Semmelweis University, Faculty of Medicine – single, long-cycle medical training
Name of the host institution (and any contributing institution):
Pulmonológiai Klinika, Mellkassebészeti Klinika (Országos Onkológiai Intézet)

Name of subject: Pulmonológia és mellkassebészet
in English: Pulmonology and thoracic surgery
in German: Pulmonologie und Thoraxchirurgie

Credit value: 4
Semester: 7. szemeszter, 8. szemeszter
(in which the subject is taught according to the curriculum)

Hours per week	Lecture	Practical lesson	Seminar
4.0	1.5	2.5	0.0

Hours per semester	Lecture	Practical lesson	Seminar
0.0	0.0	0.0	0.0

Type of course:
obligatory

Academic year:
2025/26

Language of instruction (for optional and elective subjects):
angol

Course code:
AOKPUL751_1A
(in the case of a new course, to be completed by the Dean’s Office, following approval)

Course coordinator name: Dr. Müller Veronika
Course coordinator location of work, telephone availability: Pulmonology Clinic, +36-1-355-9733
Course coordinator position:professor of medicine, head of department
Course coordinator Date and number of habilitation:2019.06.06. 06/2019

Objective of instruction and its place in the curriculum:

Teaching course on diagnostics and treatment of respiratory diseases.

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

Lecture + Exercise

Competencies acquired through completion of course:

Interpretation of the results of complex lung function studies, blood gas studies, allergic studies and ergospirometry in respiratory diseases, administration of inhaled and oxygen therapy, principles of non-invasive mechanical ventilation in sleep disorders and the acute exacerbations of obstructive airway diseases, principles of the invasive and non-invasive diagnostic methods and the treatment of lung cancer and interstitial lung diseases. Clinical diagnostics and treatment of respiratory infections.

Indications and techniques of chest surgical interventions, emergency chest surgery interventions, practical skills.

Course outcome (names and codes of related subjects):
AOKSPR763_1A, AOKSZL644_SA, AOKANE759_1A, AOKANG661_SA

Prerequisites for course registration and completion: (CODE):

Internal Medicine II (AOKBHK783_2M), Pharmacology II

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

NA

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

According block assignment

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!)

Detailed course description:

(Theoretical and practical instruction must be broken down into lessons (weeks), numbered separately. Please provide the names of lecturers in both types of lessons, indicating guest lecturers. This information is not to be attached separately. CVs of guest lecturers, however, must be attached.)

Summary

From the first semester of 2019/2020 - in accordance with the School of Medicine's instructions - the Pulmonology subject will be taught in a 3-week block format at the Department of Pulmonology (Tömő str. 25-29., Budapest 1083). and the Department of Thoracic Surgery (Ráth Gy. str. 7-9, Building III, Budapest 1122).

During the 3-week clinical block course, students will attend 21 hours of lectures (1.5 credits) and 35 hours of practices (2.5 credits) to acquire the required knowledge and practice in pulmonary patient examination, as well as basic diagnostic and therapeutic procedures. The course will include classes on thoracic surgery diagnostics and therapy. The lectures and exercises will be scheduled according to a uniform timetable, however, the exact thematic order may vary from block to block, and will be released at the beginning of the 3-week course.

1. Clinical skills development lecture

2. Thematic practical demonstration

3. Interactive practice

4. Bedside practice

Week 1.

Monday Tuesday Wednesday Friday (Pulmonology)

8:00-9:30 1/2/3/4

10:00-11:30 1/2/3/4

11:30-12:30 Lunch break

12:30-13:30 1/2/3/4

14:00-16:00 1/2/3/4

Week 2.

Monday

8:00-16:45 Thoracic surgery

Tuesday Wednesday (Pulmonology)

8:00-9:30 1/2/3/4

10:00-11:30 1/2/3/4

11:30-12:30 Lunch break

12:30-13:30 1/2/3/4

14:00-16:00 1/2/3/4

Week 3.

Exam start 10:00 and 13:00

Exact timepoints and dates will be opened at the start of the block according study and examination regulations.

Detailed course description - Pulmonology (The schedule of individual lectures and practices is based on the educational schedule of the school year, taking into account public holidays, and based on the availability of education rooms.)

Lecture topics (18 x 45')

- Bronchial asthma
- Interstitial lung disease
- Lung cancer
- Chronic obstructive pulmonary disease
- Pneumonia. Tuberculosis
- Sleep related breathing disorders
- Pulmonary embolism
- Respiratory insufficiency. Non-invasive mechanical ventilation
- Pulmonary rehabilitation. Smoking cessation
- Lung transplantation. Cystic fibrosis

Thematic practical demonstration topics (8 x 45')

- Lung function and arterial blood gas interpretation (2x)
- Pulmonary diagnostics (2x)
- Non-invasive ventilation methods

· Oxygen therapy methods

· Inhalation therapy methods, nebulisator use in acute care

· Pulmonary hypertension

Interactive practice topics (9 x 45')

· Lung function laboratory

· Bronchology/skill laboratory laboratory (2x)

· Non-invasive ventilation patient care (2x)

· Allergology

· Sleep laboratory

· Pulmonary rehabilitation care

· Pleural drainage and thoracic ultrasound

General/specific patient examinations (12 x 45')

· Pulmonary department

· Pulmonary-oncology department

· Transplantation department

Teachers responsible for lectures and practices - Pulmonology:

Prof. Dr. Veronika Müller, , Prof. Dr. Lilla Tamási, Prof. Dr. György Losonczy, Prof. Dr. János Tamás Varga, Dr. med. habil. Gábor Horváth, Dr. Anna Bardóczi, Dr. Enikő Bárczi, Dr. Anikó Bohács, Dr. Lilla Bűdi, Dr. Balázs Csoma, Dr. Györgyi Csósza, Dr. Noémi Eszes, Dr. Dorottya Fekete, Dr. Dorottya Fésü, Dr. Krisztina Guth, Dr. Dániel Hammer, Dr. Edit Hidvégi, Dr. Péter Horváth, Dr. Péter Jalsovszky, Dr. Kristóf Karlócai, Dr. Zsuzsanna Kováts, Dr. Zsófia Lázár, Dr. Zsombor Matics, Dr. Alexandra Nagy, Dr. Márta Orosz, Dr. Dóra Oroszi, Dr. Erik Palmer, Dr. Lőrinc Polivka, Dr. Éva Seres, Dr. András Südi, Dr. Zoltán Süttő, Dr. Zsófia Tassó, Dr. Nóra Melinda Tóth, Dr. Melinda Vámos, Dr. Rita Varga, Dr. Viktória Varga, Dr. Krisztina Vincze, Dr. Gabriella Zsámboki

Detailed course description - Thoracic surgery

Skill development lecture topics (3 x 45')

· Lung cancer

· Emergency thoracic surgery

· Pneumothorax, pleural effusion

· Lung transplantation

Interactive practice topics (5 x 45')

· Evaluation, diagnostics and treatment of a lung cancer case

· Evaluation, diagnostics and treatment of a metastatic lung cancer case

· Evaluation, diagnostics and treatment of a pleural effusion case

· Evaluation, diagnostics and treatment of a pneumothorax case

· Live stream from the operating room

· Pleural drainage

General/specific patient examinations (1 x 45')

· Transplantation outpatient clinic/department

· Thoracic surgery outpatient clinic/department

Teachers responsible for lectures and practices - Thoracic surgery:

Prof.Dr. Ferenc Rényi-Vámos, Dr. Péter Radeczky, Dr. Balázs Döme, Dr. Krisztina Bogos, Dr. László Agócs, Dr. Levente Bogyó, Dr. Klára Török, Dr. László Tibor Mészáros, Dr. Áron Ghimessy, Dr. Balázs Gieszer, Dr. Kristóf Csende, Dr. Hanna Tihanyi, Dr. Gábor Tarsoly, Dr. Márton Csaba

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Other courses with overlapping topics (obligatory, optional, or elective courses) in interdisciplinary areas. To minimalize 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:

Classes will be held according to the at pre-announced timetable. Absence according study and examination regualtions is allowed. Additional absence must be made up preceedingly based on previous consultation with the tutor or his/her deputy.

