

**Semmelweis University, Faculty of Medicine - single, long-cycle medical training -
Osztatlan általános orvos képzés**

Name of the host institution (and any contributing institution):

Belgyógyászati és Onkológiai Klinika

Name of subject: Belgyógyászat

in English: Internal Medicine

in German: Innere Medizin

Credit value: 8

Semester: 11th semester, 12th semester

(in which the subject is taught according to the curriculum)

Hours per week	Lecture	Practical lesson	Seminar
0.0	0.0	0.0	0.0

Hours per semester	Lecture	Practical lesson	Seminar
240.0	0.0	240.0	0.0

Type of course:

obligatory

Academic year:

2025/26

Language of instruction (for optional and elective subjects):

English

Course code:

AOKBOK786_SA

(in the case of a new course, to be completed by the Dean's Office, following approval)

Course coordinator name: Dr. Takács István (igazgató)

Course coordinator location of work, telephone availability: Department of Internal Medicine and Oncology, Semmelweis University, Tel: +06-1-459-1500/51520

Course coordinator position: professor, department head

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

Objective of instruction and its place in the curriculum:

Sixth-year practice in internal medicine aims to summarize and synthesize the knowledge acquired during the previous years in internal medicine as well as related subjects in the frame of work at a general medical ward. Students are able to deepen and complete their knowledge and competences and learn to work with gradually increasing independence. The present practice completes the curriculum in internal medicine. Students, however, can select a field, in which further six weeks

can be spent in the form of an elective practice.

Method of instruction (lecture, group work, practical lesson, etc.):

bedside work on a medical ward, consultations

Competencies acquired through completion of course:

History taking (family, social, self-history, previous illnesses)

Evaluation of present symptoms

Evaluation of the patient's condition by Karnofsky

Knowledge / ideas required for up-to-date medical therapy

The use of electronic databases (MedSol, Cochrane, PubMed)

Basic knowledge of Hungarian language

Physical examination

General physical examination

Examination of the stature

Weight, height, body mass index and body surface area

Examination of the skin

Examination of the visible mucous membranes

Examination of the thorax

Examination of the heart (palpation, percussion, auscultation)

Examination of the lungs (percussion, auscultation)

Examination of the thyroid glands (palpation)

Examination of the breasts

Examination of the abdomen

Examination of the liver (percussion, palpation)

Examination of the spleen (percussion, palpation)

Rectal examination

Examination of the extremities

Examination of the circulation

Palpation of the peripheral pulse, pulse qualities

Examination of the oral cavity (without equipment)

Basic neurological examination

Examination of the mental state

Instrumental and imaging techniques

Blood pressure measurement

ECG (12-lead)

Chest X-ray

Ultrasonic investigations

Echocardiography

CT, MRI, PET-CT

Isotope investigations, scintigraphy

Angiography

Endoscopic techniques (gastroscopy, colonoscopy, ERCP)

Other invasive instrumental examinations (bone marrow biopsy, cerebrospinal fluid sampling)

Laboratory evaluation

CBC (automatic and qualitative)

Urine (test strip, sediment)

Fecal occult blood test

Kidney function tests

Liver function tests

Examination of electrolytes and the acid-base homeostasis

Parameters of glucose metabolism

Endocrine function tests

Investigation of infections (culture, serology)

Hemostasis

Interventions

Insertion of a Foley's catheter

Subcutaneous, intramuscular and intravenous injections

Blood drawing

Enema

Intubation

Cardiopulmonary resuscitation

Biopsy

Bronchoscopy

Hemodialysis

Declaration of death, filling death certificate

Therapeutic skills

Consulting, patient education (diabetes, thrombosis, hypertension)

Dietary consultation

Nursing patients with inability of self-care

General nursing skills (changing diapers, assistance with food intake)

Signing informed consent

Management of an allergic reaction

Recognition of medical side-effects, drug overdose

Preparing discharge summary

Being familiar with the most common medications, making prescription

Transfusion

Preparation of a diagnostic and therapeutic plan

Igaz Péter dr.

Kempler Péter dr.
Lakatos Péter András dr.
Szathmári Miklós dr.
Takács István dr.
Tislér András dr.
Tóth Miklós dr.
Putz Zsuzsanna dr.
Reismann Péter dr.
Szücs Nikolette dr.
Tóke Judit dr.

Course outcome (names and codes of related subjects):

Prerequisites for course registration and completion: (CODE):

Internal Medicine Propedeutics

Pharmacology and Pharmacotherapy II

Pathology II

In the case of multi-semester courses, position on the possibility of and conditions for concurrent registration:

Not applicable.

The number of students required to start the course (minimum, maximum), student selection method:

Based on student registration in Neptun.

Detailed course syllabus (if the course can be divided into modules, please indicate): (Theoretical and practical instruction must be broken down into hours (weeks), numbered separately; names of instructors and lecturers must be listed, indicating guest lecturers/instructors. It cannot be attached separately! For guest lecturers, attachment of CV is required in all cases!)

The 8-week course includes one week Infectology and one week Family Medicine practice.

Sixth-year students must work under the supervision of a tutor (Internal Medicine specialist).

Students work at the ward and participate on consultations that aim to help the preparation for the

final exam.

Students spend 6 weeks (5 days / week, 8 hours / day, between 8:00 AM - 4:00 PM) at a medical ward.

Tasks to be performed:

- patient admission: taking patients' medical history, evaluation of signs and symptoms, physical examination
- making a preliminary diagnosis, consideration of differential-diagnostic possibilities, preparation of a diagnostic and therapeutic plan
- evaluation and follow-up of the patients' general condition, and changing diagnostic and therapeutic plan according to new findings
- patient referral on rounds (at least one patient / week)
- participation on consultations with specialists
- practicing common medical interventions under supervision (venous blood draw, injections, infusion, ECG, digital rectal examination, catheter insertion)
- observing transfusion, nasogastric tube / central line insertion, removal of pleural / ascetic fluid
- observation of imaging techniques (US, CT, angiography, endoscopies, biopsies, isotope scans etc.)
- evaluation and interpretation of laboratory parameters and radiologic findings
- becoming familiar with special units of the teaching hospital (dialysis center, plasmapheresis center, osteodensitometry, endoscopy laboratory, echocardiography)
- becoming familiar with patient documentation (daily follow-up, discharge summary, consent forms, consultation requests)
- becoming familiar with team work (joint work of nurses and doctors) in emergency and crisis situations (resuscitation, septicemia, shock, coma, myocardial infarction)
- participation on consultations aimed for students' preparation for the final exam
- performing one case presentation in written form
- optional stay in the teaching hospital for an evening shift

Other courses with overlapping topics (obligatory, optional, or elective courses) in interdisciplinary areas. To minimize overlaps, topics should be coordinated. Code(s) of courses (to be provided):

Requirements for attendance, options for making up missed sessions, and method of absence justification:

According to the rules of the University, students are required to participate on at least 90% of the practice. This is evaluated through attendance sheets signed by tutors.

In case of illness or unforeseen special circumstances of the student, retake is feasible based on an individual agreement with the course coordinator (studinger.peter@semmelweis.hu), with the permission of the course director.

Assessment methods during semester (number, topics, and dates of midterms and reports, method of inclusion in the course grade, opportunities for make-up and improvement of marks):

(number, topics, and dates of midterms and reports, method of inclusion in the course grade, opportunities for make-up and improvement of marks)

There is no formal midterm evaluation. Throughout the practice the interaction between students and the tutor provides an opportunity to assess the knowledge of students.

Number and type of individual assignments to be completed, submission deadlines:

A case presentation in written form must be completed by the end of the course.

Requirements for the successful completion of the course:

Participation on at least 90% of the practice, and preparation of the case presentation. At the end of the course, after the student has taken his/her attendance sheet to the secretariat, the Course Director grants credits to students in the Neptun system.

Type of assessment:

comprehensive examination

Exam requirements (list of topics, topics of the test exam, and the optional project topics accepted as an exam)

--

Large topics: 2 topics / student (Detailed description of the topic is required.)

1. Heart failure
2. Acute coronary syndrome
3. Atrial fibrillation
4. Chronic diseases of the aortic and the mitral valve
5. Infective endocarditis
6. Differential diagnosis and management of patients with bradycardia
7. Differential diagnosis and management of patients with tachycardia
8. Peripheral arterial disease
9. Superficial and deep vein thrombosis
10. Pulmonary embolism
11. Diagnosis of hypertension, assessment of its complications. Pharmacological and nonpharmacological treatment of hypertension. Resistant hypertension.
12. Hypertensive emergency, hypertensive urgency.
13. Differential diagnosis of chest pain
14. Chronic obstructive pulmonary disease (COPD)
15. Bronchial asthma
16. Pneumonia
17. Pleural effusion
18. Differential diagnosis of dyspnoea
19. Types of diabetes mellitus. Diagnosis of carbohydrate metabolism disorders.
20. Diet and oral antidiabetics in the management of diabetes mellitus.
21. Insulin therapy, insulin analogues
22. Micro- and macrovascular complications of diabetes mellitus
23. Management of hyperglycaemic patients
24. Hypoglycaemia
25. Dyslipidaemia
26. Obesity

27. Differential diagnosis of unintentional weight loss
28. Hyperthyroidism
29. Hypothyroidism
30. Adrenocortical insufficiency
31. Cushing's syndrome
32. Amenorrhoea
33. Osteoporosis
34. Acute kidney injury
35. Chronic kidney disease, uremia syndrome
36. Urinary tract infections, asymptomatic bacteriuria
37. Differential diagnosis and management of hypo- and hypernatraemia
38. Differential diagnosis and management of hypo- and hyperkalaemia
39. Differential diagnosis and management of hypo- and hypercalcaemia
40. GERD. Differential diagnosis of dysphagia.
41. Peptic ulcer, H.pylori infection
42. Inflammatory bowel diseases
43. Acute appendicitis
44. Liver cirrhosis
45. Differential diagnosis of jaundice
46. Cholelithiasis, cholecystitis, cholangitis.
47. Acute pancreatitis
48. Acute abdomen, differential diagnosis of abdominal pain
49. Gastrointestinal bleeding
50. Differential diagnosis of diarrhoea
51. Evaluation of the anaemic patient
52. Myeloproliferative diseases

53. Multiple myeloma
54. Differential diagnosis of thrombocytopenia
55. Congenital and acquired thrombophilias
56. Emergencies in haematology and oncology: neutropenic fever, tumour lysis syndrome, superior vena cava syndrome
57. Indications and rules of blood transfusion
58. Systemic autoimmune diseases: SLE, Sjögren's syndrome
59. Rheumatoid arthritis
60. Osteomyelitis
61. Differential diagnosis of fever. Fever of unknown origin (FUO).
62. Septicaemia
63. General aspects of the care of a poisoned patient
64. Alcohol-induced internal medicine diseases
65. Internal medicine causes of unconsciousness
66. Tumours of the oesophagus and the stomach, precancerous conditions.
67. Tumours of the colon
68. Benign and malignant tumours of the liver
69. Tumours of the pancreas and bile ducts
70. Tumours of the thyroid gland
71. Tumours of the lung

Small topics - 1 topic / student. (Brief summary / general overview rather than detailed knowledge of the topic is expected.)

1. Cardiomyopathies
2. Differential diagnosis of syncope
3. Primary and secondary pulmonary hypertension

4. Hypopituitarism
5. Anterior pituitary hyperfunction: acromegaly, prolactinoma
6. Diabetes insipidus, SIADH
7. Thyroiditis
8. Evaluation and treatment of thyroid nodules
9. Pheochromocytoma
10. Male hypogonadism
11. Carcinoid syndrome
12. Gout
13. Nephritis syndromes: acute, rapid progressive and chronic glomerulonephritis
14. Nephrosis syndrome, kidney diseases with proteinuria
15. Acute tubulointerstitial kidney diseases: acute tubular necrosis, acute interstitial nephritis
16. Chronic diseases of the tubulointerstitium
17. Renal replacement therapies: dialysis, kidney transplantation
18. Differential diagnosis of haematuria
19. Gastritis
20. Irritable bowel syndrome
21. Malabsorption and maldigestion
22. Diverticulosis, diverticulitis
23. Clostridium difficile infection
24. Viral hepatitis
25. Autoimmune diseases of the liver and biliary tract: autoimmune hepatitis, primary biliary cirrhosis, primary sclerosing cholangitis
26. Chronic pancreatitis
27. Haemochromatosis. Wilson's disease
28. Acute leukaemias
29. Hodgkin's disease

30. Non-Hodgkin lymphomas
31. Chronic lymphocytic leukaemia
32. Myelodysplastic syndrome
33. Haemophilias
34. Thrombotic microangiopathies (TTP, HUS)
35. Autologous and allogeneic bone marrow transplantation in the treatment of malignant haematological diseases
36. Systemic autoimmune diseases: progressive systemic sclerosis, polymyositis/dermatomyositis,
37. Vasculitis
38. Seronegative spondylarthritis
39. Osteoarthritis, arthrosis, differential diagnosis of joint pain
40. Internal medicine causes and differential diagnosis of muscle weakness
41. Immunodeficiencies
42. Influenza
43. EBV and CMV infection
44. Lyme disease
45. Tuberculosis
46. Internal medicine aspects of HIV infection
47. Erysipelas, cellulitis
48. Protozoan infections: giardiasis, toxoplasmosis, amoebiasis, malaria.
49. Helminthiasis
50. Drug poisoning: digitalis, opioid, benzodiazepine and paracetamol overdose
51. Special poisonings: ethylene glycol, methanol, heavy metal and fungal poisoning.
52. Carbon monoxide and carbon dioxide poisoning
53. Internal medicine aspects of hypothermia
54. Neuroendocrine tumours
55. Internal medicine aspects of nephrolithiasis

Clear, specific minimum requirements for assessment. (The list of mandatory concepts, parameters, diagrams, calculations, and practical skills required to obtain a passing grade, as well as the criteria for the completion and evaluation of project assignments accepted as an exam.) A link published on the department's website referring to the minimum requirements of the course.

Method and type of grading (Share of theoretical and practical examinations in the overall evaluation. Inclusion of the results in the end-of-term assessment. Possibilities of and conditions for offered grades.): (Share of theoretical and practical examinations in the overall evaluation, Inclusion of the results in the end-of-term assessment, Possibilities of and conditions for offered grades)

The final grade is calculated from the average of the four grades obtained from the practical exam and the three oral topics.

Students must receive at least a pass (2) grade for each of the elements of the exam in order to pass the exam. In case the student fails the practical exam or any of the oral topics, the exam is terminated with a fail (1) grade, and the student must retake the entire exam.

There is not any possibility of an offered grade.
Retake of a failed exam is feasible on the exam week of any subsequent block.

Artificial intelligence systems used in the teaching of the subject and the manner of their application

Printed resources:

Required	pdf.nem
Author	Lynn S. Bickley
Title	Bates' Guide to Physical Examination and History Taking 12th Ed
Publisher	Wolters Kluwer
Year of publication	2016

Required	pdf.nem
Author	Feather - Randall - Waterhouse
Title	Kumar and Clark's Clinical Medicine 10th Ed.
Publisher	Elsevier
Year of publication	2020

Required	pdf.nem
Author	Jameson - Fauci - Kasper - Hauser - Longo - Loscalzo
Title	Harrison's Principles of Internal Medicine 21st Ed.

Publisher	McGraw-Hill Education
Year of publication	2022

Signature of habilitated instructor (course coordinator) announcing the course:

Signature of the director of the host institution:

Date of submission:
