demonstration of tumors in the larynx and hypopharynx.
* Sinusitis. Treatment and complications. Fractures c sinuses.	Examination of the larynx. Demonstration of laryngeal diseases. Anaesthesia in oto-rhino-laryngology.
* Haemorrhage from the nose. Tumors of the nose a paranasal sinuses.	Demonstration of patients after tracheostomy. Cleaning of tracheostomy tube.
* Anatomy of the pharynx. Diseases of the nasophar	Demonstration of esophagoscopes and bronchoscopes. The method of introducing the naso-esophageal nutrition tube. Differential diagnosis of neck nodes in practice.
* Adenoid hyperplasia. Benign and malignant nasopharyngeal tumors.	
* Acute and chronic inflammatory diseases of the pharynx.	
* Acute and chronic tonsillitis. Peritonsillar abscess a complications.	
* Indications of tonsillectomy. Tumors of mesophary	
* Functional anatomy of the larynx. Acute and chron diseases of the larynx.	
* Injuries of the larynx. Paralysis of the larynx.	
* Tumors of the hypopharynx and the larynx.	
* Classifications of malignant laryngeal tumors.	
* Treatment of laryngeal tumors.	
* Diseases of the oesophagus and the inferior respira tract.	
* Differential diagnosis of neck nodes.	

Pediatrics I.

Semester:	9th	**Code:**	AOK-OAK311/OAK312/OAK313
Course type:	Lecture/Practice/Seminar	**Category:**	compulsory
Hours/week:	1/2/2	**Department:**	Pediatrics
Credit:	-/-/5	**Form of Exam:**	Signature/Signature/Term Ma

week	**Lecture**	**Practice/Seminar**

1.	Paediatric History Taking and Physical Examin Age- and developmentally-appropriate history How to perform a paediatric examination (to include respiratory, cardiovascular, gastrointes central and peripheral nervous system, musculoskeletal, skin, eyes, ears/nose/throat) Newborn examination	pBLS – Paediatric Basic Life Support Prioritise the care of a sick child - Use a systematic approach (ABCDE) to the c of a sick child - Demonstrate basic airway management (incl appropriate airway positioning, bag-valve mas ventilation) - Deliver age-appropriate cardio-pulmonary resuscitation (pBLS) - Recognise the need for help and identify how obtain it
2.	General Paediatrics – Growth Normal growth in childhood (newborn-adolescence) Measurement; Puberty; Plot and interpret a gr chart; Main physiological changes from birth t adulthood	Skills/Procedures Common practical procedures in children (venepuncture, urinary catheterisation, lumbar punture)
3.	General Paediatrics – Development Developmental milestones of children 0-5 yea Developmental screening and assessement; A and developmentally-appropriate history and examination	General growth and development Normal growth in childhood (newborn-adolesc Plot and interpret a growth chart Main physiological changes from birth to adult Developmental milestones of children 0-5 year Developmental examination in a child under 5 years
4.	General Paediatrics – Nutrition Normal feeding and eating behaviour from bir adulthood *(Breastfeeding, Formula feeding, Principals of normal nutrition of childhood)*	Nutrition, Feeding Infant feeding Failure to thrive Malnutrition Obesity
5.	Laboratory and Microbology in Paediatrics Laboratory and microbiological investigations i Paediatric conditions Common (hematological and biochemistry) laboratory tests in children – normal values	Fluid balance Dehydration Fluid therapy in emergency care - Types of intravenous fluids, Calculate intravenous fluids (bolus and maintenance) etc. Shock management
6.	Acid base and electrolyte disorders Common acid base disorders and common cau in Paediatrics Interpret blood gases in children – normal valu	Recognition of a sick child, Paediatric Emerger Assessment of a seriously ill child Respiratory failure Sepsis Anaphylaxis ALTE
7.	Pharmacology/Drugs in Paediatrics Prescription by weight, age and body surface in children Differences in drug metabolism between infan children and adults Special routes of drug administration in childre e.g. inhalation with babyhaler, suppository etc Calculate (with given doses): Common analge Common antibiotics, Oral rehydration solution, Common asthma medications (eg. beta-2 ago steroids), Common emergency drugs (eg. adrenaline for anaphylaxis)	Preventive paediatrics - Screening and Immunisation Role of prevention in Paediatric population Vaccinations, immunisation programme in Hun Neonatal screening

8.	Antibiotic therapy in Paediatrics Common paediatric bacterial infections, approporiate antibiotic use	Infectious diseases Common viral infections in Pediatrics Common bacterial infections in Pediatrics Neuroinfections Management of a febrile infant TBC
9.	Paediatric Radiology Ordering Radiology Investigations in Paediatri Radiation, Radiation Free Imaging, Neuroimaging/Imaging of Musculoskeletal/GIT/Urogenital Tract, Interventions	Paediatric Surgery Congenital malformations of the gastrointesti tract (Esophageal atresia, TOF, Duodenal atres Intestinal atresia, Anus atresia, Malrotation, Hirschprung disease) Acute abdomen (Appendicitis, Intussusceptio Volvulus) Congenital diaphragmatic hernia Acute scrotum, Inguinal hernia, Hydrocele, Undescended testis Surgical management of congenital urinary tra malformations (PUJ obstruction, VUR, hypospadias)
10.	Newborn, infant Physiologic characteristics of the newborn, ter and preterm infants Maternal diseases/drugs affecting the newbor (diabetes, gestational diabetes, lifestyle (alcoh drugs, smoking), hypertension, chronic conditi	Paediatric Emergencies (Trauma/Accident) Paediatric accidental injuries *(Burn injury prim care, Airway and GI foreign body managemen Road Accidents)*
11.	Toxicology Poisoning (General principles of toxicology)	Neonatology 1. (Neonatal Care in Delivery Room/Resuscitation) Adaptation to extrauterine life; Delivery room Routine examination of the newborn infant Neonatal Resuscitation
12.	New Trends in Paediatrics	Child Protection Risk factors for child maltreatment Types of child abuse and neglect Symptoms, signs and red flags of child maltreatment Procedure for raising concerns about child maltreatment
13.	Ethics in Paediatrics, Communication	Child and Adolescent Psychiatry
14.	Child and Adolescent Psychiatry	

Pediatrics II.

Semester:	10th	**Code:**	AOK-OAK314/AOK-OAK315
Course type:	Practice/Seminar	**Category:**	compulsory
Hours/week:	2/2	**Department:**	Pediatrics
Credit:	-/4	**Form of Exam:**	Signature/Term Mark

week	**topic**
1.	Neonatology 2.

Respiratory diseases of the newborn *(TTN, MAS, infection (sepsis, pneumonia), RDS, congen malformations)*
Jaundice - physiologic *(breast milk, breastfeeding)*, pathologic *(AB0/Rh incomp)*
Neonatal Sepsis *(Early and late onset)*, Congenital infections
Neonatal convulsion *(Metabolic, Congenital malformation, Bleeding/Ischaemia, Infection, Hyp ischemic encephalopathy)*
Summary of problems with preterm babies *(RDS, Intracranial hemorrhage, Necrotizing enterocolitis, Persistent ductus arteriosus, Bronchopulmonary dysplasia, Retinopathy of prematurity (ROP))*

2. Gastroenterology
Problems of infant feeding *(Gastro-oesophageal reflux disease, Pyloric stenosis)*
Malabsorption/malnutrition syndromes *(Inflammatory bowel disease Food adverse reactions);* Constipation
3. Respiratory disorders 1
Upper respiratory tract infection *(pharyngitis, laryngitis, epiglottitis, otitis media)*
Communitiy acquired bacterial pneumonia in children; Cystic fibrosis
4. Respiratory disorders 2
Pulmonary physiology, pulmonary function tests
Wheeze *(Viral induced wheeze, obstructive bronchitis, asthma bronchiale, bronchiolitis)* Acut therapy of respiratory distress *(O_2 delivery, non-invasive, invasive ventillation)*
5. Diabetes in childhood
Diabetes mellitus; Diabetic ketoacidosis, treatment; Evaluation of hypoglycemia in childhood
6. Endocrinology
Endocrine emergencies; Thyroid disorders; Evaluation of growth retardation, short stature
Disorders of sexual differentiation and puberty (precocious/delayed)
7. Nephrology
Congenital urinary tract malformations; Urinary tract infection in children
Nephrosis syndrome, Nephritis syndrome; Acute kidney injury; Hypertension; Enuresis
8. Cardiology
Symptoms and differential diagnosis of congenital heart defects; Hypertension
Arrhythmias *(SVT, Bradycardia, VT, VF);* Cardiogenic shock *(Diagnosis, Differential diagnosis, Therapy)*
9. Hematology
Anaemia in paediatrics
Bleeding disorders, coagulopathies in children, Immune thrombocytopenic purpura (ITP)
Acute leukemia in pediatrics (ALL), lymphoma
10. Oncology
Most common solid tumors in Peadiatrics (CNS tumours, Lymphoma, Neuroblastoma, Wilms tumour); Principles of treatment of malignancies, Side effects of treatment, Supportive care
11. Neurology
Differential diagnosis of a floppy infant *(HIE, Haemorrhage, SMA, Myopathies, Metabolic)*
Hydrocephalus
Headache in childhood *(Migrain, Secondary headaches)*
Seizures in childhood *(Febrile seizure, Epilepsy, Acute symptomatic seizure)*
Demyelinating of the central nervous system *(Guillain-Barré syndrome)*
12. Metabolic Disorders, Genetics
General rules of inborn errors of metabolism; Newborn screening of inherited metabolic disor
Chromosomal abnormalities (Down, Klienefelter, Turner syndrome)
13. Immunology
Classification, presentation and investigation of immun defects
14. Case based discussions/Consultation

Pharmacology and pharmacotherapy II.

Semester:	7th	**Code:**	AOK-OAK291/AOK-OAK292
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	4/2	**Department:**	Pharmacology

Credit: 2/- **Form of Exam:** Comprehensive Exam/ Signatu

week	Lecture	Practice
1.	Opioid analgesics. Anxiolytics. Sedatohypnotics.	Requirements.
2.	Antiepileptic drugs. General anaesthesia.	Anxiolytics, sedatohypnotics.
3.	Antipsychotic drugs. Antidepressants.	Opioids, antiepileptic drugs.
4.	Pharmacotherapy of neurodegenerative disorc Central muscle relaxants. Therapy of migraine	General anaesthesia, antiparkinson drugs.
5.	Treatment of bleeding disorders and anaemia, fibrinolytics. Anticoagulants. Inhibitors of platelet aggregat	Antipsychotics and antidepressants.
6.	Diuretic drugs. Antihypertensive drugs.	MTO I. - Drugs acting on the CNS.
7.	Pharmacotherapy of hyperlipoproteinemias. Pharmacotherapy of diabetes mellitus.	Drugs acting on the blood. Therapy of migrain
8.	Antiarrhythmic drugs. Pharmacotherapy of acute and chronic corona syndrome.	Therapy of hyperlipoproteinemias and hypertension.
9.	Therapy of heart failure I. Therapy of heart failure II.	Pharmacotherapy of diabetes, angina pectoris.
10.	Pharmacology of male and female sexual hormones. Contraceptives. Pharmacotherapy of infertility and erectile dysfunction.	Pharmacotherapy of heart failure and arrhythn
11.	Drugs used in the chemotherapy of neoplastic diseases I. Drugs used in the chemotherapy of neoplastic diseases II.	MTO II. - Drugs acting on the CVS. Pharmacol of sexual hormones. Contraceptives.
12.	Drugs that influence the GIT I. Drugs that influence the GIT II.	Pharmacotherapy of infertility and erectile dysfunction. Therapy of neoplastic diseases.
13.	Toxicology I. Toxicology II.	Discussion of drugs that influence the GIT.
14.	Principles of immunopharmacology. Discussion.	MTO III. - Pharmacology of sexual hormones, contraceptives, infertility, erectile disfunction, neoplastic diseases, GIT and toxicology. Discus

Pharmacology Cases I.

Semester:	8th	**Code:**	AOK-OAKV271
Course type:	Practice	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Pharmacology
Credit:	2	**Form of Exam:**	Evaluation(5)

week	Topic:
1.	Requirements
2.	Pharmacodynamics: drug-receptors, dose-response curves
3.	Pharmacodinamic interactions
4.	Pharmacokinetics I.
5.	Pharmacokinetics II.
6.	Pharmacokinetic question of repeated drug administration

7. Parasympathomimetics
8. Parasympatholytics, case reports
9. Sympathomimetics
10. Sympatholytics
11. Review test of pharmacology of ANS I.
12. Review test of pharmacology of ANS II.
13. Pharmacology of NSAIDs. Case report: Aspirin and Reye syndroma.
14. Discussion.

Pharmacology Cases II.

Semester:	9th	**Code:**	AOK-OAKV272
Course type:	Practice	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Pharmacology
Credit:	2	**Form of Exam:**	Evaluation(5)

week **Topic:**

1. Requirements
2. Pharmacology of opioids.
3. Pharmacotherapy of pain. Case report.
4. CNS depressants. Case reports.
5. Review test questions I.
6. Review test questions II.
7. Parkinson's disease. Case report. Review test questions.
8. Antipsychotics. Case report. Review test questions.
9. Review test questions III.
10. Pharmacotherapy of hypertension. Case report. Review test questions.
11. Pharmacotherapy of angina pectoris. Case report. Review test questions.
12. Pharmacotherapy of heart failure. Case report. Review test questions.
13. Review test questions IV.
14. Discussion.

Psychiatry I.

Semester:	9th	**Code:**	AOK-OAK441/AOK-OAK442
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	1/1	**Department:**	Psychiatry
Credit:	2/-	**Form of Exam:**	Evaluation(5)/Signature

week	**Lecture**	**Practice**
1.	Introduction to Psychiatry	Psychiatric patient examination related to the lecture
2.	Psychiatric Interview, Psychopathology I.	Psychiatric patient examination related to the lecture
3.	PsychopathologyII.	Psychiatric patient examination related to the lecture
4.	ADHD, PTSD	Psychiatric patient examination related to the lecture
5.	Disorders of Attachment	Psychiatric patient examination related to the lecture

6.	Anxiety Disorders	Psychiatric patient examination related to the lecture
7.	Mood Disorders	Psychiatric patient examination related to the lecture
8.	Bipolar Affective Disorders	Psychiatric patient examination related to the lecture
9.	Suicide	Psychiatric patient examination related to the lecture
10.	Sleep Related Disorders	Psychiatric patient examination related to the lecture
11.	Somatoform Disorders	Psychiatric patient examination related to the lecture
12.	Forensic and Ethical Issues in Psychiatry	Psychiatric patient examination related to the lecture
13.	Obsessive and Compulsive and Related Disord	Psychiatric patient examination related to the lecture

Psychiatry II.

Semester:	10th	**Code:**	AOK-OAK443/AOK-OAK444
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/1	**Department:**	Psychiatry
Credit:	3/-	**Form of Exam:**	Exam/Signature

week	**Lecture**	**Practice**
1.	Neurocognitive Disorders	Neurobiological Basis of Psychotherapy
2.	Behavioral and Psychological Symptoms of Dementia	First Interview, Psychotherapy Contract, Comn Effective Factors of Psychotherapy
3.	Delirium Syndromes	Humanistic – Patient Centered Therapy
4.	Alcohol Use Disorders	Cognitive Behavioral Therapy
5.	Substance Related and Addictive Disorders	Psychotherapy in Addictology
6.	Schizophrenia I.	Psychotherapy in Psychosis
7.	Schizophrenia II.	Opportunities of Group Therapies
8.	Trauma- and Stressor-Related Disorders	Crisis Intervention Approaches
9.	Personality Disorders I.	Expressive and Supportive Psychodynamic Therapies
10.	Personality Disorders II.	Relaxation, Symbol and Art Therapies
11.	Feeding and Eating Disorders	Hypnosis, Suggestive Communication
12.	Psychopharmacology III. Pharmacotherapy of Addictions and Mood Stabilizers	Psychopharmacology IV. Pharmacotherapy of Anxiety and Sleep-Related Disorders
13.	Non-Pharmacological Biological Therapies I.	Non-Pharmacological Biological Therapies II.

Public Health and Preventive Medicine I.

Semester:	7th	**Code:**	AOK-OAK371/AOK-OAK372
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/2	**Department:**	Public Health
Credit:	3/-	**Form of Exam:**	Exam/Signature

week	Lecture	Practice
1.	The scope and goal of preventive medicine an public health. The levels of prevention.The glo health situation; priorities in global health. Measuring health status of apopulation; the theoretical basis of demography.	Requirements of the semester. Health determi and prevention. Health promotion.
2.	Measuring health status of a population; the theoretical basis of epidemiology. Health statu high-risk populations.	Demographic indexes and their use. Measuring mortality; standardization.Analysis of statistica databases.
3.	Epidemiology of cardiovascular diseases. Epidemiology of chronic respiratory diseases.	Measuring morbidity. Epidemiological studies: ecological, cross sectional, case-control and co studies, interventionalstudies. Planning and preparation of epidemiological surveys.
4.	Epidemiology of malignant tumors. Epidemiolo metabolic and musculoskeletal diseases.	Practical aspects of the prevention ofcardiovas diseases.
5.	Epidemiology of mental disorders, suicideand accidents.	The role of screening in the prevention ofselec chronic diseases.
6.	Epidemiology of chronic gastrointestinal disea	Measuring nutritional status. Dietary guidelines healthy nutrition. The role of diet in the prever of diet-related diseases: CVD, diabetes mellitu
7.	Nutrition in public health. Basics of nutrition. Malnutritions. Food quality and safety.	The role of diet in the prevention of diet-relate diseases: obesity, tumors and osteoporosis.
8.	Epidemiology of smoking.	The role of physical activity in the prevention c chronic diseases.
9.-11.	Clinical practice	Clinical practice
12.	Epidemiology of alcohol and drug consumptior	Smoking cessation guidelines for health professionals.
13.	Structure and operation of health systems.	Prevention of alcohol and drug consumption. Lifestyle interventions.
14.	Health and health care in the family (mother, infant, child, adolescent).	Quality improvement in health care, quality too PDCA cycle.

