Semmelweis University, Faculty of Medicine – single, long-cycle medical training
Name of the host institution (and any contributing institution):
Patológiai, Igazságügyi és Biztosítási Orvostani Intézet

Name of subject: Patológia II.
in English: Pathology II.
in German: Pathologie II.

Credit value: 8
Semester: 6. szemeszter
(in which the subject is taught according to the curriculum)

Hours per week	Lecture	Practical lesson	Seminar
8.0	4.0	4.0	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):

Course code:
AOKPIB1110_2A
(in the case of a new course, to be completed by the Dean’s Office, following approval)

Course coordinator name: Dr. Kiss András (igazgató)
Course coordinator location of work, telephone availability: Department of Pathology, Forensic and Insurance Medicine, +36208259664
Course coordinator position: Director
Course coordinator Date and number of habilitation: Dr. András Kiss 2007. május 30. Anyakönyvi szám: 248

Objective of instruction and its place in the curriculum:

Lectures:

Lectures are of great help in getting to know and mastering pathology, which are held by professors who are most familiar with other fields.

The curriculum covers the entirety of general and detailed pathology. In order to acquire the

practical approach of the theoretical parts, general pathology is presented as a close part of detailed pathology. Only a few basic chapters of general pathology are the subject of independent lectures, so the audience receives organ pathology training at the beginning of the pathological studies, which aims to facilitate further studies.

Getting to know the curriculum is facilitated by 40-60 macroscopic and microscopic pictures in each lecture, but depending on the nature of the lecture, these are supplemented with electron microscopy, X-ray images, etc., occasionally digitally recorded cases are presented.

The lectures will be held for 1 hour and 15 minutes, and the Clinicopathology lectures for 45 minutes.

The chronological order of the lectures and the appointed instructors are indicative and may change during the school year. The updated version is continuously available to our students on the Moodle interface of the course in an online form.

Practical Sessions:

Autopsy Room Practices:

In the second semester, autopsy practices focus on expanding clinicopathological knowledge, summarizing abnormalities found during autopsies, identifying their correlation with medical history, and providing structured descriptions of findings. The aim is also to develop a differential diagnostic approach and recognize theoretical correlations.

If a cadaver is not available for an autopsy session, students will participate in laboratory visits or case presentations.

All information obtained from autopsies, lectures, and demonstrations is considered medical confidentiality and applies to students as well.

It is strictly forbidden to record (audio, photo, or video) any of the institute's educational and demonstration materials, presentations, built environment, equipment, or any other parts, particularly regarding autopsy and histopathology practices and lectures. These materials are the property of the institute or fall under its direct control and are not public. Unauthorized recording, disclosure, or removal without written permission from the institute’s leadership is prohibited and will result in disciplinary action.

Histopathology Practices:

These sessions aim to provide students with fundamental histopathological knowledge and diagnostic and description skills. Students analyze digital histological slides through an online teleconsultation program, both with instructors and independently. The content of histopathology sessions is also available in online video format via the Moodle system.

The institute reserves the right to modify the sequence of practical sessions (considering public

holidays, for example). The updated schedule is always available online for students on the Moodle platform.

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

Lectures and practices.

Competencies acquired through completion of course:

Basic knowledge about development and process of the diseases, application of medical terminology, recognition of basic microscopic, macroscopic alterations and clinico-pathology associations.

Course outcome (names and codes of related subjects):

Prerequisites for course registration and completion: (CODE):

Pathology I.

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

In accordance with the provisions of the Study and Examination Regulations , with the individual consent of the head of the educational-research unit that has announced the subject parallel enrolment is possible.

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

Maximum of 160 students.

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!)

Week 1

II/1.Head and neck / Dr. Judit Halász

- Neoplastic and non-neoplastic lesions of the lips, oral cavity, tongue, teeth, salivary glands, sinuses, pharynx, larynx, ear.

II/2. Clinicopathology of salivary gland tumors, oral cavity and pharyngeal tumors

II/3. Respiratory system I. / Dr. Eszter Székely

- Diseases of conducting airways and lung parenchyma.
- Diffuse alveolar damage.
- Chronic obstructive pulmonary disease (COPD).
- Restrictive lung diseases.

Week 2

II/4. Respiratory system II. / Dr. József Tímár

- Development of lung cancer.
- Neoplasia (primary cancer of the lung, metastasis, benign tumors).
- Etiology, genetic abnormalities.
- Diseases of the pleura.

II/5. Clinicopathology of COVID-19 pneumonia

II/6. Gastrointestinal tract I. / Dr. András Kiss

- Esophagus (anatomy and developmental disorders, inflammation, trauma, tumors. Pathology of the stomach (part 1).

Week 3

II/7. Gastrointestinal tract II. / Dr. Lilla Madaras

- Pathology of the stomach (part 2) and small bowel.
- Appendix.

II/8. Clinicopathology of diseases of the upper gastrointestinal tract

II/9. Gastrointestinal tract III. / Dr. Lilla Madaras

- Pathology of the Colon (congenital disorders, infections, diverticular disease, inflammation, Crohn’s disease, ulcerative colitis, vascular diseases, neoplasms, other disorders).
- Peritoneum.

Week 4

II/10. Pathology of the liver I. / Dr. Zsuzsa Schaff / Dr. András Kiss

- Anatomy and function of the liver.
- Bilirubinmetabolism and jaundice.
- Hepatic failure.
- Hepatorenal syndrome.
- Viral hepatitis.
- Chronic hepatitis.
- Cirrhosis.
- Portal hypertension.
- Nonviral hepatitis.

II/11. Clinicopathology of colorectal tumors and inflammatory bowel diseases

II/12. Pathology of the liver II. / Dr. Judit Halász

- Alcoholic liver disease, toxic liver injury.
- Hemochromatosis.
- Vascular disorders.

Week 5

II/13. Pathology of the liver III. / Dr. András Kiss

- Neoplasms.
- Gallbladder and bile ducts (congenital anomalies, cholecystitis, cholelithiasis, cholangitis, neoplasms)
- Liver transplantation.

II/14. Clinicopathology of liver and pancreas tumors

II/15. Pathology of the exocrine pancreas / Dr. Ildikó Illyés

- Developmental abnormalities, inflammation, tumors of the exocrine pancreas.

Week 6

II/16. Endocrinology I. / Dr. Attila Kovács

- Pathology of the endocrine pancreas: Diabetes mellitus.
- The hypothalamus-hypophysis system.
- Pathology of the pituitary gland.

II/17. Clinicopathology of differential diagnosis of endocrine tumors

II/18. Endocrinology II. / Dr. Eszter Székely

- The thyroid gland: hypo- and hyperfunction, inflammations, tumors.
- Pathology of the parathyroid gland.
- Hypo- and hyperfunction and other diseases of the adrenal cortex.
- Tumors of the adrenal gland. Pineal gland. Ectopic hormone production.

Week 7

II/19. Renal pathology I. / Dr. Magdolna Kardos / Dr. Deján Dobi

- Anatomy. Definitions.
- Clinical syndromes.
- Cystic renal diseases.
- Destructive and non-destructive tubulointerstitial diseases.
- Kidney biopsy.
- End stage kidney

II/20. Clinicopathology of glomerular diseases

II/21. Renal pathology II. / Dr. Magdolna Kardos

- Glomerulonephritis.

Week 8

II/22. Renal pathology III. / Dr. Deján Dobi

- Tumors of the kidney.
- Kidney transplantation.

II/23. Clinicopathology of uropathological diseases

II/24. Uropathology / Dr. Eszter Székely

- Congenital abnormalities of the urinary tract.
- Urinary bladder (malformations, inflammation, tumors). Urethra.
- Diseases of the penis and scrotum.

Week 9

II/25. Male genital tract / Dr. Eszter Székely

- Diseases of the epididymis, testes and prostate.

II/26. Clinicopathology of prostatic diseases

II/27. Gynecologic pathology I. / Dr. Lilla Madaras

- Pathology of the vulva and vagina.
- Nonneoplastic diseases of the cervix.
- Precancerous lesions of the cervix.
- HPV. Screening. Conisation. Cervic carcinoma. Bethesda system.

Week 10

II/28. Gynecologic pathology II. / Dr. Madaras Lilla

- Pathology of the uterus.
- Uterine bleeding disorders.
- Endometrial hyperplasia, endometriosis.
- Tumors of the endometrium, myometrium and serosa.

II/29. Clinicopathology of ovarian and uterine tumors

II/30. Gynecologic pathology III. /Dr. Janina Kulka

- Pathology of the fallopian tube and the ovaries.
- Pregnancy-related pathology of the uterus.

Week 11

II/31. Neonatology / Dr. Dóra Hargitai

- Pregnancy-related pathology.
- Premature birth and its complications.
- Intrauterine infections and their sequelae.
- Twin pregnancy.
- Diseases of the perinatal period.
- Sudden infant death.

II/32. Clinicopathology of perinatal diseases

II/33. Breast pathology I. / Dr. Janina Kulka

- Symptoms and diagnosis of breast diseases.
- Malformations.
- Benign symptomatic lesions (inflammations, fibrocystic disease, epithelial dysplasia and its significance, benign tumors).

Week 12

II/34. Breast pathology II. / Dr. Janina Kulka

- Malignant tumors - epidemiology, risk factors.
- Histologic classification of breast cancer.
- Prognostic factors in breast cancer.
- Nonepithelial malignancies of the breast.
- Screening: non-palpable breast lesions. The male breast.

II/35. Clinicopathology of complex diagnosis of breast tumors

II/36. Central nervous system I. / Dr. Benedek Gyöngyösi

- Trauma, vascular and circulatory disorders.
- CSF dynamics.
- Encephalomyelitis, meningitis.
- Congenital malformations.
- Demyelinating diseases.
- Neurodegenerative diseases. Pathology of the eye and ear. Metabolic diseases.

Week 13

II/37. Central nervous system II. / Dr. Benedek Gyöngyösi

- Neoplasms (neuroectodermal, embryonic, ectopic tissue, metastasis).
- Peripheral nervous system (neuropathies, inflammations, trauma, tumors).

II/38. Clinicopathology of eye diseases

II/39. Skin pathology / Dr. Enikő Kuroli (Department of Pathology and Experimental Cancer Research)

- Basics of skin pathology.
- Primary lesions.
- Dermatitides.
- Infectious conditions of the skin.
- Skin manifestations of systemic diseases.
- Tumors of the surface epithelium and skin appendages.
- Pigmented nevi and malignant melanoma

Week 14

II/40. Clinicopathology

II/41. Clinicopathology of skin diseases

II/42. Clinicopathology

Practices

Practice 1- Pulmonary pathology I. - nonneoplastic diseases

• IRDS

• Bronchopneumonia

• Lobar pneumonia

• Tuberculosis

• Boeck sarcoidosis

• Cystic fibrosis

• Pneumocystis pneumonia

Practice 2- Pulmonary pathology II- neoplastic diseases

• Small cell carcinoma

• Squamous cell carcinoma

• Adenocarcinoma

• Mesothelioma

Practice 3- Gastrointestinal pathology I.

• Peptic ulcer - stomach

• Gastritis chronica (H. pylori)

• Carcinoma sigillocellulare

• GIST

• Pleomorphic adenoma – parotid gland

Practice 4- Gastrointestinal pathology II.

• Celiac disease

• Ulcerative colitis

• Crohn’s disease

Practice 5- Liver pathology

• Alcoholic hepatitis

• Viral hepatitis

• Cirrhosis

• Hepatocellular carcinoma

• Chronic cholecystitis

Practice 6- Pathology of the pancreas

• Acute pancreatitis

• Chronic pancreatitis

• Adenocarcinoma of the pancreas

• Neuroendocrine tumor

Practice 7- Endocrine pathology

• Goiter

• Autoimmune thyroiditis (Hashimoto)

• Thyroid gland-follicular adenoma

• Thyroid gland-papillary carcinoma

• Phaeochromocytoma

Practice 8- Renal- and uropathology

• Kidney biopsy – diabetic nephropathy

• End-stage kidney disease

• Renal cell carcinoma

• Transitional cell carcinoma

Practice 9- Uropathology- prostate, testis

• Prostatic hyperplasia

• Prostatic adenocarcinoma

• Testis- seminoma

• Testis -embryonal carcinoma

Practice 10- Gynecologic pathology I.

