

University of Pécs Medical School

DENTISTRY Major

STUDY PROGRAM 2018/2019

Subjects of the
Pre-clinical module
(obligatory subjects and
criterion requirements)

5th semester

OSP-AOR-T	General and Oral Radiology	3
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OSP-GAG-T	Gnathology practice	9
OSP-K4K-T	Operative Dentistry 4 - Endodontics Propedeutics	11
OSP-KT1-T	Pathophysiology for Dental Students 1	13
OSP-MR1-T	Microbiology 1	16
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OSP-AOR-T GENERAL AND ORAL RADIOLOGY

Course director:

DR. GYULA MARADA, clinical specialist
Department of Dentistry, Oral and Maxillofacial Surgery

4 credit ▪ semester exam ▪ Pre-clinical subject ▪ autumn semester ▪ recommended semester: 5

Number of hours/semester: 28 lectures + 28 practices + 0 seminars = total of 56 hours

Course headcount limitations (min.-max.): 1 – 30

Prerequisites: OSA-BZ2-T completed + OSA-MAX-T completed + OSP-PO1-T parallel

Topic

Conditions for acceptance of the semester

Maximum of 15 % absence allowed

Mid-term exams

Making up for missed classes

Reading material

- *Obligatory literature*

- *Literature developed by the Department*

Lecture notes

- *Notes*

- *Recommended literature*

Eric Whaites: Essentials of Dental Radiography and Radiology, Churchill Livingstone, 2002

Herring: Learning Radiology, Saunders, 2015

R.B. Gunderman: Essential Radiology, Thieme, 2006

G.M. Roberts, J.P. Hughes and M.D. Hourihan: Clinical Radiology for Medical Students

S. Francis, A.F. Watkinson (Department of Radiology The Royal Free Hospital, London, UK): Intervencional Radiology Explained, Remedicina Publishing, 2000

David Sutton: Textbook of Radiology and Imaging, latest edition, Elsevier

Lectures

- 1 Diagnostic imaging methods, basics of radiation protection I.
Dr. Bogner Péter
- 2 Diagnostic imaging methods, basics of radiation protection II.
Dr. Bogner Péter
- 3 Neuroradiology I.
Dr. Bogner Péter
- 4 Neuroradiology II.
Dr. Bogner Péter
- 5 Head and neck radiology (orbit, sinuses, salivary glands) I.
Dr. Rostás Tamás
- 6 Head and neck radiology (orbit, sinuses, salivary glands) II.
Dr. Rostás Tamás
- 7 Head and neck radiology (pharynx, basis, soft tissue of the neck) I.
Dr. Rostás Tamás
- 8 Head and neck radiology (pharynx, basis, soft tissue of the neck) II.
Dr. Rostás Tamás
- 9 Radiology of the chest (heart, great vessels, lungs) I.
Dr. Battyáni István
- 10 Radiology of the chest (heart, great vessels, lungs) II.
Dr. Battyáni István
- 11 Gastrointestinal system I.
Dr. Faluhelyi Nándor
- 12 Gastrointestinal system II.
Dr. Faluhelyi Nándor

- 13 Urogenital system and interventional radiology I.
Dr. Farkas Péter István
- 14 Urogenital system and interventional radiology II.
Dr. Farkas Péter István
- 15 Principles of Radiology. Equipment.
Dr. Marada Gyula
- 16 Radiation detectors. Exposure.
Dr. Marada Gyula
- 17 Intraoral techniques. Anatomy of intraoral radiographs.
Dr. Marada Gyula
- 18 Extraoral techniques.
Dr. Marada Gyula
- 19 Anatomy of panoramic radiographs.
Dr. Marada Gyula
- 20 Radiation protection in dentistry.
Dr. Marada Gyula
- 21 Radiological terminology, radiological diagnosis. Development of teeth.
Dr. Marada Gyula
- 22 Cariology in radiology. Abrasion of teeth. Inflammation of the pulp.
Dr. Marada Gyula
- 23 Diseases of apical and marginal periodontium.
Dr. Marada Gyula
- 24 Traumatic diseases of jaws and teeth.
Dr. Marada Gyula
- 25 Prosthodontic aspects of radiology.
Dr. Marada Gyula
- 26 Digital radiological techniques (RVG, CBCT).
Dr. Marada Gyula
- 27 Endodontic aspects of radiology
Dr. Marada Gyula
- 28 Radiological failures
Dr. Marada Gyula

Practices

- 1 Introduction of the X-ray, US, CT workplaces: Parts of the X-ray equipment, general rules, positioning, aspects of radiation protection.
- 2 US examination demo on a volunteer, acoustic shadow, air in the bowel, introducing relative strenghten, patient preparation, different frequency transducers, demo of focusing, visit a CT examination, patient preparation, process of contrast injection, pre- and post-contrast series, windowing
- 3 MRI examination and visit the equipment, patient preparation, MRI safety, coils.
- 4 Neuroradiology case presentation in the seminar room.
- 5 Head and neck case presentation I.
- 6 Head and neck case presentation II.
- 7 Head and neck case presentation III.
- 8 Intervention.
- 9 Radiology of the chest: case presentation I.
- 10 Radiology of the chest: case presentation II.
- 11 Gastrointestinal system case presentation I.
- 12 Gastrointestinal system case presentation II.
- 13 Urogenital system case presentation.
- 14 Intervention workplace, introduction to instruments.
- 15 Intraoral x-ray exposure and processing
- 16 Intraoral x-ray exposure and processing
- 17 Intraoral x-ray exposure and processing
- 18 Intraoral x-ray exposure and processing
- 19 Intraoral x-ray exposure and processing
- 20 Intraoral x-ray exposure and processing
- 21 Intraoral x-ray exposure and processing
- 22 Intraoral x-ray exposure and processing

- 23 Intraoral x-ray exposure and processing
- 24 Intraoral x-ray exposure and processing
- 25 Intraoral x-ray exposure and processing
- 26 Intraoral x-ray exposure and processing
- 27 Intraoral x-ray exposure and processing
- 28 Intraoral x-ray exposure and processing

Seminars

Exam topics/questions

1. X-rax, X-ray equipment. Radiation protection.
2. Principles and applications of US imaging
3. Principles and applications of CT imaging
4. Principles and applications of MR imaging
5. Diagnostic imaging of common pathologies of the CNS
6. Diagnostic imaging of the nasal cavity, sinuses, orbits and the skull base
7. Diagnostic imaging of pharynx, larynxes, neck and thyroid gland
8. The basics of thoracic radiology
9. The basics of gastrointestinal radiology
10. The basics of urogenital radiology
11. Principles and applications of interventional radiology
12. Oral radiologic equipment
13. Radiograph of teeth. The rule of bisecting angle and parallel technique
14. Radiographic features of periapical conditions on the lower arch
15. Radiographic features of periapical conditions on the upper arch
16. Radiographs of the crown
17. Occlusal radiographs
18. Extraroral radiographs
19. Radiographs of the maxilla
20. Radiographs of the mandibule
21. Rules of contact radiographs. Cephalographs
22. Panoramic radiographs
23. Exposure
24. Processing of dental radiographs
25. Equipment of digital intraoral radiology
26. CT and CBCT in dentistry
27. Density and contrast
28. Radiation failures. Failures before processing
29. Radiation protection
30. Protection of patients
31. Protection of staff
32. Assessment of perapical radiographs
33. Endodontic procedures and their radiologic aspects
34. Caries
35. Inflammation of apical periodontium
36. Diseases of the marginal periodontium
37. Dental trauma
38. Traumatism of the jaws
39. Osteomyelitis Practical exam: intraoral radiograph taking for patients

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

Dr. Kovács András (KOANAAO.PTE), Dr. Marada Gyula (MAGFABO.PTE), Dr. Tóth Arnold (TOANAAO.PTE)

OSP-GAE-T GNATHOLOGY LECTURE

Course director:

DR. MÁRTA MÁRIA RADNAI, professor
Department of Dentistry, Oral and Maxillofacial Surgery

1 credit ▪ semester exam ▪ Pre-clinical subject ▪ autumn semester ▪ recommended semester: 5

Number of hours/semester: 14 lectures + 0 practices + 0 seminars = total of 14 hours

Course headcount limitations (min.-max.): 1 – 35

Prerequisites: OSA-MAX-T completed + OSA-FAT-T completed + OSP-GAG-T parallel

Topic

The aim of the lectures is to acquire the knowledge of the anatomy and function of chewing apparatus. Students learn the types and use of articulators.

The aim of the practices is to learn the occlusal anatomy of the teeth, and to wax up the occlusal surfaces of premolar and molar teeth according to the technology of HC Lundeen in order the better understanding the occlusion and articulation movements. Students learn the types and use of articulators and face-bow.

Conditions for acceptance of the semester

Requirements for students - Active participation on lectures and practices, based on the Study and Exam Regulations of the University, - Attendance of lectures and practices is mandatory. - Completion of the tasks in the laboratory - The student receives marks for the practical tasks in the training laboratory. The average must be at least 2.0. If the student gets 3 or more failed marks during the semester for his/her practical work, then the semester can not be evaluated and accepted. The practical tasks, which are not finished, also considered as failed mark. - Average of the marks of written or oral tests relating the theoretical knowledge which is necessary to carry out the practical work. - Form of tests: oral test, written test, etc. If the test considered as failed, the student gets one opportunity to rewrite the test. If the student gets further failed mark, the semester/practice is not accepted, it can not be evaluated. - If either of the above averages (for the practical work or the relating theory) does not reach 2.0 the end semester practical mark can not be evaluated and accepted, the student has to repeat the course.

Mid-term exams

Two mid-term tests.

Making up for missed classes

No possibility

Reading material

- *Obligatory literature*

C. McNeill: Science and Practice of Occlusion
MG: Occlusion in Restorative Dentistry

- *Literature developed by the Department*

Lecture

- *Notes*

- *Recommended literature*

J P Okeson: Management of TMJ Disorders and Occlusion

Lectures

- 1 Introduction to Gnatology and its significance in dentistry. Functional units involved in mastication. Anatomical terminology of the mouth
Dr. Marada Gyula
- 2 Morphology of osseous structures involved in mastication and the temporo-mandibular joint. Anatomical terminology of the mouth
Dr. Markovics Dóra
- 3 Masticatory muscles, their function and innervation
Dr. Markovics Dóra
- 4 Basics of occlusal anatomy of the teeth and dental arches
Dr. Markovics Dóra
- 5 Occlusal contacts in central occlusion. Orientation in the oral cavity
Dr. Markovics Dóra
- 6 WRITTEN TEST
Dr. Rajnics Zsolt
- 7 Specific positions of the mandible

- Dr. Markovics Dóra
- 8 Mandibular movements, tooth guidance. Dynamics of occlusal relationships, border-movements, mandibular movement envelope
Dr. Markovics Dóra
- 9 The process of chewing. Occlusal relations in natural dentition
Dr. Marada Gyula
- 10 Articulators (arcon, non-arcon types)
Dr. Marada Gyula
- 11 Mounting the casts in the articulator, articulator-programming, face-bow and its use
Dr. Marada Gyula
- 12 WRITTEN TEST
Dr. Marada Gyula
- 13 Modification of occlusion in adults. Christensen phenomenon
Dr. Marada Gyula
- 14 Theories of occlusion in artificial dentition
Dr. Marada Gyula

Practices

Seminars

Exam topics/questions

1. Definition of Gnathology and components of the chewing apparatus
2. Anatomy of the temporomandibular joint
3. Ligaments of the temporomandibular joint, their role, and significance in the function of the joint
4. Classification of the chewing muscles
5. Anatomy of elevator muscles of the mandible
6. Anatomy of protractor muscles of the mandible
7. Perioral mimic muscles, muscles of the tongue and their functions
8. Morphological characteristics of the incisors and canines from gnathological aspects
9. Characteristics of the occlusal anatomy of molars and premolars
10. Prominent positions of the mandible
11. Definition of occlusal vertical dimension and postural jaw position and their clinical significance
12. Definition of central occlusion and central relation and their significance
13. Definition of eugnath occlusion and deep-bite
14. Definition of curve of Spee and Wilson and their significance
15. Definition of occlusal plain and occlusal surface
16. Definition of retruded contact position, incisal edge-to-edge, lateral cusp- bite and maximal jaw open position.
17. Basic movements of the mandible
18. Symmetrical movements of the mandible
19. Asymmetrical movements of the mandible
20. The points of the mandible examined during the evaluation of mandibular movements according to the classical articulation doctrine
21. Movement paths of the mandibular condyle
22. Incisal guidance /in all planes/
23. Border movements of the mandible in the sagittal plain /incisal point, ectocondylare/
24. Border movements of the mandible in the horizontal plain /incisal point, ectocondylare/
25. Border movements of the mandible in the frontal plain /incisal point, ectocondylare/
26. Difference between the terms of centric occlusion and central occlusal position of the mandible
27. Difference between the terms of centric relation and central relation position of the mandible
28. Occlusal contacts in the intercuspal contact position of the mandible
29. Occlusal concepts used for artificial shaping of the occlusal surfaces of the teeth.
30. Occlusal contacts during pro- and retrusive movements of the mandible.
31. Occlusal contacts during lateral movements of the mandible.
32. Definition and components of articulators
33. Classification of appliances used for simulation of positions and movements of the mandible
34. Occludors, simple hinge articulators
35. Characteristics of semi-adjustable and fully adjustable articulators
36. Cast mounting on articulator with the use of Bonwill's triangle
37. Cast mounting on articulator with face-bow
38. Programming the articulator

39. Definition of Bonwill's triangle and Balkwill's angle
40. Components of the occlusal surface
41. Anatomical and physiological occlusal surface of the teeth
42. Definition of supporting and guiding cusps
43. Classification of basic bite-types
44. Definition of Bennett-movement
45. Position of cusp-marginal ridge and cusp-fossa type occlusal contacts
46. Definition of tooth guidance
47. Masticatory movements of the mandible
48. Adaptation of cuspal teeth's occlusal surfaces to mandibular movement paths
49. Articulation concepts of occlusal surfaces in natural and artificial dentition
50. Occlusal surface shaping of lower premolars with wax-up technique
51. Occlusal surface shaping of upper premolars with wax-up technique
52. Occlusal surface shaping of lower molars with wax-up technique
53. Occlusal surface shaping of upper molars with wax-up technique
54. Graphical recording methods
55. Direction lines and plains on the head, anthropological reference points
56. Lines determined by anthropological reference points and anthropological plains
57. Anatomy of the upper jaw
58. Anatomy of the mandible
59. Basic characteristics of human dentition
60. Changes of occlusion in adults, different types of tooth wear.
61. Sagittal Christensen phenomenon
62. Lateral Christensen phenomenon
63. Innervation of the function of the chewing apparatus

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

OSP-GAG-T GNATHOLOGY PRACTICE

Course director:

DR. MÁRTA MÁRIA RADNAI, professor
Department of Dentistry, Oral and Maxillofacial Surgery

3 credit ▪ midsemester grade ▪ Pre-clinical subject ▪ autumn semester ▪ recommended semester: 5

Number of hours/semester: **0 lectures + 42 practices + 0 seminars = total of 42 hours**

Course headcount limitations (min.-max.): **1 – 35**

Prerequisites: **OSA-MAX-T completed + OSA-FAT-T completed + OSP-GAE-T parallel**

Topic

The aim of the lectures is to acquire the knowledge of the anatomy and function of chewing apparatus. Students learn the types and use of articulators.

The aim of the practices is to learn the occlusal anatomy of the teeth, and to wax up the occlusal surfaces of premolar and molar teeth according to the technology of HC Lundeen in order the better understanding the occlusion and articulation movements. Students learn the types and use of articulators and face-bow.

Conditions for acceptance of the semester

Requirements for students - Active participation on lectures and practices, based on the Study and Exam Regulations of the University, - Attendance of lectures and practices is mandatory. - Completion of the tasks in the laboratory - The student receives marks for the practical tasks in the training laboratory. The average must be at least 2.0. If the student gets 3 or more failed marks during the semester for his/her practical work, then the semester can not be evaluated and accepted. The practical tasks, which are not finished, also considered as failed mark. - Average of the marks of written or oral tests relating the theoretical knowledge which is necessary to carry out the practical work. - Form of tests: oral test, written test, etc. If the test considered as failed, the student gets one opportunity to rewrite the test. If the student gets further failed mark, the semester/practice is not accepted, it can not be evaluated. - If either of the above averages (for the practical work or the relating theory) does not reach 2.0 the end semester practical mark can not be evaluated and accepted, the student has to repeat the course.

Mid-term exams

Two mid-term tests.

Making up for missed classes

No possibility

Reading material

- *Obligatory literature*
 - C. McNeill: Science and Practice of Occlusion
 - MG: Occlusion in Restorative Dentistry
- *Literature developed by the Department*
 - Lectures
- *Notes*
- *Recommended literature*
 - J P Okeson: Management of TMJ Disorders and Occlusion

Lectures

Practices

- 1 Introduction. Instruments and materials. Marking reference lines and points on the study cast and on the mounted lower cast. Marking the centric contacts on the upper mounted cast. Cutting off the occlusal surface of the mounted lower cast. Re-tracing the markings on the occlusal surface of the lower cast
- 2 Introduction. Instruments and materials. Marking reference lines and points on the study cast and on the mounted lower cast. Marking the centric contacts on the upper mounted cast. Cutting off the occlusal surface of the mounted lower cast. Re-tracing the markings on the occlusal surface of the lower cast
- 3 Forming mandibular buccal cones. Marking reference lines and points on the mounted upper cast. Cutting off the occlusal surface of the mounted upper cast
- 4 Forming mandibular buccal cones. Marking reference lines and points on the mounted upper cast. Cutting off the occlusal surface of the mounted upper cast
- 5 Re-tracing the occlusal surface of the upper cast. Re-tracing the markings on the occlusal surface of the upper cast. Forming maxillary buccal cones. Forming the buccal ridges of mandibular buccal cusps
- 6 Re-tracing the occlusal surface of the upper cast. Re-tracing the markings on the occlusal surface of the upper cast. Forming maxillary buccal cones. Forming the buccal ridges of mandibular buccal cusps

- 7 Forming the buccal ridges of maxillary buccal cusps. Shaping the triangular ridges of the maxillary buccal cusps
- 8 Forming the buccal ridges of maxillary buccal cusps. Shaping the triangular ridges of the maxillary buccal cusps
- 9 Forming the mesial and distal cusp ridges of the maxillary and mandibular buccal cusps
- 10 Forming the mesial and distal cusp ridges of the maxillary and mandibular buccal cusps
- 11 Forming the maxillary lingual cones and the cusp ridges of the maxillary lingual cusps
- 12 Forming the maxillary lingual cones and the cusp ridges of the maxillary lingual cusps
- 13 Shaping the lingual surfaces and triangular crests of the maxillary lingual cusps
- 14 Shaping the lingual surfaces and triangular crests of the maxillary lingual cusps
- 15 Forming the mesial and distal marginal ridges of the maxillary posterior teeth. Building up the triangular ridges of the mandibular buccal cusps
- 16 Forming the mesial and distal marginal ridges of the maxillary posterior teeth. Building up the triangular ridges of the mandibular buccal cusps
- 17 Building up the mandibular lingual cones. Forming the lingual surfaces and the triangular ridges of the mandibular lingual cusps
- 18 Building up the mandibular lingual cones. Forming the lingual surfaces and the triangular ridges of the mandibular lingual cusps
- 19 Forming the mesial and distal cusp ridges of the mandibular lingual cusps. Face-bow and its use
- 20 Forming the mesial and distal cusp ridges of the mandibular lingual cusps. Face-bow and its use
- 21 Forming the mesial and distal marginal ridges of the mandibular posterior teeth. Face-bow and its use
- 22 Forming the mesial and distal marginal ridges of the mandibular posterior teeth. Face-bow and its use
- 23 Completing the mandibular and maxillary occlusal surfaces. Evaluating the completed cusps and ridges
- 24 Completing the mandibular and maxillary occlusal surfaces. Evaluating the completed cusps and ridges
- 25 Build up an upper central insicor
- 26 Build up an upper central insicor
- 27 Build up the occlusal surface of a molar tooth by oneself
- 28 Build up the occlusal surface of a molar tooth by oneself

Seminars

Exam topics/questions

Practical work will be evaluated by the practice leader.

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

Dr. Marada Gyula (MAGFABO.PTE), Dr. Markovics Dóra (MADOAA-O.PTE), Dr. Rajnics Zsolt (RAZNABO.PTE)

OSP-K4K-T OPERATIVE DENTISTRY 4 - ENDODONTICS PROPEDEUTICS

Course director:

DR. EDINA LEMPEL, assistant professor
Department of Dentistry, Oral and Maxillofacial Surgery

3 credit ▪ semester exam ▪ Pre-clinical subject ▪ autumn semester ▪ recommended semester: 5

Number of hours/semester: **14 lectures + 28 practices + 0 seminars = total of 42 hours**

Course headcount limitations (min.-max.): **3 – 20**

Prerequisites: **OSA-K1K-T completed + OSA-K2K-T completed + OSA-K3K-T completed**

The subject can only be registered in case of a PASSED and valid health aptitude test!

Topic

Students should acquire the basic methods of root canal treatment.

Conditions for acceptance of the semester

Attending the classes, according to the rules of the Code of Studies and Examinations (Max 15% absence is accepted from the lectures and max 15% from the practices).

Mid-term exams

The practical work will be qualified and creates the final grade. During the semester the students write 5 tests. The results affect the semester grade.

Making up for missed classes

None

Reading material

- *Obligatory literature*
- *Literature developed by the Department*
- *Notes*
- *Recommended literature*

Stephen Cohen, Richard C. Burns: Pathways of the Pulp

Robert G. Craig: Restorative Dental Materials

Theodore Roberson (Author), Harold O. Heymann (Author), Edward J. Swift (Editor): Sturdevant's Operative Dentistry

Lectures

- 1 The aim of endodontic treatment
Dr. Lempel Edina
- 2 Clinical diagnosis establishment. Anaesthesia.
Dr. Lempel Edina
- 3 Root-canal and pulp chamber morphology.
Dr. Lempel Edina
- 4 Access cavity preparation. Vitalexirpation.
Dr. Lempel Edina
- 5 Hand instruments used in endodontic treatment.
Dr. Lempel Edina
- 6 Materials and devices used in irrigation/disinfection of the root canal.
Dr. Lempel Edina
- 7 Endodontic working length determination. Step-back preparation, anticurvature filing technique.
Dr. Lempel Edina
- 8 Drying of the root-canal. Provisional root-canal filling. Materials and instruments used in permanent root-canal filling.
Dr. Lempel Edina
- 9 Permanent root-canal filling with lateral guttapercha condensation technique.
Dr. Lempel Edina
- 10 Rotary instruments and devices.
Dr. Lempel Edina
- 11 Root-canal preparation with rotary instruments.
Dr. Lempel Edina
- 12 Pre-endodontic crown build-up. Rubber dam isolation techniques.
Dr. Lempel Edina

- 13 Thermoplastic permanent root-canal filling techniques.
Dr. Lempel Edina
- 14 Methods preserving pulp vitality. Pulp capping.
Dr. Lempel Edina

Practices

1-28 Cavity preparation and restoration

Seminars

Exam topics/questions

1. The aim of endodontic treatment.
2. Clinical diagnosis establishment. Anaesthesia.
3. Root-canal and pulp chamber morphology.
4. Access cavity preparation.
5. Hand instruments used in endodontic treatment.
6. Rotary instruments used in endodontic treatment.
7. Materials and devices used in irrigation/disinfection of the root canal.
8. Working length determination.
9. Step-back preparation, anticurvature filing technique.
9. Drying of the root-canal. Provisional root-canal filling. Materials and instruments used in permanent root-canal filling.
10. Permanent root-canal filling with lateral guttapercha condensation technique.
11. Root-canal preparation with rotary instruments.
12. Pre-endodontic crown build-up. Rubber dam isolation techniques.
13. Thermoplastic permanent root-canal filling techniques.
14. Methods preserving pulp vitality. Pulp capping.

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

Dr. Kovács Virág (KOVFACO.PTE), Dr. Lempel Edina (LEEFABO.PTE), Dr. Schreindorfer Károly (SCKPABO.PTE)

OSP-KT1-T PATHOPHYSIOLOGY FOR DENTAL STUDENTS 1

Course director:

DR. MÁRTA BALASKÓ, associate professor
Institute for Translational Medicine

2 credit • semester exam • Pre-clinical subject • autumn semester • recommended semester: 5

Number of hours/semester: **28 lectures + 0 practices + 0 seminars = total of 28 hours**

Course headcount limitations (min.-max.): **2 – 100** Prerequisites: **OSA-BKD-T completed + OSA-EF1-T completed**

Topic

Pathophysiology for dental students-1 connects basic functional and clinical subjects. Together with other preclinical subjects, it deals mainly with etiology, time-course, clinical symptoms and possible pharmacological or other interventions related to abnormalities of the cardiovascular, respiratory, hematological and renal systems, as well as with disorders of salt/water and pH balance.

Conditions for acceptance of the semester

Maximum of 15 % absence allowed

Mid-term exams

Minimum 50% test score with regard to the two midterm multiple choice tests that are organized on week 6 and week 11.

Making up for missed classes

Minimum 50% test score on the respective seminar topics. A

maximum of 15 % absence is allowed. It corresponds to 4 times 45 minutes.

Reading material

- *Obligatory literature*

- *Literature developed by the Department*

Lecture and seminar slides will be uploaded to Neptun.

- *Notes*

M. Székely (ed.): Basic Concepts in Pathophysiology, ÁOK PTE, 2007

http://aok.pte.hu/index.php?page=egyseg&egy_id=150&menu=okt_anyag&nyelv=eng

- *Recommended literature*

Scully's Medical Problems in Dentistry, ed: Crispian Scully, Churchill Livingstone; 7th edition, 2014

S. Silbernagl, F. Lang: Color Atlas of Pathophysiology, Thieme Stuttgart _ New York, 2000

Lectures

- 1 Pathophysiology of circulation for dentists.
Dr. Balaskó Márta
- 2 Heart failure.
Dr. Balaskó Márta
- 3 Peripheral circulatory failure: vasovagal syncope, circulatory shock (definition, forms and their causes, phases).
Dr. Balaskó Márta
- 4 The consequences of circulatory shock.
Dr. Balaskó Márta
- 5 Failure of the coronary circulation: reversible and irreversible complications.
Dr. Balaskó Márta
- 6 Pathophysiology of the cerebral and pulmonary circulation.
Dr. Balaskó Márta
- 7 Hypertension.
Dr. Balaskó Márta
- 8 Arrhythmias in the dental practice.
Dr. Szekeres-Solymár Margit
- 9 Pathophysiology of the respiratory system for dentists.
Dr. Balaskó Márta
- 10 Regulation of breathing, sleep apnea syndrome.
Dr. Balaskó Márta
- 11 Respiratory failure and its pathomechanisms and consequences.
Dr. Szekeres-Solymár Margit

- 12 Alveolar hypoventilation.
Dr. Balaskó Márta
- 13 Obstructive and restrictive respiratory disorders.
Dr. Balaskó Márta
- 14 Alveolar hyperventilation.
Dr. Balaskó Márta
- 15 Pathophysiology of hereditary blood cell system.
Dr. Balaskó Márta
- 16 Anemias.
Dr. Balaskó Márta
- 17 Polycythemias.
Dr. Balaskó Márta
- 18 Pathophysiology of leukocytes for dentists.
Dr. Balaskó Márta
- 19 Pathophysiology of blood clotting for dentists.
Dr. Balaskó Márta
- 20 Disseminated intravascular coagulopathy (DIC).
Dr. Balaskó Márta
- 21 Pathophysiology of glomerular and tubular functions.
Dr. Balaskó Márta
- 22 Acute renal failures.
Dr. Balaskó Márta
- 23 Chronic renal failure, uremia.
Dr. Balaskó Márta
- 24 Pathophysiology of uremia for dentists.
Dr. Balaskó Márta
- 25 Abnormalities of pH regulation: metabolic disorders.
Dr. Rostás Ildikó
- 26 Abnormalities of pH regulation: respiratory disorders.
Dr. Tenk Judit
- 27 Pathophysiology of salt and water balance.
Dr. Szekeres-Solymár Margit
- 28 Pathophysiology of osmoregulation.
Dr. Szekeres-Solymár Margit

Practices

Seminars

Exam topics/questions

Pathophysiology of the cardiovascular system for dentists.

Causes and forms of heart failure. High output cardiac failure.

Forward failure symptoms (left- and right-sided) in heart failure.

Backward failure symptoms (left- and right-sided) in heart failure.

Collaps, vasovagal syncope, and other circulatory abnormalities leading to loss of consciousness.

Definition and classification of circulatory shock. Pathophysiology of development, phases and characteristics of microcirculation.

Hypovolemic shock: causes and hemodynamics.

Cardiogenic shock: causes and hemodynamics.

Distributive shock: causes and hemodynamics.

Organ manifestations of shock.

Coronary insufficiency, reversible and irreversible complications. Mechanisms and consequences of chronic ischemic heart disease.

Regulation of cerebral circulation in health and disease. Cerebral hypoxia, ischemia, stroke.

Characteristics of pulmonary circulation. Pulmonary hypertension.

General pathophysiology and classification of systemic hypertension. Age and blood pressure.

Hypertension and the kidneys (reciprocal connection).

Hypertension and the adrenal gland.

Primary hypertension: characteristics and etiological factors.

Consequences of hypertension.

Arrhythmias in the dental practice.

Pathophysiology of the respiratory system for dentists.

Disorders of the control of breathing and sleep-apnea syndrome.
Pathogenesis and mechanisms of respiratory failure, consequences.
Alveolar hypoventilation.
Obstructive and restrictive respiratory disorders.
Disorders of oxygen transport (abnormal hemoglobin, CO-poisoning, methemoglobinemia).
Forms and mechanisms of hypoxia. Ways of compensation. Cyanosis.
Forms, general pathophysiology and consequences of anemia.
Polycythemias.
Pathophysiology of leukocytes for dentists.
Bleeding abnormalities due to platelet or vascular factors.
Congenital and acquired coagulopathies.
Thrombosis: causes and consequences.
Disseminated intravascular coagulation (DIC).
Pathophysiology of glomerular and tubular functions.
Hypothenuria, asthenuria, osmotic diuresis.
Chronic renal failure, uremia. Pathophysiology of uremia for dentists.
Acute renal failure Compensation of pH-abnormalities (plasma and intracellular buffers, respiration, kidney) and their disturbances.
Metabolic acidosis: causes, compensation, consequences.
Metabolic alkalosis: causes, compensation, consequences.
Respiratory acidosis and alkalosis: causes, compensation, consequences.
Mechanisms and disturbances of volume regulation. States of decreased extracellular volume, and their consequences.
States of elevated extracellular volume: causes, mechanisms and consequences.
Hyperosmolarity, hypertonicity. Forms, causes, consequences.
Hypotonicity: pathogenesis and consequences.
Disorders of potassium balance. Hypo- and hyperkalemia.

Note: "A" chance: test-exam on basis of the above topics. For „B" and „C" chances: oral exam on basis of 3 questions from the list above.

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

OSP-MR1-T MICROBIOLOGY 1

Course director:

DR. ISTVÁNNÉ BÁTAI, associate professor

Department of Medical Microbiology and Immunology

4 credit ▪ semester exam ▪ Pre-clinical subject ▪ autumn semester ▪ recommended semester: 5

Number of hours/semester: 42 lectures + 14 practices + 0 seminars = total of 56 hours

Course headcount limitations (min.-max.): 1 – 50

Prerequisites: OSA-BKD-T completed + OSA-IMF-T completed + OSP-PO1-T parallel

Topic

During the course the morphology, physiology of microbes, the techniques of disinfection and sterilization, the basics of antimicrobial therapy and the drugs used will be discussed. The host-parasite interactions, the factors playing roles in the pathogenesis of infections, the defense mechanisms of the host and the modes of prevention will be detailed. The systematic microbiology part of the course will discuss the microbiological aspects of various infections caused by specific pathogens. Special emphasize will be put on the indigenous flora of the oral cavity, as well as on microorganisms playing a role in the diseases of the oral cavity and the teeth.

The objective is to provide a solid microbiological basis to understand the pathogenesis and clinical aspects of oral diseases if infectious etiology, as well as those of diseases of other organ systems of stomatological relevance.

Conditions for acceptance of the semester

Maximum of 15 % absence allowed

Mid-term exams

The student will have an opportunity to sit for the written test in the last week of the semester. The student may accept the result of her/his test as kollokvium mark.

Making up for missed classes

Consultation

Reading material

- Obligatory literature

Lakshman Samaranayake: Essential Microbiology for Dentistry, 4th edition, Elsevier Churchill Livingstone 2012. ISBN: 978-0-7020-3484-8

- Literature developed by the Department

Lectures on the Neptun

- Notes

- Recommended literature

Dr. Patrick R. Murray, Dr. Ken S. Rosenthal and Dr. Michael A. Pfaller (eds.): Medical Microbiology, 7th edition, Elsevier Saunders 2012 ISBN: 978-0-323-08692-9

David Greenwood, Richard Slack, Michael Barer, Will Irving (eds.): Medical Microbiology, Elsevier Churchill Livingstone 2012, ISBN: 978-0-7020-4089-4

F.H. Kayser, K.A. Bienz, J. Eckert, R.M. Zinkernagel: Medical Microbiology, Thieme Stuttgart 2005, ISBN: 3-13-131991-7

A.K. Abbas, A.H. Lichtman, S Pillai: Cellular and Molecular Immunology, 7th ed., Elsevier Saunders, 2012, ISBN 978-1-43777-1528-6

Lectures

- 1 Introduction the subject and history of microbiology
Dr. Emódy Levente
- 2 Morphology and structure of bacteria
Dr. Tigyí Zoltán
- 3 The physiology of bacteria
Dr. Kocsis Béla
- 4 Bacterial genetics
Dr. Tigyí Zoltán
- 5 Pathogenicity, infection
Dr. Emódy Levente
- 6 Sterilization
Dr. Bátaí Istvánné (Dr. Kerényi Mónika)
- 7 Disinfection
Dr. Bátaí Istvánné (Dr. Kerényi Mónika)

- 8 Antimicrobial chemotherapy
Dr. Melegh Szilvia Zsóka
- 9 Antimicrobial chemotherapy
Dr. Melegh Szilvia Zsóka
- 10 Antimicrobial chemotherapy
Dr. Melegh Szilvia Zsóka
- 11 Immunology of infectious disease
Dr. Polgár Beáta
- 12 Immunology of infectious disease
Dr. Polgár Beáta
- 13 Immunology of infectious disease
Dr. Polgár Beáta
- 14 Vaccinology
Dr. Emódy Levente
- 15 Pyogenic bacteria - staphylococci
Dr. Báta Istvánné (Dr. Kerényi Mónika)
- 16 Pyogenic bacteria-streptococci
Dr. Báta Istvánné (Dr. Kerényi Mónika)
- 17 Pyogenic bacteria - neisseria
Dr. Báta Istvánné (Dr. Kerényi Mónika)
- 18 Enteric bacteria -enteric pathogens - Enterobacteriaceae
Dr. Tigyi Zoltán
- 19 Other enteric pathogens- Vibrios, Campylobacter, Wolinella, Helicobacter
Dr. Emódy Levente
- 20 Veilonella, parvobacteria, Capnocytohaga
Dr. Tigyi Zoltán
- 21 Lactobacilli, corynebacteria, propionibacteria
Dr. Tigyi Zoltán
- 22 Pathogens in respiratory tract
Dr. Mestyán Gyula
- 23 Pathogens in respiratory tract
Dr. Mestyán Gyula
- 24 Mycobacteria I
Dr. Emódy Levente
- 25 Mycobacteria II
Dr. Emódy Levente
- 26 Spirochetes,Leptotrichia
Dr. Kocsis Béla
- 27 Aerobic and anaerobic spore forming bacteria, Actinomyces
Dr. Kocsis Béla
- 28 Anaerobs: Bacteroides, Tannarella, Porphyromonas, prevotella, Fusobacterium
Dr. Kocsis Béla
- 29 Chlamydia, rickettsiales, mycoplasma
Dr. Báta Istvánné (Dr. Kerényi Mónika)
- 30 Papillomaviruses, polyomaviroses, adenoviruses
Dr. Reuter Gábor
- 31 Herpesviruses
Dr. Szereday László
- 32 Orthomyxoviruses (influenza), paramyxoviruses
Dr. Reuter Gábor
- 33 Picornaviruses
Dr. Reuter Gábor
- 34 Hepatitis viruses
Dr. Szereday László
- 35 HIV/AIDS, infections in immunocompromised patients
Dr. Reuter Gábor
- 36 Mycology
Dr. Mestyán Gyula

- 37 Parazitology
Dr. Kocsis Béla
- 38 Oral microbiology: normal oral flora, ecosystem of oral cavity, dental plaque, biofilm
Dr. Emódy Levente
- 39 Oral microbiology: Microbiology of dental caries
Dr. Emódy Levente
- 40 Oral microbiology: Microbiology of periodontal diseases
Dr. Tigyi Zoltán
- 41 Oral microbiology: Dentoalveolar infection
Dr. Tigyi Zoltán
- 42 Oral microbiology: Infection of oral mucosa membrane and salivary gland
Dr. Emódy Levente

Practices

- 1 Introduction, safety regulations. The microscope, native and stained preparation
- 2 Cultivation of bacteria, media
- 3 Biochemical reaction in the identification
- 4 Antibiotic sensitivity tests
- 5 Serological methods
- 6 Molecular diagnostics
- 7 Bacterial diagnosis of pyogenic infections; blood culture
- 8 Bacterial diagnosis of urinary tract infections
- 9 Bacterial diagnosis of gastrointestinal infections
- 10 Bacterial diagnosis of respiratory tract infections and meningitis
- 11 Anaerobic infections
- 12 Diagnostic virology
- 13 Diagnostic mycology and parasitology
- 14 Diagnostic oral microbiology

Seminars

Exam topics/questions

The written exam consists of multiple choice questions

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

Dr. Batai Istvánné (Dr. Kerényi Mónika) (KEMHAAP.PTE), Dr. Emódy Levente (EMLGAAO.PTE), Dr. Kocsis Béla (KOBHACE.PTE), Dr. Mestyán Gyula (MELPAAP.PTE), Dr. Polgár Beáta (POBPAAP.PTE), Dr. Szereday László (SZLPAAP.PTE), Dr. Tigyi Zoltán (TIZHAAE.PTE)

OSP-PO1-T PATHOLOGY FOR DENTAL STUDENTS 1

Course director:

DR. TAMÁS TORNÓCZKI, associate professor
Department of Pathology

4 credit ▪ semester exam ▪ Pre-clinical subject ▪ autumn semester ▪ recommended semester: 5

Number of hours/semester: 28 lectures + 0 practices + 28 seminars = total of 56 hours

Course headcount limitations (min.-max.): 5 – not limited

Prerequisites: OSA-FAN-T completed + OSA-EF2-T completed + OSA-MAX-T completed

Topic

Basic pathological cellular responses underlying the various disease processes are taught during this course. These are discussed in the following seven main chapters: necrosis, degeneration, accumulation, growth disturbances, acute and chronic inflammation, circulation, immune pathology and general oncology. The most common and most important diseases are also discussed in details during the lectures and seminars.

The main educational task of this subject is to have the students understand the disease concepts as the unity of macroscopy, microscopy, clinical signs and symptoms, genetic and laboratory changes; factors that shape the clinicopathological thinking about diseases.

The general pathology course will form the very basis for the systemic / organ pathology as well as the subsequent clinical studies by teaching the etiology, pathogenesis and pathomechanism together with the gross morphological and microscopical changes of the various diseases. During this activity the principal and methodology of the diagnostic pathology will be covered.

The theoretical part of the subject consists of 2 lectures a week (28 lectures altogether). The practical part includes 2x45 min. practice a week (altogether 14x90 min. in the course of the semester), which begins with 4x90 min. autopsy (4 practices), followed by 10 histopathology (10 practices).

Conditions for acceptance of the semester

Maximum two absences, which means 2 practices, are allowed! Absences exceeding this rate (15% of the histopathology classes) in either semester will result in not signing the gradebook! Each missed seminar has to be made up for with another group in the same week.

Mid-term exams

One macropreparation, one histological slide and a theoretical question will be given to the students at the examination by the end of the first semester.

Making up for missed classes

Maximum two absences, which means 2 practices, are allowed! Absences exceeding this rate (15% of the histopathology classes) in either semester will result in not signing the gradebook! Each missed seminar has to be made up for with another group in the same week.

Reading material

- *Obligatory literature*
V. Kumar: Robbins Basic Pathology, 2014
- *Literature developed by the Department*
- *Notes*
- *Recommended literature*

Lectures

INTRODUCTION, POSTMORTEM CHANGES, NECROSIS (4 LECTURES)

- 1 Postmortal changes. Cell injury and cell death. Causes of cell injury. Necrosis. Ultrastructural, light microscopical and gross changes
Dr. Tornóczy Tamás
- 2 Types of of necrosis: coagulation and liquefactive necrosis. Organ examples.
Dr. Tornóczy Tamás
- 3 Clinicopathology of AMI
Dr. Tornóczy Tamás
- 4 Other types of necrosis. Apoptosis.
Dr. Tornóczy Tamás

DEGENERATION, ACCUMULATION, PIGMENTS, CALACIFICATION (4 LECTURES)

- 5 Degenerations
Dr. Vida Livia
- 6 Endogenous pigments
Dr. Vida Livia
- 7 Exogenous pigments. Accumulation.
Dr. Vida Livia
- 8 Calcifications, lithiasis, amyloidosis.
Dr. Vida Livia

GROWTH DISTURBANCES (3 LECTURES)

- 9 Regressive changes: atrophy. Organ examples. Classification of cells according to the mitotic capacity
Dr. Kereskai László
- 10 Progressive changes: hyperplasia and hypertrophy 1.
Dr. Kereskai László
- 11 Progressive changes: hyperplasia és hypertrophy
Dr. Kereskai László

PATHOLOGY OF CIRCULATION. (4 LECTURES)

- 12 Oedema, hyperaemia and congestion
Dr. Kajtár Béla
- 13 Hemorrhages
Dr. Kajtár Béla
- 14 Thrombosis and embolisation
Dr. Kajtár Béla
- 15 Hypertension. Shock
Dr. Kajtár Béla

INFLAMMATIONS (4 LECTURES)

- 6 Definition of acute inflammation, cellular and vascular reactions
Dr. Kajtár Béla
- 17 Clinicopathological forms of acute inflammation
Dr. Kajtár Béla
- 18 Chronic inflammation
Dr. Kajtár Béla
- 19 Granuloma, granulomatous inflammation
Dr. Kajtár Béla

IMMUNOPATHOLOGY (3 LECTURES)

- 20 Hypersensitivity reactions
Dr. Kereskai László
- 21 Autoimmune diseases
Dr. Kereskai László
- 22 Immundeficiencies, transplantation immunology
Dr. Kereskai László

ONCOPATHOLOGY (5 LECTURES)

- 23 Neoplasia, nomenclature, definitions. Benign and malignant behaviour of tumours. Terminology (nomenclature) of neoplasms. Definition of metaplasia, dysplasia and their relation to neoplasia. Organ examples. Anaplasia
Dr. Tornóczki Tamás
- 24 Tumor growth, local spread and metastasis, types of metastases, grading and staging. Paraneoplastic syndromes. Tumor incidence and mortality.
Dr. Tornóczki Tamás
- 25 Oncogenes, protooncogenes, oncoproteins, growth factor and growth factor receptor oncogenes (RET, KIT, PDGFR), growth factor receptor overexpression (ERBB1, ERBB2), organ examples.
Dr. Tornóczki Tamás
- 26 Oncoproteins and ncogenes in signaltransduction: RAS and RAS signal proteins. Examples for oncogene with non-receptor tyrosine kinase function. The myc oncogene. Types and their changes and role in tumours (c-myc, n-myc).
Dr. Tornóczki Tamás
- 27 Tumor supressor genes: RB and p53. Their role in tumorigenesis.
Dr. Tornóczki Tamás
- 28 Chemical and radiation cancerogenesis. Microbial carcinogenesis: RNA and DNA viruses. Helicobacter pylori.
Dr. Tornóczki Tamás

Practices

Seminars

- 1 Autopsy practice
- 2 Autopsy practice
- 3 Autopsy practice
- 4 Autopsy practice
- 5 Autopsy practice
- 6 Autopsy practice
- 7 Autopsy practice
- 8 Autopsy practice
- 9 Necrosis 1.
- 10 Necrosis 1.
- 11 Necrosis 2. Degenerations.
- 12 Necrosis 2. Degenerations.
- 13 Accumulations
- 14 Accumulations
- 15 Growth disturbances
- 16 Growth disturbances
- 17 Pathology of circulation 1
- 18 Pathology of circulation 1
- 19 Pathology of circulation 2
- 20 Pathology of circulation 2
- 21 Acute inflammation
- 22 Acute inflammation
- 23 Chronic inflammation
- 24 Chronic inflammation
- 25 Oncopathology 1
- 26 Oncopathology 1
- 27 Oncopathology 2
- 28 Oncopathology 2

Exam topics/questions

PREPARATIONS

I. NECROSIS

1. Anaemic infarct of the heart
2. Haemorrhagic infarct of the small intestine
3. Gangraena sicca of the toes
4. Cerebral abscess
5. Acute pancreatitis with fat necrosis

II. DEGENERATIONS, ACCUMULATIONS, PIGMENTS

6. Steatosis hepatis
7. Aortic atherosclerosis with aneurysm
8. Haemochromatosis
9. Cholelithiasis, chronic cholecystitis and empyema
10. Nodular calcified aortic stenosis

III. GROWTH DISTURBANCES

11. Atrophia cerebri
12. Hypertrophia dilatativa ventriculi sinistri cordis
13. Cor pulmonale chronicum
14. Hyperplasia prostatae

IV. PATHOLOGY OF CIRCULATION

15. Cerebral apoplexy
16. Cerebral purpura
17. Abdominal aortic aneurysm - parietal thrombosis
18. Left atrial „ball” thrombus

V. INFLAMMATIONS

19. Fibrinous pericarditis - cor villosum
20. Pseudomembranous colitis
21. Lobar pneumonia
22. Bronchopneumonia
23. Pulmonary abscess
24. Miliary tuberculosis
25. Phthisis cavernosa

VI. ONCOPA-THOLOGY

26. Fibroadenoma of the breast
27. Carcinoma of the breast
28. Leiomyoma of the uterus
29. Dermoid cyst
30. Rectal polyp
31. Rectal adenocarcinoma
32. Pulmonary metastases

SLIDES

I. NECROSIS

1. Recent infarct of the heart
2. Haemorrhagic infarct of the lung

II. DEGENERATION, ACCUMULATION, PIGMENTS, CALCIFICATION

3. Steatosis hepatis
4. Haemosiderosis of the liver
5. Amyloidosis of the liver
6. Silicosis

III. GROWTH DISTURBANCES

7. Prostatic hyperplasia
8. Endometrial hyperplasia

IV. PATHOLOGY OF CIRCULATION

9. Pulmonary oedema
10. DIC - Fibrin thrombi in the kidney
11. Central hemorrhagic necrosis

V. INFLAMMATIONS

12. Fibrinous pericarditis
13. Pseudomembranous colitis
14. Purulent meningitis
15. Acute appendicitis
16. Sarcoidosis
17. Miliary tuberculosis

VI. ONCOPA-THOLOGY

18. Cervical intraepithelial neoplasia CIN III
19. Squamous cell carcinoma of the lower lip
20. Adenocarcinoma metastasis in a lymph node

THEORETICAL QUESTIONS

I. NECROSIS, APOPTOSIS

1. Cell injury and cell death. Causes of cell injury. Necrosis. Ultrastructural, light microscopical and gross changes. Apoptosis: morphology, pathomechanism.
2. Patterns of necrosis: coagulation type. Organ examples.
3. Patterns of necrosis: colliquation type. Organ examples.
4. Caseous necrosis and adiponecrosis

II. DEGENERATION, ACCUMULATION, PIGMENTS

5. The definition and types of degenerations. Parenchymal and fatty degeneration. Organ examples
6. Pathomorphology, pathogenesis and complications of atherosclerosis Aneurysm types
7. Exogenous and endogenous pigments. Histochemical characteristics of the different pigments. Anthracosis.
8. Hemoglobinogenic pigments I. Different forms of jaundice and cholestasis, morphology, differential diagnostics.
9. Hemoglobinogenic pigments II. Pathological forms of iron storage Endogenous nonhemoglobinogenous pigments: lipofuscin, melanin, homogentisinic acid.
10. Dystrophic and metastatic calcification. Organ manifestations. Pathomechanism and clinicopathological forms of stone formation
11. General characterisation of amyloidosis. Physico-chemical, ultrastructural and histochemical nature of amyloid. Types of amyloid fibrils. Clinicopathology of amyloidosis.

III. GROWTH DISTURBANCES

12. Causes of atrophy; general gross morphology and microscopical characteristics. Pathomechanism of atrophy. Definition of atrophy, hypoplasia, aplasia, agenesis. Osteoporosis.
13. Definition, types and organ examples of hyperplasia. Definition of hypertrophy (causes, morphology, changes at cell cycle)
14. Left ventricular hypertrophy. Causes, sequential compensatory changes and functional consequences. Cor pulmonale chronicum.