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)

During the teaching block, there are no interim tests or examinations. However, having completed certain training practices, teachers may assess the practical knowledge of the students.

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

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Requirements for the successful completion of the course:

According study and examination regulations.

Type of assessment:
kollokvium_en

Examination requirements (list of examination topics, subject areas of tests, lists of mandatory parameters, figures, concepts and calculations, practical skills, optional topics for the project assignment recognized as an exam and the criteria for its completion and evaluation)

1./ attendance on the block practice, practical examination at the time of oral exam: lung function and blood gas result analyis

2./ completion of the thoracic surgery exam

3./ adequate knowledge of the 3 questions (oral exam) (Topics: 1-15; 16-30; 31-45)

Information on the chest surgery examination is available on the website of the Department of Thoracic Surgery under the Education tab:

http://semmelweis.hu/mellkassebeszet/education/.

The Department of Thoracic Surgery self-made lecture notes and online course materials are available on the university's moodle e-learning page:

http://semmelweis.hu/mellkassebeszet/education/. or on the Thoracic Surgery Module (MODDLE)

The exam format will be an online test exam. Students will be able to prepare using notes written by

the staff of the Department of Thoracic Surgery. Notes will be available online for students enrolled in the course. Related information is also available on the Department of Thoracic Surgery's website.

Exam topics - Pulmonology:

1. Practical clinical aspects of lung anatomy and respiratory physiology
2. Arterial blood gas test and interpretation of the results
3. Exercise testing: 6MWT
4. Lung function measurements: static and dynamic lung volumes
5. Bronchial provocation testing and pharmacospirometry
6. Chest pain
7. Dyspnea
8. Cough
9. Physical examination
10. Pulmonary emergencies
11. Bronchoscopy
12. Thoracocentesis
13. Imaging techniques in pulmonology
14. Microbiology, cytology, histology and laboratory techniques
15. Inhalation pharmacotherapy
16. Systemic pharmacotherapy
17. Oxygen therapy
18. Respiratory physiotherapy, rehabilitation, and palliative care
19. Lung transplantation
20. Bronchial asthma
21. COPD and emphysema
22. COPD acute exacerbation
23. Asthma and COPD pharmacotherapy
24. Bronchitis and bronchiectasis
25. Pneumonia
26. Viral pneumonia
27. Tuberculosis
28. Other pulmonary infections
29. Lung cancer pathology and molecular biology
30. Lung cancer: diagnostics and staging
31. Principles of lung cancer therapy
32. Chemo-, immune- and targeted therapy of lung cancer
33. Diagnostics of sleep related breathing disorders
34. Principles of OSAS, central apnea and obesity hypoventilation syndrome therapy
35. Acute respiratory failure
36. NIV therapy
37. Pathology and diagnostics of interstitial lung diseases
38. Idiopathic pulmonary fibrosis
39. Interstitial lung diseases with known etiology
40. Sarcoidosis
41. Pulmonary embolism
42. Pulmonary hypertension

43. Pleural effusion
44. Pneumothorax
45. Genetic pulmonary disorders

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)

During the oral exam, the student's knowledge will be evaluated using a scale of 1 to 5 mark. Practical exam must be at least sufficient (2) for entering theroretical exam. The final exam mark is the result of 5/6 pulmonology 1/6 thoracic surgery exams, where all sub-exam marks are at least grade 2.

Printed resources:

Required	No
Author	Prof. Dr. Müller Veronika
Title	Respiratory Medicine
Publisher	Semmelweis Kiadó és Multimédia Stúdió Kft.
Year of publication	2024

Required	Yes
Author	Palange P, Rohde G:
Title	ERS Handbook of Respiratory Medicine 3rd Edition
Publisher	ISBN: 978-1-84984-079-8
Year of publication	2019

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

Signature of the director of the host institution:

Date of submission:
