

## COURSE REQUIREMENTS

<b>Semmelweis University, Faculty of Medicine</b> <b>Department of Internal Medicine and Hematology</b>
<b>Angol nyelven<sup>1</sup>:</b> Internal Medicine II. <b>Credits:</b> 7 <b>Contact hours:</b> 105 / block <b>Type:</b> <u>obligatory</u> / elective
<b>Year:</b> 2021/2022
<b>Subject code:</b> AOKBHK783_2A
<b>Course director:</b> Prof. dr. Masszi Tamás <b>Telephone:</b> 06-1-375-7364 <b>Title:</b> professor, department head <b>Date and number of habilitation:</b> 2010.06.07, 305
<b>Objective of the course and relevance to the educational curriculum:</b> The primary objective of the course in internal medicine for fifth-year students is the symptom-based and patient-oriented education of <b>hematology, immunology, rheumatology, and infectology</b> . Students become familiar with the diagnostics and treatment of the most common disorders of the above disciplines. Besides the above mentioned, <b>integrative medicine</b> , the holistic approach to medicine is also taught. This means the presentation of the coordinated patient care between internal medicine subspecialties and other related professionals and the illustration of the complexicity of real life cases. <b>Differential diagnosis</b> also requires utilization of knowledge acquired from different specialties in the diagnostic phase of a case. With this complex program we emphasize the practical importance of internal medical approach and pursuit and teach its application in the real world.
<b>Location:</b> Semmelweis University, Faculty of Medicine Department of Internal Medicine and Hematology 1088 Budapest, Szentkirályi. u. 46.
<b>Skills obtained upon successful completion of the course:</b> 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 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.
<b>Prerequisites of the course:</b>  Internal Medicine I., Immunology
<b>Number of students (minimum, maximum) required to initiate the course</b>  Students are registered in the NEPTUN System to the blocks

**Registration to the course:**

Through the NEPTUN System

**Detailed syllabus:**

Internal Medicine II. is taught in a block system. During the 5-week block, students spend 14 days (8 hours/day) in the Department. Theoretical and practical (bedside) classes are taught. Students are assigned into groups for bedside practices, case discussions and consultations that are held in rotation resulting in fewer students learning about a given topic at a time.

According to the topics below, classes are taught also dependent on the available patients.

***Hematology*****Topic list of the lectures:**

1. Aplastic anemia. Agranulocytosis. Hemopoetic stem cell transplantation. (Prof. Masszi Tamás)
2. Acute myeloid leukemia. Myelodysplastic syndromes (dr. Szombath Gergely)
3. Malignant lymphomas: Hodgkin-lymphoma, non-Hodgkin lymphomas. (dr. Benedek Szabolcs)
4. Chronic myeloproliferative diseases: CML, myelofibrosis, polycythemia rubra vera, essential thrombocythemia (dr.Várkonyi Judit)
5. Regulation of hemopoiesis. Differential diagnosis of anemias (dr. Farkas Péter)
6. Thrombocytopenias and thrombocytopathy. Hemophylia (dr. Horváth Laura)
7. Increased coagulation (thrombophylia). Disciplines and practice of anticoagulant therapy. (dr. Bodó Imre)
8. Plasmacytic dyscrasias. Acute lymphoid leukemia. (dr. Varga Gergely)

**Topic list of the practices:**

1. Neutropenic fever
2. Palliative treatment of acute leukemia
3. Curative treatment of acute leukemia
4. NHL low-grade / NHL high-grade / Hodgkin's disease
5. CLL
6. Myelodysplasia
7. Bone marrow sampling. Presentation of sampling.
8. Myeloma

**Topic list of the consultations:**

- A. Ph-negative myeloproliferative diseases
- B. Anemia – differential diagnostics
- C. Anemia – case based discussion
- D. CML
- E. Hemophylia
- F. Thrombophylia
- G. Bone marrow transplantation

***Infectology*****Topic list of the lectures:**

1. Emergencies in infectology (dr. Kempler Miklós)
2. Differential diagnosis of fever (dr. Temesszentandrás György)
3. HIV/AIDS, Tropical diseases in Hungary (dr. Lakatos Botond)

4. Multiresistent pathogens, infection control and antimicrobial stewardship (dr. Peskó Gergely)

**Topic list of the practices:**

9. Urinary tract infections
10. Airway tract infections
11. Skin and soft tissue infections
12. Infectological situations in practice (sepsis, meningitis, Lyme, pharyngitis)

**Topic list of the consultations:**

- H. Introduction to infectology
- I. FUO
- J. Sepsis
- K. Intraabdominal infections
- L. Infective endocarditis
- M. Application of antibiotics in the practice, stewardship

***Immunology*****Topic list of the lectures:**

1. Vasculitides of the great vessels. (dr. Temesszentandrás György)
2. Rare autoimmune diseases (PAN, sarcoidosis, polychondritis) (dr. Temesszentandrás György)
3. HANO (dr. Farkas Henriette)

**Topic list of the practices:**

13. SLE
14. Autoimmun myopathies
15. Kisereket érintő (ANCA asszociált) vasculitisek
16. Sjögren sy – Progressive systemic sclerosis
17. Primary and secondary immunodeficiencies
18. Therapy of autoimmune diseases. Side effects of steroid therapy
19. Rheumatoid arthritis
20. Spondylarthropathies
21. Gout, arthrosis

**Topic list of the consultations:**

- N. Autoimmune ophthalmopathies
- O. Dermatological presentation of autoimmune diseases
- P. Allergic diseases

**Additional assignments to be completed for the course:**

None

**Required attendance:**

According to the Study and Examination Regulations, students are required to participate on at least 75% of all sessions.

**Midterm evaluation:**

There is no formal midterm evaluation.

**Requirements for obtaining the signature for the course:**

Participate on at least 75% of all sessions, proven by attendance sheets.

**Type of exam:** semi-final

Each course is concluded by a practical skill oriented oral exam. During the exam the students are required to answer questions based on the knowledge acquired during practical sessions and by reading the compulsory chapters of the theoretical curriculum, by elaborating on 3 themes of the titles below.

**Exam requirements:**

### *Hematology*

1. Investigation of an anemic patient
2. Iron-deficiency anemia
3. Macrocytic anemia
4. Anaemia associated to chronic diseases
5. Hemolytic anemia
6. Aplastic anemia
7. Checking of the coagulation system
8. Evaluation of thrombosis
9. Acquired thrombophylia
10. Antiphospholipid syndrome
11. Hereditary hemophylia (Hemophylia A and B)
12. Von Willebrand disease
13. Anticoagulant therapy (indications, implementations)
14. DIC
15. Investigation of a thrombocytopenic patient
16. Thrombocytosis
17. TTP/HUS
18. ITP
19. Symptomatology of the lymphoproliferative diseases
20. Evaluation of lymphadenopathy
21. Non-Hodgkin lymphomas
22. Follicular lymphoma
23. Diffuse large B-cell lymphoma
24. Chronic lymphocytic leukemia/ Small lymphocytic lymphoma
25. Myeloma multiplex
26. Hodgkin-lymphoma
27. Symptomatology of myeloproliferative diseases
28. Acute myeloid leukemia
29. Acute lymphoid leukemia
30. Ph-negative myeloproliferative neoplasia (PV, ET, MF)
31. Chronic myeloid leukemia
32. Myelodysplasia syndrome
33. Autologous stem cell transplantation
34. Allogenic stem cell transplantation

### *Infectology*

1. Basic principles of infectology and antimicrobial therapy (infectious disease anamnesic history and physical examination, targeted, empirical and prophylactic therapy, importance of source control, blood stream infections)
2. Common antibiotics, groups of antibiotics and their clinical use (penicillins, cephalosporins, carbapenems, glycopeptids, metronidazol; bacteriostatic and bactericid antibiotics, expected susceptibility – natural resistance; important factors: host, pharmacokinetics, mechanism of action)  
penicillinek, cephalosporinok,
3. Common antibiotics, groups of antibiotics and their clinical use (lincosamids, macrolids, rifampin, tetracyclins, fosfomycin, nitrofurantoin, fluoroquinolones: bacteriostatic and bactericid antibiotics, expected susceptibility – natural resistance; important factors: host, pharmacokinetics, mechanism of action)
4. FUO – fever of unknown origin

5. Upper respiratory tract infections (sore throat, pharyngitis, otitis media, sinusitis, acute bronchitis)
6. Mononucleosis syndrome
7. Community acquired pneumonia
8. Nosocomial pneumonia
9. UTI (asymptomatic bacteriuria, cystitis, prostatitis)
10. UTI (pyelonephritis, catheter associated UTI)
11. Sepsis, septic shock
12. Intraabdominal infections (cholangitis/cholecystitis, abdominal abscess [liver, spleen, psoas], diverticulitis, peritonitis)
13. Endocarditis.
14. Lyme
15. Acute bacterial meningitis, brain abscess, neurotop viral infections
16. Erysipelas, cellulitis, fasciitis necrotisans, toxic shock syndrome, infectious arthritis, osteomyelitis
17. Neutropenic fever, systemic mycosis, infections of the immunosuppressed patient
18. Infective diarrhoea (bacterial, viral, Cl.diff.), food poisoning
19. HIV. AIDS and AIDS related diseases
20. Vaccines for adults and their importance. The flue.
21. Antimicrobial resistance, resistant microorganisms and their clinical importance; antimicrobial stewardship.

#### Immunology/rheumatology

1. SLE clinical picture
2. SLE diagnostics and treatment
3. Rheumatoid arthritis clinical picture
4. Rheumatoid arthritis diagnostics and treatment
5. Seronegative spondylarthritises
6. Gout
7. Vasculitises of the small arteries
8. Vasculitises of the middle and great arteries
9. Polyarteritis nodosa
10. Sjögren's syndrome
11. Autoimmune myopathies
12. Progressive systemic sclerosis
13. Primary and secondary immunodeficiencies
14. Allergy
15. Differential diagnosis of arthritis

#### **Scoring the exam results:**

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

#### **Registration to the exam:**

Via the NEPTUN system, according to the general rules of the Study and Exam Regulations (TVSZ).

#### **Failed exams:**

Via the NEPTUN system, according to the general rules of the Study and Exam Regulations (TVSZ). Successful exams may be repeated up to 1 time.

#### **Recommended print, electronic and online learning material:**

continuously updated materials available on the website of the Department and on moodle

Oxford Textbook of Medicine 10<sup>th</sup> Ed. (Weatherall, Ledingham, Warrel, 2017).  
Harrison's Principles of Internal Medicine 20<sup>th</sup> Ed. (McGraw-Hill, 2018).  
Bates' Guide to Physical Examination and History Taking. 12<sup>th</sup> Ed.(Wolters Kluwer, 2016).

**Signature of the course director:**

**Signature of the host institution:**

**Submission date:**

**OKB decision:**

**Notes of the dean:**

**Deans' signature:**

<sup>1</sup> Csak abban az esetben kell megadni, ha a tárgy az adott nyelven is meghirdetésre kerül.

<sup>2</sup> Dékáni Hivatal tölti ki, jóváhagyást követően.

<sup>3</sup> Az elméleti és gyakorlati oktatást órákra (hetekre) lebontva, sorszámozva külön-külön kell megadni, az előadók és a gyakorlati oktatók nevének feltüntetésével. Mellékletben nem csatolható!

<sup>4</sup> Pl. terepgyakorlat, kórlapелеmzés, felmérés készítése, stb.

<sup>5</sup> Pl. házi feladat, beszámoló, zárthelyi stb. témaköre és időpontja, pótlásuk és javításuk lehetősége.

<sup>6</sup> Elméleti vizsga esetén kérjük a tételsor megadását, gyakorlati vizsga esetén a vizsgáztatás témakörét és módját.

<sup>7</sup> Az elméleti és gyakorlati vizsga beszámításának módja. Az évközi számonkérések eredményeink beszámítási módja