REQUIREMENTS

Semmelweis University, Faculty of General Medicine – single, long-cycle medical training programme
Name of the host institution (and any contributing institutions):
Department Of Internal Medicine and Oncology

Name of the subject: Belgyógyászat I.

in English: Internal Medicine I.

in German: Innere Medizin I.

Credit value: 7

Semester: Fall / Spring
(as defined in the curriculum)

Total number of classes per week:	**lectures:** 28 / 5 weeks	**practical lessons:** 38 / 5 weeks	**seminars:** 32 / 5 weeks

Type of subject: **compulsory** **optional** **elective**
(PLEASE UNDERLINE AS APPLICABLE)

Academic year: 2024/2025

Language of instruction, for optional or elective subjects: NA

Course code: AOKBOK784_1A
(In the case of a new subject, this cell is filled in by the Dean's Office, following approval)

Course coordinator: prof. Takács István

Place of work, phone number: +3612100279

Position: professor, department head

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

Objectives of the course and its place in the medical curriculum:
The primary objective of the course in internal medicine for fourth-year students, who have been acquired the basic skills of physical examination, is the symptom-based and patient-oriented education of various segments of internal medicine. Internal medicine I comprises **endocrinology, metabolic disorders, nephrology and gastroenterology**. Students become familiar with the diagnostics and the treatment of the most common disorders of these disciplines.

Place of instruction (address of lecture hall or seminar room etc.):
Department of Internal Medicine and Oncology
1083 Budapest, Korányi S. u. 2/a

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

Prerequisites for course registration and completion:
Internal Medicine Propedeutics
Translational Medicine - Pathophysiology II
Pharmacology and Pharmacotherapy II

Conditions for concurrent course registration and permission thereof in the case of a multi-semester subject:
Not applicable.

Student headcount conditions for starting the course (minimum, maximum) and method of student selection:
Based on student registration in Neptun, in four / five blocks throughout the year.
In each block 42-45 students are expected.

Detailed course description:

During a 5-week block practice, students spend 13 days in the department, through 4 weeks.
Students are assigned into groups (14-16 students / group) for the case discussions that are held in rotation, resulting in fewer students learning about a given topic at a time. Bedside practices are also held in small groups (7-8 students/group).
Within the daily schedule, there are lectures for the entire block of students (42-45 students), and case discussion practices in rotation and bedside practices for small groups of students.
Exams are held on the fifth, final week.

Schedule:

	Monday	**Tuesday**	**Wednesday**	**Friday**
8:15-9:45	Case discussion 1	Case discussion 3	Case discussion 5	Case discussion 7
10:00-12:15	Bedside practice	Bedside practice	Bedside practice	Bedside practice
13:15-14:00	Lecture 1	Lecture 3	Lecture 5	Lecture 7
14:15-15:00	Lecture 2	Lecture 4	Lecture 6	Lecture 8
15:15-16:00	Case discussion 2	Case discussion 4	Case discussion 6	Case discussion 8

Week #1

	MONDAY	TUESDAY	WEDNESDAY	FRIDAY
8:15-9:45	**8:00-8:20** Introduction **8:30-10:00** S27 Tislér A S210 Folhoffer A S24 Horváth Cs	S28 Studinger P S211 Hagymási K S23 Tóth M / Tőke J	S29 Pethő Á S110 Hegyi P S21 Szücs N /Tőke J	S25 Horváth V S26 Reismann P S22 Szili B
10:00-12:15	**10:30-12:15** bedside practice	bedside practice	bedside practice	bedside practice
13:15-14:00	N13 Pethő Á	N17 Tislér A	G20 Miheller P	D9 Kempler P
14:15-15:00	E1 Igaz P	G18 Székely H	G22 Hritz I	E2 Takács I
15:15-16:00	S19 Ledó N S212 Patai Á S13 Mészáros Sz	S18 Studinger P S112 Mihály E S12 Dohán O	S17 Pethő Á S111 Székely H S14 Dohán O /Reismann P	S15 Nagy G S16 Kollár R S11 Szili B

Week #2

	MONDAY	TUESDAY	WEDNESDAY	FRIDAY

8:15-9:45	S27 Tislér A S210 Folhoffer A S24 Horváth Cs	S28 Studinger P S211 Hagymási K S23 Tóth M / Tőke J	S29 Pethő Á S110 Hegyi P S21 Szücs N /Tőke J	S25 Horváth V S26 Reismann P S22 Szili B
10:00-12:15	bedside practice	bedside practice	bedside practice	bedside practice
13:15-14:00	D10 Tabák Á	E3 Lakatos PA	N15 Ledó N	E4 Reismann P
14:15-15:00	N14 Studinger P	D11 Kocsis Gy	E5 Tóth M	G21 Mihály E
15:15-16:00	S19 Ledó N S212 Patai Á S13 Mészáros Sz	S18 Studinger P S112 Mihály E S12 Dohán O	S17 Pethő Á S111 Székely H S14 Dohán O /Reismann P	S15 Nagy G S16 Kollár R S11 Szili B

Week #3

	MONDAY	TUESDAY	WEDNESDAY	FRIDAY
8:15-9:45	S27 Tislér A S210 Folhoffer A S24 Horváth Cs	S28 Studinger P S211 Hagymási K S23 Tóth M / Tőke J	S29 Pethő Á S110 Hegyi P S21 Szücs N /Tőke J	S25 Horváth V S26 Reismann P S22 Szili B
10:00-12:15	bedside practice	bedside practice	bedside practice	bedside practice
13:15-14:00	E6 Igaz P	G23 Hagymási K	G19 Horváth M	E8 Horváth Cs
14:15-15:00	G24 Hegyi P	E7 Szücs N	N16 Wagner L / Cseprekál O	D12 Szathmári M
15:15-16:00	S19 Ledó N S212 Patai Á S13 Mészáros Sz	S18 Studinger P S112 Mihály E S12 Dohán O	S17 Pethő Á S111 Székely H S14 Dohán O /Reismann P	S15 Nagy G S16 Kollár R S11 Szili B

Week #4

	MONDAY	TUESDAY	WEDNESDAY	FRIDAY
8:15-9:45	RETAKE (optional)	RETAKE (optional)		
10:00-12:15	bedside practice	RETAKE (optional)		Zoom consultation (optional)
13:15-14:00	RETAKE (optional)	RETAKE (optional)		
14:15-15:00	RETAKE (optional)	RETAKE (optional)		
15:15-16:00	RETAKE (optional)	RETAKE (optional)		

Week #5

	MONDAY	TUESDAY- FRIDAY
		oral exam (9:00-13:30)
10:00-11:00	written exam	

Endocrinology and metabolic diseases

Lectures:

1. E1 Introduction to endocrinology: Diseases of the pituitary and the hypothalamus. (Igaz P)

2. E2 Thyroid disorders – symptoms, diagnosis and treatment. (Takács I)
3. E3 Thyroid nodules and cancer. (Lakatos PA)
4. E4 Secondary endocrine hypertension (primary aldosteronism, pheochromocytoma). (Reismann P)
5. E5 Glucocorticoid deficiency and overproduction: Addison's disease and Cushing's syndrome, iatrogenic Cushing's syndrome. (Tóth M)
6. E6 Neuroendocrine tumours. (Igaz P)
7. E7 Disorders of the gonads. (Szücs N)
8. E8 Disorders of calcium metabolism. (Horváth Cs)
9. D9 Causes and diagnosis of blood glucose disorders. (Kempler P)
10. D10 Glucose control in diseases of carbohydrate metabolism. (Tabák Á)
11. D11 Managing diabetic patients and their complications. (Kocsis Gy)
12. D12 Obesity, management and treatment of patients with lipid metabolism disorders. (Szathmári M)

Case discussions:

1. S21 Diagnosis, treatment and follow-up of patients with pituitary adenoma and hypopituitarism. (90' Szücs N / Tőke J)
2. S22 What to do in case of altered TSH, examination of thyroid disorders. (90' Szili B)
3. S23 Examination of cortisol overproduction and deficiency, follow-up and management of patients with Cushing's syndrome and adrenocortical insufficiency (90' Tóth M / Tőke J)
4. S24 Diagnosis and treatment of osteoporosis. (90' Horváth Cs)
5. S25 Managing diabetes mellitus – diet and treatment. (90' Horváth V)
6. S26 Purine, iron, copper and other rare metabolism disturbances. (90' Reismann P)
7. S11 Thyroid nodules, examination of thyroid cancer, radioiodine treatment. (45' Szili B)
8. S12 Options of neuroendocrine tumour treatment, endocrine paraneoplastic syndromes. (45' Dohán O)
9. S13 Examination and treatment of hyper- and hypocalcaemia (45' Mészáros Sz)
10. S14 Thyroid ultrasound (45' Dohán O / Reismann P)
11. S15 Managing and follow-up of diabetic patients, complications. (45' Nagy G)
12. S16 Obese patient, metabolic syndrome, when to treat elevated cholesterol. (45' Kollár R)

Nephrology

Lectures:

1. N13 Glomerular diseases. (Pethő Á)
2. N14 Tubulointerstitial and cystic kidney diseases. (Studinger P)
3. N15 Electrolyte disorders. (Ledó N)
4. N16 Renal transplantation. (Wagner L / Cseprekál O)
5. N17 Differential diagnostics of renal diseases. (Tislér A)

Case discussions:

1. S27 A young female patient with acute kidney injury and liver dysfunction. (90' Tislér A)
2. S28 Approach to a patient with glomerulonephritis. (90' Studinger P)
3. S29 Dialysis treatment. (90' Pethő Á)
4. S17 Management of a patient with chronic kidney disease. (45' Pethő Á)
5. S18 Vascular disorders of the kidneys, kidney stones and urinary tract infection. (45' Studinger P)
6. S19 Hematuria and proteinuria during pregnancy. (45' Ledó N)

Gastroenterology

Lectures:

1. G18 Disorders of the oesophagus and the stomach. (Székely H)
2. G19 Disorders of the small bowel, malabsorption and maldigestion. (Horváth M)
3. G20 Inflammatory bowel diseases. (Miheller P)
4. G21 Diseases of the large bowel. Functional GI disorders. (Mihály E)
5. G22 Gastrointestinal bleeding. (Hritz I)
6. G23 Management of a patient with acute liver failure. (Hagymási K)
7. G24 Disorders of the pancreas. (Hegyi P)

Case discussions:

1. S110 Management of a patient with a pancreatic disease. (90’ Erőss B)
2. S211Approach to a patient with acute abdominal pain. (90’ Hagymási K)
3. S210 Approach to a patient with an abnormal liver function test. (90’ Folhoffer A)
4. S212 Differential diagnosis and management of obstructive jaundice. (45’ Patai Á)
5. S111 Approach to a patient with swallowing difficulty. (45’ Székely H)
6. S112 Celiac disease. Differential diagnosis of diarrhoea (45’ Mihály E)

Bedside practices / Tutors

Monday Week #1 10:30-12:15, Weeks #2-4 10:00-12:15
Tislér A / Barkai L / Horváth V / Ledó N / Szabó G / Svébis M

Tuesday Weeks #1-3 10:00-12:15
Barna I / Szabó G / Kocsis Gy / Kollár R / Vági O / Leister K

Wednesday Weeks #1-3 10:00-12:15
Tőke J / Studinger P / Erőss B / Hegyi P / (Hagymási K - Székely H - Müllner K: 2 groups)

Friday Weeks #1-3 10:00-12:15
Decman Á / Garam N / Perge P / Szabó G / Németh D / Szili B

Related subjects due to interdisciplinary fields (both compulsory and elective) and potential overlaps between subjects:
Disorders of the thyroid gland - Surgery, Nuclear Medicine
Reproductive endocrinology – Obstetrics and Gynaecology, Urology
Diabetes mellitus – Ophthalmology, Neurology, Dermatology
Acute abdomen – Surgery
Gastroenteritides – Infectology
Acute kidney injury – Urology, Intensive Therapy

Attendance requirements; conditions under which students can make up for absences and the method of absence justification:
According to the rules of the University, students are required to participate on at least 75% of all sessions. This is evaluated through attendance sheets signed by 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.

Form of assessment in the study period:
(including the number, topics and scheduling of oral and written tests, their share in the overall evaluation, make-up tests and improvement tests)
There is no formal midterm evaluation. During case discussions and bedside practices the interaction between students and the tutor provides an opportunity to assess the knowledge of students.

Number and type of assignments for individual work and the deadline for submission:
Not applicable

Requirements to obtain the teacher’s signature:
Participation on at least 75% of all sessions. 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, end-term examination, term-grade, term-grade on a three-grade rating scale, no examination)***:**
end-term (semi-final) examination, with written and oral parts

Examination requirements:

On the first day of the exam week, students take a 60-min written test. Written test is comprised of 12-15 open-ended questions. The written test provides 50 points: 20 points from endocrinology and metabolic disorders, 15 points from nephrology and 15 points from gastroenterology.

After the test, during the following days, a bedside, patient-oriented oral exam is taken. Oral exam is comprised of physical examination of a patient, interpretation of physical findings and discussion of diagnostic and therapeutic approach to the patient's endocrine / metabolic / renal / gastroenterological medical condition.

There is not any topic list for the written or the oral part of the exam. A sample written test is provided to students on the website of the Department / Moodle to help preparation.

Method and type of grading:

Written test and oral exam both provide 50-50 points. Passing the written test requires at least 25 points (50%). Taking the oral exam is feasible only after a successful written test.

Score-to grade conversion is as follows:

90-100: excellent (5), 80-89: good (4), 70-79: average (3), 60-69 pass (2), <60 or <25 on the written test: fail (1).

There is not any possibility of an offered grade.

Retake of a failed exam is feasible on the exam week of any subsequent block or on the extracurricular exam week (late August / early September).

List of course books, textbooks, study aids and literature facilitating the acquisition of knowledge to complete the course and included in the assessment, precisely indicating which requirement each item is related to (e.g., topic by topic) as well as a list of important technical and other applicable study aids:

1. Lynn S. Bickley: Bates' Guide to Physical Examination and History Taking. (Wolters Kluwer, 12th Ed., 2016.) ISBN: 9781469893419
2. Feather – Randall – Waterhouse: Kumar and Clark's Clinical Medicine. (Elsevier, 10th Ed., 2020), ISBN: 9780702078682
3. Jameson – Fauci – Kasper – Hauser – Longo –Loscalzo: Harrison's Principles of Internal Medicine. (McGraw-Hill Education, 21st Ed., 2022). ISBN: 9781264268504
4. Lecture and case discussion slides (through Moodle)

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

Signature of the director of the host institution:

Date of submission: