**Semmelweis University, Faculty of Medicine**

**Name(s) of the Institute(s) teaching the subject:**

Department of Forensic and Insurance Medicine

**Name of the subject:** Forensic medicine

**Credits:** 2

**Total number of hours:** 28  
practices: 10  
seminars: 18

**Type of the course (mandatory/elective):** mandatory

**Academic year:** 2020/2021

**Code of the course:**

**Course director (tutor):** Dr. Törő Klára

**Contact details:** 93. Üllői str. 1091 Budapest, Semmelweis University, Department of Forensic and Insurance Medicine

**Position:** Head of the Institute

**Date of habilitation and reference number:** 315/2010

**Aim of the subject and its place in the curriculum:**

Forensic pathology is a science forming a bridge between medicine and law, aiming to communicate medical findings in order to aid jurisdiction. In our course we go beyond morphology and diagnoses, and try to reveal the underlying causes of the current state of a body, through providing a foundation for the understanding of changes, injuries and disease states at the molecular, cellular, tissue, organ, and organism levels.

The purpose of the subject is to realize the qualification of medical doctors, within the framework of forensic medicine, who are (a) independent, (b) critically thinking, able to (c) make decisions, and (d) take further necessary actions, (e) recognize emergency situations and (f) respects the boundaries of their competency.

During this course our goal is to pass over the knowledge substantial in everyday clinical practice, making the main objective of this subject to help acquire the following practical skills:

I. Attain the skillset of on-scene inspection of cadavers, and familiarize with the procedure of processing cases of the deceased.

II. Examining injuries, and injury-patterns in the clinical practice, with the ability to individually evaluate, and professionally documentate them.

**Location of the course (lecture hall, practice room, etc.):**

‘Photo lab’ – Harsányi Hall, Autopsy room, Digital Hystopatology Practice Room, Kenyeres Hall. All premises above are located under our main address, at 93. Üllői street 1091 Budapest.
**Competencies gained upon the successful completion of the subject:**

Successfully completing the subject will result in the attainment of the following practical skills and knowledge:

**Sufficient data about basic disease reactions and organ specific reactions so that you can:**

Interpret signs and symptoms appearing in a patient’s history and create a differential diagnosis.

**Sufficient knowledge of forensic pathology and histopathology at large so that you can:**

Interpret findings at autopsy

Interpret forensic pathology reports

Intelligently review forensic pathology slides and images with a consulting forensic pathologist

**Awareness of the role of autopsy in medicine.**

**Prerequisite(s) for admission to the subject:**

Anatomy, Physiology, Pathology, Traumatology, Internal medicine - propedeutics

**Minimum and maximum number of students registering for the course:**

Student selection method in case of oversubscription:

The announcement of the courses is based upon the orders of the Dean’s Office of General Medicine.

Maximum headcount of the course: 15 people

Minimum headcount of the course: 5 people

**How to register for the course:**

Applying for the course takes places via the NEPTUN system, regarding the instructions of the Study and Exam Comittee (TVSZ) and the Dean’s Office of General Medicine.
Detailed thematic of the course:

The course is organised in the block-based education system, throughout 40 weeks, in blocks of 2 weeks. Practical classes are preceeded by short theoretical preparation sessions, followed by a gradual introduction to the clinically oriented practices, emphasising the importance of examination of cadavers for every student. During the sessions we organize the students into small groups, challenging them to examine and process cases, while the theoretical preparation classes are held in bigger groups. Regular oral and written contribution of the students (case reports, and independent documentation) is substancial during the course. All sessions are required to contain feedback elements. At the end of the course an oral exam is conducted on the second week (see details below).

Week A

Monday
• Examination of dead bodies, Postmortem changes (number of classes: 2 periods)
• Examination and documentation of injuries (number of classes: 2 periods)
• Suffocation and asphyxia, sexual offence (number of classes: 1 period)
• Electrical fatalities (number of classes: 1 period)
• Head trauma (number of classes: 1 period)
• General toxicology, Drug related death (number of classes: 1 period)

Tuesday
• Autopsy (number of classes: 2 periods)
• Crime scene (number of classes: 2 periods)
• Crime scene practice I-II (number of classes: 1 period)
• Autopsy practice (number of classes: 1 period)
• Medico-legal aspects of traffic accidents (number of classes: 1 period)
• Firearm injuries, burns and scalds (number of classes: 1 period)

Wednesday
• Autopsy (number of classes: 2 periods)
• Sudden death and Forensic pathology (number of classes: 2 periods)
• DNA (number of classes: 2 periods)
• Identification (number of classes: 2 periods)

Friday
• Autopsy (number of classes: 2 periods)
• Child abuse (number of classes: 1 period)
• Natural or violent death - Consultation (number of classes: 1 period)

Week B

• Wednesday, Friday - exam

Potential overlap(s) with other subjects:
Neurology – head injuries
Traumatology – injuries of bones and soft tissues
General practitioning – examination of cadavers
Radiology – radiological results as proof
Gynecology – sexual offences
Internal medicin - toxicology

Special training activities required:
Successfully completing the subject does not require additional instructional occupation.
Policy regarding the attendance and making up absences:

Following the general rules of the Study and Exam Regulations (TVSZ).

The maximum amount of tolerated missed classes is 7, equalling to 25% of the total education hours. In case of having missed more than the 7 classes above, it is required to make up for the missed practice(s), which is possible by attending other announced groups of the same subject, during English education hours. Missed classes must be made up according to the original themes of them! If the number of missed classes exceeds 7, and the made up classes have not been verified, the subject cannot be completed.

As a main guideline of verification of make up classes, the sessions must be certified towards the educational official up until 14:00 on the last Tuesday preceding the exam (week B, day 2). Presenting a written certificate of the makeup classes is the responsibility of the students attending the course!

The names of students listed on the attendance sheet or make up sheet of practices, signed by the appointed instructor of the class classifies as a proof of their verified presence on the session.

Means of assessing the students’ progress during the semester:

No mid-term examination takes place. Assigned groups all take their exams on the B week of their periods, on the given specific days provided above.
Exam requirements:

Each course is concluded by a practical skill oriented oral exam. During the exam the students are required to give feedback based on the knowledge acquired during practical sessions and by reading the compulsory chapters of the theoretic curriculum, by elaborating on 2 themes of the titles below.

On the oral examination you are required to talk about two titles from the following list:

1. Definition of death. Post mortem changes.
2. The early post-mortem interval.
6. The autopsy.
7. Methods of identification. Identification of decomposed or skeletonized remains.
8. Sudden death of cardiovascular disorders.
9. Sudden death of respiratory and gastrointestinal disorders.
10. Sudden infant death.
15. Head and neck injuries.
16. Spinal, chest and abdominal injuries.
17. Gunshot injuries.
18. Differentiation of accident, suicide or murder in gunshot injuries.
19. Sexual assault: examination requirements, evidential samples and documentation.
21. Road traffic injuries.
22. Railway injuries, aircraft fatalities.
24. Types of mechanical asphyxial mechanism.
27. Injury caused by heat. Cold injury, hypothermia.
30. Commonly misused drugs and drug related death.
32. Scene examination and evidence recovery. Examination on the scene.
33. Forensic DNA analysis.

Requirement for acknowledging the semester (signature):
Signatures for the course are distributed based on the requirements explained in chapter 'Policy regarding the attendance and making up absences' above.

Type of the examination: Oral

Type and method of grading:
Forming a grade at the end of the course is based on a 5 grade result system reflecting on the performance on the oral exam. Based on the exam results, the students will be awarded grades of Excellent (5), Good (4), Satisfactory (3), Pass (2), or Fail (1).

How to register for the exam:
Via the NEPTUN system, according to the general rules of the Study and Exam Regulations (TVSZ).
Opportunities to retake the exam:
Via the NEPTUN system, according to the general rules of the Study and Exam Regulations (TVSZ). Successful exams may be repeated up to 1 time.

Literature, i.e. printed, electronic and online notes, textbooks, tutorials (URL for online material):

- Lecture notes of forensic medicine. Semmelweis Publisher. 2008.
  www.forensicmed.co.uk edited by: Richard Jones

Signature of the tutor:

Signature(s) of the head(s) of the Institute(s):

Date:

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Credit Transfer Committee’s opinion:

Comment of the Dean’s Office:

Signature of the Dean:

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1 Dékáni Hivatal tölti ki, jóváhagyást követéen.
2 Az elméleti és gyakorlati oktatást órákra (hetekre) lebontva, sorszámozva külön-külön kell megadni, az előadók és a gyakorlati oktatók nevének feltüntetésével. Mellékletben nem csatolható!
3 Pl. terepgyakorlat, kórleplemezés, felmérés készítése stb.
4 Pl. házi feladat, beszámoló, zárthelyi stb. témaköre és időpontja, pótlásuk és javításuk lehetősége.
5 Elméleti vizsga esetén kérjük a tételsor megadását, gyakorlati vizsga esetén a vizsgáztatás témakörét és módját.
6 Az elméleti és gyakorlati vizsga beszámításának módja. Az évközi számonkérések eredményeink beszámítási módja.
Subject criteria

Semmelweis University, Faculty of Medicine

Partner institutes (and possible cooperative institutes):

Department of Anaesthesiology and Intensive Therapy and Division of Clinical Simulation

Name of the subject: Intenzív terápia és aneszteziológia

In English¹: Intensive Therpay and Anesthesiology

In German¹: Intensivmedizin und Anästhesiologie

Credits: 4

Total hours: 56 hours  Lectures: 21 hours  Practice: 35 hours

Seminar:

Type of subject: obligatory course-unit

School year: 2020/2021

Subject code²: AOKANE427_1M, AOKANE427_1A, AOKANE427_1N

Tutors name: Prof. Dr. Gál János

Workplace, phone number:

Semmelweis University, Faculty of Medicine, Department of Anesthesiology and Intensive Therapy

06-1-355-6565

Post: professor and head of department

Date and number of habilitation: 30.01.2007  1/2007/habil
The aim and place of the course in the curriculum of medical training:

Intensive therapy is a synthesizing medical specialization.

During this course we present the relevance of physiological, patophysiological and pharmacological knowledge in a clinical and patient oriented view. Regarding this, we build on the knowledge acquired in surgery and internal medicine in the previous semesters.

We will discuss internal medicinal, cardiological, surgical, neurological, ob/gyn and traumatology related conditions requiring intensive therapy in detail. Intensive therapy links the triade of intensive monitoring of patients, intensive care and intensive medicine together.

In conditions requiring intensive therapy we use extensive monitoring, diagnostic and therapeutic systems in order to substitute, compensate and restore the damaged, absent or endangered vital functions. This course will make you familiar with the first steps required in the therapy of a critical patient, the conditions causing cardiac and respiratory arrest, and also the current hungarian and international BLS and ALS guidelines.

It will be demonstrated how anesthesiology maintains the balance of the homeostasis of the patient (and all organ systems) during the perioperative period. This includes the assessment of perioperative risk, preoperative preparation, intraoperative anaesthesia, analgesia, in some cases muscle relaxation, and the postoperative analgesia.

The lectures emphasize the most important messages of the curriculum, aiming to help the preparation of students.

During the different practices we aim to aid and develop the decision making skills of students in real life clinical situations under simulated conditions, demonstrating a patient and problem oriented point of view. We emphasise the importance of symptom based differential diagnosis, and the interactive analysis of possible mistakes. During the practices we introduce the students to the devices used in intensive therapy and anesthesiology. The bed-side practices have the potential to give a real clinical experience. We will assess and analyse the diagnostic and therapeutic possibilities during time dependent clinical situations under high fidelity simulated conditions. This simulation practices require teamwork, and students can simultaneously practice and develop their non-technical skills as well.

Due to the nature of this course, the knowledge and experience required during the semester can be of significant use to anyone choosing any other speciality in medicine.

Place of the course (adress of lecture hall, seminar room, etc.)

Department of Anesthesiology and Intensive Therapy
Main Intensive Care Unit
1082 Budapest, Úllöi str. 78.

Division of Clinical Simulation
Semmelweis Simulation Centre
1096 Budapest, Ernő str. 7.
Péterfy Hospital and Manninger Jenő National Institute for Traumatology,
Department of Anesthesiology and Intensive Care
1081 Budapest, Fiumei str. 17.
A list of competences acquired in case of successful fulfillment of the course:

<table>
<thead>
<tr>
<th>No.</th>
<th>Competence Description</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Familiarity with devices required in emergency situations (airway management, venous/arterial access devices, catheters, gastric tubes etc.)</td>
<td>S</td>
</tr>
<tr>
<td>2.</td>
<td>Structure, function, area of care of the intensive care unit</td>
<td>S</td>
</tr>
<tr>
<td>3.</td>
<td>ABCDE assessment of a patient requiring intensive care</td>
<td>D</td>
</tr>
<tr>
<td>4.</td>
<td>Knowledge and application of the intensive monitoring options</td>
<td>S</td>
</tr>
<tr>
<td>5.</td>
<td>Knowing the importance and limitations of PoCTs used in intensive care</td>
<td>S</td>
</tr>
<tr>
<td>6.</td>
<td>Recognising medical conditions requiring intensive therapy</td>
<td>S</td>
</tr>
<tr>
<td>7.</td>
<td>Knowledge and application of fluid therapy in the care of clinically ill patients, and the different modes and indication of enteral and parenteral nutrition</td>
<td>S</td>
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<tr>
<td>8.</td>
<td>Preoperative assessment, risk and physical status classification, knowledge of professional competence</td>
<td>S/P/SIM</td>
</tr>
<tr>
<td>9.</td>
<td>Preoperative preparation, basic knowledge in premedication</td>
<td>S/SIM</td>
</tr>
<tr>
<td>10.</td>
<td>Knowledge of the structure and function of the anaesthetic machine</td>
<td>S/SIM</td>
</tr>
<tr>
<td>11.</td>
<td>Induction and maintenance of general anaesthesia</td>
<td>S</td>
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<tr>
<td>12.</td>
<td>Basic knowledge of the indications, importance, advantages and disadvantages of regional anaesthesia techniques</td>
<td>S</td>
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<tr>
<td>13.</td>
<td>Knowledge and application of aspects in postoperative care</td>
<td>S</td>
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<tr>
<td>14.</td>
<td>Recognition and treatment of the different types of respiratory failure</td>
<td>S</td>
</tr>
<tr>
<td>15.</td>
<td>Indication and basic knowledge of non-invasive and invasive ventilation (principles, modes, devices, structure of ventilatory machines)</td>
<td>S/SIM</td>
</tr>
<tr>
<td>16.</td>
<td>Recognition and treatment of acid-base and blood gas sample differences</td>
<td>S/P</td>
</tr>
<tr>
<td>17.</td>
<td>O2 therapy, inhalational agents, importance and different forms of respiratory physiotherapy</td>
<td>S</td>
</tr>
<tr>
<td>18.</td>
<td>Treatment of acute cardiovascular conditions</td>
<td>S</td>
</tr>
<tr>
<td>19.</td>
<td>Different possibilities of hemodynamic monitoring, pharmaceutical and mechanical circulatory support</td>
<td>S</td>
</tr>
<tr>
<td>20.</td>
<td>Knowledge and use of perioperative intensive care aspects in trauma patients</td>
<td>S</td>
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<tr>
<td>21.</td>
<td>Place and importance of ultrasound in the intensive care (RUSH protocol, TCD, cannulation)</td>
<td>S</td>
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<tr>
<td>22.</td>
<td>Place and importance of ultrasound in anaesthesiology (airway management, regional techniques)</td>
<td>S</td>
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<tr>
<td>23.</td>
<td>Indication and application of blood purification devices in the intensive care</td>
<td>S</td>
</tr>
<tr>
<td>24.</td>
<td>Knowledge and application of the in-hospital BLS algorithm under simulated conditions</td>
<td>SIM</td>
</tr>
<tr>
<td>25.</td>
<td>Using an automated external device (AED) under simulated conditions</td>
<td>S</td>
</tr>
<tr>
<td>26.</td>
<td>Safe use of a manual defibrillator on a simulation device</td>
<td>SIM</td>
</tr>
<tr>
<td>27.</td>
<td>Knowledge and application of the ALS algorithm under simulated conditions</td>
<td>SIM</td>
</tr>
<tr>
<td>28.</td>
<td>Teamwork, communication during ALS and the peri-arrest period</td>
<td>SIM</td>
</tr>
<tr>
<td>29.</td>
<td>Using the ABCDE assessment on patients in peri-arrest situations</td>
<td>SIM</td>
</tr>
<tr>
<td>30.</td>
<td>Recognising and treating acute, life-threatening conditions under high fidelity simulated environment</td>
<td>SIM</td>
</tr>
<tr>
<td>31.</td>
<td>Practice and knowledge of non-technical skills (teamwork, communication, situational awareness, decision making, etc.)</td>
<td>SIM</td>
</tr>
<tr>
<td>32.</td>
<td>Learning and using the SBAR technique</td>
<td>SIM</td>
</tr>
</tbody>
</table>

**Abbreviations:**

L: level of acquisition  
S: the student saw the procedure  
P: the student took part actively in the procedure  
SIM: the student acquired the experience/skill in skill-, simulation or situation practice  
D: the student did the procedure herself/himself

**Preconditions required for application and successfull completion of the course:**

Surgery II., Cardiology-heart surgery, angiology-vascular surgery, pulmonolgy-thoracic surgery, Traumatology, Internal medicine I., Oxyology, Pharmacology II., Clinical Pharmacology

**Number of students required for starting the course (minimum, maximum), method of choosing the students:**

Being a mandatory course, we set the limit of students in the course according to the number of students in the current year. This number varies according to the language of the course.
Registration for the course:
Registration takes place in the Neptun System.

Detailed topic of the course:

**Topic of the lectures:**

<table>
<thead>
<tr>
<th>Basics of intensive therapy and anesthesiology. Conditions requiring intensive therapy. Patient safety. Psychological methods (hypnosis, suggestive communication) in anesthesiology and intensive therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to cardiopulmonary resuscitation (CPR, BLS, ALS), the periarrest period and the Post Cardiac Arrest Syndrome (PCAS). In-hospital BLS and ABCDE-approach. Managing in-hospital BLS, ALS and PCAS. Importance of non-technical skills (task management, teamwork, situation awareness, decision making, communication).</td>
</tr>
<tr>
<td>Basics and classification of respiratory failure. Most common respiratory complications of the postoperative period. ARDS.</td>
</tr>
<tr>
<td>Assessment and disorders of salt - water homeostasis. Disorders of electrolyte homeostasis. Enteral and parenteral nutrition</td>
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<tr>
<td>Shock states: classification, pathophysiology, diagnosis and therapy</td>
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<tr>
<td>Acid-base balance. Metabolic and respiratory acid-base differences. Metabolic disorders in diabetes mellitus</td>
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<tr>
<td>Sepsis and septic shock</td>
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<tr>
<td>Pulmonary embolism. Stroke. Disseminated intravascular coagulation (DIC)</td>
</tr>
<tr>
<td>Preoperative risk stratification, preconditioning, premedication. Cardiopulmonary protection.</td>
</tr>
<tr>
<td>Regional (spinal and epidural) anaesthesia: anatomy, techniques, indications, practice and complications. Local anesthetics. Pain management</td>
</tr>
<tr>
<td>Anesthesiological and intensive care aspects of polytrauma management</td>
</tr>
</tbody>
</table>

**Topic of the practices and exam:**

The aim of the practices is, that a student completing the course should:

1. be able to recognise the patient potentially in need of intensive care
2. be aware of the time dependence concerning intensive therapy, and the importance of quick allocation of the patient
3. be able to begin and provide the first 15 minutes of treatment of a patient in critical condition
4. know the basics of the preoperative preparation, anesthesiological treatment and analgesia of a patient awaiting surgery
5. know the critical effects of anaesthesiological activity (pre-, intra- and postoperative care) on the postoperative state and condition of the patient.
Regarding the learning of the skills mentioned above, we emphasize delivering them via bedside practices, simulation practices and PBL practices.

Finishing the course includes an objectively structured clinical exam (OSCE), during which the students demonstrate the skills and knowledge acquired during the semester, before the written exam.

<table>
<thead>
<tr>
<th>Lesson hour(s)</th>
<th>Bed-side</th>
<th>Skill</th>
<th>Situation-simulation</th>
<th>PBL</th>
<th>OSCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>2</td>
<td>BEV</td>
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<td>2.</td>
<td>2</td>
<td>RespInt 1.</td>
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<tr>
<td>3.</td>
<td>2</td>
<td>CPR-Basic</td>
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<td>4.</td>
<td>2</td>
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<td>CPR-Sim-1.</td>
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<tr>
<td>5.</td>
<td>2</td>
<td></td>
<td>ABC-basics</td>
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<td>6.</td>
<td>2</td>
<td></td>
<td>Sokk 1.</td>
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<tr>
<td>7.</td>
<td>2</td>
<td></td>
<td>Sokk 2.</td>
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<td>8.</td>
<td>2</td>
<td></td>
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<td></td>
<td>Homeostatis</td>
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<td>9.</td>
<td>2</td>
<td></td>
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<td>Blood purification procedures</td>
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<td>10.</td>
<td>2</td>
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<td></td>
<td>CPR-Sim-2.</td>
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<tr>
<td>11.</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>HiFiSim</td>
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<td>12.</td>
<td>2</td>
<td></td>
<td>GivMet</td>
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<tr>
<td>13.</td>
<td>2</td>
<td></td>
<td>RespInt 2.</td>
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<td>14.</td>
<td>2</td>
<td></td>
<td>TraumIA</td>
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<td>15.</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Perioperative care</td>
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<td>16.</td>
<td>2</td>
<td></td>
<td>Anaesthesiology practice in the OR</td>
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<tr>
<td>17.</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>Assessing a case of a patient requiring intensive therapy (independent work of student)</td>
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<tr>
<td>18.</td>
<td>1</td>
<td>Consultation at the end of tuition</td>
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<tr>
<td>gyv1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>OSCE-1. ih-BLS, bag and valve mask ventilation</td>
</tr>
<tr>
<td>gyv2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>OSCE-2.: LMA, drawing blood, securing venous access line, EZ-IO placement</td>
</tr>
</tbody>
</table>
Other courses which may discuss common topics with the course Intensive Therapy and Anesthesiology (mandatory and optional courses as well!). Possible overlapping of topics:

Cardiac failure – Cardiology, Internal medicine
Respiratory failure – Internal medicine, Pulmonology
Impaired consciousness – Internal medicine, Neurology
Sepsis – any clinical subject
Kidney failure – Internal medicine, Nephrology
Hepatic failure – Internal medicine, Transplant Surgery

From a pathophysiological point of view: Biophysics, Physiology, (Pathophysiology), Microbiology, Pharmacology

Special task required for the successful completion of the course:

The students should process a case which will be given to them during the PBL practices at the start of the rotation. The cases will be demonstrated by the students, then discussed together later on during the practices.

Conditions of attendance on the course and making up for missed lectures/practices:

Students are obligated to take part on 75% of the course according to the Regulation of Organisation and Function Chapter III/I. Section 17.§ 7. of the Semmelweis University. We use an online attendance program for checking the attendance rate. Make-up is possible by joining another rotation, given there are free places left.

Checking the acquired knowledge during the semester:

At the end of the rotation, students knowledge and skills will be tested through objective structured clinical exams (OSCE).

 Preconditions for a signature:
At least 75% attendance rate and successful practical, OSCE type exam.

Type of the exam:
Besides the practical, OSCE-type exam there is a theoretical exam oral and/or written.
Exam criteria:

Written exam include the material discussed in lectures, consultations and practices.

Oral topic list

In the exam the student should discuss one topic of each block (A and B)

A

A1. Homeostasis in general, examples of its disturbances
A2. Acid-base balance in general, metabolic and respiratory acidosis and alkalosis and their therapy
A3. Shock states: pathophysiology, classification, diagnostics, therapy
A4. Cardiogenic shock: symptoms, diagnostics and therapy
A5. Anaphylactic shock: symptoms, diagnostics and therapy
A6. Hemorrhagic shock: symptoms, diagnostics and therapy
A7. Obstructive shock: symptoms, diagnostics and therapy
A8. Disturbances of fluid homeostasis and their therapy. Intravenous fluids: pharmacology, clinical aspects
A9. Sepsis, septic shock, multiple organ disfunction syndrome: pathophysiology, diagnostics, therapy
A10. Respiratory failure: pathophysiology, diagnostics, therapy
A11. Acute exacerbation of COPD: pathophysiology, intensive care aspects. acute bronchial asthma: pathophysiology, intensive care aspects
A12. Indication of ICU admission in pneumonia, therapy
A13. ARDS: pathophysiology, symptoms, diagnostics and therapy
A14. Postoperative respiratory failure: pathophysiology, symptoms, diagnostics and therapy
A15. In-hospital BLS an ALS: algorhythm, electric and drug therapy
A16. Postresuscitative care
A17. Physiotherapy and feeding in intensive care. Psychological aspects of intensive care
A18. Commonly used vasopressors and inotropes
A19. Respiratory pharmacology

B

B1. Acute renal failure in the ICU: pathophysiology, diagnostics, therapy
B2. Acute pancreatitis: pathophysiology, diagnostics, therapy
B3. Acute complications of diabetes in the ICU: diabetic ketoacidosis, diabetic hyperosmotic syndrome: pathophysiology, diagnostics, therapy
B4. Acute hemorrhage, hemorrhagic shock: therapy in the ICU
B5. Acute hepatic failre, hepatic encephalopathy
B6. Acute right- and left heart failure: pathophysiology, diagnostics, therapy
B7. Periarrest arrhythmias: diagnostics, therapy
B8. Intensive care of the polytrauma patient
B9. Life-threatenig disorders of the coagulation system, pulmonary embolism, disseminated intravascular coagulation: pathophysiology, diagnostics, therapy
B11. The role of ultrasuond in anesthesiology and intensive care
B12. Correction of life-threatening electrolyte disorders (Na, K, Ca)
Forming a grade:

We form a grade considering the activity in practices, the OSCE and the theoretical exam.

Registering for the exam:

Via the Neptun system

The possibility of a redo exam:

You have a chance to redo an exam according to the rules of the Regulation of Organisation and Function Chapter III/1. Section 19.§ 3. and 12-14. of the Semmelweis University.

Optional learning material for the course (printed, electronic and online notices, textbooks, literature)

To help learning we provide e-learning material available in the Moodle System for each of our courses. This material will be updated regularly.

You can find other recommended literature via the website of the Library of Semmelweis University:

- Duale Reihe Anästhesie, Schulte am Esch J, Bause H, Kosch E et al.; © 2011; Thieme Verlag 4. Auflage

Signature of the Tutor (habilitated professor) of the subject:

Signature of the Director of the partner institute:
<table>
<thead>
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<th>Date of delivery:</th>
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<th>Opinion of the OKB:</th>
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<th>Notes of the Directorate of International Studies:</th>
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### REQUIREMENTS

<table>
<thead>
<tr>
<th>Semmelweis University, Faculty of Medicine</th>
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<tbody>
<tr>
<td>Name(s) of the Institute(s) teaching the subject:</td>
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<tr>
<td>Department of Transplantation and Surgery</td>
</tr>
<tr>
<td>Name of the subject: SURGERY III.</td>
</tr>
<tr>
<td>Credits: 2</td>
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<tr>
<td>Total number of hours: 24 lectures: 12 practices: 12 seminars:</td>
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<td>Type of the course (mandatory/elective): mandatory</td>
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<tr>
<td>Academic year: 2019/2020</td>
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<tr>
<td>Code of the course: AOSBT328_3M</td>
</tr>
<tr>
<td>Course director (tutor): Dr. László Harsányi</td>
</tr>
<tr>
<td>Contact details: 1st. Department of Surgery tel: +36-1-333-5343</td>
</tr>
<tr>
<td>Position: university professor, director</td>
</tr>
<tr>
<td>Date of habilitation and reference number: 2011.06.09., 319.</td>
</tr>
</tbody>
</table>

#### Aim of the subject and its place in the curriculum:
Providing students with state-of-the-art knowledge to be able as newly graduated physicians to recognize surgical conditions in primary care and accordingly to select further required diagnostic procedures, and selective patient management. Be able to detect patients in need of immediate surgical treatment in emergency care. With the knowledge of the basic surgical solutions be able to manage the home care of a patient who has been discharged from the surgical ward. Know the basic factors affecting quality of life and post-operative mental hygiene tasks in the postoperative period.

#### Location of the course (lecture hall, practice room, etc.):
- **Honvéd Hospital**: Bp. XIII. Róbert K. krt. 44. (entrance: from Papp. K. u.): Plastic Section (dr. Attila Fekete) – gathering place by the main security office
- **Szent Imre Hospital**: Bp. XI. Tétényi út 12-16. Plastic Section (dr. János Jósvay)
- **SE - 1st Department of Surgery**: Bp. VIII. Üllői út. 78. (dr. István Molnár)
- **Dél Pest Centrum Hospital**: Bp. IX. Nagyvárad tér 1. B building (dr. Zsolt Révész)
- **SE - Department of cardiac- and vascular surgery**: 1122 Bp. Városmajor u. 68.
- **SE - Department of thorax surgery**: 1122 Bp. Ráth György u. 7-9
- **Országos Idegsebészeti Tudományos Intézet - SE Idegsebészeti Tanszék**: 1145 Bp. Amerikai u. 57.,

#### Competencies gained upon the successful completion of the subject:
Surgery education begins in IV. year and continues throughout the curriculum till the VI. year being the basis of the clinical training. During this time, our main goal is to combine theoretical knowledge and related clinical knowledge with surgical thinking and decision-making.

#### Prerequisite(s) for admission to the subject:
In accordance with the Study and Examination Regulations.

#### Minimum and maximum number of students registering for the course:
Student selection method in case of oversubscription: Based on Neptun registration

#### How to register for the course:
In the Neptun system
Detailed thematic of the course:
Presentation of the thoracic-, vascular- and cardiac surgical development, commonly used methods and perspectives. To show the diagnostic, differential diagnostic approach by indications, contraindications to surgery, modalities of elective surgery, conditions for surgical treatment, postoperative complications and treatment methods for individual disorders.
To introduce students to the basics of neurosurgery and plastic surgery.

The following topics to be discussed in “Surgery III.:

**Chest Surgery Lectures 4x45min (2x1.5 lessons):**

Lecture 1: Cancerous and inflammatory diseases of the lung and mediastinum requiring surgical treatment
Lecture 2: PTX, hemothorax, hydrothorax, empyema thoracis, thoracic and diaphragm surgery
Lecture 3: „Minimally invasive surgery” in thoracic surgery

**Chest surgery practices 4x45min (2x1.5 lessons)**

Practice 1: Examination and complex treatment of patients with lung cancer
Practice 2: Types of chest punctures and drainage
Practice 3: The role of traditional X-ray, CT, PET / CT and bronchoscopy in thoracic surgery
Practice 4: Diagnostic and therapeutic surgical procedures of the mediastinum

**Vascular surgery lectures 4x45min (2x1.5 lessons):**

Lecture 1: History of vascular surgery, vascular surgery of the lower limb
Lecture 2: Surgery of aneurysms and dissections
Lecture 3: Surgery of supraaortic vessels
Lecture 4: Surgery of veins

**Vascular surgery practices 4x45min (2x1.5 lessons):**

Practice 1: Examination of vascular surgical patients, examination methods
Practice 2: Imaging diagnostics in vascular surgery
Practice 3: Setting up surgical indications in the light of patient examination and diagnostics
Practice 4: Introduction to vascular surgery, operations

**Cardiac surgery lectures 2x45min (1x1.5 lessons):**

Lecture 1: Diseases requiring cardiac surgery
Lecture 2: Cardiac surgery, heart transplantation

**Cardiac surgery practices 2x45 minutes (1x1.5 lessons):**

Practice 1: Cardiac surgery. New methods in cardiac surgery
Practice 2: Follow-up of patients undergoing coronary artery and valve surgery
Neurosurgery lectures 4x45min (2x1.5 lessons)

Lecture 1: Intracranial diseases requiring neurosurgical care
Lecture 2: Spinal disorders requiring neurosurgical care.

Neurosurgery practices 4x45min (2x1.5 lessons)

Practice 1: Examination of a neurosurgical patient (patient presentation), neurosurgical imaging
Practice 2: Major types of operations, acute care in neurosurgery.

Plastic surgery lectures 2x45min (1x1.5 lessons)

Lecture 1: General plastic surgery
Lecture 2: Oncoplasty guidelines in breast surgery, types of breast reconstruction

Plastic surgery practice 2x45min (1x1.5 lessons)

Practice 1: Incision guiding and skin tension lines, special suture techniques
Practice 2: Breast reconstruction

Potential overlap(s) with other subjects:
Internal medicine
Radiology
Oncology
Anesthesiology/Intensive therapy
Pulmonology
Cardiology
Neurology

Special training activities required¹: there is none

Policy regarding the attendance and making up absences: In accordance with the Study and Examination Regulations.

Means of assessing the students’ progress during the semester⁴: We use catalogue on the practices. Based on the Semmelweis University’s SZMSZ 3. chapter 17 § 7. attendance on the 75-75% of the Lectures and practices is obligatory.

Requirement for acknowledging the semester (signature):
At least 75% attendance at the sessions

Type of the examination:
colloquium

Exam requirements⁵: Based on the lectures and practices, based on the written test by the teaching departments

Type and method of grading⁶: Written test

How to register for the exam: In the Neptun system

Opportunities to retake the exam: In accordance with the Study and Examination Regulations.
**Literature, i.e. printed, electronic and online notes, textbooks, tutorials (URL for online material):**

- Hungarian:
  - Gaál Csaba: Sebészet (Novotrade- TypoArt Kft)
  - Flautner - Sárváry: A sebészet és traumatológia tankönyve (Semmelweis Kiadó 2003)

**Signature of the tutor:**

**Signature(s) of the head(s) of the Institute(s):**

**Date:**

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**Credit Transfer Committee’s opinion:**

**Comment of the Dean’s Office:**

**Signature of the Dean:**

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1 Dékáni Hivatal tölti ki, jóváhagyást követően.
2 Az elméleti és gyakorlati oktatást órákra (hetekre) lebontva, sorszámozva külön-külön kell megadni, az előadók és a gyakorlati oktatók nevének feltüntetésével. Mellékletben nem csatolható!
3 Pl. terepgyakorlat, körülállásmentes, felmérés készítése stb.
4 Pl. házi feladat, beszámoló, zárthelyi stb. témaköre és időpontja, pótlásuk és javításuk lehetősége.
5 Elméleti vizsga esetén kérjük a tételsor megadását, gyakorlati vizsga esetén a vizsgázatás témakörét és módját.
6 Az elméleti és gyakorlati vizsga beszámításának módja. Az évközi számonkéréseknk eredményeink beszámítási módja.
**Semmelweis University, Faculty of Medicine**

Name(s) of the Institute(s) teaching the subject: Department of Obstetrics and Gynecology

<table>
<thead>
<tr>
<th>Name of the subject:</th>
<th>Obstetrics and Gynecology I (5th year)</th>
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<tbody>
<tr>
<td>Credits:</td>
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<td>The total number of hours:</td>
<td>84 lectures: 15  practices: 69  seminars:</td>
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<td>Type of the course (mandatory/elective):</td>
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**Academic year:** 2019/2020

**Code of the course:**

- Course director (tutor): Prof. dr. Nándor Ács
- Contact details: +36-1-2100290
- Position: professor, head

**Date of habilitation and reference number:**

**Aim of the subject and its place in the curriculum:**

The main goal of the obstetrics and gynecology block in the fifth year is to show the clinical signs and symptoms of the most common diseases in obstetrics and gynecology, and to teach the mentality and everyday routine of the subject.

**Location of the course (lecture hall, practice room, etc.):**

Semmelweis University, Department of Obstetrics and Gynecology. Mailing address: 26 Úllói út, Budapest, 1085, Hungary

**Competencies gained upon the successful completion of the subject:**

Obstetrics and gynecology studies start in the fifth year and – throughout the whole curricula – finishes at the end of the sixth year as part of the clinical education. During this period, our goal is to set the knowledge of obstetrics and gynecology together with the knowledge of other theoretical and clinical subjects of medicine. Our goal is to have graduated doctors with up-to-date theoretical knowledge and practical skills, who are able to build correct human relationships with patients, relatives and colleagues, and are able to work in medicine independently.

**Prerequisite(s) for admission to the subject:**

Finishing 4th year studies.

**Minimum and maximum number of students registering for the course:**

**Student selection method in case of oversubscription:**

Based on registration in the NEPTUN system.

**How to register for the course:**

In the NEPTUN system.
Detailed thematic of the course:

**Practices**

The education of the subject is based on a block system. During the two weeks block, students are visiting the Department for 8 days for the theoretical and practical courses and for the exams. Exams closing the block system are on the last week. As there are different topics during the block, students are educated rotating weekly, so at the same time, fewer students are studying a subspeciality. These students are further divided into smaller groups for practices next to the patient bed and for practices at the gynecological and obstetrical outpatient wards and delivery room.

Practice themes

- Prenatal care
- Ultrasonography
- Neonatal intensive care
- Neonatal resuscitation
- Pathological pregnancy
- Delivery room
- Skill lab
- Family planning
- Outpatient clinic
- Colposcopy
- Amniocentesis
- Gynecology
- Oncology
- Assisted reproduction
- Preparation for labor

**Lectures**

- Periconceptional period
- Maternal changes during pregnancy
- Prenatal care
- Ultrasonography, Fetal monitoring
- Labor and delivery
- Pathological delivery
- Operative delivery
- Puerperium
- Pregnancy pathology I-III.
- Twin gestation
- Neonatology

- Genetics I-II.
- Gynecological endocrinology
- Inflammatory diseases in OB&GYN
- Infertility problems
- Endometriosis
- Major gynecological benign diseases
- Gynecological oncology I-III.
- Contraception
- Menopause
- Urogynecology
**Potential overlap(s) with other subjects:**
- Acute diseases – surgery, urology, intensive care
- Mature and premature newborn care – pediatrics
- Tumors – pathology, oncology
- Transfusion – 2 weeks transfusion course for 6th year students
- Sepsis, hemorrhagic problems – intensive care

**Special training activities required\(^1\):**
N. A.

**Policy regarding the attendance and making up absences:**
According to the study and examination rules, participation on 75% of the courses is mandatory.

**Means of assessing the students’ progress during the semester\(^4\):**
As the education course is short, no interim exams will take place during the study period. Interactive practices and visits will allow checking the knowledge of the students.

**Requirement for acknowledging the semester (signature):**
At least 75% participation on the course.

**Type of the examination:**
Oral - colloquium

**Exam requirements\(^5\):**

**Oral questions:**
check the list of questions on the homepage of the Department

**Type and method of grading\(^6\):**
Activity during the block practice (10%) + oral exam (90%)
90-100% excellent, 80-89% good, 70-79% average, 60-69% satisfactory, 0-59% failed

**How to register for the exam:**
Through the NEPTUN system.

**Opportunities to retake the exam:**
Based on the study and examination rules.

**Literature, i.e., printed, electronic and online notes, textbooks, tutorials (URL for online material):**
- Obstetrics by Ten Teachers 20th Edition
- Gynecology by Ten Teachers 20th Edition
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<th><strong>Signature of the tutor:</strong></th>
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<th><strong>Signature(s) of the head(s) of the Institute(s):</strong></th>
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<th><strong>Credit Transfer Committee’s opinion:</strong></th>
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1 Dékáni Hivatal tölti ki, jóváhagyást követően.
2 Az elméleti és gyakorlati oktatást órákra (hetekre) lebontva, sorszámozva külön-külön kell megadni, az előadók és a gyakorlati oktatók nevének feltüntetésével. Mellékletben nem csatolható!
3 Pl. terepgyakorlat, kórípátemezés, felülvizsgálás készítése stb.
4 Pl. házi feladat, beszámoló, végeredmények és időpontja, pótlások és javítások lehetősége.
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6 Az elméleti és gyakorlati vizsga beszámításának módja. Az évközi számonkérés eredményeink beszámítási módja.
# REQUIREMENTS

| **Semmelweis University, Faculty of Medicine.** |  |
| Name(s) of the Institute(s) teaching the subject: Department of Ophthalmology |  |

| **Name of the subject:** Ophthalmology |  |
| **Credits:** 4.0 |  |
| **Total number of hours:** 56 hours lectures: 24hs practices: 21 seminars: 11 |  |
| **Type of the course (mandatory/elective):** mandatory |  |

| **Academic year:** 2020/2021 |  |
| **Code of the course**: AOKSZE065_1A |  |

| **Course director (tutor):** Prof. Dr. Zoltán Zsolt Nagy MD, PhD, DSc, FEBO |  |
| **Contact details:** Department of Ophthalmology, Semmelweis University |  |
| **Position:** head |  |
| **Date of habilitation and reference number:** 28/05/2003, 207/2003. |  |

**Aim of the subject and its place in the curriculum:**

**Aims:** The student should acquire the theoretical and practical knowledge that a non-ophthalmologist needs to recognize i.e. serious eye diseases that threaten with blindness. Should know prevention, screening and first aid of eye diseases. Should know appropriate knowledge of symptomatology of eye diseases those require specialized ophthalmologic treatment.

**Place:** The pathology, pathophysiology, symptomatology of ophthalmic diseases are not taught in any other subjects. The language of ophthalmology, the diagnostic and therapeutic methods require special approach and knowledge. The ophthalmology associates with several subjects, eg recognition of ophthalmic problems of a patient with internal, neurological, otorhinolaryngological, stomatological, or dermatological etc diseases.

**Location of the course (lecture hall, practice room, etc.):**

Semmelweis University, Department of Ophthalmology
1085 Budapest Mária utca 39
Competencies gained upon the successful completion of the subject:

Competence assessment
1. Differentiation of infective and allergic conjunctivitis
2. Differentiation of conjunctivitis and keratitis
3. Differentiation of conjunctivitis and acute iritis
4. Recognition of conjunctival, corneal foreign body, corneal erosion
5. Recognition of cellulitis orbitae, knowledge of therapeutic approach
6. Signs of acute glaucoma, therapy
7. Causes of sudden visual loss
8. Causes of progressive deterioration of visual acuity
9. Recognition of visual field defect, knowledge of therapeutic approach
10. Clinical feature of central retinal artery occlusion, acute treatment
11. Recognition of amblyopia, strabismus
12. Possible causes of leucocoria
13. Acute treatment of lagophthalmos
14. Palsy of nerves responsible for eye movement, management
15. Clinical manifestation of papilledema, diagnosis and therapy
16. Aim and frequency of ophthalmic screening for diabetes mellitus
17. First aid for chemical injury of the eye
18. Management of penetrating eye injury

Competence in practice
1. Evaluation of near and far visual acuity
2. Confrontal examination of visual field
3. Examination of eye movement in 6 main directions
4. Examination of ocular alignment
5. Examination of pupillary reactions and size
6. Examination of anterior segment with pupillary and slit lamp
7. Fluorescein staining of the cornea
8. Schirmer test and break up time
9. Appraisal of eye tension by touching
10. Eversion of upper eyelid
11. Removal of conjunctival foreign body
12. Red reflex, direct fundoscopy of optic nerve head, retinal vessels
13. Usage of eye drops, bandage
15. Retinal angiographies: indications, side effects
16. Modern diagnostic approaches of anterior segment
17. Ophthalmic ultrasonography

Practical knowledge: Recognition of ophthalmic problems:
1. Visual deterioration
2. Differential diagnosis of red eye (conjunctivitis, keratitis, anterior uveitis, acute glaucoma)
3. Papilledema
4. Hemianopic, bitemporal visual field defect
5. Acute palsy of nerves III, IV and VI.
6. Leucocoria
7. Recognition of amblyopia and strabismus in early childhood

**Treatment alone**
1. Conjunctivitis (viral, bacterial, allergic)

**First aid**
1. Chemical injury
2. Conjunctival foreign body
3. Acute glaucoma

**Knowledge of indication for acute ophthalmic consultation**
1. Sudden visual deterioration or loss, visual field defect
2. Chemical injury
3. Acute closed angle glaucoma
4. Mechanical injuries
5. Corneal ulceration
6. Corneal foreign body

**Indication of regular ophthalmic screening, related areas**
1. Diabetes mellitus
2. Glaucoma
3. Interdisciplinary issues: autoimmune diseases, oral surgery, otorhynolaryngology, neurology

**Knowledge of modern diagnostic and therapeutic tools for ophthalmology**
1. Diagnostic tools: automatic refractometer, measurement of eye tension, optical coherence tomography, ultrasonography, angiography, corneal topography, endothel microscope, cornea and anterior segment cameras, electrophysiological methods, colour tests, examination of visual field
2. Therapeutic possibilities: laser treatment in anterior or posterior segments, essence of modern microsurgical procedures, eyedrop families: action and side effect

**Prerequisite(s) for admission to the subject:**
Anatomy, physiology, pathology, microbiology, pharmacology, translational medicine

**Minimum and maximum number of students registering for the course:**

**Student selection method in case of oversubscription:**
The first 30 students registered in NEPTUN system

**How to register for the course:**
Through the NEPTUN system
Detailed thematic of the course:
The ophthalmology is taught in a 3-week-block system. Lectures for the whole block, seminars for 5-7 students and patient examination in shadowing system (max 2-3 students/doctor) are held on the first 2 weeks, the last week is for the preparation of final exam. At the end of 2. week, practical exam should be passed after consultation (Material of practical exam: see competence in practice, first aid). Final exam is a test exam.

Time table:

<table>
<thead>
<tr>
<th>1. week</th>
<th>contact hours</th>
<th>1. Monday</th>
<th>1. Tuesday</th>
<th>1. Wednesday</th>
<th>1. Friday</th>
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<tr>
<td>8:00-9:30</td>
<td>2x45</td>
<td>Lecture 1-2</td>
<td>Lecture 3-4</td>
<td>Patient examination 4-6</td>
<td>Patient examination 7-9</td>
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<tr>
<td>10:00-12:15</td>
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<td>Seminarium 1-3</td>
<td>Lecture 5-7</td>
<td>Lecture 8-9</td>
<td>Lecture 13-14</td>
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<tr>
<td>13:00-15:15 +30 min break: in consultation with the students</td>
<td>3x45</td>
<td>Patient examination 1-3</td>
<td>Lecture 10-12</td>
<td>Seminarium 7-9</td>
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<tr>
<td>8:00-9:30</td>
<td>2x45</td>
<td>Patient examination 10-12</td>
<td>Patient examination 13-15</td>
<td>Patient examination 16-18</td>
<td>Patient examination 19-21. Practical exam</td>
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<tr>
<td>10:00-12:15</td>
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<td>Lecture 15-16</td>
<td>Lecture 19-20</td>
<td>Lecture 23-24</td>
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<td>12:15-13:00</td>
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<tr>
<td>13:00-15:15 +30 min break: in consultation with the students</td>
<td>3x45</td>
<td>Lecture 17-18</td>
<td>Lecture 21-22</td>
<td>Seminarium 10-11</td>
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<tbody>
<tr>
<td>13:00-14:00</td>
<td>Test exam</td>
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</table>

1. Functional anatomy, in vivo examination of the tissue of the eye I.: instruments for anterior segment
2. Functional anatomy, in vivo examination of the tissue of the eye II.: instruments for posterior segment
3. Binocular vision. Strabismus-amblyopia
4. Misalignment of the eye movements, diplopia

5. Diseases of the orbit. Differential diagnosis of exophthalmus

7. Ocular oncology II.: anterior surface of the eye, adnexa, anterior segment
8. Ocular oncology III.: posterior segment

9. The red eye I.: diseases of the anterior surface (infective disorders of conjunctiva, cornea, sclera, dry eye)
10. The red eye II.: Uveitis

11. Refractive surgery
12. Cataract

13. Glaucoma I.
14. Glaucoma II.

15. Sudden visual loss I.: papilla edema
16. Sudden visual loss II.: retinal circulation problems

17. Sudden visual loss III.: retinal detachment, diseases of the vitreous (endophthalmitis)
18. Main causes of blindness in posterior segment I.: diabetes mellitus

19. Main causes of blindness in posterior segment II.: senile macular degeneration
20. Main causes of blindness in childhood: ROP and problems of formerly adults

21. Pediatric ophthalmology: Leucocoria
22. The most common genetic disorders of the posterior segment

23. Ocular traumatology, iatrogenic injury
24. Interdisciplinary issues: possibilities of a general doctor for screening, prevention of blindness

Practices
Patient examination in shadowing system 21hs

Seminarium 11hs
3. Colour vision tests (Ishihara, Farnsworth, Nagel anomaloskop), contrast sensitivity test. Eversion of the eyelids. Confrontal visual field testing. Examination of the eye movements. Physical examination of a normal eye (diffuse and focal light, slitlamp).
7. Ophthalmic instrumentations 3: ERG, VEP, Kinetic and automated perimetry. Critical fusion frequency, Hertel’s exophthalmometer.
8. Follow-up examinations, detection of progression in glaucoma or diabetes mellitus.
11. Consultation, competition (ppt case presentation).

Potential overlap(s) with other subjects:
- Anterior segment diseases, uveitis: infectology, immunology, dermatology
- Allergic disorders: pulmonology, dermatology, otorhinolaryngology
- Traumatology: intensive therapy, operative dentistry, otorhinolaryngology
- Ophthalmic complication of diabetes mellitus, endocrine orbitopathy: endocrinology
- Ocular oncology: oncology, otorhinolaryngology, dental surgery, head and neck surgery
- Vascular disorder of the retina: cardiology, neurology
- Edema or atrophy of the papilla: neurology, otorhinolaryngology, operative dentistry

Special training activities required: The student is required to keep record of interesting cases, the documentation should be demonstrated before the practical exam.

Policy regarding the attendance and making up absences: see the exam regulation of the University (More than 25% absences from the practices have to be substituted individually).

Means of assessing the students’ progress during the semester: Continues assessment of the students’ progress, due to close connection between the ophthalmologist and student in shadowing system.

Requirement for acknowledging the semester (signature): attendance on at least 75% of practices, successful practical exam.

Type of the examination: Final exam consists of a written test (multiple choice, case recognition on ppt slides).

Exam requirements: successful practical exam

Type and method of grading: For passing (Grade 2-5) student has to reach more than 50 % of the exam scores.

How to register for the exam: Signing up and modification of the exam days can be arranged exclusively online by the students’ registration system (NEPTUN).

Opportunities to retake the exam: Failed exam can be repeated after 3 days with new registration.

Literature, i.e. printed, electronic and online notes, textbooks, tutorials (URL for online material): On the homepage of the Department (http://semmelweis.hu/szemeszet) more information can be found: eg. slides of lectures, practices, summary of topics not found in the book

Signature of the tutor:
<table>
<thead>
<tr>
<th>Signature(s) of the head(s) of the Institute(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
</tr>
</tbody>
</table>

| Credit Transfer Committee’s opinion:            |

| Comment of the Dean’s Office:                   |

| Signature of the Dean:                          |

1 Dékáni Hivatal tölti ki, jóváhagyást követően. 
2 Az elméleti és gyakorlati oktatást órákra (hetekre) lebontva, sorszámozva külön-külön kell megadni, az előadók és a gyakorlati oktatók nevének feltüntetésével. Mellékletben nem csatolható! 
3 Pl. terepgyakorlat, kórlemezmérés, felmérés készítése stb. 
4 Pl. házi feladat, beszámoló, zárthelyi stb. témaköre és időpontja, pótlásuk és javításuk lehetősége. 
5 Elméleti vizsga esetén kérjük a tételsor megadását, gyakorlati vizsga esetén a vizsgált témakörét és módját. 
6 Az elméleti és gyakorlati vizsga beszámításának módja. Az évközi számonkérések eredményeink beszámítási módja.
## REQUIREMENTS

**Semmelweis University, Faculty of Medicine**

**Name(s) of the Institute(s) teaching the subject:** Department of Urology

**Name of the subject:** Urology

**Credits:** 3

**Total number of hours:** 37; **lectures:** 13; **practices:** 24; **seminars:**

**Type of the course (mandatory/elective):** mandatory

**Academic year:** 2019-2020

**Code of the course:**

**Course director (tutor):** Dr. András Horváth

**Contact details:** drhorandris@gmail.com  
+36208258753

**Position:** senior lecturer

**Date of habilitation and reference number:** PhD – 2013  
reference number: 1791/2013

**Aim of the subject and its place in the curriculum:** Our aim is to teach our students for the basic knowledge of the most important differential diagnostic steps, physical examination of urology and to educate them to perform the most important, minor urological procedures, such as urethral and suprapubic catheterization.

**Location of the course (lecture hall, practice room, etc.):**

Lectures: in the lecture hall of the 1st Internal Clinic
Practice: in the classroom, the library, the wards, the outpatient care rooms, the intensive care unit of Urology Department

**Competencies gained upon the successful completion of the subject:** The competencies are detailed in the aim of the subject

**Prerequisite(s) for admission to the subject:** Finished the 4th year of a Medical University with completed subjects of surgery 2 and radiology.

**Minimum and maximum number of students registering for the course:** min: 12;  
max: 200

**Student selection method in case of oversubscription:** none

**How to register for the course:** Through the Neptun system
### Detailed thematic of the course:

#### Lectures

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Instructor(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sep 11th</td>
<td>History of Urology, Symptoms, Diagnostic Measures</td>
<td>Prof. Nyirády</td>
</tr>
<tr>
<td>2. Sep 18th</td>
<td>Male Infertility</td>
<td>Dr. Kopa</td>
</tr>
<tr>
<td>3. Sep 25th</td>
<td>Prostate Cancer</td>
<td>Prof. Nyirády</td>
</tr>
<tr>
<td>4. Oct 2nd</td>
<td>Embryology of the urogenital tract</td>
<td>Prof. Nyirády</td>
</tr>
<tr>
<td>5. Oct 9th</td>
<td>Benign Prostatic Hyperplasia</td>
<td>Prof. Nyirády</td>
</tr>
<tr>
<td>6. Oct 16th</td>
<td>Renal Tumours</td>
<td>Dr. Keszthelyi</td>
</tr>
<tr>
<td>7. Oct 30th</td>
<td>Injuries to the GU Tract</td>
<td>Dr. Horváth</td>
</tr>
<tr>
<td>8. Nov 6th</td>
<td>Urolithiasis. Diagnosis and Treatment</td>
<td>Dr. Szendrői</td>
</tr>
<tr>
<td>9. Nov 13th</td>
<td>Tumours of the Urinary Bladder</td>
<td>Dr. Riesz</td>
</tr>
<tr>
<td>10. Nov 20th</td>
<td>Testicular and Penile Tumours</td>
<td>Dr. Szűcs</td>
</tr>
<tr>
<td>11. Nov 27th</td>
<td>Management of Urological Diseases in Childhood</td>
<td>Dr. Kiss A.</td>
</tr>
<tr>
<td>12. Dec 4th</td>
<td>Endourology</td>
<td>Prof. Nyirády</td>
</tr>
<tr>
<td>13. Dec 11th</td>
<td>Incontinence, Neurogenic Bladder</td>
<td>Dr. Majoros</td>
</tr>
</tbody>
</table>

#### Practices (in 2-week-courses)

<table>
<thead>
<tr>
<th>Period</th>
<th>Dates</th>
<th>Code</th>
<th>Instructors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 w.</td>
<td>Sept 10-20</td>
<td>A7/1; A7/2; A8</td>
<td>Dr. Keszthelyi + Dr. Molnár, Dr. Fazekas, Dr. Módos</td>
</tr>
<tr>
<td>3-4 w.</td>
<td>Sept 24-Oct 3</td>
<td>A9/1; A9/2; A10</td>
<td>Dr. Szabó, Dr. Romics, Dr. Kovács</td>
</tr>
<tr>
<td>5-6 w.</td>
<td>Oct 8-17</td>
<td>A11/1; A11/2; A12</td>
<td>Dr. Szendrői, Dr. Vargha, Dr. Kubik</td>
</tr>
<tr>
<td>7-8 w.</td>
<td>Oct 22-31</td>
<td>A1/1; A1/2; A2</td>
<td>Dr. Bánfi, Dr. Horváth, Dr. Juhász</td>
</tr>
<tr>
<td>9-10 w.</td>
<td>Nov 5-14</td>
<td>A3/1; A3/2; A4</td>
<td>Dr. Riesz, Dr. Széll, Dr. Szalontai</td>
</tr>
<tr>
<td>11-12 w.</td>
<td>Nov 19-28</td>
<td>A5/1; A5/2; A6</td>
<td>Dr. Majoros, Dr. Bécsi, Dr. Hüttl</td>
</tr>
</tbody>
</table>

### Potential overlap(s) with other subjects: none

### Special training activities required: none

### Policy regarding the attendance and making up absences: Only official medical certificate is accepted

### Means of assessing the students' progress during the semester: not applicable

### Requirement for acknowledging the semester (signature): Taking part in the 60% of lectures and all but max 3 practical classes

### Type of the examination: oral
Exam requirements:

Urology
1. Most important surgical interventions in urology
2. Developmental disorders of the kidney, the ureter and the bladder
3. Developmental disorders of the urethra and the male genitilia
4. Injuries to the kidney, the ureter and the bladder
5. Lesions of the urethra and the genital organs, their early and late consequences
6. Stenoses and fistulas in the urinary tract
7. Differential diagnosis of acute abdomen (with particular attention to urologic diseases)
8. Urological emergency
9. Urine leaks, urodynamics
10. Painful and difficult voiding
11. Acute and chronic renal failure
12. Ultrasound examination of the kidney and the ureter, X-ray and isotopes
13. Imaging techniques of examination the bladder, the prostate and the male genitals
14. Non-specific infections of the kidney parenchyma and of the capsules
15. Cystitis and urethritis
16. Inflammations of the prostate and the male genitals
17. Development of urolithiasis, its types, prevention
18. Diagnostics and treatment of urinary stones
19. Diseases of the male genitalia, their diagnostics and treatment
20. Symptoms and differential diagnosis of BPH (benign prostatic hyperplasia)
21. Conservative and surgical treatment of BPH (benign prostatic hyperplasia)
22. Male sexual disorders of fertility
23. Male sexual dysfunctions
24. Pediatric urology

Urooncology
1. Groups of antineoplastic drugs in urology
2. Renal tumours
3. Tumours of the pyelon and ureter
4. Superficial bladder cancer
5. Muscle-invasive bladder cancer
6. Incidence, symptoms and diagnosis of prostate cancer
7. Localized prostate cancer
8. Treatment of advanced prostate cancer
9. Penile tumours
10. Testicular tumours
11. Haematuria

Type and method of grading: The grade depends on the practice score given by the tutor of the student and on the examiner's opinion, which is determined by the student's performance on the spot.

How to register for the exam: Through the Neptun system

Opportunities to retake the exam: Retaking the exam is free once, second for additional fee

Literature, i.e. printed, electronic and online notes, textbooks, tutorials (URL for online material): Nyirády P., Romics I. (ed.): Textbook of Urology, Semmelweis Kiadó, Budapest, 2009

Signature of the tutor: [Signature]

Signature(s) of the head(s) of the Institute(s):

Date: 24 September 2019
### Credit Transfer Committee’s opinion:

<table>
<thead>
<tr>
<th>Credit Transfer Committee’s opinion:</th>
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### Comment of the Dean’s Office:

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<tr>
<th>Comment of the Dean’s Office:</th>
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### Signature of the Dean:

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<th>Signature of the Dean:</th>
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1 Dékáni Hivatal tölti ki, jóváhagyást követően.
2 Az elméleti és gyakorlati oktatást órákra (hetekre) lebontva, sorszámozva külön-külön kell megadni, az előadók és a gyakorlati oktatók nevének feltüntetésével. Mellekletben nem csatolható!
3 Pl. terepgyakorlat, körlépésmész, felmérés készítése stb.
4 Pl. házi feladat, beszámoló, zárthelyi stb. téma köré és időpontja, pótlásuk és javításuk lehetősége.
5 Elméleti vizsga esetén kérjük a tétesor megadását, gyakorlati vizsga esetén a vizsgázatát a téma körét és módját.
6 Az elméleti és gyakorlati vizsga beszámításának módja. Az évközi számonkéresek eredményeink beszámítási módja.
COURSE REQUIREMENTS

Semmelweis University, Faculty of Medicine  
1st. Department of Medicine (Sándor Korányi Department of Medicine)

Course name: Internal Medicine IV.  
Credit: 3  
Contact hours: 42  
Lecture: 14 hours  
Practice: 28 hours  
Type: obligatory / elective

Year: 2019-2020

Subject code: AOKBL1471_4A

Course director: Dr. István Takács  
Title: professor, department head

Date and number of habilitation: 2011, 328 (Semmelweis University)

Objective of the course and how it fits in the educational curriculum:

The primary objective of the course in internal medicine for fifth-year students is the symptom-based and patient-oriented education of gastroenterology. Students become familiar with the diagnostics and the treatment of the most common disorders of the discipline.

Location:  
1st. Department of Medicine (Sándor Korányi Department of Medicine)

Skills obtained by successful completion of the course:  
Education of internal medicine commences in third year by teaching propedeutics, and finishes in the final year - providing a backbone for medical education. Our major objective throughout this period is the integration of the knowledge provided by preclinical and clinical subjects into our curriculum. By the time of graduation, our students – the future doctors – should have up-to-date theoretical and practical knowledge, as well as an ability to make appropriate interpersonal relationship with patients, relatives and medical personnel that together, provides the basis of independent medical decisions.

Prerequisites of the course:  
Completion of Hungarian medical terminology, Medical Biochemistry, Medical Physiology, Medical Biochemistry, Medical Communication

Number of students (minimum, maximum) required to initiate the course  
One eighth of the students registered at the Neptun system for the fourth year.

Registration to the course:  
Through the Neptun system
Detailed syllabus:

Lectures are delivered weekly during the semester to all students. Practices are held for students in 2-week blocks. During the 2-week block practice, students spend 6 days in the department. Students are assigned into groups for the case discussions that are held in rotation, resulting in fewer students learning about a given topic at a time. Bedside practices are also held in small groups.

Lectures:
Duration: 1 contact hour = 1x45 minutes

1. week  Approach to the patient with a GI disease
2. week  Gastritis and peptic ulcer disease
3. week  Inflammatory bowel disease
4. week  Malabsorption syndromes, maldigestion
5. week  Irritable bowel syndrome
6. week  Gastrointestinal bleeding
7. week  National holiday
8. week  Acute abdomen
9. week  Gastroenteritis
10. week  Alcoholic liver disease
11. week  Drug-induced liver injury, viral hepatitis
12. week  Gallbladder and bile duct disorders
13. week  Liver cirrhosis
14. week  Acute and chronic pancreatitis

Practices:
Week #1 / Week #2

Tuesday
8:50-9:25 Introduction, course requirements / Endoscopy - presentation
9:35-10:20 Case discussion #1 / Case discussion #2
11:20-12:50 Bedside practice, consultation

Wednesday
8:50-9:35 Case discussion #3 / Case discussion #4
9:45- 12:00 Bedside practice, consultation

Thursday
12:00-14:15 Bedside practice, consultation
14:30-16:00 Case discussion #5 / Case discussion #6

Subjects (either obligatory or elective) the content of whose may overlap with the current course:
Acute abdomen – Surgery
Gastroenteritides – Infectology

Additional assignments to be completed for the course:
None
Required attendance:
According to the rules of the University, students are required to participate on at least 75% of all sessions. This is evaluated through attendance sheets signed by the tutor. Retake of lectures / case discussions is not provided by the Department.

Midterm evaluation:
There is no formal midterm evaluation. During case discussions and bedside practices the interaction between students and the tutor provides an opportunity to assess the knowledge of students.

Requirements for obtaining the signature for the course:
Participation on at least 75% of all sessions. At the end of the semester, after the student has taken his/her attendance sheet to the secretariat, the Course Director grants credits to students in the Neptun system.

Exam type:
semi-final, written test, oral and patient examination

Method of the exam:
Written test comprises 15 single-choice quiz questions. Score-to-grade conversion of the written exam: 0-10 - fail (1), 11 - pass (2), 12 - average (3), 13 - good (4), 14-15 - excellent (5). Students must obtain at least a score of 11 during the written exam to be eligible to take the oral exam. Oral exam comprises physical investigation of a patient, and one question from the topic list provided by the Department. Oral exam is held the same day as the written test, starting between 9.00 AM and 01:00 PM.

Topic list for the oral questions
1. Acute abdomen.
2. Gastrointestinal bleeding.
5. Diarrhea and constipation.
6. Radiological and endoscopic diagnostic procedures in gastroenterology.
7. Dysphagia, heartburn, gastrointestinal reflux disease.
8. Acute and chronic gastritis.
11. Ulcerative colitis.
13. Irritable bowel syndrome.
17. Fulminant hepatic failure.
18. Cirrhosis of the liver.
19. Primary biliary cirrhosis, primary sclerosing cholangitis
22. Chronic pancreatitis.

Scoring the exam results:
A score from 1 (fail) to 5 (excellent) is given, that is the mean of the written test and oral exam. (50% - 50%). Fail during any part of the exam results in a final fail grade.
**Registration to the exam:**
through the Neptun system

**Repeat exams, failed exams:**
According to the general rules of the University

**Suggested print, electronic, online material**
3. Lecture slides provided online after registration ([bell.semmelweis.hu](http://bell.semmelweis.hu))

**Signature of the course director:**

**Signature of the host institution:**

**Submission date:**

**OKB decision:**

**Notes of the dean:**

**Deans’ signature:**
## REQUIREMENTS

Semmelweis University, Faculty of Medicine  
Name(s) of the Institute(s) teaching the subject: Department of Family Medicine

| Name of the subject: Family Medicine  
Credits: 1  
Total number of hours: 14 lectures: 14 practices: - seminars: - |
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Type of the course (mandatory/elective): mandatory</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Academic year: 2019/2020</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Code of the course: AOKCSA061_1A</th>
</tr>
</thead>
</table>

| Course director (tutor): Prof. Dr. Kalabay László  
Contact details: 06-1-355-8530  
Position: Director  
Date of habilitation and reference number: 205/2003 |
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Location of the course (lecture hall, practice room, etc.): Lecture hall</td>
<td></td>
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</tbody>
</table>

**Competencies gained upon the successful completion of the subject:**  
The structure and functioning of the Hungarian Primary Health Care System. Activity of the general practitioners.  
The ranges of normality as they will help to recognize and anticipate deviations from normal and the earliest manifestations of disease  
Quick diagnoses. Applying the best available evidence in investigations and management of common conditions in family medicine.  
The different roles of the physician and awareness of their own personal strengths and weaknesses and how it affects the Patient-Doctor relationship.  
The appropriate selection and use of screening methods for the early detection of disease. The principles of preventative care and methods to implement appropriate screening and patient education programs  
Assessing patients' illness experience within their family and social context  
Learn to manage in-hospital urgent and emergency situations in primary care.  
Management/treatment approaches of common conditions  
Rural medicine  
Video communication to improve communication skills

<table>
<thead>
<tr>
<th>Prerequisite(s) for admission to the subject: Internal Medicine, Pharmacology I., Laboratory Medicine</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Minimum and maximum number of students registering for the course: 200 students/group</th>
</tr>
</thead>
</table>

| Student selection method in case of oversubscription:  
How to register for the course: Registration for the course in the 'Neptun' system |
|------------------------------------------------|-----------------------|------------------------|

<table>
<thead>
<tr>
<th>Potential overlap(s) with other subjects: -</th>
</tr>
</thead>
</table>
**Special training activities required**

1st week: Family Medicine as a speciality  
2nd week: Emergency care in Family Practice  
3rd week: Screening of mood disorders in Primary Care  
4th week: Prevention in Primary Care  
5th week: Cardiovascular diseases in Family Practice  
6th week: Complementary and alternative medicine  
7th week: Rheumatology disorders in Family Practice  
8th week: Sleeping disorders in Family Practice  
9th week: Gastrointestinal disorders in Family Practice  
10th week: Smoking cessation in Primary Care  
11th week: Diabetes Mellitus in Family Practice  
12th week: Burnout prevention  
13th week: Case stories  
14th week: Preparing for the 1 week family practice

**Policy regarding the attendance and making up absences:**
It’s compulsory for the student to attend 75 percent of the lectures

**Means of assessing the students’ progress during the semester**

<table>
<thead>
<tr>
<th>Requirement for acknowledging the semester (signature):</th>
<th>It’s compulsory for the student to attend at least 75 percent of the training sessions.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of the examination:</strong></td>
<td>End-term written exam</td>
</tr>
<tr>
<td><strong>Exam requirements</strong>:</td>
<td>50 test questions</td>
</tr>
<tr>
<td><strong>Type and method of grading</strong>:</td>
<td>Grade 1: below 60%</td>
</tr>
<tr>
<td></td>
<td>Grade 2: 60-69%</td>
</tr>
<tr>
<td></td>
<td>Grade 3: 70-79%</td>
</tr>
<tr>
<td></td>
<td>Grade 4: 80-89%</td>
</tr>
<tr>
<td></td>
<td>Grade 5: 90-100%</td>
</tr>
<tr>
<td><strong>How to register for the exam:</strong></td>
<td>Registering for the exam in the ’Neptun’ system</td>
</tr>
<tr>
<td><strong>Opportunities to retake the exam:</strong></td>
<td>In accordance with the Studies and Exams Code</td>
</tr>
<tr>
<td><strong>Literature, i.e. printed, electronic and online notes, textbooks, tutorials (URL for online material):</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Signature of the tutor:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Signature(s) of the head(s) of the Institute(s):</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Date:</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Credit Transfer Committee’s opinion:**

**Comment of the Dean’s Office:**
Dékáni Hivatal tölti ki, jóváhagyást követően.

2 Az elméleti és gyakorlati oktatást órákra (hetekre) lebontva, sorszámozva külön-külön kell megadni, az előadók és a gyakorlati oktatók nevének feltüntetésével. Mellékletben nem csatolható!

3 Pl. terepgyakorlat, kórlapelemzés, felmérés készítése stb.

4 Pl. házi feladat, beszámoló, zárthelyi stb. témaköre és időpontja, pótlásuk és javításuk lehetősége.

5 Elméleti vizsga esetén kérjük a tételsor megadását, gyakorlati vizsga esetén a vizsgázattatás témakörét és módját.

6 Az elméleti és gyakorlati vizsga beszámításának módja. Az évközi számonkérések eredményeink beszámítási módja.
Semmelweis University, Faculty of General Medicine
Name(s) of the Institute(s) teaching the subject: Department of Psychiatry and Psychotherapy

<table>
<thead>
<tr>
<th>Name of the subject: Psychiatry I-II.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credits: 7 (two semesters)</td>
</tr>
<tr>
<td>Total number of hours: 140 (two semesters)</td>
</tr>
<tr>
<td>lectures: 42  practices: 98</td>
</tr>
<tr>
<td>seminars: none</td>
</tr>
<tr>
<td>Type of the course (mandatory/elective): Mandatory (compulsory)</td>
</tr>
<tr>
<td>Academic year: 2019-2020</td>
</tr>
<tr>
<td>Code of the course: AOKPSI057_1A és AOKPSI057_2A</td>
</tr>
<tr>
<td>Course director (tutor): Prof. János Réthelyi MD, PhD</td>
</tr>
<tr>
<td>Contact details: Department of Psychiatry and Psychotherapy 1083 Budapest Balassa u. 6.</td>
</tr>
<tr>
<td>Tel.: 061 210 0336</td>
</tr>
<tr>
<td>Position: Head of the department</td>
</tr>
<tr>
<td>Date of habilitation and reference number: 24 June 2015, registration number: 05/2015.</td>
</tr>
</tbody>
</table>

**Aim of the subject and its place in the curriculum:**
The aims of the subject of Psychiatry I-II. is to acquire in-depth knowledge about the diagnostics, symptoms and treatment of psychiatric disorders at the level of a general medical practice. It is expected from students to be able to identify the basic elements of psychopathology and the conditions requiring emergency psychiatric interventions. Furthermore, students’ communication skills are developed in order to be able to examine patients and explore psychiatric conditions independently.

Psychiatry I-II. is taught in the semesters of 9-10 within the curriculum.

**Location of the course (lecture hall, practice room, etc.):**
The location of Psychiatry lectures and practice session are within the premises of the Department of Psychiatry and Psychotherapy (i.e. Lecture hall and rooms for education)
Competencies gained upon the successful completion of the subject:

- Recording the patient's history (general, somatic, psychiatric, pharmacological and family history)
- Complex psychiatric examination (assessing the consciousness, perception, orientation, thought, intellect; emotional and memory functions; mood, and psychomotor functions of the patient; assessment of attitude towards examiner, motivation system and personality functions)
- Suicide risk assessment
- Family consultation to uncover the patient’s problems
- Exploration of patients after suicide attempts or in crisis situations.
- Interpretation of the Mini Mental State Examination results
- Indication of psychiatric inpatient treatment
- First steps of emergency psychiatry care
- Identification of different intoxications
- Recognition of somatic disorders underlying psychiatric symptoms
- Management of immediately dangerous behaviours
- Psychoeducation (regarding the disorder, therapy, prodromal signs, patient care)
- Differential diagnosis of psychiatric disorders; making a diagnosis

Prerequisite(s) for admission to the subject:
For Psychiatry I.: Pharmacology and Pharmacotherapy II., Neurology I.
For Psychiatry II.: Psychiatry I.

Minimum and maximum number of students registering for the course: We instruct the entire fifth year, therefore, there is no limit on number of subscribing students in the Neptun System.
Student selection method in case of oversubscription:

How to register for the course:
Registration for the course is possible in the Neptun system within the rotations of the block practice system.
### Detailed thematic of the course

#### Lectures

**First semester**
- Introductory lecture: curriculum, objectives, exams
- Gene-environment interactions in psychiatry. Psychopathology. Mental status examination
- Classification of mental disorders
- Organic mental disorders: diagnosis and treatment
- Anxiety disorders: diagnosis and treatment
- Eating disorders
- Affective disorders: diagnosis and treatment
- Diagnosis and treatment of the alcohol use disorder
- Schizophrenia and other psychotic disorders

  Sleep disorders: diagnosis and treatment
  Personality Disorders
  Diagnosis and treatment of the substance use disorder
  Somatoform disorders, Somatization and Conversion disorders, Hypochondriasis
  Posttraumatic stress disorders

**Second semester**
- Suicide, sexual disorders
- Legal and ethical issues in psychiatry
- Child and adolescent psychiatry (ADHD, autism, tic disorders)
- Pharmacotherapy in psychiatry
- Emergency Psychiatry
- EEG and event related potentials in psychiatry

- Geriatric psychiatry
- Adult ADHD (symptoms, comorbidity, course, therapy)
- Psychotherapy I: Cognitive and behavioural therapy
- Psychotherapy II: Family therapy, autogenic training, hypnosis
- Transcultural psychiatry
- Community psychiatry, rehabilitation of psychiatric patients
- Consultation and liaison psychiatry

**Practices**
The topics of psychiatric practice sessions are closely related to that of the lectures focusing on the following fundamental issues: writing a case report, psychopharmacologic treatment, psychotherapy, liaison psychiatry, and the conditions of emergency psychiatry.

### Potential overlap(s) with other subjects:
- Behavioural sciences, Medical communication, Medical anthropology, Medical sociology, Psychotherapy in medical practice, Pharmacology and pharmacotherapy, Neurology

### Special training activities required:
None.
**Policy regarding the attendance and making up absences:**

Similar to other subjects, the course is considered completed if the absences do not exceed 20% of practice sessions each semester. Practice teachers record absences on an attendance sheet at each practice occasion together with the following data: the ID number of the group, topic of the practice sessions, the demonstrated diagnosis. It is not possible to certify absences. Therefore, making up missing practice time is compulsory either by coming to practice sessions with a different group or performing extra tasks such as writing a case report that is examined and signed by one of our practice teachers. In the case of mass absences because of exceptional cases (i.e. grave disease) the permission of the head of the department is necessary.

**Means of assessing the students’ progress during the semester:**

There are not any mid-semester tests or oral reports in Psychiatry but on the last day of the first week of the practice (Thursday) there are three specific questions to be answered in writing during the block practice session.

**Requirement for acknowledging the semester (signature):**

The semester is acknowledged if the student has actively participated at the practice sessions which cover the theory and practice of examining a patient and case discussions attached to demonstrations. The sheet entitled The Register of Psychiatric Conditions must be downloaded from our website in the fifth year and submitted with the required signatures certifying the observed psychiatric disorders. This sheet of paper must be submitted at the final exam of Psychiatry in the six year.

**Type of the examination:**

At the end of the first semester there is a semi-final exam, while a practice mark must be acquired at the end of the second semester. The semi-final exam is a written exam containing 50 multiple choice questions. Some of them are related to case vignettes within the body of the test paper.

**Exam requirements:**

The material should be acquired by regular patient examinations during the practice sessions, by studying the e-learning material available also on our website and by studying from the designated textbooks. Preparation for the semi-final exam includes presence at the lectures, text books and the drafts and PowerPoint presentations of lectures made available for students on the website of the Department of Psychiatry and Psychotherapy.

**Type and method of grading:**

In the first semester, the semi-final exam can be passed by answering a written test of 50 items. An oral semi-final exam is only allowed by permission from the head of the department in the case of subsequently failing two written exams in Psychiatry. In the second semester, a practice mark can be gained by considering the following factors: the students’ performance exhibited within the semester during the practice sessions, the quality of their written case report submitted to their own practice teacher and the oral performance related to the topics of practice sessions.

**How to register for the exam:**

Exam registrations can be made in the Neptun system within the time limits permitted by the Rule Book of Study and Exams of Semmelweis University.

**Opportunities to retake the exam:**

Retake of the semi-final exam are permitted within the boundaries set by the Book of Study and Exams of Semmelweis University. There are two occasions of passing attempts in the form of a written exam. The third attempt to correct the failed exams can be oral.

**Literature, i.e. printed, electronic and online notes, textbooks, tutorials (URL for online material):**

Text books and lecture materials available on the website should be consulted while preparing for examination:

<table>
<thead>
<tr>
<th>Signature of the tutor:</th>
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<tbody>
<tr>
<td>Signature(s) of the head(s) of the Institute(s):</td>
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<tr>
<td>Date:</td>
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</table>

**considering the student’s**

**Comment of the Dean’s Office:**

**Signature of the Dean:**

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1. Dékáni Hivatal tölti ki, jóváhagyást követően.
2. Az elméleti és gyakorlati oktatást órákra (hetekre) lebontva, sorszámozva külön-külön kell megadni, az előadók és a gyakorlati oktatók nevének feltüntetésével. Mellékletben nem csatolható!
3. Pl. terepgyakorlat, körlapelemzés, felmérés készítése stb.
4. Pl. házi feladat, beszámoló, zárthelyi stb. témaköre és időpontja, pótlásuk és javításuk lehetősége.
5. Elméleti vizsga esetén kérjük a tételsor megadását, gyakorlati vizsga esetén a vizsgáztatás témakörét és módját.
### REQUIREMENTS

<table>
<thead>
<tr>
<th>Semmelweis University, Faculty of Medicine</th>
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<tbody>
<tr>
<td><strong>Name(s) of the Institute(s) teaching the subject:</strong></td>
</tr>
<tr>
<td>Department of Neurosurgery</td>
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<tr>
<td><strong>Name of the subject:</strong></td>
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<tr>
<td><strong>Credits:</strong></td>
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<td><strong>Total number of hours:</strong></td>
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<td><strong>Type of the course (mandatory/elective):</strong></td>
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<td><strong>Academic year:</strong></td>
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<td><strong>Code of the course:</strong></td>
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<tr>
<td><strong>Course director (tutor):</strong></td>
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<tr>
<td><strong>Contact details:</strong></td>
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<tr>
<td><strong>Position:</strong></td>
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<tr>
<td><strong>Date of habilitation and reference number:</strong></td>
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</table>

**Aim of the subject and its place in the curriculum:**

Neurosurgery is a medical specialty concerned with the prevention, diagnosis and treatment of complex neurological disorders. Neurosurgeons deal with pathologies of the central and peripheral nervous system.

There are several subspecialities in neurosurgery. In neurotraumatology, cranial and spinal injuries caused by an external mechanical forces are treated. Neuro-oncology is an important and developing field in neuroscience, that primarily deals with diagnosis and treatment of both primary central nervous system tumours and complications of systemic cancer. Vascular neurosurgery involves the treatment of abnormalities of blood vessels of the brain and spinal cord. Neurological spine surgeons treat several degenerative, neoplastic and vascular pathologies involving the bony spine or the neural structures. Neurological spine surgeons rather use minimally invasive operative techniques in order to minimize hospital stay and tissue damage. Functional neurosurgery involves the restoration of neurological condition and function. Pediatric neurosurgery is also a subspeciality and it aims to treat children with operable disorders of the nervous system.

**Location of the course (lecture hall, practice room, etc.):**

Department of Neurology, 1083 Budapest, Balassa u. 6.

**Competencies gained upon the successful completion of the subject:**

In our institute students can experience the various clinical presentations of central and peripheral nervous system abnormalities. We are able to introduce the diagnostic algorithm and special operative techniques with which they gain practical knowledge about neurology and neurosurgery.

**Prerequisite(s) for admission to the subject:**

5th year medical students, Neurology

**Minimum and maximum number of students registering for the course:** 10/80

**Student selection method in case of oversubscription:** in order of application

**How to register for the course:**

Trough the Neptun system
**Detailed thematic of the course**:  
*Lectures*  
1. Introduction to neurosurgery: history of neurosurgery.  
3. Neurological investigation of the neurosurgical patient.  
4. Increased intracranial pressure. Hydrocephalus.  
5. Head and injury and neurotrauma basics.  
7. Spinal tumors.  
8. Brain tumors, neurooncology.  
9. Vascular malformations of CNS.  
10. Degenerative spine diseases.  
11. Epilepsy surgery and investigations.  
12. Functional neurosurgery and stereotactic procedures.  
13. Radiosurgery.  
14. Visiting the operating theatre and examination.

**Potential overlap(s) with other subjects:**  
The Neurosurgery subject gives assistance to fulfil the requirements of fifth-year Surgery III. subject.

**Special training activities required**:  
None

**Policy regarding the attendance and making up absences**:  
To take part on lectures is mandatory. It is possible to miss only one (in case of offered mark) or two absence (in case of written test).

**Means of assessing the students’ progress during the semester**:  
None

**Requirement for acknowledging the semester (signature)**:  
Participation in lectures - attendances sheet, written essay (in case of offered mark) and/or written test

**Type of the examination**:  
offered mark (written essay) or written multiple choice test

**Exam requirements**:  
-offered mark: the students have opportunity to get offered mark, if they write an essay the end of the semester.  
-written multiple choice test: written test comprises 15 multiple choice quiz questions.

**Type and method of grading**:  
The students will be graded from 1 to 5.

**How to register for the exam**:  
Trough in Neptun system

**Opportunities to retake the exam**:  
According to the generals rules of the University

**Literature, i.e. printed, electronic and online notes, textbooks, tutorials (URL for online material)**:  
- online notes (http://semmelweis.hu/idegsebeszet/oktatas/gradualis-oktatas/)  
- Schmidek & Sweet’s operative neurosurgical techniques / Alfredo Quinones-Hinojosa - 62. kiadás (Jelzetek: I1/412 és I1/413)

**Signature of the tutor**:  

**Signature(s) of the head(s) of the Institute(s)**:  

**Date**:  
27/09/2019
Credit Transfer Committee’s opinion:

Comment of the Dean’s Office:

Signature of the Dean:

1 Dékáni Hivatal tölti ki, jóváhagyást követően.
2 Az elméleti és gyakorlati oktatást órákra (hetekre) lebontva, sorszámozva külön-külön kell megadni, az előadók és a gyakorlati oktatók nevének feltüntetésével. Mellékletben nem csatolható!
3 Pl. teregyakorlat, körlelemzés, felmérés készítése stb.
4 Pl. házi feladat, beszámoló, zárrámpótlás és javítások lehetősége.
5 Elméleti vizsga esetén kérjük a tételsor megadását, gyakorlati vizsga esetén a vizsgázatot témakörét és módját.
6 Az elméleti és gyakorlati vizsga beszámításának módja, lemélyen ismertítok az eredmények beszámítási módja.
**REQUIREMENTS**

**Semmelweis University, Faculty of Medicine**  
**Name(s) of the Institute(s) teaching the subject:** Department of Neurology

<table>
<thead>
<tr>
<th>Name of the subject</th>
<th>Neurology</th>
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<tbody>
<tr>
<td>Credits</td>
<td>3+4 (I + II. semester)</td>
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<tr>
<td>Total number of hours</td>
<td>96 lectures: 48 practices: 42 (2x21 block)</td>
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<tr>
<td>Type of the course</td>
<td>mandatory</td>
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<table>
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<tr>
<th>Academic year</th>
<th>2019/2020</th>
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<tr>
<td>Code of the course 1</td>
<td>AOKNEU056_1A</td>
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<tr>
<td></td>
<td>AOKNEU056_2A</td>
</tr>
<tr>
<td>Course director (tutor)</td>
<td>Dániel Bereczki M.D. D.Sc.</td>
</tr>
<tr>
<td>Contact details</td>
<td>Department of Neurology, Semmelweis University, +36-1-2100337</td>
</tr>
<tr>
<td>Position</td>
<td>Head of the department</td>
</tr>
<tr>
<td>Date of habilitation and reference number</td>
<td>12/1999. DOTE</td>
</tr>
</tbody>
</table>

**Aim of the subject and its place in the curriculum:** Acquisition of theoretical and practical neurological knowledge required in general medical education.

**Location of the course (lecture hall, practice room, etc.):** Conference room and wards of the Department of Neurology, H-1083 Budapest, Balassa u.6.

**Competencies gained upon the successful completion of the subject:**  
The student learns the technique of neurological physical examination and the interpretation of the findings. Detects when examining a patient in need of urgent care. Knows the most common neurological and borderline disorders.

**Prerequisite(s) for admission to the subject:**  
Neurology I.  
1. Neuroanatomy IV.  
2. Pathology II.  
3. Internal Medicine III. (cardiology)  
Neurology II.  
1. Neurology I.

**Minimum and maximum number of students registering for the course:** Minimum 10. Maximum: 50

**Student selection method in case of oversubscription:** Via the NEPTUN system, in order of application

**How to register for the course:** One can register via the Neptun system.
Detailed thematic of the course:

**Lectures**

1. Semester
   1. Introduction
   2. Organization of the motor system I.
   3. Organization of the motor system II.
   4. The cerebellum
   5. The brainstem-diencephalon
   6. Organization of the sensory system, the spinal cord and peripheral nerves
   7. The temporal and the parietal lobe
   8. Organization of speech, language
   9. Altered states of consciousness
   10. Control of behaviour. Memory and related structures
   11. Neuroradiology
   12. Cerebrospinal fluid circulation

**Practices:** In the form of block education.

The curriculum and the subject matter of the education can be planned in this way, therefore students have to prepare day by day from the given curriculum (practical note, neurology e-learning, textbooks). At the beginning of the practice, the instructor checks the preparedness.

**Practices in the 1st semester**

In the first semester there is one block per week, that is, a total of 12 blocks, with 2 groups per week for 12 weeks. A block is currently 5 days, Monday to Friday and includes 21 lessons.

**1st day (Monday)**

Neurological examination of head, spine, meningeal signs

Examination of cranial nerves. Patient examination.

**2nd day (Tuesday)**

Examination of the motor system. Muscle mass, tone, power, tendon and superficial reflexes, pathologic reflexes. Distinction between central and peripheral paresis. Determination of the altitude of the lesion. Patient examination.

**3rd day (Wednesday)**

Examination of the sensory system (gnostic and protopathic system, concept of dissociated sensory disturbance, sensory disturbance characteristic of spinal cord and brainstem lesions, root symptoms and signs of peripheral nervous system damage). Dermatomas and peripheral nerve supply areas. Types of pain. Patient examination.

**4th day (Thursday)**

Examination of cerebellar functions (coordination): limb-, trunk-, and gait ataxia. Romberg and past pointing tests, cerebellar nystagmus, scanning speech. Patient examination.

**5th day (Friday)**

Examination of speech (dysarthrias, aphasias). Examination of gnostic functions (agnosia, apraxia, neglect syndrome). The unconscious patient. Glasgow Coma Scale. Patient examination.
II. Semester

1. Classification and treatment of cerebrovascular disorders
2. Tumors of the central nervous system
3. Dementias
4. Movement disorders
5. Diagnosis and treatment of epilepsy
6. Neurosurgical aspects of Neurology
7. Neurological emergencies
8. Neurological consequences of craniospinal traumas. Alcohol related nervous system disorders
9. Multiple sclerosis
10. Neuromuscular disorders. Myopathies, Neuropathies, Motoneuron diseases
11. Headaches and neuralgias
12. Inflammatory neurological disorders. AIDS.

Practices: In the form of block education.

The curriculum and the subject matter of the education can be planned in this way, therefore students have to prepare day by day from the given curriculum (practical note, neurology e-learning, textbooks). At the beginning of the practice, the instructor checks the preparedness.

Practices in the 2nd semester

In the second semester there is one block per week, that is, a total of 12 blocks, with 2 groups per week for 12 weeks. A block is currently 5 days, Monday to Friday and includes 21 lessons.

1st day (Monday)
Problem-oriented learning: presentation and discussion of typical cases.

2nd day (Tuesday)

3rd day (Wednesday)

4th day (Thursday)
Problem-oriented learning: presentation and discussion of typical cases
Examination of a headache patient. Primary and symptomatic headaches.
Treatment options.
Problem-oriented learning: presentation and discussion of typical cases

5th day (Friday)
Presentation and examination of epileptic patient. Significance of past history.
Clinical seizure types. EEG findings.
Differential diagnosis of short-term loss of consciousness.
Therapeutic guidelines. Differential diagnostic issues.
Video demonstration

**Potential overlap(s) with other subjects:**
1. Neuroanatomy
2. Pharmacology
3. Epidemiology
4. Internal medicine
5. Psychiatry
6. Neurosurgery
7. Traumatology
8. Ophthalmology
9. Otorhinolaryngology
10. Sleep medicine

**Special training activities required**: Independent preparation from the e-learning curriculum compiled by the Department of Neurology.

**Policy regarding the attendance and making up absences**: Attendance at lectures and practices is compulsory. Absence may not exceed 20% of the lectures and practices. Replacement is subject to individual assessment.

**Means of assessing the students’ progress during the semester**: At the beginning of the practices, the instructor checks the preparedness.

**Requirement for acknowledging the semester (signature)**: Absence may not exceed 20% of the lectures and practices.

**Type of the examination**: After semester I practice exam with 5 grade practice mark.
After semester II practical and written/oral theory exam (semifinal), the written part is in SE Neurology e-learning system.

**Exam requirements**: The prerequisite for the practice exam is the ability to use the correct examination technique and the recognition of pathological symptoms.
At the end of the II. semester a semifinal exam of the full Vth year curriculum.

**Type and method of grading**: Five grade rating

**How to register for the exam**: At the end of the first semester, a practical exam by the instructor. At the end of the second semester via the Neptun system.

**Opportunities to retake the exam**: After an unsuccessful test, one can take an oral test for repair.
Literature, i.e. printed, electronic and online notes, textbooks, tutorials (URL for online material):
1. Arányi Zs., Kamondi A., Kovács T., Szirmai I.: Investigation of neurological patients
2. Lindsay, Bone, Callender: Neurology and Neurosurgery Illustrated. Churchill Livingstone

Signature of the tutor:

Signature(s) of the head(s) of the Institute(s):

Date: 30. September, 2019. Budapest

Credit Transfer Committee’s opinion:

Comment of the Dean’s Office:

Signature of the Dean:

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1 Dékáni Hivatal tölti ki, jövőhagyást követően.
2 Az elméleti és gyakorlati oktatást órákra (heteke) lebontva, sorszámozva külön-külön kell megadni, az előadók és a gyakorlati oktatók nevének feltüntetésével. Mellékletben nem csatolható!
3 Pl. terepgyakorlat, körlepelmezés, felmérés készítése stb.
4 Pl. házi feladat, beszámoló, zárthelyi stb. témaköre és időpontja, pótlásuk és javításuk lehetősége.
5 Elméleti vizsga esetén kérjük a tétesor megadását, gyakorlati vizsga esetén a vizsgázatás témakörét és módját.
6 Az elméleti és gyakorlati vizsga beszámításának módja. Az évközi számonkérés eredményeink beszámítási módja.