• Ectopic pregnancy

• Endometriosis

• Endometrial hyperplasia (simple)

• Endometrial carcinoma

• Follicular cyst- ovary

• Mucinous cystadenoma-ovary

• Serous cystadenoma-ovary

• High grade serous carcinoma-ovary

• Choriocarcinoma

Practice 11- Breast pathology

• Fibrocystic disease

• Fibroepithelial tumors

• Ductal carcinoma in situ (DCIS) Invasive carcinoma (NST, lobular)

Practice 12- CNS histopathology

• Purulent meningitis

• Meningeoma

• Glioma

• Brain metastasis

• Parkinson disease

Practice 13 - Skin pathology

· Seborrheic keratosis

· Basal cell carcinoma

· Melanocytic naevus

• Malignant melanoma

Practice 14- Interesting autopsy case presentation Consultation

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:

Attendance at practical sessions is generally mandatory. Instructors take attendance at the beginning of each session, either on paper or online. Students may miss up to **three histology and three autopsy sessions** per semester. Any additional absences must be made up during the semester.

Autopsy sessions can be made up with any group during their scheduled practice time, regardless of the specific session topic.

Histology sessions must be made up within the same week, with any group.

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)

One mid-term demonstration test is conducted during the semester, covering the topics taught up to that point. The test consists of **20 multiple-choice questions (16 single-choice and 4 multiple-choice questions).**

Participation in this test is a prerequisite for obtaining the semester signature (see below). The test is taken during the first 20 minutes of a histology practice session in the designated teaching week.

The demonstration test results contribute to the final exam score as follows:

- **<60%:** 0 points
- **61-74%:** 1 point
- **75-89%:** 2 points
- **90-100%:** 3 points

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

Not relevant.

Requirements for the successful completion of the course:

Students may miss up to **three histology and three autopsy practices** without justification. Any additional absences must be made up, and the make-up attendance must be recorded by the

instructor.

Participation in the mid-term demonstration test is required to obtain the semester signature.

Autopsy sessions can be made up with any group during their scheduled practice time.

Histology sessions must be made up within the same week, with any group.

Type of assessment:
szigorlat_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)

The final exam aims to comprehensively assess students' theoretical and practical pathology knowledge. Students must understand disease definitions, causes, pathogenesis, and the macroscopic, microscopic, and submicroscopic processes involved in disease development, which enable morphological recognition and classification.

The final exam consists of **four parts**, each graded separately. The lead examiner determines the final grade, which may deviate (positively or negatively) from the arithmetic average of the section grades.

The exam covers material from textbooks, lectures, and practical sessions.

Exam Structure:

1. **Test Exam:** 60 multiple-choice questions (60 minutes, covering different topics proportionally).
2. **Histology Exam:** Students must identify and describe two histological slides.
3. **Autopsy Demonstration:** Students present a previously dissected organ and discuss the differential diagnosis of observed changes.
4. **Oral Exam:** One question from each of the following topics: General Pathology (A topic list), Cardiovascular and Oncology Pathology (B topic list) and Detailed, Organ specific pathology (C topic list)

The failed result of the test exam (1st part of the exam) does not automatically indicate a failed exam (i.e., a failed grade), meaning that even with an insufficient result in the test exam, the 2nd part of the exam can still be started.

From the histological sections (2nd part of the exam), at least one of the two slides must be correctly recognized during the exam in order to begin the 3rd part of the exam and to receive a passing grade for the histology section. To pass the 2nd part of the exam, at least one slide out of the two must be basically demonstrated:

- Recognition of the basic organ,

- Establishing the correct diagnosis,
- Providing at least three fundamental histological details related to the diagnosis.

If the test concludes with at least a passing result, but the student fails to successfully demonstrate recognition of any of the histological slides (according to the minimum requirements), the exam will conclude with a failing grade.

The result of the test exam will account for 10% of the final evaluation, while the histology exam will account for 30% (15% for each slide).

The questions for the final test exam will not be shared, as the test is necessarily followed by an oral exam, i.e., the 2nd part of the exam: histological slide recognition.

If the test exam result is fail, but the histological exam result is at least passing, the 3rd and 4th part of the exam (the autopsy room practical exam) may come. If a failing grade is obtained in either the autopsy room organ demonstration (3rd part) or the theoretical exam (4th part), the exam will end with a failing grade.

The autopsy room exam will be weighted at 15%, and the theoretical exam at 45% (15% per topic, i.e., 15+15+15%) when determining the final result of the exam.

In summary, the weight of the exam results is as follows:

Test: 10%
Histology: 30% (2x15%)
Autopsy Room: 15%
Theoretical Exam: 45% (3x15%)

In case of a failing result in the 2nd, 3rd, or 4th exam parts, the examiner must record the reason for the failing result on the exam sheet."

„A" topic

GENERAL PATHOLOGY

I. POSTMORTEM SIGNS – NECROSIS

1. Postmortem changes, causes and mechanisms of cellular damage and cell death

- Causes, morphology and mechanism of cell necrosis

- Reperfusion injury

2. Macroscopic and microscopic characterization of necrosis types with organ examples

- Coagulative necrosis and its organ manifestation

- Colliquative necrosis and its organ manifestation

- Hemorrhagic infarction and its organ manifestation

- Fat, caseous and fibrinoid necrosis and its organ manifestation

- Acute myocardial infarction

- Cerebral infarction

3. Morphology and pathogenesis of apoptosis

II. DEGENERATIONS, ACCUMULATIONS, PIGMENT FORMATION

4. Degenerations, intracellular accumulations and pigments

- Reversible cell injury, types of degeneration and its organ manifestation

- Types of fatty degeneration and its organ manifestation

- Hyaline accumulation and its organ manifestation

- Anthracosis, lipofuscin and hemosiderin accumulation

5. Dystrophic and metastatic calcification, pathomechanism and clinic-pathology of stone formation

- Dystrophic calcification and its organ manifestation

- Metastatic calcification and its organ manifestation

- Stone formation; kidney and gallbladder stones

6. General features of amyloidosis: physicochemical, ultrastructural and histochemical characterization, types of amyloid, clinico-pathology of amyloidosis

III. DISORDERS OF GROWTH

7. Definition and pathomechanism of hyperplasia, metaplasia, hypertrophy, atrophy, pathogenesis and organ examples

- Pathomechanism of atrophy and hypertrophy, examples

- Myocardial hypertrophy and its clinical forms

- Pathomechanism of hyperplasia, examples

- Pathomechanism of metaplasia and dysplasia, examples

IV. PATHOLOGY OF CIRCULATION

8. Definition of edema, pathogenesis (Frank-Starling law), clinical forms

9. Venous circular dysfunctions. Stasis and its complications

10. Pathogenesis and types of thrombosis, thromboembolic complications. Special types of emboli

- Causes and types of thrombosis
- Types of emboli

11. Arterial circular dysfunctions. Bleedings. Vascular occlusion, types of infarctions

- Types of hemorrhages and their clinical presentation
- Intracranial hemorrhages

12. Forms of shock and its effects on organs. Definition, pathogenesis and consequences of DIC

- Causes and types of shock
- DIC

V. INFLAMMATION

13. Vascular and cellular mechanisms of acute inflammation, chemical mediators

14. Morphologic patterns of acute inflammation according to the type of exudate, examples

15. Definition of chronic inflammation, etiological factors, cellular and humoral mechanisms. Regeneration, reparation, wound healing

- Chronic inflammation, fibrosis, scarring
- Tissue repair, wound healing

16. Granuloma, granulomatous inflammation

VI. IMMUNOPATHOLOGY

17. Type I-II hypersensitivity reactions. Clinical and pathologic manifestations

18. Type III-IV hypersensitivity reactions. Clinical and pathologic manifestations

19. Major morphologic signs of systemic lupus erythematosus, Sjögren’s syndrome,

rheumatoid arthritis, scleroderma

- Pathomechanism of autoimmune diseases

- Systemic lupus erythematodes, rheumatoid arthritis

- Sjögren’s syndrome, scleroderma, polyarteritis nodosa

20. Pathology of transplantation

21. Pathology of inherited and acquired immunodeficiency diseases – examples

- Inherited and acquired immunodeficiency syndromes

- AIDS

VII. GENETIC DISEASES

22. Diagnostics of genetic disorders

23. Autosomal dominant, autosomal recessive and X-linked inheritance disorders

- Autosomal dominant disorders

- Familial hypercholesterinemia

- Autosomal recessive and X-linked inheritance disorders

24. Disorders caused by chromosomal aberrations

VIII. ENVIRONMENTAL CAUSES OF DISEASE

25. Effects of tobacco and air pollution

26. Effects of alcohol and related diseases

„B” topic

IX. NEOPLASIA

1. Epidemiology, incidence and mortality of neoplastic diseases

2. Physical, chemical, radiation and microbial carcinogenesis

- Viral and microbial carcinogenesis

- Chemical and radiation carcinogenesis

3. General characteristics of benign and malignant tumors, growth, local spread and metastasis, forms of metastasis

- General characteristics of neoplasms (benign, malignant tumors)

- Characteristics of neoplasms rate growth

- Invasion and metastasis of neoplasms

4. Development and morphology of precancerous lesions

5. Categorization of tumors according to histological type

6. Grading and staging of cancer

7. Paraneoplastic syndromes, serum tumor markers

8. Molecular mechanisms of tumor development, oncogenes, tumor suppressor genes and epigenetic factors

- Promotion mechanisms of oncogenes and role in carcinogenesis

- Inhibitory mechanisms of tumor suppressor genes and role in carcinogenesis

- EGFR, ABL and BCL2 genes and their roles in tumor development

- RB, p53 and APC genes and their roles in tumor development

- BRCA1, BRCA2 and ATM genes and their roles in tumor development

- DNA repair genes and role in carcinogenesis

- Cytogenetic aberrations and the role of telomere in carcinogenesis

- Epigenetic changes (DNA methylation, MicroRNAs) and role in carcinogenesis

9. Inherited cancer syndromes

10. Cytological, histological diagnosis of tumors, immunohistochemistry and molecular diagnostic tools

ORGAN-SPECIFIC PATHOLOGY

X. PATOLOGY OF THE CARDIOVASCULAR SYSTEM

11. Congenital and acquired structural disorders of the cardiovascular system

- Congenital heart diseases

- Degenerative valvular heart disease (calcific aorta stenosis, mitral prolapse)

- Valvular disease and their consequences

12. Pathogenesis, morphology and complications of atherosclerosis

13. Inflammatory heart diseases (endocarditis, myocarditis, pancarditis)

- Rheumatic fever and rheumatic myocarditis

- Infective endocarditis (acute and subacute)

- Non-infectious endocarditis (thrombotic endocarditis, Libman-Sacks endocarditis)

- Myocarditis and Cardiomyopathies

14. Cardiomyopathies

15. Pathogenesis, categorization and clinic-pathological features of vasculitis

16. Morphology and complications of acute myocardial infarction

17. Angina pectoris, chronic ischemic heart disease, sudden cardiac death

18. Etiology of heart failure, its effects on organs

- Pathomechanism of cardiac insufficiency

- Left-sided heart failure

- Right-sided heart failure

„C" topic

XI. PATHOLOGY OF THE HEAD AND NECK REGION AND RESPIRATORY TRACT

1. Congenital malformations and inflammations of the head and neck region

- Inflammatory lesions of the upper respiratory tract

- Pathology of lips, oral cavity and pharynx

2. Tumors of the oral cavity, pharynx and larynx

- Tumors of nasal passages, nasopharynx and larynx

- Pathology of lips, oral cavity and pharynx

3. Pathology of the salivary glands

4. Diseases of vascular origin of the lung, atelectasis

- Atelectasis and acute respiratory distress syndrome

- Pulmonary diseases of vascular origin - pulmonary embolism, hemorrhage, and infarction

5. Chronic bronchitis, emphysema, bronchiectasis, bronchial asthma, cystic fibrosis

- Cystic fibrosis

- Obstructive lung diseases – bronchial asthma and emphysema

- Obstructive lung diseases – chronic bronchitis and bronchiectasis

6. Chronic restrictive pulmonary diseases, pneumoconiosis

7. Infections of the lung (except tuberculosis)

8. Tuberculosis

9. Tumors of the lung and pleura

- Benign and metastatic tumors of lung

- Malignant lung tumors

- Pathology of pleura

XII. PATHOLOGY OF THE GASTROINTESTINAL TRACT

10. Pathology of the esophagus

11. Inflammatory diseases of the stomach

12. Pathogenesis, morphology and complications of peptic ulcer

13. Tumors of the stomach

14. Developmental anomalies of the gastrointestinal tract

15. Non-neoplastic lesions of the bowel (malabsorption, enterocolitis)

- malabsorption syndrome

- Enterocolitis

16. Non-neoplastic lesions of the bowel (vascular disorders, diverticulosis, ileus)

- Developmental anomalies and vascular disorders of the GI tract

- Colonic diverticulosis and bowel obstruction

17. Inflammatory bowel diseases

18. Tumors of the small and large intestine (polyps, carcinomas)

19. Pathology of the appendix

20. Neuroendocrine tumors of the gastrointestinal tract, lymphoma, GIST

XIII. PATHOLOGY OF THE LIVER, BILIARY TRACT, AND PANCREAS

21. Cholestasis (PSC, PBC, cholelithiasis, jaundice)

- Cholestasis (PSC, PBC)

- Pathophysiology of jaundice, defects of bilirubin and bile formation. Cholelithiasis

22. Circulatory disorders of liver, toxic and drug-induced liver damage

- Circulatory disorders of liver

- Alcohol-, drug-induced and toxic liver disease

23. Acute and chronic hepatitis

24. Liver cirrhosis and its complications

25. Inherited liver disease, congenital malformations of the bile ducts

26. Tumors of the liver

27. Non-neoplastic lesions of the bile ducts and gallbladder

28. Acute pancreatitis and its complications

29. Forms of chronic pancreatitis, pathogenesis, complications

30. Tumors of the pancreas

XIV. PATHOLOGY OF THE KIDNEY AND THE URINARY TRACT

31. End-stage kidney and renal failure

32. Developmental abnormalities and cystic diseases of the kidney

33. Pyelonephritis

33. Pathogenesis of glomerular diseases, nephritic and nephrotic syndrome, hematuria

- Pathogenesis of glomerular diseases

- The nephritic syndrome

- The nephrotic syndrome

- Rapidly progressive glomerulonephritis

- Systemic diseases associated glomerular damage

35. Tubular, interstitial and vascular diseases of the kidney, nephrosclerosis

- Vascular diseases of the kidney

- Acute tubular necrosis (ATN)

36. Tumors of kidney

37. Non-neoplastic diseases of the urinary tract: urolithiasis and obstructive uropathy, hydronephrosis, urocystitis

38. Tumors of the urinary bladder and the urinary tract

XVI. PATHOLOGY OF THE FEMALE GENITAL SYSTEM AND THE BREAST

39. Pathology of the vulva and the vagina

40. Inflammations, tumor-like lesions and tumors of the cervix. Precancerous lesions. Pathological aspects of cervical cancer screening

41. Tumors of the endometrium and myometrium

42. Dysfunctional uterine bleeding its pathological aspects

43. Endometriosis, adenomyosis. Pathology of female infertility

44. Non-neoplastic diseases of the ovary and fallopian tubes: inflammation, cysts

45. Tumors of the ovarium and fallopian tube

46. Pathology of pregnancy (dysfunctions of implantation, trophoblastic tumors)

47. Perinatal pathology (transplacental infections, chromosomal disorders, etiology and consequence of premature birth)

- Pathogeneis of congenital anomalies

- Disorders associated with prematurity (IRDS, NEC)

- Sudden Infant Death

- Fetal Hydrops

48. Inflammations and fibrocystic changes of the breast, fibroepithelial tumors

49. Precancerous lesions and cancer types of the breast, breast cancer screening

XVI. PATHOLOGY OF THE MALE GENITAL SYSTEM

50. Diseases of the penis and the scrotum, pathology of the sexually transmitted diseases

- Diseases of penis, scrotum and spermatic cord

- Sexually transmitted diseases

51. Prostatitis, nodular hyperplasia of the prostate, complications

52. Tumors of the prostate

53. Congenital malformations and inflammatory lesions of the testis and epididymis, male infertility

54. Tumors of the testis, categorization, tumor markers

XVII. PATHOLOGY OF THE ENDOCRINE SYSTEM

55. Pathology of the hypothalamic-hypophysis system

56. Special organic and histological alterations in diabetes mellitus

- Diabetes mellitus

- Diabetic nephropathy

57. Pathology of parathyroid glands

58. Non-neoplastic diseases of the thyroid gland

59. Tumors of the thyroid gland

60. Pathology of the adrenal gland

61. Multiple endocrine neoplasia (MEN) syndrome

XVIII. PATHOLOGY OF THE SKELETAL SYSTEM

62. Inflammatory, metabolic and degenerative bone and joint diseases

- Congenital diseases of bone. Bone lesions related to endocrine syndromes

- Osteoporosis, rickets, osteomalacia

- Osteomyelitis. Paget’s disease

63. Benign and malignant bone tumors, tumor-like lesions

- Tumors and tumor-like lesions of the bone

XIX. PATHOLOGY OF THE SKIN

64. Inflammatory skin diseases and major morphologic types

- Inflammatory skin diseases (acute and chronic dermatitis, infective dermatitis)

- Blistering skin disorders (Pemphigus, bullous pemphigoid, dermatitis herpetiformis)

65. Epithelial skin and adnexal tumors

66. Melanocytic tumors

- Melanocytic skin lesions

- Pigment cell tumors of the skin

XX. PATHOLOGY OF THE CENTRAL NERVOUS SYSTEM

67. Brain edema, hydrocephalus, congenital malformations of the central nervous system

- Pathology of raised intracranial pressure

- Congenital malformations of central nervous system

68. Dementia and neurodegenerative disorders, demyelinating diseases, prion disease

- Degenerative diseases and dementias

- Prion diseasse

- Primary diseases of myelin. Acquired metabolic and toxic disturbances of the brain

69. Inflammatory diseases of the central nervous system

70. Cerebrovascular diseases, types of intracranial hemorrhage, ischemic disorders

- Ischemia in the central nervous system

- Intracranial hemorrhage

71. Tumors of the central and peripheral nervous system

XXI. PATHOLOGY OF THE HEMATOPOIETIC AND LYMPHOID SYSTEM

72. Non-neoplastic disorders of the hematopoietic system (anemia and polycythemia)

- Anemias of diminished erythropoiesis

- Anemias related to increased loss of red blood cells

- Polycythemia vera and essential thrombocythemia

- Non-neoplastic disorders of myeloid and lymphoid system

73. Neoplastic diseases of the hematopoietic system (types of leukemia)

- Chronic myelogenous leukemia, chronic idiopathic myelofibrosis

- Myelodysplastic syndromes

- Acute myelogenous leukemia

74. Non-neoplastic disorders of the lymphoid system (reactive lymphadenopathy)

75. Neoplastic diseases of the lymphoid system (types of lymphomas)

- Categorization bases of lymphomas

- Precursor T- and B-cell lymphoblastic leukemia/lymphoma

- Chronic lymphocytic leukemia, hairy cell leukemia

- Multiple myeloma and related plasma cell disorders

- Follicular lymphoma, mantle cell lymphoma, MALT-lymphoma

- Diffuse large B-cell lymphoma, Burkitt lymphoma

- Mycosis fungoides, peripheral T-cell lymphoma, anaplastic large cell lymphoma

- Hodgkin-lymphoma

76. Pathology of the spleen

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)

Grading System:

The percentage score of the written demonstration held during the semester is added to the percentage score of the final exam test as follows:

- **<60%**: 0 percentage points

- **61-74%**: 1 percentage point
- **75-89%**: 2 percentage points
- **90-100%**: 3 percentage points

Example:

- Demonstration result: **75% → 2 percentage points**
- Final exam test result: **79%**
- **Final exam test result overall: 79 + 2% = 81% = "Good" (Grade 4)**

Final exam test grading:

- **0-59.99%**: Grade 1 (Fail)
- **60-69.99%**: Grade 2 (Satisfactory)
- **70-79.99%**: Grade 3 (Average)
- **80-89.99%**: Grade 4 (Good)
- **90-100%**: Grade 5 (Excellent)

Weighting of the final exam components (see earlier details):

- **Test:** 10%
- **Histology:** 30% (2 × 15%)
- **Dissection lab:** 15%
- **Theoretical exam:** 45% (3 × 15%)

In the case of a retake exam, if the test, histology exam, or autopsy room exam has been passed with a **grade of 2 (Satisfactory) or higher**, the grade can be retained and does not need to be repeated.

The **Krompecher Ödön Pathology Competition** provides students with exam benefits. The top performers receive exemptions:

- **2nd round qualifiers:** Exemption from the written test exam.
- **Successful histology identification:** Exemption from the complete histology exam.
- **Top three finishers:** Exemption from the autopsy exam and priority consideration for research opportunities.

Printed resources:

Required	Yes
Author	Kumar, Abbas, Aster
Title	Robbins Basic Pathology
Publisher	Elsevier
Year of publication	2017

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

Signature of the director of the host institution:

Date of submission: