The University of Pécs
Medical School

GENERAL MEDICINE
major

STUDY PROGRAM
2009/2010

Subjects of the
Clinical module
(obligatory subjects)
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Course director: DR. LAJOS BOGÁR, professor
Department of Anaesthesiology and Intensive Therapy

3 credit • Clinical • spring • semester exam

Number of hours/semester: 14 + 28 + 0 = 42

Prerequisite: OAKSE2 completed + OAKGT3 completed

Topic
The 14 lectures and 28 classes will provide information and practical skills on basic and advanced life support, general and regional anaesthesia as well as the main elements of the critical care. It is of primary importance to provide skill training to identify the clinical sings of the cardiac arrest and a number of life threatening conditions may require immediate medical interventions. Furthermore, the students will receive lectures and practices how to provide analgesia for patients during and after operation and how to avoid serious complications of general and regional anesthesia. The discipline contains the diagnostic and therapeutic methods of major shock states (hemorrhagic, septic and cardiogenic). Students will receive lectures and bedside demonstrations on severe poisoning, organ support (mechanical ventilation, renal replacement therapy, cardiovascular support etc.) and intensive care monitoring devices.

Conditions for acceptance of the semester
Maximum 4 absences are acceptable.
Minimum requirements in practice: performing cardiopulmonary resuscitation
In theory:
- The management of upper airway obstruction, status asthmaticus
- The differential diagnostic signs of acute circulatory failure
- The early treatment of the intoxicated patient
- The management of multiple trauma care

Making up for missed classes
The student can join other group for the supplementation.

Reading material
Key Topics in Anesthesia, R. Bonnett, Taylor and Francis Group, 2000, ISBN: 1859961320
and
Lectures
1. Hemodynamic management of the critically ill (Dr. Zsolt Molnár)
2. Acute and chronic pain (Dr. P. Heigl)
3. Basic cardiorespiratory physiology in anaesthesia and intensive care (Dr. Zsolt Molnár)
4. Cardiopulmonary resuscitation
5. Emergency anaesthesia and monitoring during anaesthesia
6. Peri-operative complications (AMI, PE) (Dr. István Sárosi)
7. Oxygen therapy and mechanical ventilation
8. Regional anaesthesia (Dr. István Bátaı)
9. Sepsis, septic shock, multiple organ dysfunction syndrome
10. Acute lung injury, ARDS
11. Accident and emergency care
12. Managing poisoned patients
13. Clinical nutrition of severely malnourished patients
14. Cardiac risk of anaesthesia (Dr. Miklós Tekeres)

Practices
1. Resuscitation
2. Management of electrolyte abnormalities, infusion therapy, total parenteral nutrition
3. Management of life threatening metabolic and acid-base balance disorders
4. General anaesthesia, anaesthetic equipment
5. Anaesthetic breathing systems
6. Monitoring in the operating room, the complications of anaesthesia
7. Regional anaesthesia, practical approach
8. ECG: malignant dysrhythmia, defibrillation, cardioversion, pacemaker therapy
9. Chest pain: pulmonary embolism, aorta dissection, cardiac tamponade
10. Acute cardiac failure, acute myocardial infarction
11. Respiratory failure, ARDS, upper and lower airway obstruction, PTX
12. Artificial ventilation
13. Management of shock

Seminars
Exam topics/questions
Examination requirements
One question in anaesthesia and a second one in intensive care.

Examination questions in anaesthesia
1. Preoperative patient assessment and risk stratification
2. Airway maintenance, respiratory systems
3. Anaesthetic machine
4. Clinical pharmacology of anaesthetics
5. Regional anaesthetic techniques
6. Patient monitoring during anaesthesia and depth of anaesthesia
7. Postoperative analgesia

Examination questions in intensive care
1. Definition and emergency treatment of shock
2. The acute treatment of AMI
3. The acute management of massive pulmonary embolism
4. Management of acute rhythm disturbances
5. Invasive interventions and their importance in intensive care (arterial line, central line insertion, invasive haemodynamic monitoring)
6. Acute management of fluid imbalance
7. Acid-base disorders and management
8. Infection and infection control on the ICU
9. Basic management of sepsis and septic shock
10. Multiple organ failure
11. ARDS — definition and basic ventilatory management
12. Management of acute respiratory illnesses (acute exacerbation of COPD, asthma)
13. Monitoring and treatment of acute renal failure
14. Intensive therapy of acute liver failure
15. Nutrition of the critically ill (types of nutrition and indications)
16. Acute treatment of drug overdosed patients
17. Reasons and acute management of altered conscious level
18. Acute management of the polytraumatised patient
19. Cardio-pulmonary resuscitation
20. Definition and ethical aspects of brain-stem death
Course director: Dr. Zita Battyáni, associate professor
Department of Dermatology and Venereology

4 credit • Clinical • autumn • semester exam

Number of hours/semester: 28 + 28 + 0 = 56

Prerequisite: OAAIMM completed + OAPBPR completed + OAPGT2 completed

Topic
The purpose of the education in Dermatology is to get the students acquainted with the clinical and epidemic features of dermatological and venereal diseases in the general medical practice, moreover their pathomechanisms and therapeutic possibilities.

The students pick up a reliable and necessary knowledge on the treatment of the most common dermatological disorders throughout the patient examinations and interventions/procedures under the auspices of practical education.

Postulates:
Dermatology is taught for a semester in the 4th year at the Medical School. Two hours of theoretical and two hours of practical education are provided each week. Participation in the lectures is facultative. Participation in the practical education is obligatory. Maximum six hours of absence from the practical education are allowed to have the semester accepted by the Department of Dermatology.

Conditions for acceptance of the semester

Examination:
At the end of the semester of Dermatology education the students are obliged to take a semester examination. The examination is divided into two parts: patient examination and theoretical examination in the oral test.

Making up for missed classes
Attending the classes is obligatory. If someone misses a practice for any reason, he/she is asked to attend the practice in question given to another group.

Acceptance of the semester:
If not more than 25% of the obligatory classes is missed.

Reading material

Lectures
1. Vasculitis, purpuric conditions
2. Disorders of collagen and elastic tissue
3. Dermatitis. Eczema
4. The skin in systemic diseases. Disorders of the vasculature
5. Basic immunopathologic reactions
7. Viral diseases. Pediculosis. Thermally injured skin
8. Dermatoses caused by parasites
9. Acquired Immunodeficiency Syndrome (AIDS)
10. Leprosy. Other tropical diseases
11. Sexually transmitted diseases
12. Fungal diseases with cutaneous involvement
13. Sexually transmitted diseases
14. Fungal diseases with cutaneous involvement
15. Tuberculosis of the skin
16. Bacterial diseases with cutaneous involvement
17. Types of skin lesions
18. Essential skin biology
19. Vesiculobullous diseases. Pemphigus
20. Cutaneous manifestations in metabolic disorders
21. Cutaneous manifestations in metabolic disorders
22. Papulosquamous diseases
23. Dermatological therapy
25. Skin tumours. Paraneoplastic disorders. Disorders of the cutaneous melanocytes
27. Granulomatous diseases. Disorders with abnormal keratinisation
28. Disorders of mucocutaneous integument. Disorders of the hair and nails

Practices
1. Patient examination
2. Patient examination
3. Dermatological history
4. Dermatological history
5. Bacterial skin infection
6. Bacterial skin infection
7. Viral skin infection
8. Viral skin infection
9. Fungal skin infection
10. Fungal skin infection
11. Examination of STD patient
12. Examination of STD patient
13. Tests in allergic disorders
14. Tests in allergic disorders
15. Investigations in auto-immun diseases
16. Examinations of skin ageing
17. Examinations of skin ageing
18. Sampling in fungal infections
19. Drug eruptions treatment
20. Psoriasis and its variant
21. Phototherapy
22. Venous leg ulcers
23. Venous leg ulcers
24. Topical skin therapy
25. Topical skin therapy
26. Essential systemic therapy in dermatology
27. Essential systemic therapy in dermatology
28. Care of atopic patients

Seminars

Exam topics/questions
1. a/ Tissues of the skin
   b/ Chronic discoid lupus erythematosus (CDLE). Systemic lupus erythematosus (SLE)
2. a/ Morphea. Systemic sclerosis
   b/ Varicella. Herpes zoster
3. a/ Herpes simplex. Herpes progenitalis
   b/ Premalignant conditions. Intraepidermal carcinomas
4. a/ Female and male gonorrhoea, diagnosis, treatment
   b/ Lesions of the skin caused by burning
5. a/ The classification of eczema. Contact dermatitis
6. a/ Nummular eczema. Dishydrosis
   b/ Psoriasis and its variants
7. a/ Drug eruptions and treatment
   b/ Verruca vulgaris (common wart). Verruca plana juvenilis (plane warts). Condyloma acuminatum (genital warts)
8. a/ Diseases caused by Mycobacteria. Lupus vulgaris and leprosy
   b/ Acne vulgaris. Rosacea. Rhinophyma
9. a/ Skin lesions associated with malignant tumours of the inner organs. Metastases. Acanthosis nigricans. Dermatomyositis
   b/ Pemphigoid. Dermatitis herpetiformis
10. a/ Dermatophyte infections. Trichophytia superficiale, Trichophytia profunda
    b/ The biology of Treponema pallidum. The course of syphilis
11. a/ Primary lesions of the skin
    b/ Basal cell carcinoma
12. a/ Secondary lesions of the skin
    b/ Scabies. Ticks’ bite. Pediculosis. Myiasis
13. a/ Alopecia
    b/ Lentigo maligna melanoma. Malignant melanoma
14. a/ Squamous cell carcinoma. Carcinomas of the skin, treatment
    b/ Pigmented naevi
    b/ Diseases of the pemphigus group
16. a/ Ecthyma. Pyogenic granuloma
    b/ AIDS
17. a/ Erysipelas. Cellulitis
    b/ Nodular forms of cutaneous vasculitis
18. a/ Impetigo. Angular stomatitis
    b/ Erythaema multiforme
19. a/ Prurigo. Pruritus. Erythroderma
    b/ Laboratory test of syphilis
20. a/ Atopic dermatitis and eczema of the infants
    b/ Lichen planus. Pityriasis rosea
21. a/ Mechanisms and transmitters of allergic reactions
22. a/ The primary chancre and secondary syphilis. Syphilis connatale
    b/ Urticaria
FAMILY MEDICINE

Course director: Dr. LAJOS NAGY, professor

3rd Department of Internal Medicine - Family Medicine Institut

1 credit • Clinical • autumn • midsemester grade

Number of hours/semester: 4 + 0 + 10 = 14

Prerequisite: OAPBPR completed + OAKIGU parallel

Topic
To learn the characteristics of Family Medicine. Introduction to the Family Physicians colourful work. To get impression about the complexity of Family Medicine.

Conditions for acceptance of the semester
The attendance is obligatory. Missing more than 20% of the classes means that the course is not accepted.

Making up for missed classes
next year

Reading material

Lectures
1. Introduction to family medicine
2. Epidemiology and public health in primary care
3. Ethical aspects of primary care, cultural diversity
4. Care for the Family, principles and practice

Practices

Seminars
1. Crisis in the Family
2. Care of Homless People
3. Acute Care in the Practice
4. Migration and Immunization
5. End-of-life care in family practice
6. Elderly care and rehabilitation
7. Pediatric care in family practice
8. Art of family medicine
9. Patient education
10. Patient care at home

Exam topics/questions
INTERNAL MEDICINE: DIABETES - ANGIOLOGY

Course director: DR. ISTVÁN WITTMANN, professor
2nd Department of Internal Medicine and Nephrology Center

OAKDAN

1 credit • Clinical • autumn • semester exam

Number of hours/semester: 4 + 8 + 0 = 12

Prerequisite: OAPBPR completed + OAKGT3 completed + OAKKAR completed

Topic
The purpose of the subject is to teach the students the major carbohydrate and metabolic disorders and the angiological complications of them. The theoretical knowledges are accompanied with the next clinical skills: specific history taking and physical examination of patients with carbohydrate metabolic abnormalities and angiological diseases, blood glucose measurement, carotid intima-media thickness measurement, detection of diabetic neuropathy (vegetative, sensoric), use of insulins, PENs, diagnosis and treatment of ulcus cruris, demonstration of continuous glucose monitoring system and insulin pump, measurement of waist-hip ratio, calculation of body mass index and LDL-cholesterol, calculation of a diabetic diet.

Conditions for acceptance of the semester
Obtaining the semester closing signature.

Making up for missed classes
15 % uncertified absence is allowed, no possibility to make up for missed classes.

Reading material
Harrison’s Principles of Internal Medicine (McGrew-Hill Book Company)
Joslin’s Diabetes Mellitus (14th Edition, Lippincott Williams and Wilkins 2005.)

Lectures
1. Metabolic diseases and atherosclerosis, pre-diabetes.
2. Type 2 diabetes mellitus and acute complications of diabetes.
3. Type 1 diabetes mellitus and pancreoprive diabetes, the metabolic syndrome, chronic complications of diabetes mellitus.
4. Angiology. (Zsolt Pécsvárady)

Practices
As the themes of the lectures.

Seminars
Exam topics/questions
1) Role of metabolic diseases in the development of atherosclerosis
2) Pre-diabetic states
3) Type 1 diabetes mellitus
4) Type 2 diabetes mellitus
5) Pancreoprive diabetes mellitus
6) Insulin therapy
7) Oral antidiabetic agents
8) Acute complications of diabetes mellitus
9) Chronic complications of diabetes mellitus
10) Dietetotherapy in diabetes mellitus.
11) Preoperative care of diabetic patients and the therapy of hypertension
12) The metabolic syndrome
13) Gout (hyperuricaemia)
14) Diagnosis and treatment of patients with angiological diseases.
INTERNAL MEDICINE: ENDOCRINOLOGY AND METABOLIC DISEASES
OAKEAB

Course director: DR. EMESE MEZŐSI, associate professor
1st Department of Internal Medicine

2 credit • Clinical • spring • semester exam
Number of hours/semester: 10 + 20 + 0 = 30
Prerequisite: OAPKO2 completed + OAPBPR completed + OAPGT2 parallel

Topic
Endocrine and metabolic disorders are common in the population and their incidence is increased continuously. Knowledge of these disorders is essential for the practitioners.
Topics: Disorders of the hypothalamus and pituitary gland, thyroid diseases, problems in the calcium homeostasis, disorders of the adrenal gland, endocrine tumors, obesity, primary and secondary hyperlipoproteinemias.

Conditions for acceptance of the semester
The attendance of the lectures and practices is compulsory.
The total number of justified and unjustified absences may not exceed 25%, while the number of unjustified absences may not exceed 15% of lectures and practices, otherwise the semester should be repeated.

Making up for missed classes
During the semester.

Reading material

Lectures
1. Disorders of the hypothalamus and pituitary gland 1.
2. Disorders of the pituitary gland 2.
3. Thyroid disorders 1.
4. Thyroid disorders 2.
5. Disorders of the calcium homeostasis, MEN syndromes
7. Disorders of the adrenal gland 2.
8. Weight disorders.
10. Dyslipidemias 2.
Practices
1. Disorders of the hypothalamus and pituitary gland 1.
2. Disorders of the hypothalamus and pituitary gland 1.
3. Disorders of the pituitary gland 2.
5. Thyroid disorders 1.
6. Thyroid disorders 1.
7. Thyroid disorders 2.
8. Thyroid disorders 2.
9. Disorders of the calcium homeostasis, MEN syndromes
10. Disorders of the calcium homeostasis, MEN syndromes
11. Disorders of the adrenal gland 1.
15. Weight disorders
16. Weight disorders
17. Dyslipidemias 1.
18. Dyslipidemias 1.

Seminars

Exam topics/questions
1. Diagnosis of hypothalamic-pituitary axis
2. Pituitary neoplasms
3. Gigantism and acromegaly
4. Hyperprolactinaemia
5. Hypopituitarism
6. Diabetes insipidus
7. Syndrome of inappropriate ADH section
8. Diagnosis of thyroid disorders
9. Iodine metabolism, iodine deficiency
10. Euthyroid goiter
11. Thyroiditis
12. Hypothyroidism
13. Graves disease
14. Endocrine ophtalmopathy
15. Thyrotoxic crisis
16. Non-immune hyperthyroidism
17. Diagnosis of thyroid nodules
18. Thyroid cancer.
19. Diagnosis of pituitary-adrenal axis
20. Adrenal insufficiency
21. Addison crisis
22. Side effects of chronic corticosteroid treatment
23. Cushing syndrome
24. Primary and secondary hyperaldosteronism
25. Pheochromocytoma
26. Basic and advanced investigations in suspected endocrine hypertension
27. Diagnosis of parathyroid disorders
28. Hyperparathyroidism
29. Hypoparathyroidism
30. Medullary thyroid cancer, multiple endocrine neoplasias
31. Carcinoid
32. Insulinoma
33. Polycystic ovarian syndrome
34. Main parts and processes of lipoprotein metabolism
35. Forms of dyslipidemias
36. Laboratory diagnosis of lipoprotein metabolism and definitions of dyslipidemias
37. Primary hyperlipoproteinemias
38. Secondary dyslipidemias
39. Target values in lipidology
40. Drug treatments of dyslipidemias
41. Indications, contraindications, side effects, and complications of statins
42. Theory and clinical practice of cardio-vascular risk stratification
43. Steps of lifestyle modification therapy
44. Definition and types of obesity and overweight. Methods for their measurements
45. Causes and pathomechanism of obesity and overweight
46. Pathomechanisms of obesity related complications
47. Obesity related complications
48. Lifestyle treatments of obesity and overweight
49. Drug treatment of obesity and overweight. Indications, contraindications, and side effects
50. Invasive treatments of obesity and overweight. Indications, contraindications, and side effects
51. Gout
OLARYNGOLOGY

Course director:  

Department of Oto-rhino-laryngology

OLARYNGOLOGY

Course director:  

Department of Oto-rhino-laryngology

3 credit • Clinical • autumn • semester exam

Number of hours/semester: 14 + 28 + 0 = 42

Prerequisite: OAPPA2 completed

Topic

Responsible for the course: Dr. Laszlo Lujber

Short description of the course: Selections from the fundamental parts of the ORL

The main educational task of the subject: Learning the basics of ORL.

Conditions for acceptance of the semester

Participation in the lectures and practices. Missing of two lectures accepted.

Making up for missed classes

There is no possibility.

Reading material

Readings: Karmody: Ortorhinolaryngology

Lectures

1. Introduction into Otorhinolaryngology /Prof. Pytel/
2. Anatomy of the ear, physiology of hearing /Prof. Pytel/
3. Subjective audiometry /Prof. Pytel/
4. Objective audiometry /Prof. Pytel/
5. Diseases of the external ear /Prof. Bauer/
6. Diseases of the middle ear /Prof. Bauer/
7. Complications of suppurative otitis media /Prof. Bauer/
8. Borderlines in oto-rhino-laryngology /Prof Pytel/
9. Diseases of the nose and paranasal sinuses. Allergology /Dr. Gerlinger/
10. Diseases of the salivary glands. Surgery of the facial nerve /Dr. Lujber/
11. Diseases of the oral cavity and pharynx. Acute tonsillitis, chronic tonsillitis. Tonsillecetomy /Prof. Pytel/
12. Anatomy of the larynx. Benign tumours of the larynx /Prof. Pytel/
13. Malignant tumours of the head and neck region. TNM system /Prof. Pytel/
14. Rehabilitation after major oncological head and neck surgery. Repetition of the main topics before the final exam /Dr. Pytel/
Practices
1. Examine the patient’s ear
2. Examine the patient’s nose and nasal cavities /anterior rhinoscopy/
3. Examine the patient’s oral cavity
4. Examine the patient’s larynx and hypopharynx /indirect laryngoscopy/
5. Examine the patient’s nasopharynx /posterior rhinoscopy/
7. Tests of the patient’s vestibular system /spontaneous nystagmus Romberg test, past-pointing, walking/
8. Tests of the patient’s neck
9. Tests of the patient’s function of the facial nerve
10. Tests of the patient’s signs of meningitis
11. Tests of the patient’s Eustachian tube function
12. Caloric test
13. Control of epistaxis
14. Myringotomy
15. Feeding by nasogastric tube
16. Tracheal tubes
17. X-ray films
18. Hearing aids
19. Antral lavage
20. Draining of a peritonsillar abscess
21. Irrigation of external ear canal, removal of foreign bodies from the external ear canal and nose
22. Pure tone audiometry
23. Speech audiometry
24. Otoacoustic emissions
25. Brainstem evoked response audiometry
26. CT, MR, US demonstration
27. Repetition
28. Repetition

Seminars
Exam topics/questions
Requirements of the final examination
I. Physical examination by head-mirror /headlight/
Examine the patient’s
1. ear
2. nose and nasal cavities /anterior rhinoscopy/
3. oral cavity
4. larynx and hypopharynx /indirect laryngoscopy/
5. nasopharynx /posterior rhinoscopy/

II. A. Clinical tests
Test the patients
1. hearing /voice, Weber test, Rinne test/
2. vestibular system /spontaneous nystagmus
Romberg test
past-pointing
walking/
3. neck
4. function of the facial nerve
5. signs of meningitis
6. Eustachian tube function

II. B. Demonstrate how to use the instruments of
1. caloric test
2. control of epistaxis
   - anterior nasal packing
   - posterior nasal packing
3. myringotomy
4. feeding by nasogastric tube
5. tracheal tubes
6. X-ray films
   - Water position
   - Caldwell position
   - Velin /submental vertex/ position
   - Schüller position
   - Stenvers position
   - CT, MR
7. hearing aids
8. antral lavage
9. draining of a peritonsillar abscess
10. irrigation of external ear canal
removal of foreign bodies from the external ear canal and nose

III. Theoretical questions
Pure tone audiometry
Speech audiometry
Otoacoustic emissions
Brainstem evoked response audiometry
Diseases of the pinna
Diseases of the external ear canal
Disorders of the tympanic membrane
Tumours of the external ear (benign tumours, praecancerous disorders, malignant tumours)
Serous otitis media
Suppurative otitis media
Complications of suppurative otitis media
Idiopathic facial nerve palsy. Bell-palsy
Disorders of the inner ears, congenital malformations, hereditary deafness
Trauma to the inner ear
Otosclerosis
Fluid systems of the labyrinth. Pathological disorders. Ménière diseases
Acoustic tumours
Tinnitus
Noise induced hearing losses
Disorders of the blood supply of the inner ear. Presbyacusis. Sudden deafness
Cochlear implantation
Disorders of the internal auditory canal (fractures, tumours, toxic lesions)
Sleep apnoea
Diseases of the external nose (congenital malformations, trauma, infection, tumours. Furunculus nasi)
Obstruction of the nasal airway. Rhinitis
Allergic rhinitis
Fractures of the paranasal sinuses. Fronto-basal, maxillo-facial, blow out fractures, Le-Fort fractures
Paranasal sinusitis
Tumours of the nose and paranasal sinuses
Tumours of the salivary glands (benign and malignant)
Sialoadenitis
Differential diagnosis of the neck masses
Congenital malformations of the oral cavity and pharynx
Infectious diseases of the oral cavity and pharynx (peritonsillar abscess)
Pathology of Waldeyer ring
Praecancerous disorders in the oral cavity, pharynx, larynx and oesophagus
Malignant tumours in the oral cavity and pharynx (nasopharyngeal tumours)
Clinical symptoms and signs of the diseases of the larynx
Sensory and motor innervation of the larynx, signs of the disorders
Acute and chronic infections of the larynx
Acute epiglottitis. Phlegmonous epiglottitis. Abscess of the epiglottis
Benign tumours of the larynx
Laryngeal cancer
Classifications of laryngeal cancers. TNM
Congenital malformations in the neck
Lymphadenitis of the neck
Benign tumours of the neck
Malignant disorders in the lymphnodes of the neck
Thyroiditis
Malignant tumours of the thyroid gland
Clinical signs of obstructions of the upper airways. Conicotomy. Tracheotomy
Foreign bodies in the bronchial system. Foreign bodies of the oesophagus
Disorders of phonations
Tumours of the oesophagus
Dysphagia
INTERNAL MEDICINE: GASTROENTEROLOGY

Course director: DR. ÁRON VINCZE, associate professor
1st Department of Internal Medicine

OAKGAS

3 credit • Clinical • autumn • semester exam

Number of hours/semester: 14 + 28 + 0 = 42

Prerequisite: OAPBPR completed + OAPKO2 completed + OAPGT2 parallel

Topic

As a subspeciality of internal medicine, gastroenterology training combines a weekly lecture and weekly bedside practice to overview main issues of digestive system disorders, and bedside training to promote skills in physical examination and management of patients with gastrointestinal, pancreatic, and hepatic disorders.

Conditions for acceptance of the semester

General rules apply. Absence from more than 3 lectures and 3 bed side practices is not allowed.

Exam: bed-side skills and oral exam.

Making up for missed classes

No organized extra lectures and training for missed ones. Individual options might be discussed with the study coordinator on a case-by-case basis.

Reading material

Current Medical Diagnosis and Treatment, last edition
Harrison: Principles of Internal Medicine, last edition.

Lectures

1. Introduction. Esophageal diseases.
2. Peptic ulcer disease.
3. Gastrointestinal bleeding.
4. Abdominal emergencies.
5. Functional gastrointestinal disorders.
7. Inflammatory bowel diseases.
8. Gastrointestinal polyps, early neoplasias.
9. Chronic viral hepatitis.
11. Autoimmune hepatitis, PBC, PSC
Practices
1. History taking, physical examination in patients with GI disorders
2. Reflux disease
3. Peptic ulcer disease
4. Complications of peptic ulcer disease
5. Upper gastrointestinal bleeding
6. Lower gastrointestinal bleeding
7. Acute abdomen
8. Ileus
9. Functional disorders of the upper GI tract
10. Functional disorders of the lower GI tract
11. Malabsorption
12. Gluten sensitive enteropathy
13. Ulcerative colitis
14. Crohn’s disease
15. Precancerosus conditions in the upper GI tract
16. Precancerosus conditions in the lower GI tract
17. Chronic HBV-hepatitis
18. Chronic HCV-hepatitis
19. Alcoholic liver disease
20. Non alcoholic steatohepatitis
21. Autoimmune hepatitis, Wilson’s disease, hemochromatosis
22. Primary sclerosing cholangitis, primary biliary cirrhosis
23. Acute and chronic liver failure
24. Liver cirrhosis
25. Gallstone disease
26. Complications of gallstone disease
27. Acute pancreatitis
28. Chronic pancreatitis

Seminars
Exam topics/questions
1. Gastroesophageal reflux disease
2. Esophageal motility disorders
3. Tumors of the esophagus
4. Gastritis
5. Peptic ulcer disease
6. Non-variceal gastrointestinal bleeding
7. Variceal gastrointestinal bleeding
8. Tumors of the stomach
9. Malabsorption syndrome
10. Glutensensitive enteropathy
11. Crohn’s disease
12. Ulcerative colitis
14. Appendicitis
15. Tumors of the intestinal tract
16. Toxic and drug-induced liver injury
17. Non-alcoholic steatohepatitis
18. Alcoholic liver disease
19. Chronic viral hepatitis
20. Autoimmune hepatitis
21. Primary biliary cirrhosis
22. Primary sclerozing cholangitis
23. Liver cirrhosis
24. Haemochromastosis
25. Wilson’s disease
26. Tumors of the liver
27. Hyperbilirubinaemias
28. Gallstone disease
29. Tumors of the biliary tract
30. Acute pancreatitis
31. Chronic pancreatitis
32. Tumors of the pancreas
33. Neuroendocrine tumors of the intestinal tract
PHARMACOLOGY 3

Course director: DR. LORÁND BARTHÓ, professor
Department of Pharmacology and Pharmacotherapy

3 credit • Clinical • autumn • final exam

Number of hours/semester: 14 + 0 + 28 = 42

Prerequisite: OAPGT2 completed + OAPMI2 completed

Topic

The general aim of the subject is to provide the medical students with all the basic information in pharmacology necessary to understand the actions of drugs and the clinical pharmacotherapy and to pass the Foreign Medical Graduate Examination in Medical Sciences. Pharmacology can be defined as the study of the manner in which the function of living systems is affected by chemical agents. Therefore, the students should be familiar with the basic knowledge of the physiological, pathophysiological and biochemical background of the pharmacological and therapeutic approaches. On the other hand, drug therapy is closely related to the clinical aspects of diseases.


Conditions for acceptance of the semester

Acceptance of the semester: According to the present rules of Medical Faculty in a case of absence over 25% of the classes the Department will not validate the semester.

Making up for missed classes

Each missed seminar has to be made up for with another group in the same week.

Reading material


**Lectures**

1. Corticosteroids I.
2. Corticosteroids II.
3. Oestrogens, antioestrogens, progestins and antiprogestins
4. Postmenopausal hormone therapy and hormonal contraceptives
5. Androgens, anabolic steroids and antiandrogens
6. Thyroid hormones, antithyroid drugs
7. Hypothalamic and pituitary hormones
8. Insulin
10. Parathyroid hormone, calcitonin, vitamin D and drug treatment of osteoporosis
11. Drugs used in chemotherapy of neoplastic diseases I.
12. Drugs used in chemotherapy of neoplastic diseases II.
13. Principles of immunopharmacology I.

**Practices**

**Seminars**

1. Basic principles of chemotherapy
2. Sulphonamides and trimethoprim. Fluoroquinolones
3. Beta-lactam antibiotics I.
4. Beta-lactam antibiotics I.
5. Beta-lactam antibiotics III.
6. Tetracyclines, chloramphenicol, macrolide antibiotics
7. Clindamycin, vancomycin, polymyxins
8. Aminoglycosides
9. Antituberculotic drugs
10. Treatment of leprosy
11. Antifungal drugs
12. Anthelminthic agents
13. Antiviral drugs I.
14. Antiviral drugs II.
15. Antiprotozoal drugs I.
16. Antiprotozoal drugs II.
17. Antisepsics and disinfectants I.
18. Antisepsics and disinfectants II.
19. Cytotoxic/embryotoxic effects of drugs
20. Drug allergy
21. Pharmacogenetics. Effects of age, diet and disease on drug action
22. Drug interactions
23. Toxicology: management of the poisoned patient I.
24. Toxicology: management of the poisoned patient II.
25. Toxicology: drug intoxications I.
26. Toxicology: drug intoxications II.
27. Group discussion of the pharmacology of chemotherapeutic and antibiotic drugs I.
28. Group discussion of the pharmacology of chemotherapeutic and antibiotic drugs II.

**Exam topics/questions**
1. Definition of pharmacology and the related subjects. Drug development
2. Drug names, drug compendia. Prescription writing
3. Drug formulations
4. Basic mechanisms of drug actions (examples of drug effects on receptors, ion channels, enzymes, carrier systems and effects mediated by physicochemical interactions)
5. Characterisation of agonist-receptor interaction: occupancy, affinity, dose-response curve, potency, efficacy
6. Significance of signal transduction mechanisms in the effects of drugs. Tachyphylaxis and tolerance to drugs
7. Mechanisms of drug antagonisms
8. Transport of drugs across membranes
9. Absorption of drugs, oral bioavailability and presystemic elimination
10. Plasma protein binding and tissue distribution of drugs
11. Biotransformation of drugs
12. Excretion of drugs
13. Pharmacokinetics: zero and first order elimination, volume of distribution, clearance, elimination half-life, oral bioavailability, calculation of loading and maintenance doses
14. Mechanisms and manifestations of drug allergy, cytotoxic/embryotoxic effects of drugs
15. Pharmacogenetics. The effects of age, diet and disease on drug action
16. Drug interactions
17. Cholinergic agonists and cholinesterase inhibitors
18. Muscarinic receptor antagonists
19. Neuromuscular blocking agents. Drugs acting on autonomic ganglia
20. Agents acting on the biosynthesis, storage, release and elimination of catecholamines
21. The pharmacology of catecholamines
22. Adrenergic receptor agonists
23. Alpha-adrenergic receptor antagonists
24. Beta-adrenergic receptor antagonists
25. Local anaesthetics
26. Calcium channel blockers
27. Drugs acting on the renin-angiotensin-aldosterone system
28. Diuretic drugs
29. Drugs used to treat congestive heart failure
30. Antianginal drugs. Drugs that increase regional blood flow
31. Antihypertensive drugs
32. Antiarrhythmic drugs
33. Drugs used to treat hyperlipoproteinaemias
34. Drugs affecting haemostasis
35. Drugs affecting haematopoiesis
36. Histamine, histamine H1 and H2 receptor antagonists
37. Serotonin, serotonin receptor agonists and antagonists
38. Pharmacology of eicosanoids. Drugs acting on the smooth muscle: smooth muscle relaxants, pharmacology of the uterine muscle
39. Drugs used in bronchial asthma
40. Drugs used in allergic rhinitis. Antitussive, expectorant and mucolytic drugs
41. Drugs used in the treatment of peptic ulcer
42. Emetics, antiemetics and prokinetic drugs
43. Laxatives, antidiarrhoeal agents, drug treatment of inflammatory bowel disease and paralytic ileus, digestives, drugs used in cholelithiasis
44. Antianxiety and hypnotic drugs
45. Alcohols: pharmacology, toxicology
46. Antipsychotic drugs
47. Antidepressants
48. Antiepileptic drugs
49. Psychomotor stimulants and nootropic agents
50. Drug treatment of neurodegenerative disorders
51. General anaesthetics
52. Opioid analgesic drugs: morphine and codeine
53. Opioid analgesic drugs: semi-synthetic, synthetic opioids, opioid antagonists
54. Drug abuse and dependence: general principles, opioids, anti-anxiety and hypnotic drugs, inhalants, ethanol
55. Drug abuse and dependence: psychomotor stimulants, psychedelics, cannabis
56. Non-steroidal antiinflammatory drugs: aspirin, paracetamol
57. Non-steroidal antiinflammatory drugs: pyrazolones, propionic acid derivatives, indole derivatives and others. COX-2 inhibitors
58. Adjuvant analgesics. Drugs used to treat gout. Centrally-acting muscle relaxants
59. Hypothalamic and pituitary hormones
60. Corticosteroids
61. Oestrogens, antioestrogens, progestins, antiprogestins
62. Postmenopausal hormone therapy and hormonal contraceptives
63. Androgens, anabolic steroids, antiandrogens
64. Thyroid hormones, antithyroid drugs
65. Insulin and oral hypoglycaemic agents. Glucagon
66. Parathyroid hormone, calcitonin and vitamin D, drugs used to treat osteoporosis
67. Sulphonamides and trimethoprim. Fluoroquinolones
68. Beta-lactam antibiotics
69. Tetracyclines, chloramphenicol, macrolide antibiotics
70. Clindamycin, polymixins, vancomycin
71. Aminoglycosides
72. Antituberculous drugs. Anti-leprosy drugs
73. Antifungal drugs
74. Antiviral drugs
75. Antiseptics and disinfectants
76. Antiprotozoal drugs
77. Anthelminthic drugs
78. Drugs used in the chemotherapy of neoplastic diseases: alkylating agents, antimetabolites
79. Drugs used in the chemotherapy of neoplastic diseases: alkaloids, antibiotics, hormonal agents, biological therapy
80. Immunosuppressants and immunomodulators. Drug treatment of rheumatoid arthritis
81. The treatment of the intoxicated patient: decontamination, facilitation of toxicant elimination, antidote administration, supportive treatment
82. Drug intoxications: mechanisms, symptoms, treatment
Course director: Dr. Dénes Molnár, professor
Department of Paediatrics

4 credit • Clinical • autumn • semester exam

Number of hours/semester: $28 + 28 + 0 = 56$

Prerequisite: OAPBPR completed + OAPKO2 completed + OAKGT3 completed

**Topic**

The basic goal is to get a good general knowledge from paediatrics. To acquire a good skill in examining patients and to be able to make plans for diagnostic procedures and to bring up therapeutic proposals.

**Conditions for acceptance of the semester**

Oral exam.

The attendance of the classes is compulsory, the teachers will check it regularly. The maximum permitted number of absences is 4, independently of the reason. In case of more than 4 absences, the signing of the gradebook will be refused with the consequent invalidation of the semester.

**Making up for missed classes**

It can be appreciated only in very special cases.

**Reading material**


**Lectures**

1. Paediatrics and child health. Introduction
2. The characteristics of the premature and mature baby. Infant mortality, statistical data. Neonatal screening
3. Neonatal pulmonar pathology
4. Neonatal neurology (Hypoxic-ischaemic encephalopathy, intracranial haemorrhage, birth injuries) (Csábi Györgyi Dr.)
5. Neonatal haematology
6. Perinatal inductions
7. Surgical diseases in the neonatal period
8. Congenital heart malformations
9. Infant feeding
10. Nutritional disorders (malnutrition, vitamins, minerals)
11. Inborn errors of metabolism
12. Normal and abnormal psychomotor development
13. Pneumonias in the infancy and childhood
14. Obstructive respiratory disorders
15. The most common ear-nose-throat diseases
16. Carditis, disturbances of rate and rhythm, heart failure
17. Gastrointestinal infections
18. Gastrointestinal motility disorders
21. Chronic inflammatory bowel diseases
22. The types of dehydration and their treatment
23. Enteral and parenteral nutrition
24. Liver and spleen disorders
25. Glomerulonephritis. Acut and chronic renal failure
26. Urinary tract infections
27. Nephrosis syndrome
28. Acid-base balance

Practices
Physical examination, evaluation of the data

Seminars

Exam topics/questions
PAEDIATRICS 2

**Course director:** DR. DÉNES MOLNÁR, professor

**Department of Paediatrics**

**4 credit • Clinical • spring • semester exam**

**Number of hours/semester:** 28 + 28 + 0 = 56

**Prerequisite:** OAKGY1 completed

**Topic**

The basic goal is to get a good general knowledge from paediatrics. To acquire a good skill in examining patients and to be able to make plans for diagnostic procedures and to bring up therapeutic proposals.

**Conditions for acceptance of the semester**

Written exam.

The attendance of the classes is compulsory, the teachers will check it regularly. The maximum permitted number of absences is 4, independently of the reason. In case of more than 4 absences, the signing of the gradebook will be refused with the consequent invalidation of the semester.

**Making up for missed classes**

It can be accepted only in very special cases.

**Reading material**


**Lectures**

1. Hypertension in childhood
2. Normal and abnormal growth and development.
3. Endocrine disorders in the infancy and childhood
4. Diabetes mellitus
5. Hypoglycaemias
6. Anaemias
7. Leukemias in the childhood
8. Solid tumours
9. Differential diagnosis of the hemorrhagic diseases
10. The disorders of the consciousness (traumas of the brain, poisoning)
11. CNS infections
12. Convulsive disorders, epilepsy
13. Immunodeficiences
14. The most common immunological disorders
15. Shock and its treatment
16. Mental retardation
17. The most common surgical diseases in the childhood I.
18. The most common surgical diseases in the childhood II.
19. Burns
20. Resuscitation of the infant and child
21. Psychosomatic disorders
22. Adolescent medicine
23. Clinical neuroimaging in the infancy and childhood
24. Dermatology in the childhood
25. Immunisation
26. HIV in neonates, children
27. Ethics in the paediatrics
28. Prevention of the adult diseases in childhood

Practices
Physical examination, evaluation of the data

Seminars

Exam topics/questions
Internal Medicine: Haematology

Course director: Dr. Marianna Dávid, associate professor
1st Department of Internal Medicine

3 credit • Clinical • autumn • semester exam

Number of hours/semester: 14 + 28 + 0 = 42

Prerequisite: OAPBPR completed + OAPKO2 completed + OAPGT2 completed

Topic

Short description of the course: The course involves two topics, Haematology and Haemostasis. Haematology will be lectured in 1 hour/week through 10 weeks. Etiology, pathophysiology, genetical background of malignant disease, clinical symptoms, physical disturbances, diagnostic procedures will be highlighted. Detailed therapeutic possibilities will also be discussed. Haemostasis education will be given for 4 weeks, involving thromboembolic and bleeding disorders with their therapies. Each lecture will be followed by 2 hours practice. The topic of the practices will be adjusted to the lecture of the week.

The main educational task of the subject: In Haematology the recognition of the most important entities of benign and malignant haematological illnesses will be emphasized. The competence level at the different working places, according the nature and severity of the disease as well as therapeutic intervention must be recognized and on the basis of that knowledge capability to send patient to the most appropriate hospital has to be reached. In the Haemostasis to recognize inherited and acquired thrombophilias, bleeding tendencies on the basis of symptoms and the laboratory results. Therapeutic strategies of prevention and therapy will be taught.

Conditions for acceptance of the semester

Acceptance of the semester: 2x2 h absences from the classes are allowed

Making up for missed classes

Reading material

Lectures
2. Iron deficiency, and megaloblastic anaemias
3. Inherited and acquired haemolytic anaemias
4. Immune thrombocytopenia (ITP), microangiopathic haemolytic anaemias (TTP, HUS)
5. Aplastic anaemia. Allogeneic stem cell transplantation
6. Autologous stem cell transplantation
7. Acute leukaemias. Myelodysplastic syndrome
8. CLL and low-grade non-Hodgkin’s lymphomas
9. Hodgkin and non-Hodgkin malignant lymphomas
10. Monoclonal gammapathies. Multiple myeloma. Chronic lymphocytic leukaemia
11. Chronic myeloproliferative diseases (PV, CML, OMF, ET)
12. Haemostasis, Inherited and acquired thrombophilias, venous and arterial thromboembolic disorders
13. Prevention and therapy of thromboembolic diseases. DIC, HIT Fibrinolytic, and antiplatelet therapies
14. Bleeding disorders (inherited and acquired)

**Practices**

1. Normal blood counts, peripheral blood smear, and bone marrow slide viewing
2. Examination of patients with iron deficiency and megaloblastic anaemia.
3. Peripheral blood smears of patients with microcytic and macrocytic anaemia.
4. Haemolytic anaemia, inherited and acquired.
5. Evaluation and discussion of laboratory results.
6. ITP– clinical features, diagnosis and therapeutical options.
7. Thrombotic microangiopathies: TTP, HUS
8. Diagnostic procedure and treatment of acute myelocytic leukaemias, peripheral blood smears.
9. Diagnostic procedure and treatment of acute lymphocytic leukaemias, peripheral blood smears.
11. Diagnosis and treatment of chronic myelocytic leukaemia, peripheral blood smears.
12. Diagnosis and treatment of chronic lymphocytic leukaemia, peripheral blood smears.
13. Hodgkin’s disease – clinical symptoms, staging and therapy
14. Multiple myeloma and other plasma cell dyscrasias
15. The practice of autologous stem cell transplantation.
16. Visit to the haemapheresis laboratory (stem cell collection, and freezing). the transplantation unit.
17. Non- Hodgkin’s lymphomas – clinical symptoms, staging and therapy
18. Haemostasis, platelets, fibrinolysis and evaluation of laboratory tests.
19. Diffuse intravascular coagulation
20. The bleeding patient – inherited and acquired bleeding disorders
21. Evaluation of the blood coagulation tests.
22. Thrombophilias.
24. Heparin induced thrombocytopenia.
25. Control of anticoagulant treatment
27. Antiplatelet therapies
Seminars

Exam topics/questions
1. Iron deficiency anaemia
2. Pernicious anaemia
3. Haemolytic anaemias (inherited and acquired)
4. Microangiopathic haemolytic anaemias (TTP, HUS)
5. Osteomyelofibrosis
6. Polycythaemia vera
7. Essential thrombocythaemia
8. Acute leukaemias
9. Chronic myelogenous leukaemia
10. Myelodysplastic syndrome
11. Aplastic anaemia
12. High grade malignancy non-Hodgkin lymphomas
13. Indolent non-Hodgkin lymphomas
14. Chronic lymphocytic leukaemia
15. Hodgkin’s lymphoma
16. Plasmocytoma
17. Haematopoetic growth factors and their role in the therapy
18. Platelet disorders
19. Coagulopathies (inherited and acquired bleeding disorders)
20. Therapy of different haemorrhagic diatheses
21. Inherited and acquired thrombophilies
22. Prevention of venous thromboembolic diseases in internal medicine
23. Prevention of arterial thrombosis
24. Anticoagulant therapy
25. Diseases of the spleen
26. Stem cell transplantation
FORENSIC MEDICINE

Course director: DR. ANDRÁS HUSZÁR, assistant professor
Department of Forensic Medicine

4 credit • Clinical • autumn • semester exam

Number of hours/semester: 28 + 28 + 0 = 56

Prerequisite: OAPPA2 completed

Topic

Forensic medicine is a branch of medicine applied for the purposes of justice. For the achievement of these purposes in practice forensic medicine uses the knowledge comprised in various theoretical and clinical parts of medicine. Therefore, forensic medicine is a very complex science, which has different specialties, e.g. serology, toxicology, traumatology, genetics, etc.

Conditions for acceptance of the semester

Absences accepted according to the exam rules.

Making up for missed classes

Individual agreement

Reading material

Lecture Notes of Forensic Medicine, edited by P. Sótonyi, Semmelweis University of Medicine, Budapest
B. Knight (ed.: E. Arnold): Simpson’s Forensic Medicine, 10th edition

Lectures

1. Introduction.
2. The medico-legal requirements of general practitioner.
3. Death investigations
4. Death investigations
5. Causes of death
7. DNA techniques in the forensic practice
8. DNA techniques in the forensic practice
9. Motor vehicle injuries
10. Traffic safety
11. Suffocation and asphyxia
12. Immersion death
13. Sexual offences
14. Abortion, battered child
15. Firearms, explosion injuries.
16. Terrorism.
18. Informatics.
19. Bioethics
20. Clinical trials, human experiments
21. Toxicology
22. Toxicology
23. Crime scene investigations
24. Crime scene investigations
25. Forensic psychiatry
26. Forensic psychiatry
27. Consultation
28. Consultation

Practices
1. Changes after death
2. Changes after death
3. Post-mortem examination, medical report
4. Post-mortem examination, medical report
5. Vital signs and reactions
6. Vital signs and reactions
7. Wounds and injuries
8. Wounds and injuries
9. Head and spinal injuries I.
10. Head and spinal injuries II.
11. Firearm and explosion injuries
12. Firearm and explosion injuries
13. Serology, paternity tests
14. Serology, paternity tests
15. Alcohol (introduction)
16. Alcohol (introduction)
17. Toxicology (introduction)
18. Toxicology (introduction)
19. Identification, skeletal remains
20. Identification, skeletal remains
21. Criminalistics
22. Criminalistics
23. Autopsy case demonstration (changes after death, post-mortem examination)
24. Autopsy case demonstration (changes after death, post-mortem examination)
25. Autopsy case demonstration (changes after death, post-mortem examination)
26. Autopsy case demonstration (changes after death, post-mortem examination)
27. Consultation
28. Consultation
Seminars

Exam topics/questions

A
1. Healthcare law
3. Medical negligence and malpractice.
5. Autopsy report.
6. Medical reports and certificates.
8. Donation procedure.
12. Medico-legal application of blood grouping data. Paternity testing.
14. Efficiency of serology (blood grouping antigens, sera proteins and enzymes). HLA system and DNA fingerprinting.
15. Vital signs and reactions.
17. Legal aspects of mental disorders. Criminal responsibility. Wills and testamentary capacity.
18. Suicide: social and medico-legal problems.

B
1. Sudden natural death in adult.
2. Sudden natural death in childhood. Sudden Infant Death Syndrome.
5. Incised and stab wounds.
6. Head injuries.
7. Firearm injuries.
8. Motor vehicle accidents.
10. Sexual offences. Medical examination in rape and unlawful sexual intercourse.
11. Proof of pregnancy, criminal abortion.
18. Poisoning by common drugs.
INTERNAL MEDICINE: CLINICAL INFECTOLOGY  OAKINF

Course director:  DR. GÁBOR TERNÁK, professor
Department of Infectology, Baranya County Hospital

3 credit • Clinical • spring • semester exam

Number of hours/semester: 14 + 28 + 0 = 42

Prerequisites: OAPBPR completed + OAPMI2 completed + OAKGT3 completed

Topic
The role of the subject in the fulfilment of the educational targets, short summary of the topics: The main goal is to acquire knowledge and understanding of the etiology, epidemiology, clinical appearance, differential diagnosis, therapy and the prevention of infectious diseases. The topic includes the immunological aspects of the infectious diseases, hospital hygiene, clinical epidemiology, nosocomial infections, sepsis, and the differential diagnosis of feverish diseases, antibiotic policy also. During practical teachings, the students will be thought on taking the patient’s history suspected for infectious diseases, to perform simple laboratory tests, like reading of blood smear, performing abdominal, chest and lumbar taps.

Conditions for acceptance of the semester
The conditions of accepting the semester: (examinations, the permitted number of absences): The attendance of classes is obligatory. Only 2 absences are permitted from classes and the head of the dept. can permit 4 practices to be fulfilled at different times, beyond the scheduled timetable. The students are obliged to perform an examination (practical, oral) at the end of the semester.

Making up for missed classes
Compensation of absences: Obtaining permission from the head of the dept.

Reading material
Proposed books (English):
Mandel’s Principles and Practices of Infectious Diseases
Manson’s Tropical Diseases

Lectures
1. The scope of infectious diseases
2. Clinical microbiology
3. Basic antiinfective treatment
4. Differential diagnosis of fever, fever of unknown origin (FUO)
5. Respiratory tract infections
6. Gastrointestinal infections, parasitoses
7. Skin and soft tissue infections
8. Hepatitis
9. Infectious diseases of the childhood
10. Infections of the central nervous system
11. AIDS
12. Bloodstream infections
13. Imported infectious diseases
14. Migration-related infectious diseases

*Practices*

Actual diseases on the dept. in association with the lectures.

*Seminars*

-  

*Exam topics/questions*

1. Acut viral hepatitis A
2. Acut viral hepatitis B and D
3. Acut viral hepatitis C
4. Acut viral hepatitis E-SEN
5. Amoebiasis
6. Ancylostomiasis
7. Anthrax
8. Antibiotic strategies
9. Ascariasis
10. Botulism
11. Brucellosis
12. Campylobacter infection (gastroenteritis)
13. Cholera
14. Chronic hepatitis
15. Clinical signs and symptoms of acut hepatitis
16. Clinical stages of AIDS
17. Common cold
18. Cysticercosis
19. Differential diagnosis of fever of unknown origin (FUO)
20. Differential diagnosis of jaundiced patients
21. Diphtheria
22. Dysbacteriosis
23. Dysentery syndrome
24. E. coli gastroenteritis
25. Echinococcosis
26. Enterobiosis
27. Epidemiology of AIDS
28. Erysipelas
29. Exanthema subitum
30. Giardiasis
31. Herpes simplex virus infections
32. Infectious mononucleosis
33. Influenza
34. Legionellosis
35. Leptospirosis
36. Lyme disease
37. Malaria
38. Meningitis epidemica (meningococcal meningitis)
39. Meningitis purulenta
40. Meningitis serous
41. Morbilli
42. Nosocomial infections
43. Opportunistic infections in AIDS
44. Parotitis epidemica
45. Pertussis
46. Plaut-Vincent angina
47. Poliomyelitis anterior acuta
48. Pseudo membranous enteritis (Clostridium difficile infection)
49. Psittacosis
50. Q-fever
51. Rabies
52. Rubeola
53. Salmonellosis gastroenteritica
54. Scarlatina
55. Sepsis, sepsis syndrome
56. Streptococcal pharyngitis
57. Strongyloides stercoralis infection
58. Teniasis
59. The main groups and the properties of the antibiotics
60. The possible reasons of the unsuccessful antibiotic treatment
61. The transmission mechanisms of AIDS
62. Tick-borne encephalitis
63. Toxic hepatitis
64. Toxic shock syndrome
65. Toxocariasis
66. Toxoplasmosis
67. Travel/related imported diseases
68. Traveller’s diarrhea
69. Treatment and prevention possibilities of AIDS
70. Trichinelllosis
71. Trichuriasis
72. Tularemia
73. Typhus abdominalis, paratyphus
74. Varicella-zooster
75. Viral enteritis
76. Yersiniosis
INTERNAL MEDICINE: CARDIOLOGY

Course director: DR. KÁLMÁN TÓTH, professor

1st Department of Internal Medicine

3 credit • Clinical • spring • semester exam

Number of hours/semester: $14 + 28 + 0 = 42$

Prerequisite: OAPBPR completed + OAPKO2 completed + OAPGT2 parallel

Topic

The subject provides general theoretical and practical baselines to the state of the art of cardiological diagnostics and therapy and their application in the everyday medical practice. Interactions and differential diagnostic features with other internal diseases are emphasized.

Cardiovascular diseases represent the largest patient population requiring medical attention in general practice. This subject includes special topics of case history and physical examination of cardiac patients, the most important characteristics of cardiological diseases, non-invasive and invasive cardiological diagnostic procedures, therapeutic possibilities and an introduction to the basics of heart surgery.

Conditions for acceptance of the semester

Oral semester exam

Oral retake/upgrading exam

Maximal 6 hours absences are tolerated during the semester at the lectures and practices. More than 6 hours absences result in automatic exclusion from the exam.

Making up for missed classes

To make up for absences, students have a chance to join a practice of another group at the same week or on the same topic.

Reading material

First Department of Medicine lecture slides


Additional recommended literature:


Houghton AR, Gray D: Making Sense of the ECG - A hands-on guide)
Lectures

1. An introduction to cardiology. Noninvasive cardiological diagnostics I (electrocardiology: ECG, stress tests, Holter monitoring, transtelephonic ECG) (Dr. Kálmán Tóth)
2. Noninvasive cardiological diagnostics II (echocardiography, nuclear cardiology, heart MRI and coronary CT) (Dr. Attila Cziráki/Dr. Tamás Simor)
3. Invasive cardiological diagnostics (coronary angiography, IVUS, NOGA) (Dr. Iván Horváth)
4. Arrhythmias and their pharmacological treatment (Dr. Kálmán Tóth)
5. Invasive clinical electrophysiology, diagnostics and non-pharmacological treatment of arrhythmias (Dr. Tamás Simor)
6. Hypertension (Dr. László Czopf)
7. Heart failure (Dr. Tamás Habon)
8. Stable coronary heart disease. Cardiovascular prevention (Dr. Kálmán Tóth)
9. Acute coronary syndromes. PCI (Dr. Iván Horváth)
10. Coronary surgery. Heart transplantation. (Dr. Sándor Szabados/Dr. László Hejjel)
11. Carditis (endo-, myo-, peri-). Diagnosis, therapy and prevention. Valvular diseases (Dr. Attila Cziráki)
12. Congenital heart diseases in adults. Valvular surgery (Dr. Sándor Szabados/Dr. László Hejjel)
13. Cardiomyopathies (Dr. Tamás Habon)
14. Cardiac rehabilitation (Dr. István Czuriga/Dr. Gábor Késmárky)

Practices

3. Noninvasive cardiological diagnostics II (echocardiography, nuclear cardiology, heart MRI and coronary CT)
4. Noninvasive cardiological diagnostics II (echocardiography, nuclear cardiology, heart MRI and coronary CT)
5. Invasive cardiological diagnostics (coronary angiography, IVUS, NOGA)
6. Invasive cardiological diagnostics (coronary angiography, IVUS, NOGA)
7. Arrhythmias and their pharmacological treatment
8. Arrhythmias and their pharmacological treatment
9. Invasive clinical electrophysiology, diagnostics and non-pharmacological treatment of arrhythmias
10. Invasive clinical electrophysiology, diagnostics and non-pharmacological treatment of arrhythmias
11. Hypertension
12. Hypertension
13. Heart failure
14. Heart failure
15. Stable coronary heart disease. Cardiovascular prevention
16. Stable coronary heart disease. Cardiovascular prevention
17. Acute coronary syndromes. PCI
18. Acute coronary syndromes. PCI
19. Coronary surgery. Heart transplantation
20. Coronary surgery. Heart transplantation
21. Carditis (endo-, myo-, peri-). Diagnosis, therapy and prevention. Valvular diseases
22. Carditis (endo-, myo-, peri-). Diagnosis, therapy and prevention. Valvular diseases
25. Cardiomyopathies
26. Cardiomyopathies
27. Cardiac rehabilitation
28. Cardiac rehabilitation

Seminars

Exam topics/questions
Cardiology Theses
1. Basic principles of ECG analysis
2. Special cardiologic investigations I: Stress tests, Holter monitoring and Ambulatory blood pressure monitoring (ABPM)
3. Special cardiologic investigations II: Echocardiography and nuclear methods
4. Special cardiologic investigations III: Invasive studies (electrophysiology, heart catheterization, coronary angiography and coronary interventions)
5. Mechanisms of arrhythmias
6. Sinus and atrial arrhythmias
7. Arrhythmias involving the AV node and accessory pathways
8. Ventricular arrhythmias
9. AV blocks and ventricular conduction defects
10. Syncope and sudden cardiac death
11. Antiarrhythmic drugs
12. Pacemakers and implantable cardioverter defibrillators
13. Epidemiology and risk factors of ischemic heart disease (IHD), primary prevention
14. Types of ischemic heart disease (IHD) (types of angina pectoris)
15. The diagnostics of ischemic heart disease (IHD)
16. The drug treatment of ischemic heart disease (IHD)
17. The revascularisation treatment (PCI, CABG) of ischemic heart disease (IHD)
18. The diagnostics of acute coronary syndromes (ACS)
19. The treatment of acute coronary syndromes (ACS)
20. The most important complications of acute myocardial infarction (AMI) and their treatment
21. Risk stratification after acute myocardial infarction (AMI), secondary prevention and rehabilitation
22. The epidemiology and types of hypertension
23. Essential hypertension - risk factors, pathogenesis
24. The treatment of hypertension
25. Epidemiology, risk factors and pathomechanism of heart failure
26. The clinical syndromes of heart failure
27. The treatment of heart failure
28. Cardiomyopathies
29. Dilated cardiomyopathy
30. Hypertrophic cardiomyopathy and restrictive cardiomyopathy
31. Myocarditis
32. The diseases of the pericardium
33. Cardiac tamponade
34. Rheumatic fever
35. Infective endocarditis
36. Diseases of the mitral valve
37. Diseases of the aortic valve
38. Combined and multiple valve diseases
39. Anticoagulation and fibrinolytic treatment in cardiovascular diseases
40. The role of multicenter, international clinical studies in the therapy of heart diseases (arrhythmias, ACS, secondary prevention, etc.)
Clinical Biochemistry

Course director: DR. L. Gábor Kovács, professor
Department of Laboratory Medicine

2 credit • Clinical • autumn • semester exam

Number of hours/semester: 14 + 14 + 0 = 28

Prerequisite: OAABK2 completed + OAPPA2 completed

Topic

The aim of the subject is to develop the ability to synthesize information from exact laboratory parameters with other clinical diagnostic approaches.

Accurate molecular analysis of specimen obtained from the human body is essential for the patients’ disease evaluation, diagnosis, prognosis, therapy monitoring and disease prevention. The subject “Clinical Biochemistry” bases on your existing knowledge in biochemistry, and pathology. We will teach you how to select from the variety of laboratory parameters, provide you with a strategy on how and when to order these tests, and help you to develop a molecular approach to medicine. The subject includes a description of the clinical use of clinical chemistry, hematology, hemostaseology, and molecular genetics investigations.

Conditions for acceptance of the semester

Attending the lectures and practices is obligatory. Absences up to 25% as total are accepted.

Making up for missed classes

Attending the practices is obligatory. If someone misses a practice for any reason, he/she is asked to attend the practice in question given to another group.

Reading material


Lectures

1. Clinical biochemistry in modern medicine. The informational value of laboratory tests
2. Disorders of water, Na+ and K+ balance
3. Plasma protein abnormalities
4. Plasma enzymes
5. Laboratory diagnostics of the heart and striated muscle diseases
6. Iron, porphyrin and haemoglobin metabolism
7. Lipid metabolism, its disorders and laboratory diagnostics
8. Diseases of the liver and the gastrointestinal tract
9. Carbohydrate metabolism and the significance of laboratory tests in different endocrine disorders
10. Acid/base balance
11. Renal diseases
12. Disorders of calcium and magnesium metabolism, laboratory diagnostics of bone and joint diseases
13. Nutrition and age. Laboratory diagnostic approaches in toxicology and therapeutic drug monitoring
14. Inherited (genetic) diseases. Tumours and tumour markers

Practices

1. General introduction to the use of clinical laboratory tests - Patient preparation, sampling and sample handling - Requesting a lab test - The informational value of the test results
2. General introduction to the use of clinical laboratory tests - Patient preparation, sampling and sample handling - Requesting a lab test - The informational value of the test results
3. Examination of blood - Laboratory tests involved in blood cell quantification and their derived values - Analysis and interpretation of acid/base parameters of blood - Laboratory monitoring of blood coagulation
4. Examination of blood - Laboratory tests involved in blood cell quantification and their derived values - Analysis and interpretation of acid/base parameters of blood - Laboratory monitoring of blood coagulation
5. Analysis of the soluble components of blood - Electrolytes, metals, trace elements, carbohydrates, lipids, metabolites
6. Analysis of the soluble components of blood - Electrolytes, metals, trace elements, carbohydrates, lipids, metabolites
7. Examination of plasma proteins- Analytical alternatives in studying plasma enzymes, isoenzymes, immunoglobulin, transport proteins, and the informational value of different tests
8. Examination of plasma proteins- Analytical alternatives in studying plasma enzymes, isoenzymes, immunoglobulin, transport proteins, and the informational value of different tests
9. Special chemical tests - Hormone analyses- Therapeutic drug monitoring
10. Special chemical tests - Hormone analyses- Therapeutic drug monitoring
11. Urinalysis - Bedside and chemical (quantitative) urine tests and their interpretation (practical lesson)
12. Urinalysis - Bedside and chemical (quantitative) urine tests and their interpretation (practical lesson)
13. Basic bedside laboratory tests (POCT) - Practical lesson
14. Basic bedside laboratory tests (POCT)- Practical lesson

Seminars
Exam topics/questions

Questions for the oral examination

1. Factors influencing laboratory test results. Alterations due to errors in sample collection, sample preparation and application of different analytical methodologies. The effect of individual biological variations on the test results

2. Specificity, sensitivity and predictive value of laboratory tests

3. Theoretical background of spectrophotometry and its application in laboratory diagnostics

4. Theoretical background of emission flame photometry and atomic absorption photometry, and their use in laboratory diagnostics

5. The amphoteric nature of proteins, different protein separation and identification techniques

6. Disorders of water and sodium homeostasis. Different disease states due to water and/or sodium deficit or excess. Laboratory tests useful in these disorders

7. Disorders of potassium balance of the organism. Potassium deficiencies due to administration of diuretics (determination of serum and urinary K levels and/or excretion, renal functional tests)

8. Disturbances of non-immunoglobulin plasma proteins (electrophoretic separation and specific detection of proteins, immunological methods)

9. Disorders of immunoglobulins (analytical approach to the detection of decreased or increased serum immunoglobulin levels)

10. Benign and malignant paraproteinaemias. Differential diagnostic capabilities

11. The main plasma enzymes and their origin and biological function in the body

12. Diagnostic value of the measurement of serum (plasma) enzymatic activity (determination of total activity, isoenzyme tests, monitoring of enzyme activity versus time)

13. Laboratory monitoring of oral anticoagulant therapy

14. Laboratory findings in disseminated intravascular coagulation (DIC)

15. Informational value of global coagulation tests

16. Laboratory diagnostic approaches in anaemias

17. Disorders in porphyrin metabolism and their diagnostic approaches

18. Disorders of haemoglobin and iron metabolism. Laboratory approaches

19. Laboratory findings in diagnostics of myocardial infarction

20. Laboratory monitoring of treatment of acute myocardial infarction (AMI), e. g. reperfusion, fibrinolytic therapy

21. Laboratory approaches in chronic heart failure (BNP, proBNP, electrolytes)

22. Assessment of cardiovascular risk factors by laboratory testing

23. Lipids and lipoproteins in the blood plasma, their investigation and predictive value of the lab tests (cholesterol, triglycerides, phospholipids, free fatty acids, lipoproteins: HDL, LDL, VLDL, chylomicrons)

24. Risk factors of arteriosclerosis and their laboratory diagnostic capabilities
25. Laboratory tests that predict hepatic disorders (bile constituents, plasma proteins, blood coagulation, enzymes, immunoglobulins, Fe, Cu, etc.)

26. Clinical biochemistry of viral hepatitises, PCR and serological diagnostics

27. Laboratory diagnostics of alcoholic liver damage

28. Laboratory findings in liver cirrhosis

29. Laboratory findings in hepatic coma

30. Disorders of bilirubin metabolism (pre-, intra- and posthepatic disorders as seen in the clinical laboratory)

31. Diagnostic value of testing acute phase proteins

32. Laboratory diagnosis of acute and chronic pancreatitis (serum amylase, lipase, Ca, CRP, etc.)

33. The origin of serum and urinary amylase activity, and their diagnostic value

34. Diagnostic criteria of diabetes mellitus (WHO criteria)

35. The most important laboratory tests for the diagnosis of diabetes mellitus (fasting plasma glucose, glucose tolerance test, K, acid-base balance, lactate, urine tests)

36. Laboratory diagnostics of diabetic coma

37. Clinical biochemistry of hypoglycemia

38. Laboratory diagnostics of diabetes insipidus

39. Clinical biochemistry of metabolic syndrome

40. Laboratory tests in examining glomerular kidney function (GFR, clearance, creatinine)

41. Laboratory tests in examining tubular kidney function (dilution and concentration tests, Na and K excretion, amino acidurias, etc.)

42. Laboratory investigations of acute renal diseases (salt and water balance, acid-base balance, urea, creatinine)

43. Laboratory diagnostics of chronic renal failure

44. Examination and differential diagnostics of proteinurias (Bence Jones protein, glomerular and tubular proteinurias)

45. Laboratory approaches in hematurias

46. Laboratory findings in metabolic type changes of the acid/base balance

47. Laboratory findings in respiratoric type changes of the acid/base balance

48. Laboratory approaches for the detection of disorders in Ca and P metabolism (serum and urinary Ca and P, plasma ionized Ca, total protein, albumin, alkaline phosphatase, hormon and vitamin determinations)

49. Laboratory diagnosis of metabolic bone diseases (hyperparathyroidism, osteomalacia, renal diseases)

50. Clinical biochemistry of osteoporosis, laboratory monitoring of therapeutical approaches

51. Indications of Mg tests and their informational value

52. The origin of increased serum uric acid levels in different diseases

53. The most important laboratory tests that suggest the presence of malignant diseases (erythrocyte sedimentation rate, metabolites, enzyme activities, etc.)
54. Tumor markers and their informational value (AFP, CEA, enzymes, hormones, etc.)
55. Therapeutic drug monitoring (TDM) in the clinical chemistry lab
56. Measurement of multidrug resistance in the clinical laboratory
57. Toxicology tests in the clinical laboratory
58. Bedside/point of care tests (POCT), different types and their informational value
INTERNAL MEDICINE: CLINICAL IMMUNOLOGY - RHEUMATOLOGY

OAKKIR

Course director:  DR. LÁSZLÓ CZIRJÁK, professor
Department of Immunology and Rheumatology

2 credit • Clinical • spring • semester exam
Number of hours/semester: 14 + 14 + 0 = 28

Prerequisite: OAAIMM completed + OAPBPR completed + OAPPA2 completed

Topic
The goal of this course is to learn the basic knowledge of clinical immunology and rheumatology, to practice the examination of patient with musculoskeletal and joint complains, to learn the diagnosis and therapy of epidemics of rheumatology and to learn the basics of clinical immunological problems, autoimmun diseases, tumor immunology, allergy, transplantation, immundeficiency.

Conditions for acceptance of the semester
Examination of the musculoskeletal system.

Making up for missed classes
During the practice of other group.

Reading material
Presentations: on Intranet
Harison’s: Principal of Internal Medicine (23rd edition)

Lectures
2. Systemic lupus erythematosus
3. Systemic sclerosis
4. Sjögren’s syndrome. Inflammatory myopathies
5. Systemic vasculitis
6. Up to date management of systemic autoimmune diseases. Principals of therapy
7. Rheumatoid arthritis. Diagnosis
8. Rheumatoid arthritis. Treatment and monitoring of patients
9. Spondylarthropathies
12. Psoriatic arthritis. Juvenile idiopathic arthritis
13. Diagnosis and treatment of gout and crystal induced arthropathies. Clinical characteristics of metabolic disorders.

Practices
1. Learn and practice the examination of patient with musculoskeletal complain
2. Learn and practice the examination of patient with musculoskeletal complain
3. Rheumatoid arthritis, systemic lupus erythematosus, scleroderma, Sjögren’s syndrome
4. Rheumatoid arthritis, systemic lupus erythematosus, scleroderma, Sjögren’s syndrome
5. Ancylosing spondylitis (Bechterew diseases), arthritis psoriatica, SNSA
6. Ancylosing spondylitis (Bechterew diseases), arthritis psoriatica, SNSA
7. Ancylosing spondylitis (Bechterew diseases), arthritis psoriatica, SNSA
8. Gout, crystal-induced arthropathy
9. Gout, crystal-induced arthropathy
10. Osteoporosis
11. Osteoporosis
12. Osteoarthritis
13. Osteoarthritis
14. Spinal osteoarthritis

Seminars

Exam topics/questions
Exam’s questions.
CLINICAL RADIOLOGY
Course director: DR. ISTVÁN BATTYÁNI, associate professor
Department of Radiology

4 credit • Clinical • autumn • semester exam

Number of hours/semester: 28 + 28 + 0 = 56

Prerequisite: OAPPA2 completed + OAPSPR completed

Topic
Students will be familiarised with the methods and information contents of diagnostic procedures; the basic terms of Radiology; the preparing procedure for the examination; clinical data required for the examinations; the indications, contraindications and risks of different interventional radiological and diagnostic methods. (They have to be able to fit the clinical data into the diagnostic algorithm). Students become well trained for the synthesis of clinical data and medical diagnostic methods, likewise the perfect strategy of highest rated radiological diagnosis.

Demonstrating the interventional radiological methods, their points, appliances; presenting relations to previous therapeutic processes (surgery, drugs etc.); therapeutic and financial advantages.

After the course the students as a practitioner with a help of the known clinical data will be able to draw up the application sequence (examination shift) of the picture making diagnostic methods required for the diagnosis of certain diseases (in case of need based on the consultation with the specialist). At any time with this end in view the proportions of the smallest risk, the invested amount compare to the greatest benefit of diagnostic.

To make possible the predomination of ALARA principle by the representation of the genetic and somatic risks of ionising ray and the bases of ray-protection.

To settle the ability to synthesise the educated radiology knowledge with the former learned studies and to create the solid bases of practicable clinical diagnostic mentality.

Conditions for acceptance of the semester
To get the gradebook signed, a maximum of 2 (two) seminars (4 hours) may be missed and they are not replaceable by any kind, even by participating in other seminars, since the subjects may go non-parallel in various groups. Missed seminars, caused by disease, can be certified by a written certificate obtained from the treating physician (booked in the log of his/her office)! This can be done at the next seminar on the forthcoming week, only.

Making up for missed classes
No possibilities to make up for missed classes.

Reading material
In English:
G. M. Roberts, J. P. Hughes, and M. D. Hourihan: Clinical Radiology for Medical Students

In Hungarian:
Fráter, Palkó, Makó, Kollár, Battyáni: Radiológia (Medicina, 2005)

Recommended:
Daffner, Richard H.: Clinical Radiology: The Essentials, Williams & Wilkins, 1993
Davit Sutton: Textbook of Radiology and Imaging (7th edition), ELSEVIER

Lectures

2. Conventional and digital radiography, DSA,
3. Ultrasonography.
4. CT, MRI.
5. Contrast materials and their application (reaction and side effects).
6. Chest diagnostic imaging methods. The examination methods of the lung, the necessary clinical information, indications, contents of information. Basic terms, roentgen anatomy, basic findings. The normal and pathologic lung.
9. The roentgen anatomy and imaging methods of the mediastinal diseases (inflammation, lymph node enlargement, tumors, large vessel diseases and congenital malformations, etc.).
10. Imaging methods of the heart and great vessels, necessary clinical information, indications. Diagnosis of the Vitium. Congenital heart diseases. Disease of the myocardium and pericardium. Findings in pulmonary and general hypertension. Cardio-pulmon
12. Imaging methods of the small bowel and the large bowel, their indications, the necessary clinical information. Diseases and their radiological diagnosis
16. Radiology of the genital system.
17. Imaging methods of the breast and the superficial soft tissues.
21. Complex angiological examinations (physical examinations, functional tests, laboratory findings, Doppler US, CT, MRI angiography, Indices.) lymphography.
23. Terms of interventional radiology (past, today, future). Interventional radiology in the vascular system (embolisation, selective blood sampling, foreign body removal).
24. The methods of vascular interventional radiology (Thrombolysis, thrombus aspiration, catheter therapy in atherosclerosis. Stents. TIPS.
25. Interventional oncoradiology. (vascular methods)
26. Non vascular interventional radiological methods I. (liver, bile duct, urogenital system etc.).
27. Non vascular interventional radiological methods II. (pancreas interventions, percutan tissue and blood sampling, core biopsy, cyst sclerotisation, CT guided procedures).

Practices
4. Ultrasound (US) at work. Units of an US equipment (sound generator and receiver, control panel, detectors, image processor, display screen, video recorder, printers, digital storage device). Examination of parenchymal organs and blood vessels.


7. Imaging of the thorax (lung, the thoracic cage, diaphragm, pleura). The image of the non-pathologic thorax: differentiation of normal against pathologic shadows (blood vessel, hilar components, normal air content, size of vessels, normal connective tissue appearance). Units of the lungs and their 3D localization on the films made in 2 perpendicular projections. Basic pathologic lesions (shadows) of the lung as they appear on the image (spot, nodule, infiltrate, round lesion, atelectasis, hyperlu


10. Clinical cases. I.


12. Examination of the heart by conventional radiography, CT, MRI, PET and SPECT. Fluoroscopy, special projections. Shape of the heart in normal and pathologic conditions. Diseases of the pericardium.


15. Stomach X-ray (barium meal).Preparation of the patient, the condition of the examination. The necessary clinical data. The so called ‘en face’ filling surplus and filling defect. Ulcer disease (stomach and duodenum) and its complications (perforation, bleeding, stenosis). Stomach cancer and other tumors. The operated stomach. Hypotonic duodenography. Examination of the small bowel: follow-through, fractionated barium study of the small bowel (small bowel X-ray), selective hypotonic small bowel


17. Clinical cases II.


23. Clinical cases III.


28. Clinical cases IV.

Seminars
Exam topics/questions

Group „A”

2. Major units of an X-ray equipment.
5. Magnetic resonance imaging.
7. Medical ultrasound methods.
8. Image fusion.
10. The biological effect of radiation.
11. Stochastic and deterministic radiation effect.
13. Radiation protection.
15. Diagnosis of pulmonary embolism.
17. Hepatic chemoembolization.
18. Indication and technique of tumor ablation.
20. ALARA principle.
21. MRI in vertebral disorders.
22. Personal dosimetry.
24. Interventional radiology in pancreatic diseases.
25. High resolution CT.
26. Interventional radiology.
27. Interventional radiology in the liver and bile ducts.
28. Interventional radiology in the kidney, ureter and bladder.
29. Treatment of internal bleeding by catheter techniques.
32. Guided tissue and cytologic sampling.
33. Percutaneous drainages.
34. Imaging of musculo-skeletal disorders.
35. Interventional radiology in the small pelvis.
Group „B”

1. Imaging of bones and joints. Basic pathologic lesions on bone image and their terminology.
2. Acute inflammation of bones and joints and their clinical appearance.
3. Tuberculosis of the bones and joints.
5. Benign and malignant bone tumors. The necessary clinical data.
14. Radiology of the heart. Shape and contour changes.
19. Imaging of the esophagus. Imaging techniques. Interventional radiology: stent, esophageal bleeding, TIPS.
23. Imaging of the liver and bile ducts. Indications, techniques and information obtained by the examinations.
28. Phlebography (venography).
30. Mammography. Galactography, pneumocystography, cyst puncture, tissue and cytologic sampling, tumor marking by wire.
31. Indication and technique of neurological imaging.
32. Congenital cardiac diseases.
33. Imaging of acute abdominal conditions and the postoperative abdomen.
34. Diagnosis of acute cerebral vascular diseases.
35. Differential diagnosis of abdominal cysts.
PUBLIC HEALTH 2

Course director: DR. ISTVÁN EMBER, professor
Department of Public Health Medicine

4 credit • Clinical • autumn • semester exam

Number of hours/semester: 28 + 6 + 22 = 56

Prerequisite: OAPME1 completed

Topic
In the second semester of the subject Public health is the introduction into the detailed epidemiology of communicable and non-communicable diseases, focusing on the primary and secondary prevention possibilities.

The aim of the subject is to form a preventive attitude. The physicians have to know the different preventive strategies and they have to be able to use them in the practice.

Conditions for acceptance of the semester
Absence of 2 x 2 hours is acceptable.
Before the oral exam a minimum requirement test has to be successfully done. (In this multiple choice test the students have to reach 60 percent to begin the oral exam.)
Three questions have to be chosen from the list. The mean of the three notes will give the final result. (If one of the answers can not be accepted then the student fails.)

Making up for missed classes

Reading material

Lectures
1. Molecular epidemiology
2. Epidemiology of cardiovascular diseases
3. Epidemiology of cerebrovascular diseases
4. Epidemiology of hypertension
5. Epidemiology of diabetes
6. Epidemiology of osteoporosis
7. Epidemiology of mental disorders
9. Epidemiology of alcohol consumption
10. Epidemiology of accidents and violent deaths. Epidemiology of suicide
12. Molecular epidemiology of cancer
13. Pathomechanism of carcinogenesis. Environmental chemical carcinogenesis
15. Occupational medicine
16. Occupational cancers
17. Industrial toxicology of organic compounds
18. Industrial toxicology of inorganic compounds
19. Introduction to the epidemiology of infectious diseases. Pathomechanism of infection
21. Epidemiology of airborne infections
22. Epidemiology of enteral diseases. Epidemiology of hepatitis
23. Sexually transmitted diseases. AIDS
24. Epidemiology of parasitic infections
25. Epidemiology of prion diseases
27. Nosocomial tumors
28. Bioterrorism. Reemerging infectious diseases

Practices
1. Haematotoxicology
2. Genotoxicological investigations
3. Parazitology

Seminars
1. Epidemiology of non-infectious diseases/Instructions for preparation of clinico-social case study
2. Screening
3. Direct and indirect standardisation
4. Risk assessment. Chemical safety
5. Prevention of food contamination caused diseases
6. Occupational health
7. Control for nosocomial infections. Sterilisation, desinfection, deratisation, desinsection
8. The basics of population genetics
9. Laboratory diagnostics of infectious diseases
10. Health status evaluation, health promotion, SWOT analysis
11. Evaluation of the clinico-social study
Exam topics/questions

1. Tasks and operation of public health institutions. WHO
3. Classification of epidemiological studies. Confounding and bias
4. Analytical epidemiology
5. Molecular biological methods in molecular epidemiology
6. Methods of demography
7. Basic measures of demography related to the reproduction and mortality
8. Mortality statistics, life expectancy, lost years and avoidable mortality
9. Measures of morbidity and hidden morbidity
10. The evaluation of nutritional status
11. Consequences of over-nutrition, disproportional intake of nutrients. Malnutrition
12. Food allergy, food intolerance, aversion to foods
13. Healthy nutrition
14. Nutrition and cancer
15. Food borne illnesses of chemical origin. Food safety
16. Food borne illnesses of biological origin. Epidemiology of toxicoinfections (C. botulinum, C. perfingens, B. cereus and Staphylococcus aureus)
17. Basic principles of ecology
18. Environmental pollution, global issues
19. Water resources, water demand, hydrological cycle
20. Drinking water qualification
21. Drinking water supply and treatment
22. Water born epidemics. Health effects of water pollution (mercury, asbestos fibres, cyanide, arsenic)
23. Sewage water management
24. Health effects of soil pollution. Erosion and deflation
25. Outdoor air pollution and smog
27. Health effects of ionizing radiations
28. Stochastic and deterministic dose-response relationship
29. Health effects of non-ionizing radiations
30. Health effects of electromagnetic fields
31. Health effects of indoor air pollution. Sick building syndrome
32. Geographical epidemiology
33. Health care systems and quality assurance
34. Health care financing, management
35. Health issues of childhood, adolescence and youth.
36. Health promotion, health education
37. Health issues of elderly
38. Health effects of tourism, traffic and transport
39. Molecular epidemiology
40. Epidemiology of mental disorders
41. Epidemiology of alcohol abuse
42. Health effects of active and passive smoking
43. Epidemiology of drug abuse
44. Epidemiology of diabetes mellitus
45. Epidemiology of cardio- and cerebrovascular diseases
46. Epidemiology of hypertension
47. Epidemiology of osteoporosis
48. Epidemiology of hereditary diseases
49. Epidemiology of violent deaths, accidents and suicide
50. Chemical carcinogenesis
51. Multistep model of carcinogenesis. Oncogenes and tumor suppressor genes in carcinogenesis
52. Epidemiology of cancers
53. Molecular epidemiology of cancers
54. Cancer prevention. Role of inheritance in cancer development
55. Primary, secondary and tertiary prevention
56. Chemoprevention
57. Chemical safety
58. Toxicological investigations of chemicals (mutagenic and genotoxicological investigations)
59. Health effects of common and dangerous wastes and the possibilities for prevention
60. Health effects of common and hazardous wastes. Qualification, management
61. Scope and operation of occupational health care
62. Etiology and prevention of occupational diseases
63. Prevention of disorders caused by extreme temperature at the workplace
64. Health effects of atmospheric pressure
65. Epidemiology of noise and vibration
66. Epidemiology of pneumoconiosis
67. Epidemiology of silicosis and asbestosis
68. Basics of toxicology
69. Toxicology of pesticides
70. Toxicology of acidic and alkaline compounds, organic solvents, gases
71. Toxicology of heavy metals, plastics chlorinated hydrocarbons
72. The principles of the epidemiology of infectious diseases. The classification of infectious diseases
73. Primary and secondary factors of the outbreaks
74. Practical measures to control infectious diseases
75. Laboratory diagnosis of infectious diseases. Molecular epidemiology of infectious diseases
76. Disinfection, disinsectization, deratisation, Sterilization
77. Basic principles of vaccination
78. Age-related compulsory vaccinations
79. Non-age related vaccinations
80. Epidemiology of gastrointestinal infections I. (salmonellosis, campylobacteriosis, yersiniosis and E.coli gastroenteritis)
81. Epidemiology of gastrointestinal infections II. (cholera, rotavirus, calicivirus, non-polio myelitis type enterovirus infection, dysentery, travellers’ diarrhoea)
82. Epidemiology of hepatitis infections (A, B, C, D, E viruses)
83. Epidemiology of air-borne infections (legionellosis, Haemophilus influenzae, varicella, Pneumococcus, Meningococcus)
84. Epidemiology of vector-borne infections (tick-borne encephalitis, Lyme borreliosis, typhus exanthematicus and plague)
85. Vaccine preventable childhood infections I. (poliomyelitis, mumps, measles and rubella)
86. Vaccine preventable childhood infections II. (tetanus, diphtheria and pertussis)
87. Epidemiology of parasitic diseases (ascariasis, enterobiasis, trichuriasis, giardiasis and amoebiasis)
88. Epidemiology of tuberculosis
89. Epidemiology of influenza viruses
90. Epidemiology of rabies
91. Epidemiology of tropical infections (malaria, yellow fever and sleeping sickness)
92. Epidemiology of AIDS. Epidemiology of sexually transmitted diseases
93. Epidemiology of zoonosis (toxoplasmosis, listeriosis, trichinosis and echinococcosis)
94. Epidemiology of prion diseases
95. Epidemiology of nosocomial infections
96. Bioterrorism. Types of biological weapons. Epidemiology of emerging infections
PUBLIC HEALTH 6 (OCCUPATIONAL HYGIENE AND OCCUPATIONAL MEDICINE) OAKMUF

Course director: DR. ISTVÁN EMBER, professor
Department of Public Health Medicine

1 credit • Clinical • spring • final exam

Number of hours/semester: $7 + 7 + 0 = 14$

Prerequisite: OAKREP completed

**Topic**

The aim of the course is the introduction in the occupational medicine. Every doctor has to know the importance of this discipline and about the risk factors in the working environment and about the preventive strategies.

In the 8th semester students have to do a final exam of Public Health, for it they need completed courses, which are the followings: The basics of disease prevention (OAAABMA), General Epidemiology and Demography (OAAAEDE), Environmental Health (OAAAKET), Preventive Medicine (OAPNEO), Detailed Epidemiology (OAKREP), Occupational Hygiene and Occupational Medicine (OAKMFO).

**Conditions for acceptance of the semester**

**Making up for missed classes**

**Reading material**

**Lectures**

1. Basics of occupational medicine
2. General toxicology
3. Toxicology of organic and inorganic compounds (metals, pesticides)
4. Work-related diseases I.
5. Work-related diseases II.
6. Occupational cancers
7. Epidemiology of communicable and non-communicable nosocomial diseases

**Practices**

1. Haematotoxicology I.
2. Haematotoxicology II.
3. Genotoxicologic measurements I.
4. Genotoxicologic measurements II.
5. Risk assessment
6. Occupational health: Physical examination, administration, reporting I.
7. Occupational health: Physical examination, administration, reporting II.

**Seminars**

Exam topics/questions
NEUROLOGY 1

Course director: DR. SÁMUEL KOMOLY, professor
Department of Neurology

3 credit • Clinical • autumn • midsemester grade

Number of hours/semester: 14 + 28 + 0 = 42

Prerequisite: OAAEA completed + OAPPA2 completed + OAKGT3 completed

Topic

How to approach to the patients with neurologic disease: asking the history, the neurological examination (testing higher critical function, cranial nerves, motor function, reflex function, sensory function, gait and stance) Appreciate a patient who has a neurological problem Recognize the common neurological disorders. Recognize neurological emergencies (e.g. comatose patient) and initiate treatment. Manage common neurological disorder using drug when appropriate, appreciate other aspects of general management, and know what neurosurgery may have to offer. To integrate basic neuroscience and anatomy and clinical neurology as far as possible Clinical neurology will be taught both in the out patients clinics and in the ward.

Conditions for acceptance of the semester

According to Code of Studies and Examinations

Making up for missed classes
extra scheduled practices

Reading material


Lectures

1. Special aspects of the history taking and special techniques for neurologic diagnosis
2. Neuro diagnostic producers
3. Somatic sensation and pain
4. Multiple sclerosis
5. Disorders of motility
6. Epidemiology and management of cerebrovascular diseases
7. Disorders of language and speech
8. Myopathies
9. Meningitis and encephalitis
10. Gait and movement disorders
11. Multiple sclerosis
13. Myasthenia gravis
14. Polyneuropathies I.
Practices
1. Reflexes
2. Testing of cranial nerves
3. Testing of cranial nerves
4. Tests of motor functions
5. Tests of motor functions
6. Testing of sensory functions
7. Testing of sensory functions
8. Testing of cerebellar and vestibular functions
9. Testing of cerebellar and vestibular functions
10. Testing of gait and stance
11. Testing of gait and stance
12. Testing of higher cortical functions
13. Testing of higher cortical functions
14. Testing of higher cortical functions
15. Reflexes
16. Testing of cranial nerves
17. Testing of cranial nerves
18. Tests of motor functions
19. Tests of motor functions
20. Testing of sensory functions
21. Testing of sensory functions
22. Testing of cerebellar and vestibular functions
23. Testing of cerebellar and vestibular functions
24. Testing of gait and stance
25. Testing of gait and stance
26. Testing of higher cortical functions
27. Testing of higher cortical functions
28. Reflexes

Seminars
Exam topics/questions
- Physical examination of the skull and vertebral column
- Signs of meningeal irritation.
- Investigation of cranial nerves.
- Investigation of motility.
- Investigation of somatic sensation.
- Investigation of deep tendon and superficial reflexes.
- Pathological reflexes.
- Investigation of coordination.
- Hyperkinesias.
- Investigation of speech, gnostic and cognitive functions.
- Investigation of the unconscious patient. Confusional status.
- Signs of increased intracranial pressure. Main intracranial herniations.
- Signs of temporal lobe lesions.
- Signs of frontal lobe lesions.
- Signs of parietal lobe lesions.
- Signs of occipital lobe lesions.
- Signs of blood circulation disturbances (internal carotid artery, basilar artery).
Course director: DR. SÁMUEL KOMOLY, professor
Department of Neurology

3 credit • Clinical • spring • semester exam

Number of hours/semester: 14 + 28 + 0 = 42

Prerequisite: OAKNE1 completed

Topic

How to approach to the patients with neurologic disease: asking the history, the neurological examination (testing higher critical function, cranial nerves, motor function, reflex function, sensory function, gait and stance). Appreciate a patient who has a neurological problem. Recognize the common neurological disorders. Recognize neurological emergencies (e.g. comatose patient) and initiate treatment. Management of common neurological disorders, using drug when appropriate, appreciate other aspects of general management, and to know what neurosurgery may offer. To integrate basic neuroscience and anatomy and clinical neurology as far as possible. Clinical neurology will be taught both in the out patients clinics and on the ward.

Conditions for acceptance of the semester

According to Code of Studies and Examinations

Making up for missed classes
extra scheduled practices

Reading material

Lectures

1. Diagnostics of epilepsy
2. The role of new MR methods in diagnostic neuroradiology
3. Neuromodulation for the treatment of movement disorders
4. Dementias
5. Myasthenia gravis
6. Treatment of epilepsy
7. Paraneoplastic syndromes
8. Epidemiology and management of cerebrovasular diseases
9. Sleep disorders
10. Brain and spinal cord tumors
11. Metabolic, dysimmune and compression neuropathies
12. Cranio-cerebral and brain edema
13. Vascular malformations, subarachnoid hemorrhage
14. Neurogenetics
Practices

1. Examination of stroke patients
2. Examination of stroke patients
3. Examination of patients with multiple sclerosis
4. Examination of patients suffering from neuropathy
5. EMG, ENG, EEG examinations
6. EMG, ENG, EEG examinations
7. Observe lumbar puncture and visit the CSF laboratory
8. How to do basic CSF examinations?
9. Visit to the CT MRI facility
10. Visit to the CT MRI facility
11. Examination of patients suffering from muscle disorders
12. Consultation of patients with neurogenetics problem
13. Coma and related disorders of consciousness I.
14. Coma and related disorders of consciousness II.
15. Examination of stroke patients
16. Examination of stroke patients
17. Examination of patients with multiple sclerosis
18. Examination of patients suffering from neuropathy
19. EMG, ENG, EEG examinations
20. EMG ENG EEG examinations
21. Observe lumbar puncture and visit the CSF laboratory
22. How to do basic CSF examinations?
23. Visit to the CT MRI facility
24. Visit to the CT MRI facility
25. Examination of patients suffering from muscle disorders
26. Consultation of patients with neurogenetics problem
27. Coma and related disorders of consciousness I.
28. Coma and related disorders of consciousness II.

Seminars
Exam topics/questions

1. Symptoms of myopathies (knowledge of genetically determined myopathies is required).
   Accidental (provoked) epileptic seizures.
2. Benign paroxysmal positional vertigo (Bárány).
   Transient ischemic attack, and its significance.
   Basics of acute stroke management
4. Myasthenia gravis.
   Temporal lobe epilepsy.
5. Metabolic polyneuropathies.
   Subarachnoid hemorrhage.
6. Dysimmune neuropathies (Guillain-Barré syndrome, Chronic inflammatory demyelinating polyneuropathy).
   Alzheimer disease
7. Carpal tunnel syndrome.
   Idiopathic generalized epilepsies.
   Parkinson disease.
9. Peripheral facial palsy (Bell-paresis).
   Venous thrombosis of the brain.
10. Acute meningitis.
    Intracerebral hemorrhage.
11. Phobic postural vertigo (Brandt).
    Focal epilepsies.
12. Herpes simplex encephalitis.
    Primary prevention of stroke.
13. Cervicobrachialgia (Neurological significance of the cervical vertebral degeneration).
    Clinical symptoms of multiple sclerosis.
    Diagnosis of MS.
15. Trigeminal neuralgia.
    Main pathologies of the spinal cord.
16. Characteristic clinical vascular symptoms of the carotid and vertebral arteries.
    Differential diagnosis of short unconsciousness.
17. Main categories of the neurodegenerative disorders.
    Status epilepticus.
18. Migraine and other primary headaches.
Urinary incontinence.
   Herpes zoster. Postherpetic neuralgia.
20. Traumatic injuries of the spinal cord.
   Alzheimer disease.
   Neurological disorders of the alcoholism.
22. Hydrocephalus.
   Neurolues and neuroborreliosis.
   Neurological complications of AIDS.
24. Neurological significance of the lumbar vertebral degeneration and herniation.
   Somatisation, atypical depression.
25. Neurofibromatosis (M. Reclinghausen)
   Paraneoplastic neurological disorders.
26. Symptoms of increased intracranial pressure.
   Focal dystonias.
27. Creutzfeldt-Jakob disease.
   Frequent vascular brainstem syndromes (Locked-in, Weber, Wallenberg, basilar artery occlusion).
28. Subacute combined degeneration of the spinal cord.
   Wilson disease.
29. Polyneuropathies.
   Sleep apnoea syndrome. Narcolepsia.
   Restless leg syndrome.
INTERNAL MEDICINE: NEPHROLOGY, HYPERTENSION

Course director: DR. ISTVÁN WITTMANN, professor
2nd Department of Internal Medicine and Nephrology Center

3 credit • Clinical • spring • semester exam

Number of hours/semester: 14 + 28 + 0 = 42

Prerequisite: OAPBPR completed + OAKEAB parallel

Topic

The importance of nephrology and hypertension is growing among the subspecialties of internal medicine. The topic of this curriculum is to introduce into classical nephrology (nephrotic sy., acute glomerulonephritides, urinary tract infections, hereditary kidney disease etc.) and hypertension. We also focus on the complications of diabetes, hypertension and peripheral arterial diseases which are leading causes of end stage renal failure all over the world.

Conditions for acceptance of the semester

The attendance of the lectures and practices is compulsory. The maximum permitted number of absences is 2 lectures and 2 practices.

Making up for missed classes

The maximum permitted number of absences is 2 lectures and 2 practices. Each further missed practice has to be made up for during the semester period.

Reading material


Lectures

2. The imaging techniques in nephrology.
3. Hereditary diseases of kidney (polycystic kidney, Alport syndrome)
5. Nephrotic syndrome.
7. Renal involvement in systemic diseases: SLE. HUS (haemolytic uraemic syndrome), Henoch-Schönlein syndrome.
8. Diabetic nephropathy.
11. Urinary tract infections.
Practices

1. Case history taking, physical examination of renal patients.1
2. Case history taking, physical examination of renal patients.2
3. The tests evaluating renal function.1
4. The tests evaluating renal function.2
5. How to evaluate the results of renal imaging procedures?
6. Examination of patients with rapidly progressive glomerulonephritis.
7. Indications/contraindications of renal biopsy.1
8. Indications/contraindications of renal biopsy.2
9. Examination of patients with IgA nephropathy.
10. The differential diagnosis of oedema.
11. The causes, forms and differential diagnosis of hematuria and proteinuria. Urine analysis. 1
12. The causes, forms and differential diagnosis of hematuria and proteinuria. Urine analysis. 2.
13. Diagnosis and treatment of primary and secondary forms of glomerulonephritis.
15. Early diagnosis, treatment, follow-up of diabetic nephropathy.1
16. Early diagnosis, treatment, follow-up of diabetic nephropathy.2
17. Examination of patients with microalbuminuria.
18. Examination of patients with microalbuminuria.
19. Diagnosis and treatment of hypertension in renal patients.
20. Diagnosis and treatment of hypertension in renal patients.
21. Follow-up of renal patients.
22. Diagnosis, treatment of urinary tract infection, pyelonephritis.
23. Inherited kidney diseases. 1
24. Inherited kidney diseases. 2
25. Examination of patients with chronic renal failure.
27. Pertioneal dialysis, haemodialysis.

Seminars
Exam topics/questions

- The evaluation of renal diseases.
- The differential diagnosis of hematuria.
- The differential diagnosis of proteinuria.
- The differential diagnosis of oedema.
- The methods suitable to measure glomerular function.
- The methods suitable to measure tubular function.
- The imaging techniques in nephrology.
- Indications/contraindications of renal biopsy.
- Acute glomerulonephritis.
- Rapidly progressive glomerulonephritis.
- Nephrotic syndrome.
- Asymptomatic diseases - the importance of screening.
- Urinary tract infection, acute and chronic pyelonephritis.
- Acute and chronic tubulointerstitial nephritis.
- Analgesic nephropathy.
- Follow-up of renal diseases.
- Hypertension and the kidney.
- Diabetic nephropathy.
- Renal involvement in systemic diseases: SLE, vasculitides, atherosclerosis, HUS.
- Acute renal failure.
- Chronic renal failure.
- Peritoneal dialysis.
- Haemodialysis.
- Inherited kidney diseases.
1 credit • Clinical • spring • semester exam

Number of hours/semester: 14 + 0 + 0 = 14

Prerequisite: OAKGY1 completed + OAKNE1 completed + OAKEAB parallel

Topic

Conditions for acceptance of the semester

Making up for missed classes

Reading material
The basis is the topics of the lectures.
Further readings:
- Nelson Textbook of Paediatrics
- Emery and Mueller: Elements of Medical Genetics

Lectures
1. Genetic vs. environmental factors in the causation of diseases. Genetic variants
2. The techniques and methods of medical genetics. The classification of congenital anomalies. Mutagenesis, carcinogenesis, teratogenesis
3. Mendelian inheritance. The essential features of monogenous disorders
4. The principles of recombinant DNA technology. The clinical application of gene analysis
5. The forms of recently discovered non-mendelian inheritance. Tumour genetics
6. The inborn errors of metabolism. Mitochondrial disorders. Myopathies
7. The essential features of human cytogenetics. The recognisable autosomal trisomic syndromes
8. Sex chromosome abnormalities. Molecular cytogenetics
9. Multifactorial inheritance of single malformations and common diseases
10. Clinical teratology
11. Dysmorphology. Mental retardation
12. Prenatal genetics
13. Genetic screening. The treatment and prevention of genetic disorders
14. Genetic counselling

Practices

Seminars
Exam topics/questions
1. Gene structure and function. Human Genome Project
2. Structure and characteristics of human chromosomes
3. The techniques and methods of medical genetics
4. The classification of congenital anomalies according to the causation
5. Mutagenesis, carcinogenesis, teratogenesis
6. Autosomal dominant inheritance
7. Autosomal recessive inheritance
8. X-linked recessive inheritance
10. Inborn errors of metabolism II.: Lysosomal storage disorders
11. Clinical manifestation of the inborn errors of metabolism
12. Diagnostic approach of the inborn errors of metabolism
13. Mitochondrial disorders
14. The principles of DNA recombination techniques
15. Non-mendelian monogenous inheritance
16. The clinical application of gene analysis
17. The basic techniques of human cytogenetics
18. The indications for chromosome analysis
19. The recognisable autosomal abnormalities (except Down syndrome)
20. Down syndrome
21. Sex chromosome abnormalities (except Turner syndrome)
22. Turner syndrome
23. Multifactorial inheritance
24. Genetic polymorphism
25. The teratological risk of the foetus: maternal infections
26. The teratological risk of the foetus (except maternal infections)
27. Dysmorphology: malformations, deformations, minor anomalies
28. The significance of congenital syndrome identification
29. The aetiological consideration of children with mental retardation
30. Diagnostic approach of mental retardation
31. The prenatal diagnosis of genetic disorders
32. Down syndrome screening programs
33. Genetic screening and predictive testing
34. Genetic counselling
35. The treatment alternatives of genetic anomalies
36. The ethical principles and dilemmas in clinical genetics
2 credit • Clinical • spring • semester exam

Number of hours/semester: $14 + 14 + 0 = 28$

Prerequisite: OAPSPR completed + OAPPA2 completed

**Topic**

The main educational task of the subject: An introduction to the biological and clinical properties of tumors, that a successful treatment is only possible with the help of dynamic teamwork and especially if the detection of the tumor happens at an early stage. The role of practicing physicians in the prevention of tumors, in their early detection and during the treatment of the patients.

Short description of the course: The aetiology, development and progression of tumors. The epidemiology, classification and identification of tumors, the examinations needed to classify the tumors into certain stages. The current possible therapies (surgery, radio-, chemo-, hormone-, and immune therapy) and their success in the treatment of different types of tumors. The early and late complications of these therapies and their possible prevention. Acute cases in oncology and their treatment. Supportive and palliative treatment, painkilling and the psychological support of patients.

**Conditions for acceptance of the semester**

Acceptance of the semester: The student with two unjustified absences (including either the lecture or the practice) is allowed to take the exam. In the case of three or more unjustified absences he/she cannot take the exam.

**Making up for missed classes**

**Reading material**


**Lectures**

1. Statement of the Clinical Oncologic Problem. The Biology of Cancer. (Laszlo Mangel)
2. Radiation Physics as Applied to Clinical Radiation Oncology. (Péter Kovács)
3. Basic Principles of Radiobiology. Radiation Protection (Géza Sáfrány)
4. Principles of Surgical Oncology (András Papp)
5. Principals of Medical Oncology (Ágnes Rúzsa)
6. Tumors of the Head and Neck (Zoltán Takácsi-Nagy)
7. Alimentary tract cancer (Robert Farkas)
8. Lung Cancer (József Löwei)
9. Breast Cancer (Laszlo Mangel)
10. Urologic and Male Genital Cancers (Róbert Farkas)
11. Gynecologic Tumors (Szabolcs Bellyei)
12. Nervous System Tumors (Laszlo Mangel)
13. Skin Cancer. Soft Tissue Sarcoma. Bone Tumors (Szabolcs Bellyei)
14. Supportive Care, Palliative treatment, Cancer Pain Management (Árpád Boronkai)

Practices
1. Decision making in the practice of oncology. Quality control, quality assurance, onco-team. (Szabolcs Bellyei, Róbert Farkas)
2. Chemo,-hormonal, -immune, -biological treatments. (Arpad Boronkai)
3. The equipments used in radiation oncology. Implementation of treatments. (Peter Kovacs)
4. Planning systems and fusion. (Zsolt Sebestyén)
5. Alimentary tract cancer in practice (Andras Szigeti)
6. Head and neck cancer, lung cancer in practice (Szabolcs Bellyei)
7. Breast cancer, skin cancer in practice (Laszlo Mangel)
8. Nervous system cancer in practice (Laszlo Mangel)
9. Urologic and male genital cancers in practice (Robert Farkas)
10. Gynecological cancer in practice (Szabolcs Bellyei)
11. Metastases and disseminated disease (Robert Farkas)
12. Palliative care, oncologic emergencies (Arpad Boronkai)
13. Principles of psychosocial oncology (Andras Szigeti)

Seminars

Exam topics/questions
Type of exam1: written
Type of retake-exam: oral
1. The basis principals of tumor biology
2. Principles of surgical oncology
3. Radiation physics
4. The equipments used in radiation oncology
5. Treatment planning, radiation protection
6. Basic concepts of chemotherapy
7. Basic concepts of hormone therapy
8. Biological treatment
9. Cancer pain management
10. Psycho oncology
11. Oncologic emergencies
12. Palliative care
13. Tumors of head and neck
14. Lung cancer
15. Breast Cancer
16. Cancer of the esophagus and the stomach
17. Cancer of the pancreas and the liver
18. Colorectal cancer
19. Skin cancer
20. Melanoma
21. Soft tissue sarcomas and bone tumors
22. Nervous system tumors
23. Gynecologic tumors
24. Urologic and male genital cancers
The main message of this course is to get informed students about frequent oral diseases, hard and soft tissue lesions in the oral cavity. In addition to these malformations, inflammations, tumors on maxillofacial region are also the topics in this course. Students should collect information in maxillofacial traumatology and pain disorders. The organic part of that programme is to deal with manifestations of general diseases in the oral cavity.

Conditions for acceptance of the semester
According to the Code of Studies and Examinations

Making up for missed classes
not possible

Reading material

Lectures

1. Diagnostic procedures in oral diseases
2. Worldwide prevalence of oral diseases.
3. The ethiology, pathology and therapy of dental caries.
4. Integrated prevention and control of dental caries in children and young adults
5. Disease of the pulp and periapex
6. Periodontal diseases. Focal infection
7. Diseases of the oral mucosa with infective origine
8. Benign tumours of the oral cavity
9. Precancerous state of maxillofacial region
10. Malformations and disorders in maxillofacial region
11. Maxillofacial traumatology
12. Facial pain and TMJ disorders
13. Dental implants
14. Geriatric Considerations in Oral Medicine
Practices

1. Oral examinations of patients (interview, first examination, dental equipments)
2. Oral examinations (X-ray, treatment plan) restorative dental treatments
3. Edentulous state. Dental treatment for elderly people
4. Classification of fixed and removable dentures. Bruxism and myofacial pain dysfunction
5. Preventive methods in children’s dentistry
6. Patient examination in children’s dentistry. Acute treatments
7. Methods of removal plaque and calculus
8. Oral hygiene self care. Tooth pastes, toothbrushes, dental floss
9. Orthodontic methods. Slideshow
10. Orthodontic methods. Introduction of patients
11. Maxillofacial traumatology. Examination and treatment of injured patients
13. Inflammations of orofacial region. Treatment in outpatient department
14. Extraction therapy. Consultation

Seminars

Exam topics/questions

1. Medical history, dental history, oral examination
2. Clinical examination of the lips, labial mucosa, buccal mucosa, gingivae, palate, tongue, floor of the mouth and salivary glands
3. Intra- and extraoral radiographics, types of intraoral views to take for endodontic therapy
4. Techniques for examining a child under 2 years of age
5. Eruption of teeth, sequence and age-range of eruption
6. Disturbed eruption of teeth
7. Local factors affecting delayed eruption
8. Lip diseases
9. Oral hygiene measures in different ages
10. Integrated caries prevention
11. Aetiology of dental caries
12. Clinical features of dental caries, caries detection
13. Adult and juvenile periodontitis
14. Pathology of dental caries
15. Restorative treatment of decayed teeth
16. Endodontic therapy
17. Focal infection
18. Alterations in size, shape and color of teeth
19. Alterations in number of teeth: amelogenesis imperfecta, dentinogenesis imperfecta
20. Macroglossia, ankyloglossia, scrotal tongue, white-coated-, geographic tongue, median rhomboid glossitis
21. The forms of leukoplakia
22. The clinical locations of oral cancer
23. The clinical aspects of oral cancer
24. The treatment of oral cancer
25. The TNM system for staging oral cancer
26. Oral lichen planus
27. Malignant potential of oral pre-cancerous lesions
28. The treatment of leukoplakia
29. Salivary gland diseases. Sjögren’s syndrome
30. Inflammatory tumours
31. Fibromas, papillomas, hemangiomas
32. The fractures of the facial bones
33. Acute ulcerative gingivitis
34. Candidiasis in the oral cavity
35. Oral manifestations of viral infections
36. Minor-, major aphthous ulcers
37. The oral signs and symptoms in anaemia, leukaemia
38. The investigation of facial pain
39. Trigeminal neuralgia, post-herpetic neuralgia, migraine
40. Temporal headache, Beell’s palsy, anaesthesia and paraesthesia of the trigeminal nerve
41. The examination of the TM joint
42. TMJ dysfunction syndrome
43. Occlusion and articulation in human dentition
44. Working cast and removable dies, pontics and dentures
45. Ageing of the oral tissues
46. The oral manifestations of AIDS
47. Mandible fractures
48. Dental traumatology, acute treatment
ORTHOPAEDICS

Course director: DR. TAMÁS ILLÉS, professor
Department of Orthopaedics

3 credit • Clinical • spring • semester exam

Number of hours/semester: 14 + 28 + 0 = 42

Prerequisite: OAANEA completed + OAPPA2 completed

Topic

Orthopaedics is concerned with disease of the musculoskeletal system and forms an important part of essential medical knowledge.

Our aim is to provide a well-rounded education of aetiopathology, pathomechanism, clinical signs, diagnosis, conservative and surgical treatment and rehabilitation of congenital and acquired degenerative disorders, from which students should be able to carry on continued learning for the reminder of their career.

Conditions for acceptance of the semester

If not more than 25% of the obligatory classes are missed.
Successfully passed exam.

Making up for missed classes

Absence from practices can be redeemed in case the time of the practice does not interfere with other practices and lectures.

Redeem can be completed under the circumstances of regular practices. Absences from up to two practices can be redeemed with other groups, but require confirmation.

Reading material

Mark D Miller: Review of Orthopaedics, Saunders, 2004

Lectures

1. Introduction, gait cycle, symptoms in orthopedic disorders
2. Congenital dyslocation of the hip
3. Congenital foot deformities
4. Spine deformities
5. Cerebral palsy
6. Pediatric hip diseases (Perthes, Ephyseolysis)
7. Shoulder disorders
8. Prearthrotic conditions, osteoarthritis
9. Joint arthroplasty
10. Complications of joint replacement and revison arthroplasty
11. Adult foot deformities
12. Acut injuries and degenerative diseases of the knee joint
13. Low back pain
14. Bone tumors

Practices
1. Introduction
2. History
3-14. Physical examination

Seminars

Exam topics/questions
1. Brachial plexus injury after birth  
2. Praearthritic conditions  
3. Pes planovalgus  
4. Benigne bone tumours  
5. Protrusio acetabuli  
6. Tendovaginites  
7. Aetiology and pathology of DDH  
8. Ewing sarcoma  
9. Hallux valgus, digitus malleus, digitus quintus varus  
10. Popliteal cysts, knee effusions  
11. Types of limping  
12. Chronic osteomyelitis, osteomyelitis sec. Garré, Brodie abscess  
13. Epiphyseolysis capitis femoris in adolescents  
14. Rheumatoid arthritis and its surgical aspects  
15. Ultrasound diagnostics in orthopaedics  
16. Clinical features and conservative treatment of coxarthrosis  
17. Infantile cerebral palsy  
18. Scheuermann disease  
19. Torticollis congenita  
20. Spondyloysis, spondylolisthesis, sacralisation, lumbalisation  
21. Epicondylitis humeri  
22. Aetiology and pathology of clubfoot  
23. Coxa vara congenita and symptomatica  
24. Treatment of clubfoot  
25. Madelung deformity  
26. Limb equalisation  
27. Osteochondritis deformans juvenilis coxae  
29. Habitual shoulder dislocation  
30. Spondylarthritis ankylopetica.
31. Functional scoliosis, postural deformities.
32. Posttraumatic dystrophy of the lower extremity (Sudeck)
33. Sterile necrosis of bones of the foot
34. Osteoarthritis cubiti.
35. Periarthritis humeroscapularis
36. Alternative surgical treatment options of degenerative joint disorders
37. Degenerative spine disorders (lumbago, lumbo-ischialgia)
38. Osteoclastoma
39. Clinical and radiological features of DDH
40. Cervical rib, thoracic outlet syndrome (TOS)
41. Syndroma cervicobrachialis
42. Conservative treatment of DDH
43. Types and treatment possibilities of scoliosis with known aetiology
44. Habitual patella dislocation: diagnostics and treatment
45. Early and late symptoms of knee arthritis, conservative treatment options
46. Prognostic significance of septic hip conditions in newborn
47. Knee ligament injuries
48. Necrosis capitis femoris
49. Meniscus injuries
50. Coxitis tuberculosa
51. Joint motions, measurement of muscle strength
52. Idiopathic structural scoliosis
53. Surgical treatment of DDH
54. Chondromalatia patellae
55. Transitory coxitis, coxa saltans
56. Rehabilitation after limb amputation. Orthoses, paediatric and adult orthopaedic shoes
57. Osteomyelitis acuta
58. Complications of joint replacements
59. Endoprosthesis
60. Rocker bottom foot
61. Injection contractures
62. Orthopaedic aspects of osteoporosis
63. Bone substitution in orthopaedics
64. Diagnostics and treatment baselines of bone tumours
65. Arthroscopy
66. Clinical and radiological features of osteogenic sarcoma, treatment options
67. Closure abnormalities of the spinal cord
68. Discus hernia
69. Aseptic bone necroses.
PSYCHIATRY 1
OAKPS1

Course director: DR. SÁNDOR FEKETE, professor
Department of Psychiatry and Psychotherapy

3 credit • Clinical • autumn • semester exam

Number of hours/semester: 14 + 28 + 0 = 42

Prerequisite: OAPPA2 completed + OAPMT5 completed + OAPGT2 completed

Topic
Requirements

To acquire the knowledge and skills of clinical psychiatry in the general practice

Themes:
- The essential psychopathological symptoms and syndromes
- The treatment of the ill patient’s emotional responses
- Psychological first aid and psychiatric emergencies in crisis and stress situations
- Exploration, evaluation of the psychiatric patients
- Biological and psychological therapeutic interventions
- Prevention and postvention of psychiatric disorders
- Psychiatric care and mentalhygienic activity in the general practice
  (Psychiatric interview in Hungarian)
- Practices (first and second semesters)
  - Psychiatric evaluation (interview, psychiatric history, mental status examination)
  /2 x 2 hrs/
  - Anxiety disorders (amiety, phobias, obsessive compulsive disorder, panic disorder) /2 x 2 hrs/
  - Conditions which mimic physical disease (somatisation disorders, conversion disorder, hypochondriasis, somatoform pain disorder) /2 x 2 hrs/
  - Psychosomatic disorders /2 x 2 hrs/
  - Psychosexual disorders/dysfunction and paraphilia /2 hrs/

Practices:
- Observation, description and evaluation of the patients’ behaviour

Conditions for acceptance of the semester
According to the Code of Studies and Examinations

Making up for missed classes
According to the Code of Studies and Examinations

Reading material
Lectures
1. The history of psychiatry
2. Psychiatric classification
3. Anxiety disorders
4. Somatoform disorders
5. Dissociative disorders
6. Psychosexual disorders
7. Sleep disorders
8. Factitious disorders
9. Impulse control disorders
10. Adjustment disorders (stress reactions)
11. Psychosomatic disorders
12. Psychiatric emergencies
13. Psychotherapies (dynamic)
14. Psychotherapies (cognitive, behavioural and client-centred schools)

Practices
1. Psychopathology I.
2. Psychopathology II.
3. Psychopathology III.
4. Psychopathology IV.
5. Psychopathology V.
6. Psychopathology VI.
7. Anxiety I.
8. Anxiety II.
9. Sleep disorders I.
10. Sleep disorders II.
11. Adjustment disorders I.
12. Adjustment disorders II.
13. Adjustment disorders III.
14. Adjustment disorders IV.
15. Personality disorders I.
16. Personality disorders II.
17. Personality disorders III.
18. Personality disorders IV.
19. Suicide I.
20. Suicide II.
21. Suicide III.
22. Suicide IV.
23. Psychosomatic disorders I.
24. Psychosomatic disorders II.
25. Psychosomatic disorders III.
26. Psychosomatic disorders IV.
27. Crisis intervention I.
28. Crisis intervention II.

**Seminars**

**Exam topics/questions**

-
**Psychiatry 2**

Course director: **DR. SÁNDOR FEKETE**, professor  
Department of Psychiatry and Psychotherapy

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<td><strong>Number of hours/semester:</strong> 14 + 28 + 0 = 42</td>
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<td><strong>Prerequisite:</strong> OAKPS1 completed</td>
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**Topic**

To acquire the knowledge and skills of clinical psychiatry in the general practice

**Themes:**
- The essential psychopathological symptoms and syndromes
- The treatment of the ill patient’s emotional responses
- Psychological first aid and psychiatric emergencies in crisis and stress situations
- Exploration, evaluation of the psychiatric patients
- Biological and psychological therapeutic interventions
- Prevention and postvention of psychiatric disorders
- Psychiatric care and mentalhygienic activity in the general practice  
  (Psychiatric interview in Hungarian)
- Practices (first and second semesters)
- Psychiatric evaluation (interview, psychiatric history, mental status examination) /2 x 2 hrs/
- Anxiety disorders (amiety, phobias, obsessive compulsive disorder, panic disorder) /2 x 2 hrs/
- Conditions which mimic physical disease (somatisation disorders, conversion disorder, hypochondriasis, somatoform pain disorder) /2 x 2 hrs/
- Psychosomatic disorders /2 x 2 hrs/
- Psychosexual disorders/dysfunction and paraphilia /2 hrs/

**Practices:**
- Observation, description and evaluation of the patients’ behaviour

*Conditions for acceptance of the semester*

According to the Code of Studies and Examinations

*Making up for missed classes*

According to the Code of Studies and Examinations

*Reading material*

H. I. Kaplan, B. J. Sadock, Grebb: Synopsis of Psychiatry, 7<sup>th</sup> edition Williams and Wilkins, Baltimore, 1994
Lectures
1. Personality disorder, Mood disorder
2. Schizophrenia, Delusional psychosis and other psychotic disorders
3. Substance-related disorders, Addiction, alcohol abuse and dependency
4. Geriatric psychiatry Mental retardation
5. Biological therapies, Eating disorders
6. Child psychiatry

Practices
1. Schizophrenia I.
2. Schizophrenia II.
3. Schizophrenia III.
4. Schizophrenia IV.
5. Affective disorders I.
6. Affective disorders II.
7. Affective disorders III.
8. Affective disorders IV.
9. Delusional disorders I.
10. Delusional disorders II.
11. Alcohol related disorders I.
12. Alcohol related disorders II.
13. Alcohol related disorders III.
14. Alcohol related disorders IV.
15. Organic psychiatric disorders I.
16. Organic psychiatric disorders II.
17. Organic psychiatric disorders III.
18. Organic psychiatric disorders IV.
19. Mental retardation I.
20. Mental retardation II.
21. Eating disorders I.
22. Eating disorders II.
23. Dementia I.
24. Dementia II.
25. Dementia III.
26. Dementia IV.
27. Biological therapies I.
28. Biological therapies II.

Seminars
Exam topics/questions
Questions of the semester examination
1. The classification of affective disorders Anorexia nervosa
2. Schizoaffective psychosis Mental retardation
3. Neuroleptics
   Symptomatology of alcohol withdrawal delirium
4. Alcoholic hallucination
   The treatment of schizophrenia
5. Amnesic syndrome Lithium therapy
6. Idiosyncratic alcohol intoxication. The treatment of delusional disorders
7. Catatonic symptoms Indications of ECT
8. Primary degenerative dementia Antidepressants
9. MID (multi-infarct dementia). The treatment of eating disorders
10. Bulimia nervosa
    The use of carbamazepine in psychiatry
11. Lobe syndromes Psychotherapy of schizophrenia
12. Child psychiatric disorders. The treatment of mania
13. Aetiology of mental retardation Group psychotherapies
14. Aetiology of schizophrenia
    The treatment of drug dependence
15. Aetiology of delusional disorders
    The treatment of alcoholic hallucination
16. The leading symptoms of organic psychiatric disorders. The treatment of alcohol withdrawal delirium
17. Bipolar affective disorder Client-centred psychotherapy
18. Epidemiology of schizophrenia Neuroendocrinological markers of depression
19. Organic psychiatric disorders Cyclothymia, dysthymia
20. Mental retardation (diagnosis)
    The treatment of schizophrenic paranoid type
21. Alcohol dependence
    The treatment of mood disorders
22. Outcome of schizophrenics Non-pharmacological treatments of mood disorders
23. Self-help groups in rehabilitation Opioid abuse and dependence
24. Aetiology of deliriums Behavioural and cognitive therapies
25. Psychopathological symptoms in the general medical practice Side effects of neuroleption
26. Barbiturate abuse and dependence Cannabis related disorders
27. Aetiology of alcohol dependence Psychiatric symptoms in epilepsy
28. The differential diagnosis of dementia Hallucinogen abuse
29. Cocaine abuse and dependence  
The most important psychotherapeutic schools
30. The treatment of alcohol dependence Biological therapies

31. Elimination disorders  
Psychoanalytic and dynamic psychotherapies
32. Amphetamine related disorders  
Side effects of antidepressants
INTERNAL MEDICINE: PULMONOLOGY

Course director: DR. ZOLTÁN BALIKÓ, head physician
Department of Pulmonology, Baranya County Hospital

2 credit • Clinical • spring • semester exam

Number of hours/semester: 12 + 16 + 0 = 28

Prerequisite: OAKKRA completed + OAKONK completed + OAPGT2 completed

Topic
To teach the frequent respiratory diseases and to demonstrate the usual methodology of diagnosis and treatment in the field of Respiratory Medicine.

Conditions for acceptance of the semester
More than 2 absences of practice is not accepted

Making up for missed classes
It is a question of agreement.

Reading material

Lectures
1. Development and structures of the respiratory tract. Functions of the respiratory tract.
3. Pneumonia.
4. Obstructive sleep apnoe syndrome
5. Respiratory failure. Noninvasive mechanical ventilation
6. Cancer of the lungs. Other pulmonary neoplasm and the related conditions
7. Asthma bronchiale.
8. Chronic bronchitis and emphysema
Practices
1. I. Lung function tests, evaluation of lung function, nonspecific bronchial provocation test, exercise test
2. II. Lung function tests, evaluation of lung function, nonspecific bronchial provocation test, exercise test
3. I. Chest sonography, pleura or lung biopsy under fluroscopy and ultrasound examination of the lung
4. II. Chest sonography, pleura or lung biopsy under fluroscopy and ultrasound examination of the lung
5. Allergy in the respiratory medicine: Tuberculin test, PPD result evaluation, skin prick test, etc:
6. Intensive care in pulmonology (blood gas values, blood sampling for gas measurement-arterial, ear lobe-,
7. Non-invasive mechanical ventilation, etc.
8. I. Bronchoscopy
9. II. Bronchoscopy
10. I. Practice in the ward
11. II. Practice in the ward
12. Microbiologic examinations
13. I. Case records
14. II. Case records
15. III. Case records
16. Pulmonary cytology

Seminars
Exam topics/questions
1. Morphology of the pleura and the lung, segmental anatomy
2. Respiratory and non-respiratory functions of the lung
3. Radiography of the lung, X-ray methods, fluoroscopy and their indications
4. Typical radiographic manifestations of pulmonary disorders
5. Bronchology. Methods and indications
6. Imaging techniques of the chest. Indications of the CT, MRI and ultrasound examinations
7. Radionuclidic examinations in the diseases of the lung and their indications
8. Instrumental examinations of cases of pleural diseases, methods of biopsy
9. The differential diagnostic procedures of pleural effusion
10. Mediastinoscopy, thoracoscopy
11. Differential diagnosis of haemoptysis
12. Differential diagnosis of dyspnoea
13. Lung function tests in general, disturbances of ventilation
14. Lung mechanics
15. Functional examinations of the small airways
16. Blood gas analysis, respiratory failure
17. Pharmacospirometry, bronchial provocation test
18. Disorders of diffusion
19. The role and place of the allergy tests in the respiratory practice
20. Definition, epidemiology, pathogenesis and severity grades of COPD
21. Prevention, therapy and prognosis of COPD
22. Bronchiectasis and cystic fibrosis
23. Definition, classification, pathogenesis and microscopic features of asthma bronchiale
24. Symptoms, differential diagnostic procedures and prognosis of asthma bronchiale
25. Guidelines of the treatment of asthma bronchiale
26. Treatment of acute asthma attack
27. Therapeutic recommendations of pneumonia caused by bacteria
28. Symptoms and causative agents of typical pneumonia
29. Pathogens, symptoms and therapy of atypical pneumonia
30. Abscessus pulmonum and bronchiectasia
31. Non-bacterial pneumonia and its classification and treatment
32. Pathogens of nosocomial pneumonia, therapeutic directives
33. Technique and evaluation of the tuberculin test
34. Epidemiology, aetiology and natural course of pulmonary tuberculosis
35. Clinical signs and differential diagnostic procedures of pulmonary tuberculosis
36. Essentials of the therapy of pulmonary tuberculosis, first-line and second-line drugs
37. Differential diagnosis of cavitary lesions
38. Extrapulmonary manifestations of tuberculosis
39. Diseases caused by atypical Mycobacteria (MOTT)
40. Cytology in the practice of respiratory medicine
41. Diseases of the lung caused by fungi
42. The most frequent bronchopulmonary diseases caused by fungi
43. Clinical features of pulmonary emboli and their frequency in the practice
44. Treatment and prognosis of pulmonary embolism
45. Oedema pulmonum, left-heart failure
46. Pulmonary hypertension. Clinical signs of chronic cor pulmonale
47. Classification of pulmonary hypertension, its clinical signs and treatment modalities
48. Epidemiology, pathogenesis, clinical signs and methods of the examinations of bronchial malignancies
49. Histological classification and staging of lung cancer
50. Therapy of lung cancer
51. Paraneoplastic syndromes caused by lung cancer
52. Diagnostic symptoms and treatment of lung metastases
53. Diseases of the pleura
54. Diseases of tbc diaphragma
55. Classification and clinical symptoms of interstitial lung diseases
56. Pneumoconioses. Clinical signs and treatment
57. Hypersensitive pneumonitis
58. Sarcoidosis. Pathogenesis, clinical signs, radiomorphology and treatment
59. Idiopathic lung fibrosis
60. Alveolar proteinosis, idiopathic pulmonary haemosiderosis
61. Pulmonary diseases accompanied by high eosinophil granulocyte count
62. Pulmonary disorders caused by systemic autoimmune diseases
63. Symptoms and treatment of pleural effusions
64. Aetiology, radiomorphology, symptoms, diagnosis, prognosis and treatment of pneumothorax
65. Diseases of the mediastinum. Symptoms and diagnostic elaboration
66. Causes and symptoms of the enlarged mediastinal lymph nodes
67. Primary and secondary tumours of the mediastinum
68. Classification and clinical signs of respiratory failure
69. Causes and diagnosis of respiratory failure
70. ARDS
71. Indications and modes of mechanical ventilation
72. Symptoms, diagnosis and treatment of the sleep apnoea syndrome
73. Non-invasive ventilation. Indications and its performance
The aim of the subject is the introduction into the epidemiology of communicable and non-communicable diseases, focusing on the primary and secondary prevention possibilities.

In the 8th semester students have to do a final exam of Public Health, for it they need completed courses, which are the followings: The basics of disease prevention (OAABMA), General Epidemiology and Demography (OAAAED), Environmental Health (OAAKET), Preventive Medicine (OAPNEO), Detailed Epidemiology (OAKREP), Occupational Hygiene and Occupational Medicine (OAKMFO).

**Conditions for acceptance of the semester**

**Making up for missed classes**

**Reading material**

**Lectures**

1. Epidemiology and prevention of cardiovascular diseases (Ischemic heart disease)
2. Epidemiology and prevention of cardiovascular diseases (cerebrovascular diseases, hypertension, atherosclerosis)
3. Epidemiology and prevention of cancers
4. Epidemiology and prevention of diabetes mellitus and obesity
5. Epidemiology and prevention of osteoporosis
6. Epidemiology and prevention of COPD, asthma bronchiale and other non-communicable respiratory diseases
7. Epidemiology and prevention of non-communicable gastrointestinal diseases
8. Epidemiology and prevention of mental disorders. Epidemiology and prevention of addictions
9. Epidemiology and prevention of accidents and violent deaths. Epidemiology and prevention of suicide
10. Epidemiology and prevention of respiratory infections
11. Epidemiology and prevention of enteral infections
12. Epidemiology and prevention of arthropod-borne infections. Epidemiology and prevention of infections spread through skin contact. Epidemiology and prevention of diseases transmitted from animals to humans (zoonoses)
13. Epidemiology and prevention of sexually transmitted diseases

*Practices*

*Seminars*

*Exam topics/questions*
We start the English program practice in urology with a review of the anatomy and physiology of genitourinary organs. Thereafter, instruments, catheters and diagnostic equipments used in general urology will be introduced to the students. In the following practices, they will take part in patient examination, catheterization, and some other routine urologic procedures. In the following practices, specific urologic diseases, differential diagnosis, and alternative treatments will be discussed as a bedside practice. The emphasis will be on genitourinary congenital diseases, obstructive uropathy, urolithiasis, uro-infections, male infertility, erectile dysfunction, urinary incontinence and other minor urologic diseases. The etiology, risk factors, diagnosis, alternative treatments, and follow up of these diseases will be discussed in detail.

**Conditions for acceptance of the semester**

Presence in at least 80% of the classes is mandatory.

Passing the final oral exam held at the end of the semester is necessary. In the exam, any topic discussed in lectures and/or the practices may be required

**Making up for missed classes**

In case of an excused absence, the tutor can decide on the method of compensation

**Reading material**


**Lectures**

1. Anatomy & physiology of the GUT. Physical examination of the GUT
3. Disorders & anomalies of the GUT in childhood
4. Urinary Tract Infections. Antibiotics
5. Tumors of the bladder: Diagnosis & treatment
6. Tumors of the testis: Diagnosis & treatment
7. Urinary stones: Clinical features, diagnosis and treatment
8. Tumors of the Kidney, Renal Pelvis, Ureter, Penis, Urethra & Scrotum
9. Benign prostatic hyperplasia (BPH): Diagnosis & treatment
10. Carcinoma of the prostate: Diagnosis & treatment
11. Emergency room urology
12. Role of minimal invasive procedures in urology
13. Urinary incontinence. Urodynamic studies
14. Male sexual dysfunction. Male infertility
Practices
The practices usually follow the lectures according to the availability of such patients on the given day.

Seminars

Exam topics/questions
1. Physical examination of the genitourinary tract
2. Symptoms of disorders of the genitourinary tract and differential diagnosis
3. Urologic laboratory examination. Urinalysis and urine culture
4. Symptoms related to the act of urination and quantitative changes of the urine
5. Urinary storage and voiding dysfunction
6. Pyuria and its examination
7. Hematuria and its evaluation
8. Urethral catheterization: Types, indications, and technique
9. Cystourethroscopy: Requirements, technique, and indications
10. Urinary tract imaging: Purpose, and indications
11. Interventional uro-radiology: Principles, technique, indications, and contraindications
12. Radionuclide imaging in urology
13. Kidney function investigations
14. Genitourinary tract biopsy: Indications and technique
15. Evaluation and management of urologic emergencies: Renal colic, suprapubic pain, acute scrotum, gross hematuria, anuria, and urinary retention
16. Role of minimal invasive procedures in urology
17. Congenital anomalies of the nephric system (kidney, pyelon, ureter)
18. Congenital anomalies of the gonads and vesicourethral unit (bladder, urethra)
19. Lower urinary tract infections in women: Classification, pathogenesis, and management
20. Prostatitis and lower urinary tract infections in men: Diagnosis and treatment
22. Specific infections of the genitourinary tract
23. Urinary stone: Epidemiology, composition, and etiology of specific stone types
24. Clinical manifestations and diagnosis of urolithiasis
25. Management and medical treatment of patients with urinary stones
26. Non-medical treatment of urolithiasis: Therapeutic modalities, indications, and contraindications
27. Urinary obstruction and stasis: Differential diagnosis and management
28. Ptosis of the kidney: Symptoms, diagnosis and treatments
29. Injuries of the kidney and ureter: etiology, evaluation, classification, and management
30. Injuries of the bladder, urethra, penis, and scrotum
31. Foreign bodies in the urinary tract
32. Non-malignant intrascrotal disorders: Differential diagnosis, and treatment
33. Non-tumorous diseases of the penis and urethra
34. Urinary incontinence and urodynamic studies
35. Male sexual dysfunction, male infertility
36. Renal parenchymal neoplasms: Types, clinical features, diagnosis, and treatment
37. Urothelial carcinoma: Location, clinical features, diagnosis and staging
38. Urothelial carcinoma: Treatment modalities
39. Benign prostatic hyperplasia (BPH): Clinical features and diagnosis
40. Benign prostatic hyperplasia (BPH): Medical and surgical treatment
41. Carcinoma of the prostate gland: Incidence, diagnosis, grading, and staging
42. Carcinoma of the prostate: Treatment modalities
43. Tumors of the testis: Risk factors, classification, diagnosis and staging
44. Complex treatment of testis tumors
45. Tumors of the penis, scrotum and urethra.
Surgery 1 includes several chapters of special surgery (thoracic surg., endocrine glands., heart surgery, surgery of the liver, anorectal diseases and appendicitis). This subject conveys a basic knowledge to the future district or family doctors to be able to cope up with the surgical problems of every day life.

Conditions for acceptance of the semester
Participation at the bedside practices is obligatory, max. two absences can be accepted if certified by medical certificate. Otherwise the semester will not be accepted.

Making up for missed classes
Unfulfilled practices are to be replaced at an other time according to appointments with the group leader.

Reading material
- Porter and Malt: Oxford Textbook of Surgery (CD-ROM, available in the library of the computer of the clinic)
- D.C. Sabiston: Textbook of the Surgery (Saunders, Philadelphia 1991.)

Lectures
1. Surgery of the lung with a special respect to pulmonary neoplasms
2. Management of thoracic wall deformities and pleural lesions. PTX.
3. Surgery of the mediastinum
4. Management of mammary cancer including serial screening, early diagnostic workup and prognostic factors
5. Surgical treatment of intrahepatic lesions including differential diagnosis
6. Surgical management of portal hypertension including bleeding from ruptured esophageal varices
7. Surgery of the endocrine glands I. (thyroid and parathyroid diseases)
8. Surgery of the endocrine glands II. (adrenals, carcinoids and incidentalomas)
9. Surgery of the heart: options for congenital cardiac lesions
10. Acquired heart disease and its management
11. Surgery of the intestines: benign lesions of the small and large bowel, IBD, vascular lesions, etc.
13. Diseases of the anorectum. Practical proctology
14. Acute abdomen with a special respect to acute appendicitis and related problems
Practices
1. Preoperative preparation of patients prior to pulmonary surgery
2. Drainage techniques following thoracic surgery. Physiotherapy
3. Workup of nodular masses
4. Evaluation of imaging techniques in gastrointestinal diseases
5. Examination of patients with thryeoid and parathyreoid diseases. The algorithm of diagnostic steps
7. Postoperative care of patients following abdominal surgery, the ways of pain killing
8. The clinical significance of bloody stool, rectal digital examination
9. Physical examination of the female breast. Early signs of malignancy
10. Clinical signs of adrenocortical adenomas and hyperplasias
11. Physical examination of patients with acute appendicitis
12. Inflammatory bowel disease, the comparison of main clinical symptoms
13. Anorectal abscesses and fistulous tracks: clinical symptomatology and physical examination
14. Colorectal cancer, its etiology, staging, complications, and options for treatment

Seminars
Exam topics/questions
1. Diagnosis of lung cancer / anamnesis, symptoms, bronchoscopic finding, lung biopsy, suspected tumor lesions on the X-ray picture/
4. Surgical options for the treatment of intrathoracic empyema / pleural and mediastinal/
6. Deformities of the thoracic wall and their correction.
7. Mediastinal space occupying lesions according to localisation and origin.
12. When is tissue sparing resection contraindicated? Special forms of mammary cancer. Local renewal and distant spread.
14. Space occupying lesions of the liver/ FNH, cavernous hemangioma, liver cell adenoma, liver cysts/.
15. Diseases of the gallbladder / gallstone disease and its complications, treatment options/.
18. Symptomatology of the acute abdomen. The origin of pain within the abdominal cavity.
19. Clinical examination and apparative diagnostics of acute abdomen.
20. Abolishment of foci in local peritonitis.
21. Treatment strategy for generalized peritonitis.
22. Definition, classification and pathogenesis of ileus. Treatment options.
25. Absolute indications of surgery in nodular thyroid disease.
26. Types of surgery for thyroid disease and their possible complications.
27. Diffuse and nodular thyroid disease. Unifocal and multifocal thyroid autonomy
28. Graves disease from the point of view of the surgeon.
29. Adrenal tumors and laparoscopic adrenalectomy.
30. Inflammatory small bowel diseases with a special respect to M. Crohn/ symptoms, ethiology and principles of treatment.
31. Carcinoid tumors and gastrointestinal stromal tumors/GIST/
32. Apparative, imaging and contrast-X-ray investigations of the large bowel.
33. Surgical interventions ont he large bowel /also by-pass operations, ileo- and colostomies/
34. The ulcerative colitis and its comparison with Crohn. s disease/ Ethiology, natural history and therapeutic options/8
35. Diverticula and diverticular disease of the colon and its complications.
36. Benugn anorectal lesions/ rectal and anal prolaps, hemorrhoids, anal fissure, anorectal absceses and fistulae/
37. Rectal cancer/ staging and classification by Dukes, precancerous lesions, importance of rectal digital examination/.
38. Surgical and additive treatment of rectal carcinoma
39. Benign neoplasms and polyps of the colon.
40. Prevention. Diagnostics, symptoms and classification of colon cancer according to Dukes and TNM.
41. Acute appendicitis and its main complications. Laparoscopic appendicectomy.
## Surgery 2

### Course director:

**DR. ÖRS PÉTER HORVÁTH**, professor
Surgery Clinic

<table>
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<th>3 credit • Clinical • autumn • semester exam</th>
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**Number of hours/semester:** 14 + 28 + 0 = 42

**Prerequisite:** OAKSE1 completed

### Topic

Further important chapters of special surgery (vascular including surgery of the arteries, veins and lymphatics; surgery of the gastrointestinal tract from the esophagus to rectum, herniology, principles of reconstructive surgery, operations on the breast. Laparoscopic and minimal invasive surgery. Preparation of future home doctors to decision making how to handle surgical cases according to indication of surgical interventions or other treatment modalities.

### Conditions for acceptance of the semester

Admission and physical examination of new patients. Participation in endoscopic investigations and attendance at rounds, actually at operations. Transfusion of blood preparates, blood group matching, ability to evaluate imaging diagnostic finds and labpanels. Participation on classes is obligatory with max. two absences including medical certificate.

### Making up for missed classes

Missed practices are to be made up for at a later time according to appointments with the group leader.

### Reading material

- D.C. Sabiston: Textbook of Surgery (Saunders, Philadelphia 1991.)
- Porter and Malt: Oxford Textbook of Surgery (CD-ROM, available through the computers of the surgical clinic)

### Lectures

1. Extracranial occlusive cerebrovascular diseases
2. Direct and indirect interventions on the arterial system. Occlusive vascular diseases of the aorta and the lower extremities
3. Surgery of the veins
4. Laparoscopic and minimal access surgery
5. Benign lesions and functional disturbances of the esophagus
6. Malignant tumors of the esophagus
7. Surgical management of peptic duodenal and gastric ulcers. Miscellaneous gastric lesions
8. Malignant gastric neoplasms and their surgical treatment
9. Surgery of benign pancreatic lesions
10. Surgical management of pancreatic neoplasms, including islet cell tumors
11. Surgery of extrahepatic biliary ways, including Klatskin tumor
12. Organ transplantation
13. Basic principles of plastic and reconstructive surgery
14. Acute abdomen and GI-bleeding

**Practices**
1. Out patient ambulance for vascular diseases. Use of the portable doppler apparatus
2. Physical examination of vascular patients
3. Measurement of the ankle pressure
4. Chronic and acute vascular ischemia
5. Evaluation of angiograms (digital extraction, CT angio, MR angio)
6. Examination of patients with venous disorders
7. Venous crural ulcer. Demonstration of postthrombotic syndrome and deep venous perforants
8. Evaluation of imaging techniques and findings in patients with dysphagia
9. Practical advices for reflux patients
10. Clinical signs (early and late) of gastric cancer
11. Diagnostic algorithm of patients with GERD
12. Differential diagnosis of jaundice
13. Palliative treatment of pancreatic malignancies
14. The role of diagnostic laparoscopy in intraabdominal surgical diseases
15. The segmental structure of the liver
16. Laboratory signs of biliary stagnation
17. The significance of widened choledochus and related examinations
18. Function and role of the national transplant center. Organ donation
19. Clinical signs of acute, subacute and chronic rejection
20. Forensic and legal aspects of cosmetic interventions
21. Morbid obesity and related problems. Surgical options
22. Causes of acute abdomen.
23. Diagnosis and treatment of intraabdominal abscesses
24. The nature and management of postoperative gastrointestinal paralysis
25. Features of mechanical ileus
26. Complications of peptic ulcer disease
27. GI-bleedings with special respect to rupture of esophageal varices
28. Consulting debated chapters

**Seminars**
Exam topics/questions
1. Symptomatology and diagnosis of ileus
2. Acute mesenterial occlusion
3. Abdominal ischaemia and abdominal steal syndrome
4. Peripheral vascular disease, symptoms and treatment
5. Occlusive arterial disease. Clinic and treatment modalities
6. Arterial embolism and thrombosis
7. Aortic aneurysm, ruptured and dissecting aneurysm
8. Renal hypertension and its management
9. Raynaud syndrome
10. Buerger’s disease
11. Indirect interventions in vascular surgery
12. Subclavian steal syndrome
13. Thoracic outlet syndrome, diagnosis and operative solution
14. Diabetes and obliterating vascular disease
15. Chronic venous insufficiency and its treatment (CVI)
16. The diagnosis of thrombophlebitis and deep venous thrombosis
17. Acute deep venous thrombosis: ways of treatment
18. Post-thrombotic syndrome
19. Crural ulcers
20. What is difference between embolism and thrombosis?
21. Laparoscopic surgery: indications and contraindications
22. Examination of vascular patients in the outpatient ambulance
23. The significance of rectal bleeding
24. Colorectal tumours
25. Complications of vascular surgery
26. Endoscopy in surgery
27. Minimally invasive techniques in surgery
28. Factors influencing long-term survival of renal transplants
29. Immune suppression after renal transplantation, its side effects and complications
30. Donor conditioning, preservation of cadaver kidneys
31. Indications for liver transplantation
32. Complications following liver transplantation
33. Patient selection prior to liver transplantation
34. Immune suppression after liver transplantation
35. Breast screening and aftercare
36. Vagotomies, indications and techniques
37. On the herniae in general
38. Resectable mammary cancer (operative and adjuvant treatment)
39. Chronic pancreatitis and its complications
40. Benign neoplasm of the breast and inflammatory lesions of the breast
41. Acute gastrointestinal bleeding
42. Malignant tumours of the stomach
43. Brain death - legal and medical conditions of the diagnosis
44. Diagnosis of breast tumours
45. Oesophageal cancer
46. Gastro-oesophageal reflux and its management
47. Surgical aspects of Chron’s disease
48. Colostomies
49. Diaphragmatic and hiatal hernias
50. Corrosive oesophageal injuries and their management
51. Conditions mimicking an acute abdomen
52. Laparoscopic cholecystectomy
53. Differential diagnosis of jaundice
54. The diagnosis of oesophageal diseases
55. Zollinger-Ellison syndrome
56. Fields of plastic surgery
57. Tumours of the pancreas
58. Biledigestive anastomoses, indications
59. Oesophageal diverticula
60. Gallstone ileus
OBSTETRICS AND GYNAECOLOGY 1

Course director: DR. JÓZSEF BÓDIS, professor
Department of Obstetrics and Gynaecology

OAKST1

4 credit • Clinical • autumn • semester exam

Number of hours/semester: 28 + 28 + 0 = 56

Prerequisite: OAKSE1 completed

Topic

All aspects of obstetrics are discussed during one semester: physiology of pregnancy: fertilisation of oocyte, implantation; adaptation of maternal endocrine and circulatory system to pregnancy; embryonic, fetal development; diagnostic tools for evaluating fetal well-being; pregnancy pathology: diseases of the mother and the embryo/fetus, and diagnostic and therapeutical opportunities to manage them; physiological and pathological puerperium; the newborn: physiology of adaptation and management of diseases of the newborn.

The purpose of this teaching program is to give a basic knowledge in the field of obstetrics, however, novel scientific results are also reported. The program, with its practical part, makes students capable of
- distinguishing normal and pathologic pregnancies,
- evaluating fetal well-being,
- managing normal labor,
- assisting in newborn adaptation, and
- revealing puerperal pathologies.

The program gives the opportunity to progress the knowledge obtained by the end of the semester.

Conditions for acceptance of the semester

Semester exam (written or oral)
Licence for exam: absences less than 20 % of classes
Making up for missed classes
see above
Absences due to medical problem:
Student(s) should attend the department during the hours of duty services (organized for individuals).

Reading material

-Subject of lectures - hand-out of lecturers;
www.merck.com/mmpe/sec18.html
www.acog.org
www.fpnotebook.com/OB.htm
www.obgyn.net/
UP MS General Medicine major – subjects of the Clinical module – academic year 2009/2010

Lectures
1. Physiology of pregnancy / Maternal diseases and pregnancy
2. Endocrine physiology of pregnancy / Endocrine function of the placenta
3. Prenatal care / Hypertension in pregnancy
4. Ultrasound examinations in pregnancy
5. Assessment of fetal well-being
6. Diabetes and pregnancy / Haemolytic disease of the newborn
7. Prenatal genetics
8. Bleeding during late pregnancy
9. Physiology of normal labour
10. Breech presentation and breech delivery / Dystocia and prolonged labor; malpresentations
11. Preterm labour, premature rupture of the membranes
12. Twin pregnancy and twin labor
13. Labour induction, obstetrical anaesthesia and analgesia
14. Operative delivery
15. Rupture of the uterus, coagulation defects, amniotic fluid embolism
16. Abortion / Ectopic pregnancy
17. Physiology of adaptation after birth
18. Birth asphyxia and resuscitation
19. Puerperium and its complications
20. Family planning methods
21. Anatomy of the genital tract
22. Physiology of the menstrual cycle
23. Abnormal uterine bleeding
24. Dysmenorrhoea and premenstrual syndrome. Anovulatory cycle
25. Amenorrhoea
26. Intersexuality
27. Gynecological infections I
28. Gynecological infections II

Practices
1. Diagnosis of pregnancy, medical history
2. Physical, bimanual examination of pregnant women, diagnosis of intrauterine positioning
3. of the fetus in the last trimester; intrauterine death
4. Assessment of foetal well-being
5. Recording of uterine activity and foetal hearth rate; demonstration in labourward
6. Examination of amniotic fluid, prenatal genetics; ultrasound examination
7. Examination of amniotic fluid, prenatal genetics; ultrasound examination
8. Conduction of normal labour
9. Puerperium
10. Abnormal labour I.
11. Abnormal labour I.
12. Abnormal labour II.
13. Abnormal labour II.
14. Preterm delivery, the signs of threatened abortion and preterm delivery
15. Preterm delivery, the signs of threatened abortion and preterm delivery
16. Adaptation of the newborn after birth
17. Adaptation of the newborn after birth
18. Birth asphyxia and resuscitation
19. Birth asphyxia and resuscitation
20. Placental and postplacental bleeding; manual separation of the placenta
21. Placental and postplacental bleeding; manual separation of the placenta
22. Operative delivery
23. Operative delivery
24. Pregnancy termination during the first and second trimester
25. Pregnancy termination during the first and second trimester
26. Contraceptive methods
27. Contraceptive methods
28. Diagnosis of pregnancy, medical history

Seminars

Exam topics/questions
1. a. Placental steroid and peptide hormones. The „fetal-placental unit”
b. Abnormal bleeding during labor.
2. a. Assessment of fetal well-being.
b. Abnormalities in lie position and presentation.
3. a. Forceps delivery and vacuum extraction.
b. Prenatal genetics.
4. a. Cesarean section.
b. Hypertension in pregnancy.
5. a. Breech presentation and breech delivery.
b. Abortion; classification, management.
b. Rh-isoimmunisation.
7. a. Principles in the management of preterm delivery.
b. Hyperemesis gravidarum.
8. a. Birth asphyxia and resuscitation.
b. Significance of urinary tract infection during pregnancy.
b. Placenta previa.
10.  a. Rupture of uterus.
b. Amniotic fluid examinations during the third trimester.
11.  a. Ultrasound examination in pregnancy.
b. Complications of the puerperium.
b. Oligohydramnios.
b. Abruptio placentae.
14.  a. Postdate pregnancy, diagnosis and management.
b. Indications and requirements of forceps delivery.
15.  a. Abnormalities of placental detachment; disorders of the umbilical cord.
b. Indications of cesarean section.
b. Asynclitism.
17.  a. Obstructed labor.
b. Disseminated intravascular coagulation in pregnancy.
18.  a. Significance and screening of gestational diabetes.
b. Fetal pulmonary maturation.
19.  a. Apgar score.
b. Labor induction.
b. Early and late decelerations.
b. Polyhydramnios.
22.  a. Cardiotocography in the assessment of fetal well-being.
b. Differential diagnosis of placenta previa and abruptio placentae.
23.  a. Signs and management of threatened preterm delivery.
b. Significance of hCG secretion in the first trimester of pregnancy.
24.  a. Various causes of abortion and it’s clinical classification.
b. Opportunities in the management of preterm premature rupture of the membrane.
b. Evaluation of intrauterine positioning of the fetus in the last trimester.
27.  a. Definitions and clinical importance of prematurity and postmaturity.
b. Abnormalities in the engagement, rotation, position, and presentation.
b. Etiology, diagnosis, and management of cervical incompetence.
29. a. Perinatal mortality.
b. Fetal hypoxia during labour.
30. a. Forelying and prolapsed umbilical cord.
b. Infectious diseases during pregnancy.
31. a. Definition and diagnosis of intrauterine growth retardation.
b. Puerperal infections.
32. a. Significance of fetal scalp blood sampling during labor.
b. Therapeutical opportunities to increase fetal pulmonary maturation.
33. a. Intrauterine fetal demise.
b. Acute and chronic tocolysis.
34. a. Definitions of live-birth, perinatal, neonatal, and infant mortality.
b. Deep vein thrombosis in the puerperium.
35. a. Spontaneous abortions - etiology and management.
b. Anomalies of uterine contractions during delivery.
Obstetrics and Gynaecology 2

Course director: DR. JÓZSEF BÓDIS, professor
Department of Obstetrics and Gynaecology

OAKST2

3 credit • Clinical • spring • semester exam
Number of hours/semester: 14 + 28 + 0 = 42
Prerequisite: OAKST1 completed

Topic
During this semester, all aspects of gynaecology are discussed: anatomy of female genital tract; physiology of menstrual cycle; gynaecological bleeding abnormalities; benign and malignant tumours; gynaecological infections; congenital anomalies of genital tract; contraception; examination of infertile couple; assisted reproduction; physiology of postmenopause; diagnostic tools and therapeutic opportunities in gynaecology.

The purpose of this teaching program is to give a general basic knowledge in the field of gynaecology.
This program makes students capable of recognizing gynaecological tumours, infections, and other abnormalities and choosing the proper management. The program ensures the opportunity to insert new information.

Conditions for acceptance of the semester
Absences less than 20% of classes;
Semester examination

Making up for missed classes
Absences due to medical reason:
extra practices organized during the hours of duty services.

Reading material
- Subject of lectures - lecturers’ hand-out
  www.merck.com/mmpe/sec18.html
  www.acog.org
  www.fpnotebook.com/OB.htm
  www.obgyn.net/

Lectures
1. Infertility I
2. Infertility II
3. Diseases of the vulva and vagina / Congenital anomalies of the genital tract
4. Assisted reproductive techniques
5. Gynaecological endoscopies
6. Descensus and prolapsus of the uterus. Urinary incontinence
7. Paediatric gynaecology / Contraception
8. Polycystic ovary syndrome
9. The menopause and climacteric
10. Endometriosis
11. Gestational trophoblastic neoplasm
12. Praemalignant disease of the cervix / Benign diseases of the uterus
13. Malignant disease of the cervix / Malignant disease of the uterus
14. Benign and malignant tumours of the ovary

Practices
1. Diagnostic methods. Making a gynaecological diagnosis
2. Diagnostic methods. Making a gynaecological diagnosis
3. Vaginal smear, hormonal cytodiagnosis, BBT chart, examination of the cervical mucus
4. Vaginal smear, hormonal cytodiagnosis, BBT chart, examination of the cervical mucus
5. The evaluation of female infertility
6. The evaluation of female infertility
7. Abnormal bleeding during reproductive decades
8. Abnormal bleeding during reproductive decades
9. Gynaecological infections
10. Gynaecological infections
11. The significance of laparoscopy and hysteroscopy in gynaecology
12. The significance of laparoscopy and hysteroscopy in gynaecology
13. Malposition of the genital tract
14. Malposition of the genital tract
15. Praemalignant and malignant disease of the cervix
16. Praemalignant and malignant disease of the cervix
17. Pediatric gynaecology
18. Pediatric gynaecology
19. Climacterium femininum. Hormonal therapy in gynaecology
20. Climacterium femininum. Hormonal therapy in gynaecology
21. Benign tumours of the uterus
22. Benign tumours of the uterus
23. Radiotherapy of cervical and endometrial cancer
24. Radiotherapy of cervical and endometrial cancer
25. Ovarian tumours. Complex therapy of ovarian carcinoma
26. Ovarian tumours. Complex therapy of ovarian carcinoma
27. Contraception, tubal cautery
28. Contraception, tubal cautery
Exam topics/questions

1. a. Galactorrhoea
   b. Endometrial cycle

2. a. Pre- and postoperative radiation therapy
   b. Diagnosis of anovulatory cycle

3. a. Classification, diagnosis and management of amenorrhoea
   b. Ovulation induction

4. a. Use of gestagens in the practice of gynaecology
   b. Endocrine causes of hirsutism

5. a. Fibroid of the uterus
   b. Management of urinary incontinence

6. a. Management of uterine and vaginal vault prolapse in the reproductive age and postmenopause
   b. Aetiology and management of dysfunctional uterine bleeding

7. a. Pathological positioning of the internal genital tract
   b. Use of antibiotics in gynaecology

8. a. Indications of extended abdominal hysterectomy
   b. Significance of colposcopy in gynaecology

9. a. Pelvic inflammatory disease (PID)
   b. Klinefelter’s syndrome

10. a. Therapy of cervical cancer
    b. Diagnosis and therapy of anovulatory cycle

11. a. Aetiology, clinical presentation and therapy of polycystic ovary syndrome
    b. Infectious diseases of the lower genital tract

12. a. Congenital abnormalities of the female genital tract
    b. Glandular cystic hyperplasia of the endometrium

13. a. Significance of ultrasound diagnostics in gynecology
    b. Abnormal bleeding in postmenopause

14. a. Operative procedures for improving the position of the reproductive organs
    b. Cervical intraepithelial neoplasia (CIN)

15. a. Juvenile metrorrhagia
    b. Chemotherapy in gynaecologic malignancies

16. a. Dysmenorrhoea and premenstrual syndrome
    b. Pruritus and kraurosis vulvae

17. a. Postmenopausal hormone therapy
    b. Dysfunctional uterine bleeding

18. a. Premenopause and menopause
    b. Turner’s syndrome
19.  a. Diagnosis and management of ovarian cancer  
    b. Congenital abnormalities of the genital tract
20.  a. Significance of hysteroscopy  
    b. Significance of the genetic examinations in the field of gynaecological endocrinology
21.  a. Therapy of anovulatory cycles  
    b. Management of endometrial cancer
22.  a. Sterility and infertility  
    b. Bacterial vaginosis
23.  a. Preoperative preparation of the patient and postoperative care  
    b. Carcinoma of the vulva
24.  a. Hormonal cytodiagnosis  
    b. Oral and intrauterine contraception
25.  a. Endometriosis  
    b. Dysgerminoma
26.  a. Teratogen ovarian tumours  
    b. Prostaglandins and their significance in gynaecology
27.  a. Intrauterine contraceptive device  
    b. Laparoscopy in gynaecology
28.  a. Acute abdomen due to gynecological reason  
    b. Assisted reproductive techniques
29.  a. Climacteric  
    b. Sterilisation. Surgical contraception
30.  a. Vulvovaginitis  
    b. Pearl index
OPHTHALMOLOGY

Course director: DR. ZSOLT BIRÓ, professor
Department of Ophthalmology

3 credit • Clinical • autumn • semester exam

Number of hours/semester: 14 + 28 + 0 = 42

Prerequisite: OAPPA2 completed + OAKSE1 completed

Topic

Conditions for acceptance of the semester
Making up for missed classes

Reading material

Lectures

1. Introduction. The globe (embryology, anatomy, growth and development)
2. The eyelids. The lacrimal apparatus
3. The conjunctiva. Allergic eye diseases
4. The cornea. The sclera
5. The uveal tract: iris, ciliary body and choroid. Intraocular inflammation
6. The lens
7. Glaucoma. The classification, diagnosis, pathogenesis and treatment
8. Vitreous and vitreoretinal diseases. Retinal detachment
9. Retina I. Vascular abnormalities, retinopathies
10. Retina II. Central and peripheral retinal dystrophies and degenerations
11. Neuroophthalmology (optic nerve, visual pathway, pupil) Electrophysiology (ERG, EOG, VEP)
12. Intraocular tumours. The orbit
13. Strabismus. Nystagmus

Practices

1. Taking the history. Testing of visual acuity and optical defects. Light and colour perception. The methods of morphological examination
2. Taking the history. Testing of visual acuity and optical defects. Light and colour perception. The methods of morphological examination
3. Eyelids and lacrimal apparatus. Eversion of the upper eyelid. Examination of the lacrimal system. Irrigation of the nasolacrimal duct
4. Eyelids and lacrimal apparatus. Eversion of the upper eyelid. Examination of the lacrimal system. Irrigation of the nasolacrimal duct
5. Conjunctiva. Irrigation of the conjunctival sac. The application of drops and ointments into the conjunctival sac. Patching and bandage of the eye
6. Conjunctiva. Irrigation of the conjunctival sac. The application of drops and ointments into the conjunctival sac. Patching and bandage of the eye


11. Lens. Slit-lamp examination before and after cataract surgery. Cataract surgery: ICCE, ECCE, lensectomy, ultrasonic phakoemulsification (video demonstration)

12. Lens. Slit-lamp examination before and after cataract surgery. Cataract surgery: ICCE, ECCE, lensectomy, ultrasonic phakoemulsification (video demonstration)


17. Retina I. Fundus examination. Fluorescein angiography. Diabetic and hypertensive retinopathy

18. Retina I. Fundus examination. Fluorescein angiography. Diabetic and hypertensive retinopathy


20. Retina II. Colour vision. Dark adaptation. Electrophysiology, fundus examination, genetic counselling


23. Intraocular tumours. The clinical picture, diagnosis, differential diagnosis of white pupil, ultrasonography (video demonstration)

24. Intraocular tumours. The clinical picture, diagnosis, differential diagnosis of white pupil, ultrasonography (video demonstration)
25. Strabismus. Extraocular muscles, testing for strabismus. Amblyopia treatment (video demonstration)
26. Strabismus. Extraocular muscles, testing for strabismus. Amblyopia treatment (video demonstration)
27. Ocular injuries. Low vision aids (video demonstration)
28. Ocular injuries. Low vision aids (video demonstration)

Seminars

Exam topics/questions
1. A) Gross anatomy of globe
   B) Ophthalmological complications of hypertension and diabetes mellitus
2. A) Anatomy of the ocular adnexa
   B) Vascular diseases of the retina
3. A) The methods of examination, special ophthalmologic examinations
   B) Treatment of strabismus
4. A) Ophthalmoscopy and its significance, the blurred disc margin
   B) Diseases of the eyelids and their treatment
5. A) Physiology and pathophysiology of the tears
   B) Retinal detachment and its treatment
6. A) Applying bandage, ointment and drop to the eye, irrigation of the nasolacrimal duct
   B) Ophthalmological traumatology
7. A) The significance of the vitreous body
   B) Diseases of the conjunctiva and their treatment
8. A) Anatomy and physiology of the retina
   B) Diseases of the lacrimal apparatus and their treatment
9. A) The classification of the glaucoma
   B) Tumors of the lids, of the globe and of the orbita
10. A) Anatomy and physiology of the extraocular muscles
    B) Chief complaints in ophthalmology; taking the patient’s history
11. A) The significance and diagnosis of strabismus
    B) Treatment of cataracta
12. A) The sensory visual pathway
    B) Diseases of the cornea and their treatment
13. A) Emergency situations in ophthalmology
    B) Diseases of the sclera and their treatment
14. A) Lethal diseases in ophthalmology
    B) Glaucomas - other than chronic open angle glaucoma
15. A) Causes of sudden monocular loss of vision
    B) Inflammation of the uveal tract
16. A) Differential diagnosis of red eye  
      B) The blindness: main causes, prevention
17. A) Pharmacology of the eye, commonly used eye medications  
      B) The orbit and its diseases
18. A) Nervous innervations of the globe and its adnexa  
      B) Diseases of the macula and their treatment
19. A) Significance of ophthalmology in the choice of profession  
      B) Diagnosis and therapy of chronic open angle glaucoma
20. A) Pediatric ophthalmology. Special subjects of pediatric interests  
      B) Significant degenerations of the retina
21. A) Genetic aspects of the eye diseases  
      B) Diseases of the optic nerve
Course director: DR. LÁSZLÓ VÁMHIDY, associate professor
Department of Traumatology and Hand Surgery

3 credit • Clinical • spring • semester exam

Number of hours/semester: 14 + 8 + 20 = 42

Prerequisite: OAANEA completed + OAPSPR completed

Topic

Trauma curriculum:
- a problem-based approach to learning in which fundamental medical concepts are mastered, not as much by memorizing textbooks as much as through group investigation and analysis of real patient cases;
- a strong emphasis on exploring the patient-doctor relationship and locating modern medical practices in its social context;
- The curriculum of traumatology is designed to assist students in achieving the following educational goals:
  - Establish a knowledge base grounded in scientific principles and apply this knowledge effectively for the benefit of patients and populations.
  - Acquire the skills and abilities needed to evaluate and treat his/her patients appropriately.

Conditions for acceptance of the semester

During the semester an essay and a personal presentation will be performed, about the actual knowledge of the students. It is mandatory for every student to produce a 50% result for the exam.

Making up for missed classes

The attendance of the classes is compulsory. Absences from the practices should be made up for in duties.

Reading material

Basic books
Traumatology /Lecture Notes of Szeged University/

Handbook
Lectures
3. Open fractures and their complications. Infectious complications of hand injuries
4. Polytrauma, pseudoarthrosis, malunion, sudeck dystrophy
5. Injuries of the humeral diaphysis and the forearm. Injuries of the wrist
6. Hand injuries. Diagnosis, treatment, prognosis. Revascularisation, replantation, microsurgery
7. Fractures of the femoral and crural diaphysis. Diagnosis, treatment
8. Bone injuries of the knee. Injuries of the menisci and ligaments of the knee
9. Injuries of the spine
10. Injuries of the chest, their treatment. Injuries of the abdomen
11. Fractures of the hip. Hip replacement in traumatology
12. Injuries of the pelvis. Classification, methods of treatment
13. Neurotrauma

Practices
1. Basic principles of wound treatment (Anaesthesia, excision, closure).
2. Basic forms of osteosynthesis. (Screw OS, plate OS).
4. The base of the ATLS
5. Principles of microsurgery
6. Physical diagnostic of the hand
7. Duty
8. Duty

Seminars
1. Bone healing
2. Possibilities for fracture treatment
4. Femoral neck fracture
5. Fractures around the hip.
6. Fractures of the upper extremity
7. Fractures of the femoral and the crural diaphysis
8. Fractures around the knee
9. Pathophysiology of the knee. Treatment of the ligament and meniscal injuries
10. Fractures of the ankle
11. Fractures of the foot.
12. Tendon injuries of the hand.
13. Microsurgery
14. Injuries of the thorax
15. Injuries of the abdomen
16. Injuries of the spine and pelvis
17. X-ray practice
18. X-ray practice
19. X-ray practice
20. X-ray practice

Exam topics/questions
1. Basic characteristics of fractures (signs, forms etc.)
2. Open fractures. Rules of primary care, complications
3. Biomechanical conditions of bone healing (primary-, secondary bone healing)
4. Delayed union, pseudoarthrosis, the difference between them and their treatment (dealing with the economic view)
5. Operative or non-operative fracture treatment (the up-to-date view!)
6. Basic principles of stable osteosynthesis. Role of the AO/ASIF group
7. Intramedullar osteosynthesis (Küntscher nailing, unreamed intramedullary nailing)
8. Böhler’s three rules in fractures treatment (reduction, fixation, physiotherapy)
9. Possibilities of skin transplantation in traumatology (free flap transfer, pedicle flap, tubular flap, jump flap, microsurgery in flap transplantation)
10. Medical first aid on the scene of the trauma, transportation
11. Monotrauma, multiple trauma, polytrauma
12. Application of different metals and plastic materials in traumatology
13. Types of wounds, rules of wound treatment
14. Inactivity atrophy, reflex sympathetic dystrophy
15. Intraarticular fractures. Soft tissue injuries of the joint (ligaments!)
16. Burn disease
17. General rules of non-operative fracture treatment
18. Basic principles of fracture treatment in childhood

B.
1. Fractures of the scapula and clavicle. Acromioclavicular and sternoclavicular dislocations
2. Dislocations of the shoulder
3. Fractures of the proximal humerus
4. Fractures of the shaft of the humerus
5. Fractures and dislocations about the elbow
6. Fractures of the shaft, radius and ulna
7. Fracture radii in loco typico. Colles, Smith fracture
8. Fractures and pseudoarthrosis of the scaphoid. Perilunar dislocations
9. Fractures of the fingers and metacarpals
10. Examination of the sensory and motor function of the hand. Symptoms of radial, ulnar and median nerve injury
11. Flexor tendon injuries of the hand
12. Extensor tendon injuries of the hand
13. Surgical infections of the hand
14. Severe hand injuries: revascularisation, replantation
15. Microsurgery
16. Possibilities of reconstruction in peripheral nerve injuries
17. Possibilities of reconstruction in tendon injuries of the hand
18. Dislocations of the elbow

C.
1. Pelvic fractures and associated injuries
2. Fractures and dislocations of the hip joint
3. Femoral neck fractures
4. Complications of femoral neck fractures
5. Per- and subtrochanteric fractures
6. Fractures of the femoral shaft
7. Fractures around the knee
8. Ligaments injuries of the knee. Injuries of the menisci
9. Fractures of the tibia and fibula shaft
10. Malleolar fractures
11. Ligaments injuries of the ankle. Achilles tendon injury
12. Fractures of the talus and calcaneus. Fractures and dislocations of the foot
13. Posttraumatic infected bone processes of the lower extremity
14. Injuries of the spine
15. Diagnostic and therapeutic principles of abdominal injuries
16. Injuries of the chest (rib fractures and complications, open chest injuries)
17. Principles of the treatment of a polytraumatised patient
18. Retroperitoneal injurie