Public Health and Preventive Medicine II.

Semester:	8th	**Code:**	AOK-OAK373/AOK-OAK374
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/2	**Department:**	Public Health
Credit:	3/-	**Form of Exam:**	Comprehensive Exam/Signatu

week	Lecture	Practice

1.	Principles of communicable diseases epidemio Global burden of communicable diseases. Epidemiology ofairborne diseases.	Requirements of the semester. Control of communicable diseases: sterilization, disinfecti disinsection, deratisation. Best practice for har hygiene.
2.	Epidemiology of enteric diseases.	Control of communicable diseases: vaccination Epidemic and pandemic preparedness.
3.	Epidemiology of hematogenic and cutaneous diseases. Epidemiology of sexually transmittec diseases.	Practical aspects of the prevention of selected airborne diseases.
4.	Epidemiology of healthcare associated infectio (infection control, nosocomial surveillance). Gl problem of antimicrobial resistance.	Practical aspects of the prevention of selected foodborne diseases and hepatitis infections. Parasitic infections.
5.	Epidemiology of zoonoses, transmissible spongiform encephalopathies; emerging and r emerging diseases. The effect of climate chan on the human health and environment.	Practical aspects of the prevention of tick- bor diseases, tetanus, lyssa. Case studies about healthcare associated infections.
6.	Air pollutants and their effect on human healtl The quality of water/drinking water and its eff on human health I.	Prevention of outdoor and indoor air pollution their health damaging effects.
7.	The quality of water/drinking water and its eff on human health II. Sewage, soil pollutions, w management.	Public health responses for climate change.
8.	Spring holiday	Environmental epidemiology: examining healtl damaging effects of surface and drinking wate pollution.
9.	Environment and occupation related diseases caused by chemical exposures.	Chemical safety, risk assessment. Case studies about health effects of certain chemicals.
10.	Occupational health. Occupational diseases ca by physical (temperature, pressure, vibration, radiation) exposures.	The burden of occupational morbidity and mortality. Practical aspects of occupational hea
11.	Occupational diseases caused by biological, ergonomic and psychosocial exposures. Occupational pneumoconiosis.	Health effects of workplace-related

Pulmonology

Semester:	7th	**Code:**	AOK-OAK451/AOK-OAK452
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	1/2	**Department:**	Pulmonology
Credit:	2/-	**Form of Exam:**	Exam/Signature

week	**Lecture**	**Practice**
1.	The global situation of infectious diseases. Epidemiology of infectious diseases: airborne diseases I-II.	General epidemiology and basic concepts of infectious diseases. Sterilization, disinfection, disinsection, deratisation.

2.	Epidemiology of infectious diseases: enteric diseases. Foodborne diseases – microbiological risks.	Hand hygiene in the prevention of infectious diseases.
3.	Epidemiology of infectious diseases: hematoge cutaneous and sexually transmitted diseases. Diseases caused by parasites. Epidemiology of infectious diseases: Emerging re-emerging diseases.	Practical aspects of vaccination.
4.	Epidemiology of infectious diseases: zoonoses Transmissible spongiform encephalopathies. Global problem of antimicrobial resistance.	Practical aspects of the prevention of selected infectious diseases; airborne and enteric disea Hygiene of communal feeding.
5.	Epidemiology of health care associated infecti Air pollution, air pollutants and their effect on human health.	Practical aspects of the prevention of selected infectious diseases; hepatitis infections, tick-bo diseases.
6.	Water pollutants and their effects on human health. Sewage, soil pollutions, waste management. The effect of climate change on the human he and environment.	Practical aspects of the prevention of selected infectious diseases; tetanus, lyssa.
7.	Occupational health. Occupational safety, acci prevention. General toxicology. Chemical safety, risk assessment.	Practical aspects of infection control.
8.	Toxicology of metals, solvents, plastics, gases agrochemicals.	Environmental epidemiology: examining health damaging effects of air pollution.
9.	Occupational diseases caused by physical (temperature, pressure, vibration, radiation) exposures.	Environmental epidemiology: examining health damaging effects of surface and drinking wate pollution.
10.	Occupational diseases caused by biological, ergonomic and psychosocial exposures.	Practical aspects of occupational health. SPRING HOLIDAY
11.	SPRING HOLIDAY	Health effects of workplace-related exposures. Occupational hazards in health care. SPRING HOLIDAY

Radiology I.

Semester:	7th	**Code:**	AOK-OAK461/AOK-OAK462
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	1/1	**Department:**	Radiology
Credit:	2/-	**Form of Exam:**	Evaluation(5)/Signature

week	**Lecture**	**Practice**
1.	Imaging diagnostics: role, development, prese and future	Imaging diagnostics: role, development, prese and future
2.	Conventional radiology	Conventional radiology
3.	Contrast agents	Contrast agents
4.	Ultrasound	Ultrasound
5.	Computed tomography and magnetic resonan imaging	Computed tomography and magnetic resonanc imaging

6.	Interventional radiology	Interventional radiology
7.	Gastroenterology I.(esophagus, stomach, duodenum)	Gastroenterology I.
8.	Gastroenterology II. (mesenteric small bowels large intestine)	Gastroenterology II.
9.	Joints	Joints
10.	Bones	Bones
11.	Chest I. (lung)	Chest I. (lung)
12.	Chest II. (mediastinum)	Chest II. (mediastinum)
13.	Heart and peripheric vessels	Heart and peripheric vessels
14.	Head and neck	Head and neck

Radiology II.

Semester:	8th	**Code:**	AOK-OAK463/AOK-OAK464
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	1/1	**Department:**	Radiology
Credit:	2/-	**Form of Exam:**	Exam/Signature

week	**Lecture**	**Practice**
1.	Radiology of the breasts and female reproduct system	Radiology of the breasts
2.	Radiology of the liver	Radiology of the liver
3.	Radiology of the biliary tract	Radiology of the biliary tract
4.	Radiology of the pancreas & spleen	Radiology of the pancreas & spleen
5.	Neuroradiology I. (image modalities, congenital anomalies and vascular lesions of the head)	Neuroradiology I.
6.	Neuroradiology II. (Tumours, infections, trauma of the head)	Neuroradiology II.
7.	Neuroradiology III. (Spinal diseases)	Neuroradiology III.
8.	Pediatric radiology	Pediatric radiology
9.	Radiology of the kidneys & the urinay tract	Radiology of the kidneys & the urinay tract
10.	Radiology of the retroperitoneal space	Radiology of the retroperitoneal space
11.	Radiology of the pelvis and the male reproduc organs	Radiology of the pelvis and the male reproduct organs
12.	Radiological aspects of emergency	Radiological aspects of emergency
13.	Radiological aspects of trauma	Radiological aspects of trauma

Rheumatology

Semester:	7th, 9th	**Code:**	AOK-OAKV551
Course type:	Lecture	**Category:**	compulsory
Hours/week:	2	**Department:**	Rheumatology
Credit:	2	**Form of Exam:**	Evaluation(5)

The course „Rheumatology" covers the whole spectrum of musculoskeletal diseases including the imn mediated internal medical systemic inflammatory diseases. The aim of the course is to provide a detailed and practical overview of various types of arthritis and systemic autoimmune diseases, in ad to the limited topics covered within the clinical immunology section of the Internal Medicine course semester).
The topics are delivered in interactive, seminar-like lectures and in practicals at the Departme Rheumatology and Immunology. Special emphasis is put on „hands-on" training at bedside. The lecture interactive, focus on live or slide-based patient presentation, and on critical thinking, decision-makin differential diagnostic thinking.
The immunological basis of the diseases, novel treatment paradigms, the principles of immunosuppre therapy, the innovative biological therapies, and the systematic diagnostic work-up of patients with arthritis, and other immune-mediated manifestations, such as Raynaud's phenomenon, skin, renal, pulmonary, neurological, etc. involvements typical of systemic autoimmune diseases are detailed withi course „Rheumatology".

topic

* Lecture – Introduction. Systemic lupus erythematosus, antiphospholipid syndrome; László Kovács
* Practical – max. 20 students
* Lecture – Rheumatoid arthritis, spondylarthritis; Attila Balog
* Practical – max. 20 students
* Practical – max. 20 students
* Practical – max. 20 students
* Lecture - Systemic sclerosis (scleroderma), Systemic vasculitides; László Kovács
* Practical – max. 20 students
* Lecture - Sjögren's syndrome, polymyositis, dermatomyositis; Attila Kovács
* Practical – max. 20 students
* Practical – max. 20 students
* Practical – max. 20 students
* Consultation; László Kovács

Social and Health Policy

Semester:	8th or 10th	**Code:**	AOK-OAKV591
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Public Health
Credit:	2	**Form of Exam:**	Evaluation(5)

week	**topic**
1.	Introduction to health policy. The influence of international organisations (WHO, World Bank on national health policies.
2.	Health and health policy in the European Union.

3. The basic principles of health care systems.
4. Health care services in selected European countries.
5. Health care services in North American countries.
6. Quality assurance in health care.
7. Human resource management in health care.
8. Introduction to social policy. The aim and task of social policy. The basic values and principle social policy.
9. Social policy in welfare states.
10. The structure and function of social policy in the European Union. Social policy in developing countries.
11. Poverty, deprivation, patterns of inequalities.
12. Social policy of high-risk populations I. (immigrant, ethnicity, unemployed).
13. Social policy of high-risk populations II. (disabled, chronic diseased, elderly).
14. The evaluation of the social and health care reforms from the beginning of '90s – world tendencies (Final evaluation).

Surgery I.

Semester:	7th	**Code:**	AOK-OAK471/AOK-OAK472
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/2	**Department:**	Surgery
Credit:	3/-	**Form of Exam:**	Evaluation(5)/Signature

week	**Lecture**	**Practice**
1.	Benign diseases of the breast, Surgery of the breast cancer	
2.	Surgery of the breast cancer, Surgery of the thyroid gland	
3.	Oncoplastic breast surgery, Surgery of the adrenal gland	
4.	Surgery of the mediastinum	
5.	Surgery of the thorax	
6.	**BLOCK PRACTICE**	Active participation in examination of patients in the daily work on different units. Taking par operations as 2nd assistant, and observation o operations. Case discussion every day: 12.00-13.00h.
7.	**BLOCK PRACTICE**	Active participation in examination of patients in the daily work on different units. Taking par operations as 2nd assistant, and observation o operations. Case discussion every day: 12.00-13.00h.
8.	**BLOCKP RACTICE**	Active participation in examination of patients in the daily work on different units. Taking par operations as 2nd assistant, and observation o operations. Case discussion every day: 12.00-13.00h.

9.	**ALL SAINTS DAY (Break)**
10.	Surgery of the lung cancer
11.	Vascular surgery
12.	Vascular surgery
13.	Cardiac surgery
14.	Cardiac surgery

Surgery II.

Semester:	8th	**Code:**	AOK-OAK473/AOK-OAK474
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/2	**Department:**	Surgery
Credit:	3/-	**Form of Exam:**	Evaluation (5)/Signature

week	**Lecture**	**Practice**
1.	Benign and malignant diseases of the oesopha I. Benign and malignant diseases of the oesopha II.	
2.	Malignant diseases of the stomach, Benign diseases of the stomach	
3.	Surgery of the liver I Surgery of the liver II	
4.	Surgery of the pancreas I. Surgery of the pancreas II.	
5.	Surgery of the gallbladder and biliary tract I. Surgery of the gallbladder and biliary tract II.	
6.	Minimal invasive surgery, Surgery of the spleen	
7.	Benign diseases of the large intestine	
8.	Malignant diseases of the colon and rectum	
9.	Proctology, the care of intestinal stoma wearir patients	
10.	SPRING BREAK	
11.	Surgery of the thyroid gland, Endocrine Surge	
12.	**BLOCK PRACTICE**	Active participation in examination of patients in the daily work on different units. Taking par operations as 2nd assistant, and observation c operations. Case discussion every day: 12.00-13.00h.
13.	**BLOCK PRACTICE**	Active participation in examination of patients in the daily work on different units. Taking par operations as 2nd assistant, and observation c operations. Case discussion every day: 12.00-13.00h.

14.	**BLOCK PRACTICE**	Active participation in examination of patients in the daily work on different units. Taking par operations as 2nd assistant, and observation o operations. Case discussion every day: 12.00-13.00h.

Surgery III.

Semester:	9th	**Code:**	AOK-OAK475/AOK-OAK476
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	1/1	**Department:**	Surgery
Credit:	2/-	**Form of Exam:**	Evaluation(5)/Signature

week	**Lecture**	**Practice**
8.	Appendicitis, Emergency colorectal surgery	Demonstration, investigation of surgical patien Consultation about the topics of lectures
9.	ALL SAINTS DAY	
10.	Peritonitis	Demonstration, investigation of surgical patien Consultation about the topics of lectures
11.	Ileus	Demonstration, investigation of surgical patien Consultation about the topics of lectures
12.	Differential diagnostics of acute abdomen Most frequent interventions in the gastrointesl surgery	Demonstration, investigation of surgical patien Consultation about the topics of lectures
13.	Surgery of the thyroid gland, endocrine surgel	Demonstration, investigation of surgical patien Consultation about the topics of lectures
14.	Surgical immunology, organ transplantation	Demonstration, investigation of surgical patien Consultation about the topics of lectures

The Clinical Basics of Aviation and Space Medicine

Semester:	8th or 10th	**Code:**	AOK-OAKV061
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Aviation and Space Medicine
Credit:	2	**Form of Exam:**	Evaluation(5)

week	**topic**
1.	The aeromedical qualification system in civilian and military practice.
2.	Functional diagnostic examinations in practical aviation medicine.
3.	Aeromedical problems in pulmonology and gastroenterology.
4.	The cardiological aspects of aviation medicine.
5.	Excess temperature in aviation.
6.	Neurological and psychiatricalproblems in aviation medicine.
7.	Ophtalmology in aviation medicine.

8. Emphasized aeromedical issues in oto-rhino-Iaryngology.
9. The comparison of experiences gained in the MiG-29 and the Gripen.
10. The issues of alcoholism in aviation medicine.
11. Rheumatological aspects of aviation.
12. The medical background of the International Space Station (ISS). Medical care during long-te space flights.
13. Energy drinks in aviation?

The Language of Effective Doctor-Patient Communication I.

Semester:	7th or 9th	**Code:**	AOK-OAKV621
Course type:	Practice	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Med. Comm. and Translation
Credit:	2	**Form of Exam:**	Term Mark

week	**Lecture**	**Practice**
1.	An introduction to physician – patient communication 1	An overview of communication. Identifying the elements that make up communication
2.	An introduction to physician – patient communication 2	The patient centered approach: patient friendl language in history taking, instructing patients during examinations and discussing treatment options.
3.	Gastroenterology 1	Receiving patients: greeting them and putting at ease. Introducing yourself as the attending physician explaining your role.
4.	Gastroenterology 2	The presenting complaint. Encouraging patient describe their problems in their own words.
5.	Gynecology and obstetrics 1	Asking for history of menstruation Encouraging withdrawn patients to speak
6.	Gynecology and obstetrics 2	Taking obstetric history: previous pregnancies, complications, deliveries, asking for present complaints
7.	Orthopedics	Patient's past medical history. Discussing famil medical history. Taking effective notes during the interview.
8.	Endocrinology	Explaining medical terminology to a patient Updating patient notes
9.	Surgery 1	Giving results: explaining results to patients, g a prognosis
10.	Surgery 2	Planning surgical treatment: explaining treatm surgical interventions to a patient, discussing options
11.	Surgery 3	Describing benefits and side effects, negotiatir treatment Informed decision making

12.	Pulmonology	Delivering bad news Writing concise and accurate notes
13.	Dental care	Preparing and reassuring the patient during th examination. Negotiating the treatment.
14.	Test/exam	

The Language of Effective Doctor-Patient Communication II.

Semester:	8th or 10th	**Code:**	AOK-OAKV622
Course type:	Practice	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Med. Comm. and Translation
Credit:	2	**Form of Exam:**	Term Mark

week	**Lecture**	**Practice**
1.	Cardiology	Enquiring about patient's social history. Asking about life-style and environmental health
2.	Anesthesiology and intensive care	Anesthesiological assessment of a patient Describing types of anesthesia Postoperative care
3.	Oncology	Educating and counseling patients and their families Revision of the written documentation of patie care
4.	Dermatology	Discussing treatment options Showing sensitiv and respect to patients
5.	Pediatrics 1	Communicating with children and adolescents. Establishing and developing rapport with a chi
6.	Pediatrics 2	Reassuring a child. Child-friendly instructions. Asking about substance use.
7.	Psychology	Encouraging withdrawn patients to speak. Calr aggressive or angry patients.
8.	Neurology 1	Reassuring a patient or relative. Showing emp
9.	Neurology 2	Techniques for communicating with patients w neurological problems. Language to show sensitivity.
10.	Rheumatology	Encouraging patients to express their fears an concerns. Giving a prognosis.
11.	Oto-rhino-laryngology	Summarizing and structuring the interview Communicating with elderly patients
12.	Ophthalmology	Handling complaints Managing unrealistic requests (saying no)
13.	Urology	Encouraging patients to express their fears an concerns Advising on lifestyle
14.	Test/exam	

The role of sonography in critical care

Semester:	8th or 10th	**Code:**	AOK-OASZV681

Course type:	Seminar	**Category:**	elective
Hours/week:	Total 6	**Department:**	Anaesthesiology & Int. Ther.
Credit:	1	**Form of Exam:**	Evaluation (5)

topic

* Proper place for point- of-care sonography
  Ultrasound techniques and point-of-care sonography
  Basic properties of ultrasound machines, basic settings, transducers
* Basic US planes of the heart.
  Estimation of global left ventricular function and heart chamber dimensions.
  Suspicion and identification of acute myocardial infarction, acute valvular regurgitation, acute right-failure.
  Identification of pericardial effusion. US-guided pericardial tap (pericardiocentesis)
* Role of point-of-care sonography during management of polytraumatised patients: FAST („focused assesment with sonography for trauma")
  Suspicion and identifying of abdominal and pelvic fluid collections, hematomas, bleeding, urinary retention. US-guided abdominal tap.
  US-guided peritoneal tap
  Signs of atelectasis, infiltration
  Pleural effusion, pneumothorax
* Role of transoesophageal ECHO in the cardiac surgery anesthesia
  Examination of inferior vena cava, collaptibility, fluid responsiveness.
  US guided vascular interventions: insertion of a central venous cannula, US guided intervention: percutaneous tracheotomy
  Role of ultrasound in intracranial pathology (trauma, intracranial bleeding, intracranial pressure elev): measurement of n. opticus diameter, role of transcranial Doppler ultrasound
* Ultrasound guided regional anaesthesia: basic principles.
  Regional anaesthesia of the thrunk, the upper and the lower limb, nerve blockades.
* Bedside practice

Thesis writing in English-academic language and style

Semester:	9th	**Code:**	AOK-OASZV641
Course type:	Practice	**Category:**	elective
Hours/week:	2	**Department:**	Med. Comm. and Translation
Credit:	2	**Form of Exam:**	Term Mark

topic

* General structure of the thesis, thesis types
* Scientific English style: objectivity, formality, complexity, explicitness, hedging, responsibility, and precision
* The Abstract
* The Introduction. Formulating hypotheses and research questions.
* Citation rules, in-text and end-text referencing.
* The Methods
* The Results. Tables, charts and other types of illustration.
* The Discussion.

* Other parts of the thesis: Acknowledgements, Appendix, Questionnaires, Conflict of interest, Declar of ethics.
* Presenting the thesis. How to make oral presentations?

Traumatology

Semester:	10th	**Code:**	AOK-OAK511/AOK-OAK512
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	2/2	**Department:**	Traumatology
Credit:	3/-	**Form of Exam:**	Exam/Signature

week	Lecture	Practice
1.	Introduction to the evaluation and treatment o trauma patient, primary – secondary survey Role of trauma care	Types of wounds, wound management. Types sutures. The primary survey: physical examina of trauma patients (ABCs), imaging techniques Interpretation of X-ray images.
2.	General principles of wound management and healing. Fracture healing, delayed bone healin non-union. Pathological fractures. AO principa fractures management	Classification of fractures, principles of fracture management. Introduction to trauma implants Plaster technique.
3.	Upperextremity III. Wrist injuries, hand injurie Hand infections. Replantation. Reconstructive procedures. Peripheral nerve injuries. Injuries the brachial plexus.	Shoulder examination. Replacement technique shoulder dislocation (Artl, Hippocrates). Introduction to Gilchrist bandage. Examination rotator cuff injuries.
4.	Upper extremity II. Distal humeral injuries, elb injuries, forearm injuries.	Indications for functional and surgical treatme surgical neck fractures of the humerus. Treatm options for humeral diaphysis fractures. X-ray presentation.
5.	Upper extremity I. Shoulder girdle injuries, proximal humeral injuries	Diagnosis of radius fractures, demonstration o closed reduction and plaster fixation. Practice plaster technique, application of radius plaster Indications for conservative and surgical treatr X-ray presentation.
6.	Burn injuries.	Examination of the hand function. Demonstrat of Moberg's scheme. Treatment options for ter and nerve injuries.
7.	Special considerations (pregnant, elderly, pediatricpatients, PTSD)	Radiological presentation of scaphoideal fractu carpal instabilities, treatment options.
8.	Craniocerebral injuries, spine injuries	Examination of pelvic and acetabulum fracture options for temporary fixation of the pelvis. Transport of trauma patient with pelvic fractur ray presentation.
9.	Torso trauma I. Chest injuries Torso trauma II. Abdominal trauma	Clinical diagnosis of femoral neck fractures. Examination of the hip joint. Patient examinati Treatment options for hip fractures. X-ray presentation.
10.	Torso trauma III. Pelvic fractures, acetabular fractures	Examination of the knee joint (Sternmann I-II, Böhler, McMurray, valgus-varus stress, anterio posterior tableau symptom, Lachmann test). Diagnosis of meniscus injuries, treatment optic Cruciate ligament replacements.

11.	Polytrauma	Ankle joint examination. Functional anatomy o ankle and foot. Principles of care for ankle fractures, ligament injuries. Diagnosis and treatment of calcaneal fractures. X-ray presentation.
12.	Lower extremity I. Proximal femoral region injuries, hip-, femoral shaft fractures. Traumat hip displacement.	Neurological examination of head injury. Examination of brain nerves, sensory and moto functions. Neurological examination of spinal c injury. Transport of the spinal cord injured.
13.	Lower extremity II. Distal femoral fractures, k injuries, proximal tibia fractures	Examination of a polytrauma patient. Primary secondary survey. Presentation of FAST. DCS a ETC principles. Examination of chest trauma, differential diagnosis of chest injuries.
14.	Lower extremity III. Injuries fractures around ankle, foot injuries	Internal medicine examination of the injured, preparation of the patient for surgery in the ICU/ward. Importance of anaesthesiological investigations, consideration of surgical risk.

Tropical Diseases

Semester:	8th or 10th	**Code:**	AOK-OAKV651
Course type:	Lecture	**Category:**	compulsory elective
Hours/week:	2	**Department:**	Clinical Microbiology
Credit:	2	**Form of Exam:**	Evaluation(5)

week	**topic**
1.	General aspects of tropical diseases. Characteristic diseases of the gastrointestinal tract focus on bacterial infections frequently seen in tropical areas. Pathogenesis, clinical and laboratory diagnosis, and therapeutic options. Travellers' diarrhoea. Pathogenesis, clinical and laborator diagnosis.
2.	Diarrhoea caused by protozoa: entamoebiasis, cryptosporidiasis, giardiasis, and diseases caus by *Isospora*, *Balantidium*, and *Capillaria*. Pathogenesis, clinical and laboratory diagnosis, and therapy. Epidemiology, life cycles clinical and laboratory diagnosis. Therapy.
3.	Special aspects of viral infections in tropical areas. Geographical distribution, pathogenesis, cl and laboratory diagnosis of arboviruses. Pathogenesis, clinical and laboratory diagnosis of vir haemorrhagic fevers; Marburg and Ebola viruses. Importance of the early diagnosis of import viral infections in non-tropical countries. .
4.	Arthropod-borne infections caused by various bacteria, and spirochetes in tropical areas. Distribution of various vectors which may influence the emergence of a disease. Plague. Clini and laboratory diagnosis, and therapy.
5.	SARS, avian flu, rabies, West Nile virus- and other rare viral infections characteristic in some tropical countries. Slow viruses. Clinical picture, pathogenesis, and diagnostic possibilities.
6.	Malaria, schistosomiasis. Causative agents, distribution of vectors, pathogenesis, clinical and laboratory diagnosis, and therapy
7.	Tuberculosis, leprosy, and other bacterial infections with special emphasis on tropical areas (meningitis caused by *N. meningitidis*, and rhinoscleroma). Clinical and laboratory diagnosis. Differences in clinical picture in the tropical areas compared to other countries. Therapy.
8.	Sexually transmitted infections and diseases. Differences in the presentation of various bacte and viral STDs in tropical areas. AIDS in Africa and in other undeveloped countries. Clinical symptoms, epidemiology, laboratory diagnosis, and therapy. AIDS-related infections and ther
9.	A physician's experiences in the tropical area I.
10.	Viral exanthemas and central nervous system infections in the tropical area. Clinical symptom epidemiology, laboratory diagnosis, and therapy.

11. A physician's experiences in the tropical area II.
12. Infections associated with immunosuppression and HIV. Clinical symptoms, epidemiology, pathogenesis, and laboratory diagnosis.
13. Lesser known viral infections in the tropical area. Clinical manifestation, pathogenesis, and diagnostic possibilities.
14. Written exam.

Urology

Semester:	9th or 10th	**Code:**	AOK-OAK521/AOK-OAK522
Course type:	Lecture/Practice	**Category:**	compulsory
Hours/week:	1/2	**Department:**	Urology
Credit:	2/-	**Form of Exam:**	Exam/Signature

week	**Lecture**	**Practice**
1.	Signs and symptoms urological diseases. Case history and the physical examination.	Case history, physical examination. Case presentation.
2.	Congenital anomalies.	Signs and symptoms of the urology patient. Ca presentation.
3.	Urolithiasis.	Catheters and endoscopic instruments.
4.	Incontinency.	Endoscopy.
5.	Urotraumatology.	Percutaneous epicystostomy and nephrostomy
6.	Acute and chronic renal failure.	ESWL.
7.	Nonspecific infections in the urology.	Uro-radiology.
8.	Tumors of the kidney and ureter.	Physical examinations of patients.
9.	Tumors of the bladder.	Laboratory investigations in the urology.
10.	Tumors of the external male genitalia.	Biopsy from bladder, prostate and testis.
11.	Tumors of the prostate.	Evaluation of sonography.
12.	BPH.	Physical examinations. Case reports.
13.	Acute urology.	Visit to operating theatre.
14.	Consultation	Acute urology

VOW TO BE MADE BY 1ST YEAR MEDICAL STUDENTS

I ……., /
as the student of the University of Szeged /
promise solemnly /
that I will observe and adhere /
to the rules and regulations of Hungary. /
Also I will observe and adhere /
to the rules and regulations /
of the University of Szeged /
and I am aware of these. /
I devote all my best efforts /
to go through with my studies here /
as efficiently as possible. /
I will give my teachers /
the respect and gratitude /
which is their due. /
I will respect the secrets /
which are confided in me /
even after the patient has died. /
I will maintain by all means in my power /
the honor and the noble traditions /
of the medical profession. /
I will devote my time and efforts /
to learn the progressive achievements /
of the basic and clinical sciences /
in order to use this knowledge /
for advancing medicine, /
for the care of my patients /
and to promote man's progress on Earth. /
I will use the University's computer network and tools /
solely for the purpose of studying /
and I will adhere /
to the data protection /
and network usage regulations. /
I make these promises solemnly,/
freely, /
and upon my honor. /

OATH TO BE TAKEN BY MEDICAL GRADUATES

I, …… name ……., / on this occasion / of my admission / to the ranks of the medical profession / swear on my honor / to devote my talents and knowledge / to the benefit of mankind.
I shall hold / University of Szeged in esteem.
I shall count those / who have instructed me / in the science of medicine / as my masters, / and shall show them / gratitude and respect at all times.
I shall impart my medical knowledge / and experience / to the generations of physicians to come. / I shall constantly labour / to increase my erudition / with a view to developing / and advancing medical science. / I shall practice my profession / conscientiously.
I vow to devote / my medical knowledge / to the protection of health / and to the benefit of the sick. / I shall treat / and advise patients / in the best of their interest / and to the best of my knowledge / and convictions / and I shall strive / to safeguard their health / against hazardous / and injurious effects.
I shall reveal no secret / concerning my fellow men / whether learned within my practice of medicine / or outside it / unless the law demands this.
I shall inform the patients / and also their relatives / if the patients' interest so requires / as to the patients' condition / and the method of treatment / in a timely and considerate manner. / I shall issue a medical certificate / only in accordance with my true convictions.
I shall conduct myself / towards the patients / my fellow physicians and the society as a whole, / in a matter befitting my calling as a physician. / I shall preserve the honor / of the medical profession / and its noble traditions.
I shall not be hampered / from fulfilling the duties of my profession / on the grounds of social, / political, / national, / racial / or religious distinction.
I take this oath solemnly / and of my own free will.

Foreign Students' Secretariat
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