IV. PATHOLOGY OF CIRCULATION

15. Definition of edema, pathomechanism (Starling law), clinical forms
16. Classification of haemorrhages based on pathomechanism, clinical forms. Congestion and hyperemia.
17. Thrombosis and embolus: definitions, casues, types and clinical consequences
18. Causes, types and pathomechanisms of shock. Disseminated intravascular coagulation (DIC).
19. Clinicopathological classification of hypertension and complications

V. INFLAMMATIONS

20. Vascular and cellular mechanisms of acute inflammations
21. Clinicopathological classification of acute inflammation based upon exudate types. Organ examples.
22. Definition, causes, cellular and humoral mechanisms of chronic inflammation.
23. Pathogenesis and clinicopathology of tuberculosis
24. Granuloma, granulomatous inflammation

VI. IMMUNPATHOLOGY

25. Mechanisms of hypersensitivity reactions, examples of related disorders
26. Pathogenesis of autoimmune disorders. Systemic lupus (SLE)
27. Transplantation immunity. Aquired immunodeficiency syndrome (AIDS)

VII. ONCOPA-THOLOGY

28. Neoplasia, nomenclature, definitions. Definition of metaplasia and dysplasia, organ examples and their connections with neoplasia
29. General characteristics of benign and malignant tumors, anaplasia, tumor growth, local spread and metastasis, types of metastases
30. Incidence and mortality of cancers. Grading és staging. Paraneoplastic syndromes.
31. Oncogenes, protooncogenes, oncoproteins, growth factor and growth factor receptor oncogenes (RET, KIT, PDGFR), overexpression of normal growth factor receptors (ERBB1, ERBB2). Organ examples.
32. Oncogenes and oncoproteins in signal transduction: RAS and RAS signal proteins. Examples of oncogenes with non receptor tyrosine kinase activity, examples. The myc oncogene: types, their changes and roles in tumors (c-myc, n-myc)
33. Tumor suppressor genes: RB and p53 genes and their roles in tumorigenesis. Neurofibromatosis, NF1.
34. Chemical and radiation cancerogenesis. Mikrobial carcinogenesis: RNA és DNA viruses, Helicobacter pylori

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

Dr. Bogner Barna István (BOBPAAO.PTE), Dr. Czina Márton (CZMNAAT.PTE), Dr. Kajtár Béla (KABFAAO.PTE), Dr. Kaszás Bálint (KABRAAO.PTE), Dr. Kereskai László (KELMAAO.PTE), Dr. Pap Anita (PAAOACO.PTE), Dr. Semjén Dávid (SEDFABO.PTE), Dr. Smuk Gábor (SMGFAAO.PTE), Dr. Tornóczki Tamás (TOTMABO.PTE), Dr. Vida Livia (VILFAAO.PTE)

OSP-PTE-T PROTHODONTICS BASICS LECTURES

Course director:

DR. MÁRTA MÁRIA RADNAI, professor
Department of Dentistry, Oral and Maxillofacial Surgery

2 credit ▪ semester exam ▪ Pre-clinical subject ▪ autumn semester ▪ recommended semester: 5

Number of hours/semester: **28 lectures + 0 practices + 0 seminars = total of 28 hours**

Course headcount limitations (min.-max.): **1 – 24**

Prerequisites: **OSA-MAX-T completed + OSA-FAT-T completed + OSP-PTG-T parallel**

The subject can only be registered in case of a PASSED and valid health aptitude test!

Topic

The aim of this course is to inform students about clinical and technological aspects of fixed partial dentures. Students have to practice the clinical and dental technical steps of crown and bridge fabrication. The course shows the possible mistakes of the procedures. They also learn how to take impression in the clinic.

Conditions for acceptance of the semester

Requirements for students

- Active participation on lectures and practices, based on the Study and Exam Regulations of the University,
- Attendance of lectures and practices is mandatory.
- Completion of the tasks in the laboratory
- Average of the marks of written or oral tests relating the theoretical knowledge which is necessary to carry out the practical work.
- Form of tests: oral test, written test, etc. If the test considered as failed, the student gets one opportunity to rewrite the test. If the student gets further failed mark, the semester/practice is not accepted, it can not be evaluated.
- If either of the above averages (for the practical work or the relating theory) does not reach 2.0 the end semester practical mark can not be evaluated and accepted, the student has to repeat the course.

Offered course mark: PTE TVSZ 2. §(15)

Consequences of coming late to the practice:

Students must come to the practice on time.

If a student is late three times, it is equal with one missing.

If a student comes more than 5 minutes late, it is regarded as an absence.

Mid-term exams

Two mid-term tests

Making up for missed classes

No possibility.

Reading material

- *Obligatory literature*

Shillingburg HT, Jacobi R, Brackett SE: Fundamentals of Tooth Preparation. Quintessence, 2nd edition, ISBN 0-86715-157-9
SF Rosenstiel, MF Land, J Fujimoto: Contemporary Fixed Prosthodontics, 3rd ed., 2001, ISBN 0-8151-5559-X

- *Literature developed by the Department*

Lectures

- *Notes*

- *Recommended literature*

Lectures

- 1 History of prosthetic dentistry. Topics of prosthetic dentistry, prosthetic appliances.
Dr. Marada Gyula
- 2 Indications for making artificial crowns, classification of crowns.
Dr. Marada Gyula
- 3 Main principles of tooth preparation.
Dr. Marada Gyula
- 4 Rotary instruments in prosthetic work.

- Dr. Marada Gyula
- 5 Methods of tooth preparation. Pulp protection.
Dr. Marada Gyula
- 6 Finish line, periodontal aspects of tooth preparation. Biologic width.
Dr. Marada Gyula
- 7 Precision impression methods.
Dr. Marada Gyula
- 8 Procedure of dental impressions. Sulcus enlargement.
Dr. Marada Gyula
- 9 Model preparation methods I.
Dr. Rajnics Zsolt
- 10 Model preparation methods II.
Dr. Rajnics Zsolt
- 11 Partial metal crowns. Preparation of 3/4 and 4/5 crown. Veneer preparation.
Dr. Rajnics Zsolt
- 12 Build up of destroyed tooth, materials and methods.
Dr. Rajnics Zsolt
- 13 Provisional restorations, materials and methods.
Dr. Rajnics Zsolt
- 14 WRITTEN TEST
Dr. Rajnics Zsolt
- 15 Construction of cast metal crowns, clinical and laboratory steps I.
Dr. Rajnics Zsolt
- 16 Construction of cast metal crowns, clinical and laboratory steps II.
Dr. Rajnics Zsolt
- 17 Construction of resin faced and acrylic crowns, clinical and laboratory steps.
Dr. Rajnics Zsolt
- 18 Construction of porcelain fused to metal crowns, clinical and laboratory steps.
Dr. Rajnics Zsolt
- 19 Full ceramic systems.
Dr. Marada Gyula
- 20 Construction full ceramic crowns, clinical and laboratory steps.
Dr. Marada Gyula
- 21 Post and cores, indications, conditions, preparation. Types of post and cores, classification.
Dr. Rajnics Zsolt
- 22 Prefabricated posts, types, indications.
Dr. Rajnics Zsolt
- 23 Interim and definitive cementation of crowns. Removal of cemented crowns and bridges.
Dr. Marada Gyula
- 24 WRITTEN TEST
Dr. Rajnics Zsolt
- 25 Consequences of tooth loss. Prosthetic value of the teeth. Classification of bridges, indication, planning.
Dr. Marada Gyula
- 26 Requirements of bridges.
Dr. Rajnics Zsolt
- 27 Procession of bridge construction, clinical and laboratory steps. Special bridges.
Dr. Rajnics Zsolt
- 28 Infection control in prosthodontics. Shade selection.
Dr. Rajnics Zsolt

Practices

Seminars

Exam topics/questions

1. Subject of prosthodontics, types of prosthetic appliances.
2. Consequences of tooth loss.
3. The aims of prosthetic rehabilitation.
4. Definition, classifications, indications and contraindications of crowns.
5. Characteristics of partial crowns, indications and contraindications.

6. Materials artificial crowns, and their characteristics.
7. Biomechanical principles of tooth preparation.
8. Chemical methods of abutment protection.
9. Prosthodontic methods of abutment protection.
10. Place of finish line compared to the marginal gingiva.
11. Different preparation-margin designs, advantages and disadvantages, indications.
12. Abutment preparation: general rules, aspects.
13. Instruments and methods of abutment preparation.
14. Steps of abutment tooth preparation for metal-ceramic crowns.
15. Steps of abutment tooth preparation for full ceramic crowns.
16. Steps of abutment tooth preparation for metal partial crowns for anterior and posterior teeth.
17. Comparison of chemical and prosthetic abutment protective methods.
18. What do you have to check after completion of tooth preparation?
19. What are the typical failures during abutment preparation?
20. Methods of pulp protection during tooth preparation.
21. Core build up when the abutment tooth is severely damaged. Management of caries lesions on the abutment teeth.
22. Definition of impression, anatomic, precision impression.
23. Steps of precision impression taking with one phase method.
24. Steps of precision impression taking with two phase method
25. Process of precision impression.
26. Factors influencing the accuracy of the impression, evaluation of the impression.
27. Aims of abutment protection.
28. Methods of preparation of temporary crowns.
29. Types of impression trays, requirements relating the trays.
30. Displacement of gingival tissues, sulcus-enlargement: aim, instruments, materials and methods.
31. Definition of the model, precision model.
32. Classification of models.
33. Materials for making a model, and their characteristics.
34. Technique of die and cast making in case of fixed partial dentures.
35. Classification of impression materials.
36. Materials of precision impression, and their characteristics.
37. Material of anatomic impression, and its characteristics.
38. Dental burs and their use.
39. Material of temporary acrylic crowns and their characteristics and processing.
40. Comparison of different impression methods.
41. Preparation for complete crowns. Cast metal crowns.
42. Veneered crowns. Resin faced crowns.
43. Veneered crowns. Porcelain fused to metal crowns.
44. Dental technical process of making Jacket crowns (resin).
45. Dental technical process of making full ceramic crown with platinum-foil method.
46. Porcelain laminate veneers, definition, indication, tooth preparation.
47. Shade selection, theory and praxis.
48. Temporary cementation of crowns.
49. Procedure of definitive cementation of crowns.
50. Removal of crowns and bridges.
51. Value of the teeth from prosthetic aspect, their use as abutments.
52. Definition of bridges, parts of bridges, classification.
53. Materials of bridges. Methods of veneer fabrication.
54. Functions of a bridge. Static, functional and aesthetic aspects.
55. Static, functional, biological and esthetic requirements of a bridge.
56. Indications and contraindications of fixed partial dentures.
57. Factors influencing the lifespan of bridges.
58. Process of making cast metal bridges (clinical and dental technical steps).
59. Process of making metal-ceramic bridges (clinical and dental technical steps).
60. Try-in of crowns and bridges in the dental-surgery.
61. Procedure of investing and casting.
62. Special bridges (removable bridges, adhesive bridges).
63. Alloys for cast metal crowns, and their properties.

64. Alloys for porcelain fused to metal crowns, and their properties.
65. Systems for full ceramic crowns and their processing.
66. Materials, armamentarium and steps of crown and bridge fixation.
67. Classification of post retained prosthetic appliances, indications and contraindications.
68. Indirect and direct methods for making a post-and-core.
69. Types and application of prefabricated metal posts.
70. Types and application of prefabricated non-metal posts.
71. Cementation of post-and-core.

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

OSP-PTG-T PROSTHODONTICS BASICS PRACTICES

Course director:

DR. MÁRTA MÁRIA RADNAI, professor
Department of Dentistry, Oral and Maxillofacial Surgery

5 credit ▪ midsemester grade ▪ Pre-clinical subject ▪ autumn semester ▪ recommended semester: 5

Number of hours/semester: 0 lectures + 70 practices + 0 seminars = total of 70 hours

Course headcount limitations (min.-max.): 1 – 24

Prerequisites: OSA-MAX-T completed + OSA-FAT-T completed + OSP-PTE-T parallel

The subject can only be registered in case of a PASSED and valid health aptitude test!

Topic

The aim of this course is to inform students about clinical and technological aspects of fixed partial dentures. Students have to practice the clinical and dental technical steps of crown and bridge fabrication. The course shows the possible mistakes of the procedures. They also learn how to take impression in the clinic.

Conditions for acceptance of the semester

Requirements for students

- Active participation on lectures and practices, based on the Study and Exam Regulations of the University,
- Attendance of practices is mandatory.
- Completion of the tasks in the laboratory
- The student receives marks for the practical tasks in the training laboratory. The average must be at least 2.0. If the student gets 3 or more failed marks during the semester for his/her practical work, then the semester can not be evaluated and accepted. The practical tasks, which are not finished, also considered as failed mark.
- Average of the marks of written or oral tests relating the theoretical knowledge which is necessary to carry out the practical work.
- Form of tests: oral test, written test, etc. If the test considered as failed, the student gets one opportunity to rewrite the test. If the student gets further failed mark, the semester/practice is not accepted, it can not be evaluated.
- If either of the above averages (for the practical work or the relating theory) does not reach 2.0 the end semester practical mark can not be evaluated and accepted, the student has to repeat the course.

Offered course mark: PTE TVSZ 2. §(15)

Consequences of coming late to the practice:

Students must come to the practice on time.

If a student is late three times, it is equal with one missing.

If a student comes more than 15 minutes late, it is regarded as an absence.

Mid-term exams

Practical marks

Making up for missed classes

No possibility.

Reading material

- *Obligatory literature*

Shillingburg HT, Jacobi R, Brackett SE: Fundamentals of Tooth Preparation. Quintessence, 2nd edition, ISBN 0-86715-157-9
SF Rosenstiel, MF Land, J Fujimoto: Contemporary Fixed Prosthodontics, 3rd ed., 2001, ISBN 0-8151-5559-X

- *Literature developed by the Department*

Lectures

- *Notes*

- *Recommended literature*

Lectures

Practices

- 1 Practising the handling of burs.
- 2 Practising the handling of burs.
- 3 Practising the handling of burs.
- 4 Practising the handling of burs.
- 5 Practising the handling of burs.
- 6 Preparation of a lower molar tooth for full metal crown.
- 7 Preparation of a lower molar tooth for full metal crown.
- 8 Preparation of a lower molar tooth for full metal crown.
- 9 Preparation of a lower molar tooth for full metal crown.
- 10 Preparation of a lower molar tooth for full metal crown.
- 11 Preparation of a lower premolar and molar tooth for a metal-ceramic crown.
- 12 Preparation of a lower premolar and molar tooth for a metal-ceramic crown.
- 13 Preparation of a lower premolar and molar tooth for a metal-ceramic crown.
- 14 Preparation of a lower premolar and molar tooth for a metal-ceramic crown.
- 15 Preparation of a lower premolar and molar tooth for a metal-ceramic crown.
- 16 Preparation of an upper incisor for a full ceramic crown.
- 17 Preparation of an upper incisor for a full ceramic crown.
- 18 Preparation of an upper incisor for a full ceramic crown.
- 19 Preparation of an upper incisor for a full ceramic crown.
- 20 Preparation of an upper incisor for a full ceramic crown.
- 21 Preparation of an upper canine and premolar tooth for a full ceramic and metal-ceramic crown.
- 22 Preparation of an upper canine and premolar tooth for a full ceramic and metal-ceramic crown.
- 23 Preparation of an upper canine and premolar tooth for a full ceramic and metal-ceramic crown.
- 24 Preparation of an upper canine and premolar tooth for a full ceramic and metal-ceramic crown.
- 25 Preparation of an upper canine and premolar tooth for a full ceramic and metal-ceramic crown.
- 26 Making a precision impression of the jaw and alginate antagonist impression of the upper arch. Fabricating a temporary bridge and crown.
- 27 Making a precision impression of the jaw and alginate antagonist impression of the upper arch. Fabricating a temporary bridge and crown.
- 28 Making a precision impression of the jaw and alginate antagonist impression of the upper arch. Fabricating a temporary bridge and crown.
- 29 Making a precision impression of the jaw and alginate antagonist impression of the upper arch. Fabricating a temporary bridge and crown.
- 30 Making a precision impression of the jaw and alginate antagonist impression of the upper arch. Fabricating a temporary bridge and crown.
- 31 Mounting the sectioned and antagonist model to the articulator. Making the wax pattern for a lower metal-ceramic bridge.
- 32 Mounting the sectioned and antagonist model to the articulator. Making the wax pattern for a lower metal-ceramic bridge.
- 33 Mounting the sectioned and antagonist model to the articulator. Making the wax pattern for a lower metal-ceramic bridge.
- 34 Mounting the sectioned and antagonist model to the articulator. Making the wax pattern for a lower metal-ceramic bridge.
- 35 Mounting the sectioned and antagonist model to the articulator. Making the wax pattern for a lower metal-ceramic bridge.
- 36 Making the wax pattern for a lower metal-ceramic bridge.
- 37 Making the wax pattern for a lower metal-ceramic bridge.
- 38 Making the wax pattern for a lower metal-ceramic bridge.
- 39 Making the wax pattern for a lower metal-ceramic bridge.
- 40 Making the wax pattern for a lower metal-ceramic bridge.
- 41 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 42 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 43 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 44 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 45 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 46 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 47 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.

- 48 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 49 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 50 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 51 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 52 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 53 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 54 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 55 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 56 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 57 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 58 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 59 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 60 Students take a lower and upper anatomical impression and bite registration from each other. Making anatomical models and mount them to the articulator.
- 61 Making anatomical models and mount them to the articulator. Demonstration and practise of using a facebow.
- 62 Making anatomical models and mount them to the articulator. Demonstration and practise of using a facebow.
- 63 Making anatomical models and mount them to the articulator. Demonstration and practise of using a facebow.
- 64 Making anatomical models and mount them to the articulator. Demonstration and practise of using a facebow.
- 65 Making anatomical models and mount them to the articulator. Demonstration and practise of using a facebow.
- 66 Demonstration and practise of using a facebow. Practising the tooth preparation.
- 67 Demonstration and practise of using a facebow. Practising the tooth preparation.
- 68 Demonstration and practise of using a facebow. Practising the tooth preparation.
- 69 Demonstration and practise of using a facebow. Practising the tooth preparation.
- 70 Demonstration and practise of using a facebow. Practising the tooth preparation.

Seminars

Exam topics/questions

The practical works will be evaluated during the semester

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

Dr. Benke Beáta (BEBFADO.PTE), Dr. Marada Gyula (MAGFABO.PTE), Dr. Muzsek Zsófia (MUZFACO.PTE), Dr. Rajnics Zsolt (RAZNABO.PTE)

OSP-PUH-T PUBLIC HEALTH

Course director:

DR. ISTVÁN KISS, professor
Department of Public Health Medicine

1 credit ▪ semester exam ▪ Pre-clinical subject ▪ autumn semester ▪ recommended semester: 5

Number of hours/semester: 14 lectures + 0 practices + 0 seminars = total of 14 hours

Course headcount limitations (min.-max.): 1 – not limited Prerequisites: OSA-EF1-T completed + OSA-MF2-T completed

The subject can only be registered in case of a PASSED and valid health aptitude test!

Topic

Public Health represents the preventive side of medicine. The subject deals with primary, secondary and tertiary prevention of the most challenging diseases of public health.

The aims are to exam the process of disease development and demonstrate the possibilities of prevention on individual and community levels.

Conditions for acceptance of the semester

Maximum of 15 % absence allowed

Mid-term exams

-

Making up for missed classes

-

Reading material

- *Obligatory literature*

Edit Paulik: Public Health and Preventive Medicine, Medicina Publishing House, Budapest 2013.

- *Literature developed by the Department*

Educational material uploaded on Neptun.

- *Notes*

- *Recommended literature*

Lectures

- 1 Leading causes of mortality and morbidity worldwide. The definition of health and disease. Health determinants.
Dr. Kiss István
- 2 Levels of prevention. Health Promotion. Social risk factors.
Dr. Kiss István
- 3 Basics of Epidemiology
Dr. Kiss István
- 4 Epidemiology and prevention of cardiovascular diseases
Dr. Kiss István
- 5 Epidemiology and prevention of cancer
Dr. Kiss István
- 6 Epidemiology and prevention of other non-communicable diseases
Dr. Németh Katalin
- 7 Epidemiology of addictions.
Dr. Gyöngyi Zoltán
- 8 Basics of nutrition. Nutritional habits, healthy diet.
Dr. Kiss István
- 9 Role of nutrition in the development of major chronic non-communicable diseases
Dr. Kiss István
- 10 Basics of infectious diseases.
Dr. Németh Katalin
- 11 Main categories of infectious diseases and their characterization 1.
Dr. Németh Katalin
- 12 Main categories of infectious diseases and their characterization 2.
Dr. Németh Katalin

- 13 Basics of environmental health 1.
Bérczi Bálint Dániel
- 14 Basics of environmental health 2. Occupational medicine
Dr. Varga Csaba

Practices

Seminars

Exam topics/questions

1. Leading causes of mortality and morbidity worldwide.
2. The definition of health and disease. Health determinants.
3. Levels of prevention.
4. Demography.
5. Epidemiology and prevention of cardiovascular diseases.
6. Epidemiology and prevention of cancer.
7. Epidemiology and prevention of other non-communicable diseases: diabetes.
8. Epidemiology and prevention of other non-communicable diseases: obesity.
9. Epidemiology and prevention of other non-communicable diseases: osteoporosis.
10. Epidemiology and prevention of other non-communicable diseases: gastrointestinal diseases.
11. Epidemiology and prevention of other non-communicable diseases: respiratory diseases.
12. Basics of nutrition.
13. Nutritional habits, healthy diet.
14. Role of nutrition in the development of major chronic non-communicable diseases.
15. Basics of infectious diseases.
16. Epidemiology of infectious diseases: global and European situation.
17. Main categories of infectious diseases and their characterization.
18. Vaccination.
19. Nosocomial infections.
20. Water hygiene.
21. Soil pollution.
22. Air hygiene.
23. Healthy environment at workplace.
24. Health effects of radiation, noise, vibration, dusts, chemicals.
25. Occupational medicine in the dental praxis.
26. Occupational diseases. Ergonomics.
27. Basics of epidemiology.
28. Social risk factors.
29. Health promotion, health education.
30. Epidemiology of head and neck cancers.
31. Nutrition related diseases and their prevention.
32. Food borne infectious diseases, food poisoning and their prevention.
33. Public health importance of oral diseases.
34. Epidemiology and prevention of caries.
35. Epidemiology of sexually transmitted diseases.
36. Epidemiology of viral hepatitis.
37. Hospital hygiene. Sterilization, disinfection.
38. Practical aspects of infectious disease prevention.
39. Major risk factors in disease development: smoking
40. Major risk factors in disease development: alcohol consumption.

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

OSP-SPF-T SURGICAL PROPEDEUTICS

Course director:

DR. GÁBOR MENYHEI, professor
Department of Vascular Surgery

2 credit • semester exam • Pre-clinical subject • autumn semester • recommended semester: 5

Number of hours/semester: **14 lectures + 14 practices + 0 seminars = total of 28 hours**

Course headcount limitations (min.-max.): **2 – 20** Prerequisites: **OSA-MAX-T completed + OSA-MF2-T completed**

The subject can only be registered in case of a PASSED and valid health aptitude test!

Topic

The subject provides an overview of basic principles in general, vascular and orthopedic surgery and intensive therapy. The lectures deal with the diagnosis and treatment of the most important diseases. During practises basic examination methods practised and discussed.

Conditions for acceptance of the semester

Maximum of 15 % absence allowed

Mid-term exams

Making up for missed classes

According to consultation with practice leaders.

Reading material

- *Obligatory literature*
- *Literature developed by the Department*
- *Notes*
- *Recommended literature*

AH Kaye, J. Smith: Textbook of surgery, Blackwell Company; 2006, ISBN: 1405126272

Lectures

- 1 History of surgery. Principles in operating theatre, indications in surgery.
Dr. Menyhei Gábor
- 2 Types of wounds, principles of wound management.
Dr. Fazekas Gábor
- 3 Surgical infections and its prevention. Principles of antibiotic treatment.
Dr. Menyhei Gábor
- 4 Principles of anaesthesia.
Dr. Bártai István
- 5 Preoperative assessment and management. Resuscitation, shock management.
Dr. Jáksó Krisztián
- 6 Vascular diseases: diagnostic and therapeutic approaches.
Dr. Jancsó Gábor
- 7 Diseases and surgery of veins.
Dr. Menyhei Gábor
- 8 Principles of trauma management.
Dr. Szabó Tamás
- 9 Thoracic surgery.
Dr. Szántó Zsolt János
- 10 Cardiac surgery.
Dr. Hejmel László
- 11 Surgery of thyroid and parathyroid glands and breast.
Dr. Fazekas Gábor
- 12 Disorders and surgery of upper and lower gastrointestinal tract.
Dr. Benkő László
- 13 Principles in oncology: diagnostics and management.
Dr. Benkő László
- 14 Surgery of liver, gallbladder and pancreas.
Dr. Benkő László

Practices

- 1 General surgery
- 2 General surgery
- 3 General surgery
- 4 Anaesthesia
- 5 Intensive therapy
- 6 Vascular surgery
- 7 Vascular surgery
- 8 Traumatology
- 9 Thoracic surgery
- 10 Cardiac surgery
- 11 General surgery
- 12 General surgery
- 13 General surgery
- 14 General surgery

Seminars

Exam topics/questions

According to lecture topics.

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

Dr. Arató Endre (AREPAAP.PTE), Dr. Bártai István (BAIMABO.PTE), Dr. Benkő László (BELFAAO.PTE), Dr. Fazekas Gábor (FAGFABO.PTE), Dr. Gadácsi Melinda (GAMIAAO.PTE), Dr. Hejjei László (HELOABP.PTE), Dr. Jancsó Gábor (JAGMAAO.PTE), Dr. Menyhei Gábor (MEGMABO.PTE), Dr. Pintér Őrs (PIOFAAO.PTE), Dr. Szabó Tamás (SZTFAMO.PTE), Dr. Szántó Zsolt János (SZZFAAO.PTE), Dr. Vadász Gergely (VAGFACO.PTE)

OSP-BPF-T INTERNAL MEDICINE: PROPAEDEUTICS FOR DENTAL STUDENTS

Course director:

DR. ISTVÁN WITTMANN, professor

2nd Department of Internal Medicine and Nephrology Centre

2 credit ▪ semester exam ▪ Pre-clinical subject ▪ spring semester ▪ recommended semester: 6

Number of hours/semester: **14 lectures + 14 practices + 0 seminars = total of 28 hours**

Course headcount limitations (min.-max.): – Prerequisites: **OSA-EF2-T completed + OSA-MAX-T completed**

Topic

Conditions for acceptance of the semester

Mid-term exams

Making up for missed classes

Reading material

- *Obligatory literature*
- *Literature developed by the Department*
- *Notes*
- *Recommended literature*

Lectures

Practices

Seminars

Exam topics/questions

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

OSP-FF1-T PHARMACOLOGY FOR DENTISTRY STUDENTS 1

Course director:

DR. ZSUZSANNA TAMASIK-HELYES, professor
Department of Pharmacology and Pharmacotherapy

3 credit ▪ semester exam ▪ Pre-clinical subject ▪ spring semester ▪ recommended semester: 6

Number of hours/semester: 42 lectures + 0 practices + 0 seminars = total of 42 hours

Course headcount limitations (min.-max.): 2 – 30 Prerequisites: OSP-KT2-T parallel + OSP-PO2-T parallel

Topic

The general aim of the subject is to provide the dentistry students with all the basic information in pharmacology necessary to understand the actions of drugs and the clinical pharmacotherapy. Pharmacology can be defined as the study of the manner in which the function of living systems is affected by chemical agents. Therefore, the students should be familiar with the basic knowledge of the physiological, pathophysiological and biochemical background of the pharmacological and therapeutic approaches. On the other hand, drug therapy is closely related to the clinical aspects of diseases.

The following topics will be dealt with. Definitions, prescription writing, drug development, drug formulations. General aspects of mechanisms of drug actions: characterization of drug-receptor interactions, mechanisms of drug antagonism, signal transduction mechanisms of drug receptors. General and quantitative aspects of pharmacokinetics: absorption, distribution and elimination of drugs. Pharmacology of the autonomic nervous system. Local anaesthetics.

Cardiovascular pharmacology: drugs used to treat congestive heart failure, antianginal, antiarrhythmic, antihypertensive drugs, diuretics, calcium channel blockers, drugs acting on the renin-angiotensin-aldosterone system. Drugs affecting haemostasis, haematopoiesis and hyperlipoproteinaemias. Pharmacology of histamine, serotonin.

Conditions for acceptance of the semester

Maximum of 15 % absence allowed

Mid-term exams

Making up for missed classes

Not possible

Reading material

- *Obligatory literature*

Rang, Dale, B. Ritter, Moore: Pharmacology, 8th edition, Elsevier Churchill Livingstone, 2015.

G. Katzung (ed.): Basic and Clinical Pharmacology, 12th edition, Lange Medical Books/McGraw-Hill, 2012.

- *Literature developed by the Department*

Intranet. Department of Pharmacology and Pharmacotherapy. Educational materials.

Neptun Meet Street

- *Notes*

- *Recommended literature*

Lectures

- 1 Introduction to pharmacology
Sánticsné Dr. Pintér Erika
- 2 Drug development
Sánticsné Dr. Pintér Erika
- 3 Basic mechanisms of drug effects. Characteristics of the agonist-receptor interaction I
Dr. Bölcskei Kata
- 4 Characteristics of the agonist-receptor interaction II
Dr. Bölcskei Kata
- 5 Signal transduction. Tachyphylaxis and tolerance
Dr. Bölcskei Kata
- 6 Antagonism
Dr. Bölcskei Kata
- 7 Consultation on pharmacodynamics
Dr. Bölcskei Kata
- 8 Absorption and distribution
Dr. Bölcskei Kata
- 9 Biotransformation and excretion
Dr. Bölcskei Kata

- 10 Quantitative pharmacokinetics I.
Dr. Bölcskei Kata
- 11 Quantitative pharmacokinetics II.
Dr. Bölcskei Kata
- 12 Drug formulations I.
Dr. Bölcskei Kata
- 13 Drug formulations II.
Dr. Bölcskei Kata
- 14 Introduction to the pharmacology of the autonomic nervous
Sánticsné Dr. Pintér Erika
- 15 Cholinergic agonists, cholinesterase inhibitors
Sánticsné Dr. Pintér Erika
- 16 Muscarine receptor antagonists
Sánticsné Dr. Pintér Erika
- 17 Peripheral muscle relaxants
Sánticsné Dr. Pintér Erika
- 18 Drugs acting on synthesis, storage, release and elimination of catecholamines
Sánticsné Dr. Pintér Erika
- 19 Adrenergic receptor agonists
Sánticsné Dr. Pintér Erika
- 20 Adrenergic receptor antagonists
Sánticsné Dr. Pintér Erika
- 21 Local anaesthetics I
Tamasikné Dr. Helyes Zsuzsanna
- 22 Local anaesthetics II
Tamasikné Dr. Helyes Zsuzsanna
- 23 Calcium channel blockers
Tamasikné Dr. Helyes Zsuzsanna
- 24 Drugs acting on the renin-angiotensin-aldosterone system
Sánticsné Dr. Pintér Erika
- 25 Diuretics
Sánticsné Dr. Pintér Erika
- 26 Therapy of congestive heart failure
Tamasikné Dr. Helyes Zsuzsanna
- 27 Antianginal drugs
Sánticsné Dr. Pintér Erika
- 28 Pharmacotherapy of hypertension
Sánticsné Dr. Pintér Erika
- 29 Anti-arrhythmic drugs
Dr. Pozsgai Gábor
- 30 Histamine and histamine receptor antagonists
Dr. Pozsgai Gábor
- 31 Serotonin, 5-HT receptor agonists and antagonists I
Dr. Bölcskei Kata
- 32 Serotonin, 5-HT receptor agonists and antagonists II
Dr. Bölcskei Kata
- 33 Eicosanoids I
Tamasikné Dr. Helyes Zsuzsanna
- 34 Eicosanoids II
Tamasikné Dr. Helyes Zsuzsanna
- 35 Drugs acting on smooth muscle
Tamasikné Dr. Helyes Zsuzsanna
- 36 Pharmacotherapy of hyperlipoproteinemias
Dr. Pozsgai Gábor
- 37 Drugs influencing haemostasis I
Tamasikné Dr. Helyes Zsuzsanna
- 38 Drugs influencing haemostasis II

Tamasikné Dr. Helyes Zsuzsanna

- 39 Drugs influencing haemostasis III
Tamasikné Dr. Helyes Zsuzsanna
- 40 Drugs influencing haematopoiesis
Tamasikné Dr. Helyes Zsuzsanna
- 41 Drugs acting on the respiratory system I
Dr. Bölcskei Kata
- 42 Drugs acting on the respiratory system II
Dr. Bölcskei Kata

Practices

Seminars

Exam topics/questions

1. Drug development
2. Basic mechanisms of drug effects
3. Characteristics of the agonist-receptor interaction
4. Signal transduction
5. Tachyphylaxis and tolerance. Antagonism
6. Absorption
7. Distribution
8. Biotransformation
9. Excretion
10. Quantitative pharmacokinetics
11. Cholinergic agonists. Cholinesterase inhibitors
12. Muscarine receptor antagonists
13. Peripheral muscle relaxants
14. Drugs acting on the synthesis, storage, release and elimination of catecholamines
15. Adrenergic receptor agonists
16. Adrenergic receptor antagonists
17. Histamine and histamine receptor antagonists
18. Serotonin, 5-HT receptor agonists and antagonists
19. Eicosanoids
20. Drugs influencing smooth muscles
21. Local anaesthetics
22. Calcium channel blockers
23. Drugs acting on the renin-angiotensin-aldosterone system
24. Diuretics
25. Pharmacotherapy of congestive heart failure
26. Antianginal drugs
27. Pharmacotherapy of hypertension
28. Anti-arrhythmic drugs
29. Pharmacotherapy of hyperlipoproteinemias
30. Drugs influencing haemostasis
31. Drugs influencing haematopoiesis
32. Drugs acting on the respiratory system: pharmacotherapy of bronchial asthma
33. Drugs acting on the respiratory system: Pharmacotherapy of allergic rhinitis, antitussive, expectorant and mucolytic drugs

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

OSP-K5K-T OPERATIVE DENTISTRY 5 - OPERATIVE DENTISTRY

Course director:

DR. EDINA LEMPEL, assistant professor
Department of Dentistry, Oral and Maxillofacial Surgery

5 credit ▪ semester exam ▪ Pre-clinical subject ▪ spring semester ▪ recommended semester: 6

Number of hours/semester: 14 lectures + 56 practices + 0 seminars = total of 70 hours

Course headcount limitations (min.-max.): 3 – 25 Prerequisites: OSP-K4K-T completed + OSP-MR1-T completed

The subject can only be registered in case of a PASSED and valid health aptitude test!

Topic

Basic information about different treatment methods of carious lesions.

Conditions for acceptance of the semester

Maximum of 15 % absence allowed

Mid-term exams

Attending the classes, according to the rules of the Code of Studies and Examinations (Max 15% absence is accepted from the lectures and max 15% from the practices). 10 minutes late is equal with an absence.

In case of lack of basic knowledge/preparedness the supervisor can refuse the participation on the practice and can disrupt the patient's treatment. 3 test will be written during the semester. In case of min one failed test the semester is not accepted. There is one possibility to improve the failed test.

Further requirement to collect minimum 10 scores from the treatments.

Scores of the treatments:

Esthetic filling: Class I., V.: 0,75

Esthetic filling: Class II., III., IV.: 1,25

Trepanation, enlargement of front teeth: 1,00

Trepanation, enlargement of premolar teeth: 1,25

Trepanation, enlargement of front teeth: 2,00

Root canal filling of front teeth: 0,50

Root canal filling of premolar teeth: 0,75

Root canal filling of molar teeth: 1,00

Inlay/onlay: 3,0

Making up for missed classes

None

Reading material

- *Obligatory literature*
Sturdevant's Art and Science of Operative Dentistry
- *Literature developed by the Department*
Topics of the oral presentations.
- *Notes*
- *Recommended literature*
Robert G. Craig: Restorative Dental Materials

Lectures

- 1 Principles and rules of cavity preparation.
Dr. Lempel Edina
- 2 Pain, trauma and moisture control during treatments.
Dr. Lempel Edina
- 3 Metals (clinical pertains), cements (clinical pertains).
Dr. Lempel Edina
- 4 Dental Ceramics

- Dr. Lempel Edina
- 5 Dental bonding agents.
Dr. Lempel Edina
- 6 Adhesive cementation of full ceramic restorations.
Dr. Lempel Edina
- 7 Operative treatment's effect on the pulp.
Dr. Lempel Edina
- 8 Types of composite resin filling materials and their use.
Dr. Lempel Edina
- 9 Minimal invasive restorations. Composite resin fillings, layering techniques.
Dr. Lempel Edina
- 10 Esthetic composite resin and porcelain veneers
Dr. Lempel Edina
- 11 Making of indirect class I., II., V. fillings. (Inlay)
Dr. Lempel Edina
- 12 Class III. and class IV. cavity fillings.
Dr. Schreindorfer Károly
- 13 The use of flowable composite resins, compomers and modern glass-ionomer cements in esthetic dentistry.
Dr. Lempel Edina
- 14 Special cavity preparations, dentin pins, lining, extra-radicular anchorage.
Dr. Lempel Edina

Practices

- 1-56 Patient treatment in clinical practice.

Seminars

Exam topics/questions

1. The principles of cavity preparation, classification of cavities, nomenclature
2. Rubber dam isolation
3. Anaesthesia, trauma control, effect of treatments on the pulp
4. Metallic filling materials, temporary filling materials
5. Cements
6. Resins, composite resin filling materials
7. Adhesive systems in operative dentistry
8. Class I, II, V preparation for plastic filling
9. Class I, II, V preparation for solid filling
10. Composite layering techniques for II class cavities
11. Class III., IV. cavity preparation for plastic filling. Filling of cavity
12. Making of metal inlay/onlay (preparation, direct, indirect modelling)
13. I, II, V class metal inlay cementation
14. I, II, V class composite/ceramic inlay (preparation, impression, technical background)
15. I, II, V class composite/ceramic inlay adhesive cementation
16. Indication and criteria of parapulpal pins

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

Dr. Dunavári Erika Katalin (DUEFAAO.PTE), Dr. Krajczár Károly (KRKFAAO.PTE), Dr. Lempel Edina (LEEFABO.PTE), Dr. Schreindorfer Károly (SCKPABO.PTE)

OSP-KT2-T PATHOPHYSIOLOGY FOR DENTAL STUDENTS 2

Course director:

DR. MÁRTA BALASKÓ, associate professor
Institute for Translational Medicine

2 credit ▪ semester exam ▪ Pre-clinical subject ▪ spring semester ▪ recommended semester: 6

Number of hours/semester: 28 lectures + 0 practices + 0 seminars = total of 28 hours

Course headcount limitations (min.-max.): 2 – 100 Prerequisites: OSP-KT1-T completed

Topic

Pathophysiology for dental students-2 deals with the etiology, time-course and clinical symptoms, as well as with possible pharmacological and other interventions in disorders of the gastrointestinal system, energy balance, intermediary metabolism and the endocrine systems.

Conditions for acceptance of the semester

Maximum of 15 % absence allowed

Mid-term exams

Minimum 50% test score with regard to the two midterm multiple choice tests that are organized on week 6 and week 11.

Making up for missed classes

Minimum 50% test score on the respective seminar topics. A maximum of 15 % absence is allowed. It corresponds to 4 times 45 minutes.

Reading material

- *Obligatory literature*

- *Literature developed by the Department*

Lecture and seminar slides will be uploaded to Neptun

- *Notes*

M. Székely (ed.): Basic Concepts in Pathophysiology, ÁOK PTE, 2007

- *Recommended literature*

Scully's Medical Problems in Dentistry, ed: Crispian Scully, Churchill Livingstone; 7th edition, 2014

S. Silbernagl, F. Lang : Color Atlas of Pathophysiology, Thieme Stuttgart _ New York, 2000

Lectures

- 1 Saliva production and its role in dental health and oral mucosal protection.
Dr. Balaskó Márta
- 2 Disorders of gastric filling and emptying. Gastro-esophageal reflux disease.
Dr. Szakács Zsolt
- 3 Disorders of gastric juice production. Peptic ulcer.
Dr. Tenk Judit
- 4 Vomiting and its importance in dental practice.
Dr. Balaskó Márta
- 5 Diarrheas.
Dr. Szakács Zsolt
- 6 Maldigestion, malabsorption, bowel obstruction (ileus).
Dr. Balaskó Márta
- 7 Pancreatitis.
Dr. Balaskó Márta
- 8 Pathophysiology of liver functions and their importance in dental practice.
Dr. Balaskó Márta
- 9 Hepatic coma.
Dr. Szekeres-Solymár Margit
- 10 Vitamins and their importance in dental practice.
Dr. Szekeres-Solymár Margit
- 11 Complete starvation.
Dr. Balaskó Márta
- 12 Partial starvation.
Dr. Balaskó Márta

- 13 Pathophysiology of obesity, metabolic syndrome.
Dr. Balaskó Márta
- 14 Cold- and warm-defense and their disorders.
Dr. Balaskó Márta
- 15 Fever and sickness behavior.
Dr. Balaskó Márta
- 16 Diabetes mellitus.
Dr. Balaskó Márta
- 17 Acute complications of diabetes mellitus syndromes.
Dr. Balaskó Márta
- 18 Chronic complications of diabetes mellitus syndromes.
Dr. Balaskó Márta
- 19 Diabetes mellitus in dentistry.
Dr. Balaskó Márta
- 20 Hypoglycemias.
Dr. Balaskó Márta
- 21 Disorders of protein metabolism. Gout.
Dr. Balaskó Márta
- 22 Disorders of lipid metabolism, pathomechanisms of atherosclerosis.
Dr. Balaskó Márta
- 23 Causes and consequences of hyperprolactinemia. Disorders of growth.
Dr. Szekeres-Solymár Margit
- 24 Disorders of thyroid functions.
Dr. Tenk Judit
- 25 Hypo- and hyperfunctions of the adrenal medulla.
Dr. Balaskó Márta
- 26 Hypo- and hyperfunctions of the adrenal cortex.
Dr. Balaskó Márta
- 27 Abnormalities of parathyroid functions and calcium levels, their manifestations in teeth and bones.
Dr. Balaskó Márta
- 28 Pathophysiological aspects of the dental treatment of elderly patients.
Dr. Balaskó Márta

Practices

Seminars

Exam topics/questions

Saliva production and its role in dental health and oral mucosal protection.
Disorders of gastric filling and emptying. Gastro-esophageal reflux disease.
Vomiting (acute, chronic) and its importance in dental practice.
Disorders of gastric juice production. Peptic ulcer.
Utilization of nutrients and its disorders. Maldigestions Complex malabsorption syndromes.
Diarrhea: causes, pathophysiological forms, consequences.
Bowel obstruction.
Acute pancreatitis: pathophysiology and consequences.
Pathophysiology of chronic pancreatitis.
Pathophysiology of liver functions and their importance in dental practice.
Disorders of intermediary metabolism in general liver cell damage.
Jaundice.
Hepatic coma.
Water-soluble vitamins and their importance in dental practice.
Fat-soluble vitamins and their importance in dental practice.
Complete starvation: occurrence and process.
Partial starvation, accelerated forms of energetic insufficiency. Anorexia nervosa. Protein deficiency. Protein-calorie malnutrition.
Consequences of excessive protein intake.
Etiology and pathogenesis of obesity. Metabolic syndrome.
Consequences of obesity. Therapeutic possibilities.
Cold-defense and cold-induced disorders.
Warm-defense and heat-induced disorders. Heat stroke and malignant hyperthermia.

Pathogenesis of fever. Fever and sickness-behavior. The biological value of fever.
Hyperglycemia and glucose-tolerance tests. Diagnosis of diabetes mellitus.
General pathobiochemistry of diabetes mellitus syndrome.
Etiology and pathogenesis of DM1.
Etiology and pathogenesis of DM2.
Diabetic ketoacidosis (DKA) and ketoacidotic coma.
Diabetic hyperosmolar syndrome (HHS) and coma.
Late complications of diabetes mellitus.
Hypoglycemia.
Disorders of the hypothalamo-pituitary system. Pituitary insufficiency.
Hyperprolactinemia.
Pathophysiology of growth.
Hyperthyroidism.
Hypothyroidism.
Disturbances of the adrenal medulla and the sympathetic system. Pheochromocytoma.
Adrenal (cortex) insufficiency.
Primary and secondary hyperaldosteronism.
Glucocorticoid hyperfunctional states.
Pathophysiological aspects of glucocorticoid therapy.
Abnormalities of parathyroid functions and calcium levels, their manifestations in teeth and bones.
Hypocalcemia, hypercalcemia.
Mechanisms and disturbances of bone remodeling. Osteoporosis, osteomalacia.
Pathophysiological aspects of the dental treatment of elderly patients.

Note: „A” chance: test-exam on basis of the above topics. For „B” and „C” chances: oral exam on basis of 3 questions from the list above.

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

OSP-ORB-T ORAL BIOLOGY

Course director:

DR. ÁKOS NAGY, associate professor

Department of Dentistry, Oral and Maxillofacial Surgery

3 credit ▪ semester exam ▪ Pre-clinical subject ▪ spring semester ▪ recommended semester: 6

Number of hours/semester: 14 lectures + 28 practices + 0 seminars = total of 42 hours

Course headcount limitations (min.-max.): 2 – 60

Prerequisites: OSA-AA2-T completed + OSA-MF2-T completed + OSA-BKD-T completed

The subject can only be registered in case of a PASSED and valid health aptitude test!

Topic

During this semester the students acquire knowledge about the oral structures and their development, function and about the biochemical, molecular biological, histological processes of bone and oral environment.

Conditions for acceptance of the semester

Attending the classes, according to the rules of the Code of Rules and regulations.

Mid-term exams

Oral exam. A score system is used for the acceptance of practices. The score system is demonstrated on the first practice.

9th week: MIDTERM TEST theory and practice.

Making up for missed classes

Not possible.

Reading material

- *Obligatory literature*
- *Literature developed by the Department*
- *Notes*
- *Recommended literature*
Ferguson DB: Oral Bioscience, ISBN 0443053731

Lectures

- 1 Development of teeth
Dr. Nagy Ákos
- 2 Process of mineralization
Dr. Nagy Ákos
- 3 Osteogenesis – tissue structure, metabolism. Process of bone resorption.
Dr. Nagy Ákos
- 4 Amelogenesis – tissue structure
Dr. Nagy Ákos
- 5 Dentinogenesis ? secondary, tertiary dentin formation
Dr. Nagy Ákos
- 6 Cementogenesis. Histology and function of parodontal ligaments
Dr. Nagy Ákos
- 7 Crystal-structure of bioapatites. Fluoride metabolism. Effect of fluorides on tooth structure
Dr. Nagy Ákos
- 8 Eruption of teeth. Movement of teeth
Dr. Nagy Ákos
- 9 Development and structure of pulp
Dr. Nagy Ákos
- 10 Oral sensation. Pain. Decreasing of stimulus-threshold. Sense of taste. Smelling
Dr. Nagy Ákos
- 11 Ionizing radiation. Radio-Osseo-Necrosis
Dr. Nagy Ákos
- 12 Effect of diet on oral tissues. Effect of age. Systematic diseases, medicines in dental practice
Dr. Nagy Ákos
- 13 Structure of oral soft tissues. Gingival sulcus, crevicular fluid
Dr. Nagy Ákos
- 14 Anatomy of temporo-mandibular joint. Pathways of articulation. Mastication, swallow

Dr. Nagy Ákos

Practices

- 1 Morphology and functional anatomy of the chewing organ.
- 2 Morphology and functional anatomy of the chewing organ.
- 3 Salivary Glands Saliva production
- 4 Salivary Glands Saliva production
- 5 Saliva as a diagnostical fluid
- 6 Saliva as a diagnostical fluid
- 7 Salivary proteins in caries development, caries prevention
- 8 Salivary proteins in caries development, caries prevention
- 9 Oral clearance
- 10 Oral clearance
- 11 Dental hard tissues
- 12 Dental hard tissues
- 13 Tissue regeneration in dentistry, molecular biological background
- 14 Tissue regeneration in dentistry, molecular biological background
- 15 Specific and non specific oral defense
- 16 Specific and non specific oral defense
- 17 Midterm
- 18 Midterm
- 19 Oral microorganisms. Plaque, like a biofilm. Biochemistry of plaque.
- 20 Oral microorganisms. Plaque, like a biofilm. Biochemistry of plaque
- 21 Bleeding disorders
- 22 Bleeding disorders
- 23 Inflammation
- 24 Inflammation
- 25 Oral tumors
- 26 Oral tumors
- 27 Basic research methods and application of results in dental practice
- 28 Basic research methods and application of results in dental practice

Seminars

Exam topics/questions

1. Development of teeth
2. Process of mineralization
3. Osteogenesis
4. Process of bone resorption.
5. Amelogenesis
6. Dentinogenesis
7. Cementogenesis.
8. Histology and function of parodontal ligaments.
9. Crystal-structure of bioapatites.
10. Fluoride metabolism. Effect of fluorides on tooth structure.
11. Eruption of teeth. Movement of teeth.
12. Development and structure of pulp.
13. Oral sensation. Pain. Decreasing of stimulus-threshold.
14. Sense of taste. Smelling.
15. Ionizing radiation. Radio-Osseo-Necrosis.
16. Effect of diet on oral tissues. Effect of age.
17. Systematic diseases, medicines in dental practice.
18. Structure of oral soft tissues. Gingival sulcus.
19. Anatomy of temporo-mandibular joint.
20. Pathways of articulation. Mastication, swallow.
21. Saliva-production and physiology.
22. Role of saliva proteins and peptides in caries development and protection.
23. Bone regeneration, osseointegration.
24. Inflammation
25. Specific and aspecific oral protection.

26. Development of the dental plaque.
27. Plaque, like a biofilm. Biochemistry of plaque.
28. Basic research methods and application of results in dental practice.
29. Oral clearance

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

Dr. Nagy Ákos (NAARADP.PTE)

OSP-P1E-T PROSTHODONTICS 1 - LECTURE

Course director:

DR. MÁRTA MÁRIA RADNAI, professor
Department of Dentistry, Oral and Maxillofacial Surgery

1 credit ▪ semester exam ▪ Pre-clinical subject ▪ spring semester ▪ recommended semester: 6

Number of hours/semester: 14 lectures + 0 practices + 0 seminars = total of 14 hours

Course headcount limitations (min.-max.): -

Prerequisites: OSP-PTE-T completed + OSP-PTG-T completed + OSP-GAE-T completed

The subject can only be registered in case of a PASSED and valid health aptitude test!

Topic

The student should learn the clinical and laboratory procedures and methods of making a complete denture. The student learns the technic of impression taking, using the face-bow, and practices the tooth preparation.

Conditions for acceptance of the semester

Making a lower and upper complete denture during the laboratory practise. The tooth preparations and the anatomic casts have to be accepted. If a student does not show up for the test, the test is considered as failed. The person responsible for the course-unit shall have the right to offer an excellent or good examination grade on the basis of outstanding mid-term performance and if it is accepted by the student, it shall qualify as a grade obtained at examination. The conditions of offering a grade shall be made public by the person responsible for the course-unit before announcing the course-unit. Due to generating examination sheets electronically, the student shall register for the examination even if he/she accepts the grade. Based on this an excellent mark can be offered as a course mark to the student if both midsemester written test are awarded with excellent marks, and the student has an outstanding work in the practice as well. He does not need to take the exam.

Mid-term exams

Two written test. Exam at the end of the semester will be in written form. End-of-semester grade may be given by a) mid-term grade in the case of both theory-oriented and practice-oriented course-units on the basis of tests and assessments carried out during term-time, b) examination grade which may be defined on the basis of the performance at the examination exclusively or by taken into consideration performance on mid-term tests and the examination jointly. In the latter case the examination shall contribute to the grade by 50% at least and the mid-term tests by 50% at most.

Making up for missed classes

Making up for missed classes

No possibility.

Reading material

- *Obligatory literature*

G Zarb et al.: Prosthodontic Treatment for Edentulous Patients, Elsevier

Geering A, Kundert M, Kelsey CC: Complete Denture and Overdenture Prosthetics, Thieme

- *Literature developed by the Department*

Lecture notes

- *Notes*

- *Recommended literature*

Lectures

- 1 Consequences of complete edentulism. Anamnesis and examination of the edentulous patient.
Dr. Muzsek Zsófia
- 2 Clinical anatomy of the edentulous maxilla.
Dr. Muzsek Zsófia
- 3 Clinical anatomy of the edentulous mandible I.
Dr. Muzsek Zsófia
- 4 Clinical anatomy of the edentulous mandible II.
Dr. Muzsek Zsófia
- 5 Parts of the complete denture and principles of functional stability. Anatomical impression and model. Individual tray.
Dr. Muzsek Zsófia
- 6 Making a functional impression on the edentulous mandible and maxilla.
Dr. Muzsek Zsófia
- 7 Midsemester written test
Dr. Muzsek Zsófia

- 8 Assessment of the occlusal plane, the occlusal vertical dimension and the centric relation. Intraoral gothic arch tracing registration.
Dr. Benke Beáta
- 9 Setting up of denture teeth: methods, static and dynamic occlusion.
Dr. Benke Beáta
- 10 Try-in, examination before processing the denture. Christensen's phenomenon.
Dr. Benke Beáta
- 11 Processing the denture in the dental laboratory, reocclusion, insertion, remontage.
Dr. Benke Beáta
- 12 Problems and problem solving during the use of a complete denture. Relining, repairing, copying the denture.
Dr. Benke Beáta
- 13 Maintenance of patients with complete dentures. Oral pathology of edentulous patients.
Dr. Benke Beáta
- 14 Midsemester written test
Dr. Benke Beáta

Practices

Seminars

Exam topics/questions

Prosthodontics

Complete denture

1. What are the consequences of loss of one or more teeth?
2. Consequences of complete edentulousness.
3. History taking, patient examination, in case of complete edentulousness.
4. Preprosthetic treatment of the patients. How do you plan the treatment?
5. Aesthetic aspects of denture teeth selection.
6. Functions of complete removable denture. Parts of the complete denture.
7. Tasks of the parts of the complete denture (denture base, flange, and artificial teeth).
8. Which factors are relevant to complete denture retention? (upper and lower jaw)
9. Functions of myofunctional factors in lower complete denture retention. Which muscles are advantageous and which are disadvantageous in complete denture retention.
10. Materials used for complete denture construction, what are the features of these materials? (base, artificial teeth)
11. Definition of clinical anatomy and its significance. Provide some examples.
12. Clinical anatomy and prosthetic significance of the hard palate.
13. Clinical anatomy and prosthetic significance of the soft palate. Possibilities of posterior palatal seal/ post-dam construction.
14. Clinical anatomy and prosthetic significance of the maxillary tuberosity and the tuber-cheek split/buccal sulcus.
15. Clinical anatomy of edentulous lower ridge. Basic forms of mandibular edentulous ridges.
16. Clinical anatomy and prosthetic significance of the mucosa of the mandibular edentulous alveolar ridge and the vestibular and lingual mandibular mucosal reflection.
17. Clinical anatomy and prosthetic significance of the mucosa over the maxillary edentulous alveolar ridge and the maxillary vestibular mucosal reflection.
18. Clinical anatomy and prosthetic significance of the maxillary edentulous alveolar ridge. The displaceable flabby ridge.
19. Clinical anatomy and prosthetic significance of retromolar pad and tubercle-masseter split/masseter groove. (borders and muscles)
20. Clinical anatomy (borders and muscles) and prosthetic significance of the middle lingual vestibule (mylohyoid area/ paralingual area).
21. Clinical anatomy (borders and muscles) and prosthetic significance of the distolingual vestibule (retromylohyoid area),
22. Clinical anatomy (borders and muscles) and prosthetic significance of the anterior lingual vestibule (sublingual crescent area).
23. Clinical anatomy (borders and muscles) and prosthetic significance of the buccal shelf (accessory mandibular recess).
24. Clinical anatomy (borders and muscles) and prosthetic significance of the buccal shelf.
25. Prosthetic significance of the mimic muscles. Mandibular and palatal torus.
26. Describe the fixed, mobile and displaceable mucosa, where can you find them, what are their significance in prosthodontics?
27. Borders of upper and lower complete denture base.
28. Requirements of special tray in case of complete edentulousness, material of the special tray, methods of construction.
29. Materials of functional impression. Their properties, processing.
30. Steps and materials of the lower functional impression.
31. Steps and materials of the upper functional impression.
32. Preparation of the functional cast, relief areas and procedure to achieve relief.

33. What is the difference between the occlusal plane and the occlusal surface? What is the significance of determining the occlusal plane during the fabrication of complete denture?
34. Registration of occlusal vertical dimension and centric relation in case of complete upper and lower edentulousness, and in case of lower edentulous ridge (patient has his upper teeth)
35. Materials of the occlusal rim, and its fabrication.
36. How can be determined the centric relation in case of complete edentulism with intraoral gothic arch tracing?
37. Definition of prosthetic curve of Spee and its role in tooth set-up for complete denture.
38. What are the functional and esthetic aspects of setting up the artificial teeth in complete dentures?
39. What are an occludor and an articulator, their role in setting up the teeth in complete denture?
40. What are the important anatomical features of incisal teeth, canines, premolars and molars from prosthetic point of view?
41. What and how do you check at the trial denture stage? Christensen phenomenon: definition, explanation, clinical impact.
42. Processing of complete denture, laboratory steps.
43. Development of oral and vestibular tissue surface of complete dentures.
44. Steps of upper complete denture construction with traditional method.
45. Processing methods for complete denture (except the traditional pressing method)
46. Possible failures during complete denture processing. Importance and steps of reocclusion/laboratory remount.
47. Final insertion of upper and lower complete dentures.
48. Importance and steps of clinical remount of complete denture (remontage).
49. Definition of mucosal resilience, what is the extent of the resilience, why is it important in prosthetics? What are the reasons of complete denture sinking?
50. Complete denture relines: clinical and technical steps
51. Materials, types and characteristics of denture teeth
52. Material of the denture base plate, types, characteristics

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

OSP-P1G-T PROSTHODONTICS 1 - PRACTICE

Course director:

DR. MÁRTA MÁRIA RADNAI, professor

Department of Dentistry, Oral and Maxillofacial Surgery

4 credit ▪ midsemester grade ▪ Pre-clinical subject ▪ spring semester ▪ recommended semester: 6

Number of hours/semester: 0 lectures + 56 practices + 0 seminars = total of 56 hours

Course headcount limitations (min.-max.): –

Prerequisites: **OSP-PTE-T completed + OSP-PTG-T completed + OSP-GAG-T completed**

The subject can only be registered in case of a PASSED and valid health aptitude test!

Topic

The student should learn the clinical and laboratory procedures and methods of making a complete denture. The student learns the technic of impression taking, using the face-bow, and practices the tooth preparation.

Conditions for acceptance of the semester

Making a lower and upper complete denture during the laboratory practise. The tooth preparations and the anatomic casts have to be accepted. If a student does not show up for the test, the test is considered as failed. The person responsible for the course-unit shall have the right to offer an excellent or good examination grade on the basis of outstanding mid-term performance and if it is accepted by the student, it shall qualify as a grade obtained at examination. The conditions of offering a grade shall be made public by the person responsible for the course-unit before announcing the course-unit. Due to generating examination sheets electronically, the student shall register for the examination even if he/she accepts the grade. Based on this an excellent mark can be offered as a course mark to the student if both midsemester written test are awarded with excellent marks, and the student has an outstanding work in the practice as well. He does not need to take the exam.

Mid-term exams

Students practical works will be evaluated by the practice leader with practical mark. The average of the marks has to be higher than 2. If not, the semester can not be accepted. If the student would like to improve the suggested mark he has one chance int he exam period. A practical work has to be made upon the decision of the examiner.

Making up for missed classes

Making up for missed classes

No possibility.

Reading material

- *Obligatory literature*
 - G Zarb et al.: Prosthodontic Treatment for Edentulous Patients, Elsevier
 - Geering A, Kundert M, Kelsey CC: Complete Denture and Overdenture Prosthetics, Thieme
- *Literature developed by the Department*
 - Lecture notes
- *Notes*
- *Recommended literature*

Lectures

Practices

- 1 Laboratory practise: Making a lower and upper complete acrylic denture.
- 2 Laboratory practise: Making a lower and upper complete acrylic denture.
- 3 Laboratory practise: Making a lower and upper complete acrylic denture.
- 4 Laboratory practise: Making a lower and upper complete acrylic denture.
- 5 Laboratory practise: Making a lower and upper complete acrylic denture.
- 6 Laboratory practise: Making a lower and upper complete acrylic denture.
- 7 Laboratory practise: Making a lower and upper complete acrylic denture.
- 8 Laboratory practise: Making a lower and upper complete acrylic denture.
- 9 Laboratory practise: Making a lower and upper complete acrylic denture.
- 10 Laboratory practise: Making a lower and upper complete acrylic denture.
- 11 Laboratory practise: Making a lower and upper complete acrylic denture.
- 12 Laboratory practise: Making a lower and upper complete acrylic denture.
- 13 Laboratory practise: Making a lower and upper complete acrylic denture.
- 14 Laboratory practise: Making a lower and upper complete acrylic denture.

- 15 Laboratory practise: Making a lower and upper complete acrylic denture.
- 16 Laboratory practise: Making a lower and upper complete acrylic denture.
- 17 Laboratory practise: Making a lower and upper complete acrylic denture.
- 18 Laboratory practise: Making a lower and upper complete acrylic denture.
- 19 Laboratory practise: Making a lower and upper complete acrylic denture.
- 20 Laboratory practise: Making a lower and upper complete acrylic denture.
- 21 Laboratory practise: Making a lower and upper complete acrylic denture.
- 22 Laboratory practise: Making a lower and upper complete acrylic denture.
- 23 Laboratory practise: Making a lower and upper complete acrylic denture.
- 24 Laboratory practise: Making a lower and upper complete acrylic denture.
- 25 Laboratory practise: Making a lower and upper complete acrylic denture.
- 26 Laboratory practise: Making a lower and upper complete acrylic denture.
- 27 Laboratory practise: Making a lower and upper complete acrylic denture.
- 28 Laboratory practise: Making a lower and upper complete acrylic denture.
- 29 Laboratory practise: Making a lower and upper complete acrylic denture.
- 30 Laboratory practise: Making a lower and upper complete acrylic denture.
- 31 Laboratory practise: Making a lower and upper complete acrylic denture.
- 32 Laboratory practise: Making a lower and upper complete acrylic denture.
- 33 Students take impressions from each other, bite registration.
- 34 Students take impressions from each other, bite registration.
- 35 Students take impressions from each other, bite registration.
- 36 Students take impressions from each other, bite registration.
- 37 Students take impressions from each other, bite registration.
- 38 Students take impressions from each other, bite registration.
- 39 Students take impressions from each other, bite registration.
- 40 Students take impressions from each other, bite registration.
- 41 Students take impressions from each other, bite registration.
- 42 Students take impressions from each other, bite registration.
- 43 Students take impressions from each other, bite registration.
- 44 Laboratory practise: Mounting the casts into the articulator. Practising tooth preparation on manikin.
- 45 Laboratory practise: Mounting the casts into the articulator. Practising tooth preparation on manikin.
- 46 Laboratory practise: Mounting the casts into the articulator. Practising tooth preparation on manikin.
- 47 Laboratory practise: Mounting the casts into the articulator. Practising tooth preparation on manikin.
- 48 Laboratory practise: Mounting the casts into the articulator. Practising tooth preparation on manikin.
- 49 Laboratory practise: Mounting the casts into the articulator. Practising tooth preparation on manikin.
- 50 Laboratory practise: Mounting the casts into the articulator. Practising tooth preparation on manikin.
- 51 Laboratory practise: Mounting the casts into the articulator. Practising tooth preparation on manikin.
- 52 Laboratory practise: Mounting the casts into the articulator. Practising tooth preparation on manikin.
- 53 Laboratory practise: Mounting the casts into the articulator. Practising tooth preparation on manikin.
- 54 Laboratory practise: Mounting the casts into the articulator. Practising tooth preparation on manikin.
- 55 Laboratory practise: Mounting the casts into the articulator. Practising tooth preparation on manikin.
- 56 Laboratory practise: Mounting the casts into the articulator. Practising tooth preparation on manikin.

Seminars

Exam topics/questions

Prosthodontics

Complete denture

Practical exam

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

Dr. Marada Gyula (MAGFABO.PTE), Dr. Rajnics Zsolt (RAZNABO.PTE)

OSP-PO2-T PATHOLOGY FOR DENTAL STUDENTS 2

Course director:

DR. TAMÁS TORNÓCZKI, associate professor
Department of Pathology

4 credit • final exam • Pre-clinical subject • spring semester • recommended semester: 6

Number of hours/semester: 28 lectures + 0 practices + 28 seminars = total of 56 hours

Course headcount limitations (min.-max.): 5 – not limited Prerequisites: OSP-PO1-T completed

Topic

There is a special emphasis during the course on the clinicopathological view of the diseases, i.e., understanding the relationship of the clinical symptoms, macroscopical and microscopical changes of the diseased organs. By the end of the academic year, a basic clinicopathological affinity and competence in differential diagnosis is required of the students. Fundamentals and major examples of specific, organ pathology are discussed.

Since this is a curriculum designated with specific regard to dentistry students, special emphasis will be placed on the oral pathology and head-neck pathology chapters.

The systemic pathology course involves the major fields of organ pathology: pulmonary pathology, haematopathology, gastrointestinal pathology, pathology of the liver, pancreas and biliary system, pathology of the skin, cardiovascular pathology, oral pathology, pathology of the head and neck, pathology of the endocrine organs, nephropathology, pathology of male and female genital system and breast pathology.

Pathology education of dentistry students consists of 28 lectures and 28 histopathology seminars (14 practices) with the emphasis on oral pathology. The education during the second semester is carried out by the leader and colleagues of the Oral Pathology Unit (Faculty) of the Pathology Department.

The third-year students are expected to acquire the pathogenesis, the macroscopy and partly the microscopy of the main pathological changes which occur in this region. This reference knowledge could be used for the ongoing dental studies and especially later in consultations with the oral pathologists. The attendance to the Oral Pathology course and the knowledge picked up there -beside the general requirements- are obligatory to the approval of the two semesters.

Conditions for acceptance of the semester

Absences exceeding 15% of the practical classes will result in not signing the gradebook. Maximum absence: 2 practices. Each missed seminar has to be made up for with another group in the same week.

Mid-term exams

Final exam for the dentist students includes two slides and 2 exam questions.

Making up for missed classes

Absences exceeding 15% of the practical classes will result in not signing the gradebook. Maximum absence: 2 practices. Each missed seminar has to be made up for with another group in the same week.

Reading material

- *Obligatory literature*

Robbins: Basic Pathology Medicina 2014.

- *Literature developed by the Department*

Tornóczy, Kajtár: Oral Pathology Histology Notes (also available here: <http://aok.pte.hu/hu/egyseg/oktatasianyagok/230> limited amounts of printed version is available at our secretary office)

- *Notes*

- *Recommended literature*

R.A. Cawson, E.W. Odell: Cawson's Essentials of Oral Pathology and Oral Medicine. 8th Edition, Churchill Livingstone, Elsevier, 2012 ISBN, 978-0443-10365-0

Antonio Cardesa, Pieter J. Slootweg: Pathology of the Head and Neck. Springer-Verlag, 2006, ISBN 10-3-540-30628-5, 2006

Sook-Bin Woo: Oral Pathology: A comprehensive atlas and text. Elsevier-Saunders, 2012, ISBN:978-1-4377-2226-0

JA. Regezi, JJ. Sciubba, RCK. Jordan: Oral Pathology. Clinicopathological correlations. 6th Edition, Elsevier, 2012, ISBN: 978-1-4557-0262-6

Lectures

PATHOLOGY OF THE RESPIRATORY SYSTEM (2 LECTURES)

- 1 Pathology of the upper respiratory tract and the larynx. Chronic obstructive lung diseases.
Dr. Smuk Gábor
- 2 Pneumonias. Lung tumors.
Dr. Smuk Gábor

DERMATOPA-THOLOGY (2 LECTURES)

- 3 Dermatopathology I: common skin lesions occurring in the head and neck region.
Dr. Kálmán Endre
- 4 Dermatopathology II: systemic skin diseases with oral cavity manifestations
Dr. Kálmán Endre

HAEMATOPA-THOLOGY (2 LECTURES)

- 5 A lymphoid sejtek ontogenesise. A lymphomák általános jellemzése.
Dr. Kajtár Béla
- 6 Haematologiai malignitások a fej-nyak régióban.
Dr. Kajtár Béla

PATHOLOGY OF THE GASTROINTESTINAL TRACT (2 LECTURES)

- 7 Diseases of the esophagus and stomach
Dr. Bogner Barna István
- 8 Pathology of the small and large intestines
Dr. Bogner Barna István

CARDIOVASCULAR PATHOLOGY (3 LECTURES)

- 9 Ischaemic heart diseases, endocarditis, myocarditis
Dr. Tornóczki Tamás
- 10 Congenitalis heart diseases Cardiomyopathies
Dr. Tornóczki Tamás
- 11 Vasculitidies, vascular tumors
Dr. Tornóczki Tamás

ORAL PATHOLOGY (8 LECTURES)

- 12 Developmental disorders of the oral cavity and jaws. Diseases of the jaws.
Dr. Tornóczki Tamás
- 13 Infective and non infective disorders of the oral cavity. 1.
Dr. Tornóczki Tamás
- 14 Infective and non infective disorders of the oral cavity. 2. Oral ulcerations.
Dr. Tornóczki Tamás
- 15 Epithelial lesions of the oral cavity
Dr. Tornóczki Tamás
- 16 Epithelial neoplasms of the oral cavity. Pathogenetic role of HPV.
Dr. Tornóczki Tamás
- 17 Pathology of the salivary glands. 1.
Dr. Tornóczki Tamás
- 18 Pathology of the salivary glands. 2.
Dr. Tornóczki Tamás
- 19 Mesenchymal lesions of the oral cavity
Dr. Tornóczki Tamás

ENDOCRINO-PA-THOLOGY (2 LECTURES)

- 20 Hypophysis tumors. Pathology of the thyroid gland I (developmental anomalies, hyperplasias, thireoiditides)
Dr. Tornóczki Tamás
- 21 Pathology of the thyroid gland II (neoplasias). Pathology of the parathyroid glands. Pathology of the adrenals.
Dr. Tornóczki Tamás

NEPHRO- AND UROPA-THOLOGY (2 LECTURES)

- 22 Pathology of kidney tumours. Kidney failure.
Dr. Kereskai László
- 23 Inflammations and tumors of the urinary system.
Dr. Kereskai László

PATHOLOGY OF THE LIVER, PANCREAS AND THE BILIARY SYSTEM (2 LECTURES)

- 24 Liver diseases.
Dr. Bogner Barna István
- 25 Pathology of the pancreas and the biliary tract.
Dr. Bogner Barna István

PATHOLOGY OF THE MALE, FEMALE GENITALIA AND THE BREAST (3 LECTURES)

- 26 Pathology of the testis, epididymis and prostate.
Dr. Kálmán Endre
- 27 Pathology of the ovaries and uterus.
Dr. Kálmán Endre
- 28 Pathology of the breast.
Dr. Kálmán Endre

Practices

Seminars

- 1 Pulmonology
- 2 Pulmonology
- 3 Dermatopathology
- 4 Dermatopathology
- 5 Haematopathology
- 6 Haematopathology
- 7 Gastroenteropathology
- 8 Gastroenteropathology
- 9 Cardiovascular Pathology
- 10 Cardiovascular Pathology
- 11 Pathology of the oral cavity 1
- 12 Pathology of the oral cavity 1
- 13 Pathology of the oral cavity 2
- 14 Pathology of the oral cavity 2
- 15 Pathology of the oral cavity 3
- 16 Pathology of the oral cavity 3
- 17 Pathology of the oral cavity 4
- 18 Pathology of the oral cavity 4
- 19 Endocrinopathology
- 20 Endocrinopathology
- 21 Nephropathology
- 22 Nephropathology
- 23 Liver, pancreas pathology
- 24 Liver, pancreas pathology
- 25 Male, female genital pathology and breast pathology
- 26 Male, female genital pathology and breast pathology
- 27 Consultation
- 28 Consultation

Exam topics/questions

SLIDES

I. PATHOLOGY OF THE RESPIRATORY SYSTEM

- 1. CMV pneumonitis
- 2. Carcinoma microcellulare pulmonum
- 3. Carcinoma planocellulare pulmonum

II. DERMATOPATHOLOGY

- 4. Seborrheic keratosis
- 5. Basal cell carcinoma
- 6. Nodular melanoma
- 7. Bullous pemphigoid
- 8. Psoriasis

III. HAEMATOPA-THOLOGY

9. Toxoplasma lymphadenitis
10. Follicular lymphoma
11. CLL/SLL infiltration in lymph node
12. Diffuse large B-cell lymphoma
13. Hodgkin lymphoma
14. CML, CP smear

IV. PATHOLOGY OF THE GASTROINTESTINAL TRACT

15. Helicobacter pylori infection (Whartin-Starry)
16. Coeliac disease- subtotal/total villous atrophy (Marsh 3c)
17. Carcinoid of the appendix
18. Rectal adenocarcinoma

V. CARDIOVASCULAR PATHOLOGY

19. Viral myocarditis
20. Arteritis temporalis
21. Kaposi sarcoma

VI-IX. ORAL PATHOLOGY

22. Squamous cell papilloma
23. Keratoacanthoma
24. Squamous cell carcinoma
25. Nasopharyngeal carcinoma (lymphoepithelial carcinoma)
26. Keratinizing squamous cell metaplasia
27. Epulis (peripheral giant cell granuloma) pyogen granuloma
28. Buccal fibroma
29. granular cell tumor (Abrikosoff-tumor)
30. Orofacial actinomycosis
31. Sialoadenitis chronica in the submandibular gland (Küttner-tumor), sialolithiasis
32. Lymphoepithelial cyst (intraparotideal)
33. Mucocele (extravasation type)
34. Sjögren syndrome lymphocytic sialoadenitis (minor salivary gland)
35. Pleomorphic adenoma
36. Warthin tumor (cystadenoma papillare lymphomatosum)
37. Adenoid cystic carcinoma
38. Mucoepidermoid carcinoma
39. Fibrous dysplasia of the jaw
40. Ameloblastoma (unicystic type)
41. Oral lichen
42. Verrucous type squamous cell carcinoma
43. Plasma cell granuloma (epulis)
44. Radicular cyst
45. Odontogen keratocyst (keratocystic odontogen tumor)
46. Crohn' s disease, oral cavity
47. Salivary gland MALT lymphoma
48. BION (bisphosphonate induced osteonecrosis)
49. Plasma cell myeloma, jaw
50. Pemphigus vulgaris, oral cavity
51. Leukoplakia: in situ carcinoma
52. Haemangioma, oral cavity

X. ENDOCRINOPA-THOLOGY

53. Papillary carcinoma of the thyroid gland
54. Basedow-Graves disease
55. Hashimoto's-thyreoiditis
56. Parathyroideal adenoma
57. Pheochromocytoma

XI. NEPHRO- AND UROPA-THOLOGY

58. Clear cell renal cell carcinoma
59. Urothelial carcinoma of the renal pelvis

XII. PATHOLOGY OF THE LIVER, PANCREAS AND THE BILIARY SYSTEM

60. HBs-antigen positivity (Shikata)
61. Alcoholic hepatitis
62. Hepatocellular carcinoma in cirrhotic liver

XIII. PATHOLOGY OF THE MALE, FEMALE GENITALIA AND THE BREAST

63. Prostate adenocarcinoma
64. Seminoma
65. Endometrial adenocarcinoma curettage
66. Serous papillary cystadenocarcinoma of the ovaries
67. Invasive ductal carcinoma

THEORETICAL QUESTIONS

I. PATHOLOGY OF THE RESPIRATORY SYSTEM

1. Diseases of the upper airways, ARDS
2. Infections of the lower airways
3. Chronic obstructive lung diseases: general characteristics, types
4. Lung tumors

II. DERMATOPA-THOLOGY

5. Melanocytic lesions
6. Epithelial tumors of the skin
7. Inflammatory skin diseases

III. HAEMATOPA-THOLOGY

8. Reactive lymph node changes
9. Lymphomas in the head and neck region
10. Myeloid neoplasias

IV. PATHOLOGY OF THE GASTROINTESTINAL TRACT

11. Diseases of the oesophagus
12. Pathology of the stomach
13. Pathology of the small intestines
14. Colorectal pathology

V. CARDIOVASCULAR PATHOLOGY

15. Angina pectoris és chronic ischemic heart disease, sudden cardiac death
16. Clinicopathology of acute myocardial infarction
17. Pathology of valvular disorders (inflammatory and degenerative)
18. Cardiomyopathies, cardial tumors
19. Myocarditides, pathology of the pericardium
20. Congenital heart diseases
21. Arteriosclerosis, types and clinicopathology of aneurysms
22. Pathogenesis, classification and clinicopathology of vasculitides, vascular tumors

VI. ORAL PATHOLOGY

23. Infective and inflammatory diseases of the oral mucosa
24. Non-infective inflammatory diseases of the oral mucosa
25. Benign epithelial lesions of the oral mucosa
26. Role of the HPV subtypes in the pathogenesis of benign and malignant lesions of the oral mucosa
27. Precancerous conditions. Leukoplakia and its differential diagnosis. Erythroplakia.
28. Malignant epithelial neoplasms of the oral cavity: histology types, localisation and pathogenesis

29. Benign mesenchymal lesions of the oral cavity and the jaws
30. Malignant mesenchymal lesions of the oral cavity and the jaws
31. Inflammatory lesions of the salivary glands: sialoadenitis, sialolithiasis, Mikulicz syndrome, Sjögren syndrome.
32. Tumor-like lesions of the salivary glands and oral mucosa.
33. Benign tumors of the salivary gland
34. Malignant tumors of the salivary gland
35. Odontogenic and non odontogenic cysts
36. Odontogenic tumors

VII. ENDOCRINOLOGY

37. Anterior lobe pituitary tumors. hypophysis elülső lebenyének tumorai. Congenital anomalies of the thyroid gland, conditions associated with hyperplasia
38. Thyroiditis, thyroid neoplasias
39. Hyperplasia, adenoma of the parathyroid gland
40. Suprarenal gland hyperplasia, atrophy, tumors of the adrenal cortex. Tumors of the adrenal medulla.

VIII. NEPHRO- ÉS UROLOGIA

41. Renal failure. Tumors of the kidney.
42. Cystitis, tumors of the bladder and ureter

IX. PATHOLOGY OF THE LIVER, PANCREAS AND THE BILIARY SYSTEM

43. Pathology of the liver
44. Diseases of the biliary tract and the pancreas

X. PATHOLOGY OF THE MALE, FEMALE GENITALIA AND THE BREAST

45. Tumors of the prostate
46. Testicular tumors, classification, tumor markers
47. Carcinoma of the cervix (pathogenesis, pathomorphology, screening)
48. Epithelial benign and malignant tumors of the uterine corpus. Mesenchymal neoplasms of the uterus.
49. Cysts and tumors of the ovaries (surface epithelial, germ cell tumors, sex cord stromal tumors, metastases)
50. Mastitis (lactational, ductal ectasis, fat necrosis, galactocele), mastopathies (fibrocystic changes). Fibroepithelial tumors
51. Carcinoma of the breast: pathogenesis, types, prognosis

Comment: The Department of Pathology reserves the right to propose minor modifications in the curriculum

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

Dr. Bogner Barna István (BOBPAAO.PTE), Dr. Czina Márton (CZMNAAT.PTE), Dr. Kálmán Endre (KAEMAAO.PTE), Dr. Kaszás Bálint (KABRAAO.PTE), Dr. Pap Anita (PAAOACO.PTE), Dr. Tornóczki Tamás (TOTMABO.PTE), Dr. Vida Livia (VILFAAO.PTE)

OSP-SA1-T ORAL SURGERY 1

Course director:

DR. JÓZSEF SZALMA, associate professor
Department of Dentistry, Oral and Maxillofacial Surgery

2 credit ▪ semester exam ▪ Pre-clinical subject ▪ spring semester ▪ recommended semester: 6

Number of hours/semester: **14 lectures + 14 practices + 0 seminars = total of 28 hours**

Course headcount limitations (min.-max.): **1 – 40**

Prerequisites: **OSP-KT1-T completed + OSP-MR1-T completed + OSP-PO1-T completed**

The subject can only be registered in case of a PASSED and valid health aptitude test!

Topic

The aim of this subject is to introduce the fundamentals of oral and maxillofacial surgery; especially dental local anesthesia and tooth extractions.

Exercising dental local anesthetic methods and to become experienced in daily tooth extractions.

Conditions for acceptance of the semester

Attendance on lectures and practices is obligatory. No make up for missed classes. Missing more than 20% will automatically reject semester acceptance [i.e. 3 or more missing of 14 lectures or 3 or more missing of 14 practices] and the semester has to be repeated.

Mid-term exams

-

Making up for missed classes

There is no possibility.

Reading material

- *Obligatory literature*

Szabo Gy.: Oral and Maxillofacial Surgery, Semmelweis, 2001.

Stanley F. Malamed: Local Anesthesia, Mosby 1990

- *Literature developed by the Department*

Lecture notes. It is important to make notices, because lecture slides are only a skeleton or visual completion of the lecture material.

- *Notes*

- *Recommended literature*

Larry J. Peterson, Edward Ellis III, James R. Hupp, Myron R. Tucker: Oral and Maxillofacial Surgery, 1998

Lectures

- 1 Principles of dentoalveolar surgery and the relationship with dental practice.
Dr. Szalma József
- 2 Principles of asepsis and antisepsis.
Dr. Szalma József
- 3 Instrumentation of the clinical oral surgery practice.
Dr. Szalma József
- 4 Clinical pharmacology of local anesthesia, physiology of pain.
Dr. Szalma József
- 5 Local anesthetic methods in the maxilla.
Dr. Szalma József
- 6 Local anesthetic methods in the mandible.
Dr. Szalma József
- 7 Typical tooth extractions (using forceps).
Dr. Szalma József
- 8 Instructions and motivating after extractions. Alveolitis.
Dr. Szalma József
- 9 Prevention and management of medical emergencies in the dental chair.
Dr. Szalma József
- 10 Diagnostic methods of oral surgery. The influence of the correct diagnosis.
Dr. Szalma József

- 11 Maxillofacial clinical anatomy.
Dr. Gelencsér Gábor László
- 12 Extraoral anesthetic methods, the complications of local anesthesia.
Dr. Olasz Lajos
- 13 General systemic diseases in dental practice.
Dr. Olasz Lajos
- 14 Antibiotic prophylaxis and therapy.
Dr. Gelencsér Gábor

Practices

- 1 Introduction. The presentation of oral surgery workflow, basic requirements of proper clothing, safety measurements.
- 2 The methods of asepsis and antiseptis. Oral surgery instruments. Presentation.
- 3 Oral surgery instruments. Presentation.
- 4 Instruments. Practicing the proper usage.
- 5 Instruments. Practicing the proper usage.
- 6 Instruments. Practicing the proper usage.
- 7 The tools and materials of local anaesthesia. Demonstration.
- 8 Demonstration of local anaesthesia in the upper jaw.
- 9 Demonstration of local anaesthesia in the lower jaw.
- 10 Local anaesthesia performed by students.
- 11 Routine extraction. Steps, safety measurements. Demonstration.
- 12 The position of the dentist and the patient by different oral surgical approaches. Demonstration.
- 13 Routine extraction performed by students.
- 14 Repeating and completion of the knowledge.

Seminars

Exam topics/questions

1. Disinfection, sterilization and aseptic methods in dental practice.
2. The kind of local anesthetic solutions and their pharmacology.
3. The equipment of local anesthesia.
4. Armamentarium for basic oral surgery.
5. Typical tooth extractions.
6. The pharmacology of antibiotics.
7. The complications of dental local anesthesia.
8. Maxillofacial anatomy and the fundamentals of oral surgery.
9. Antibiotic prophylaxis.
10. Type of elevators.
11. The physiology of pain.
12. Anatomy of maxillary nerve (V/2).
13. Extraoral anesthetic methods.
14. Anesthetic methods of maxillary teeth.
15. Extraction forceps.
16. Anesthetic methods of mandibular teeth.
17. Specification for the use of elevators.
18. The anatomic property of the teeth by extraction.
19. Frequent general systemic diseases in dental practice.
20. Instructions and motivating after extractions.
21. The armamentarium for tooth removing.
22. Anatomy of mandibular nerve (V/3).
23. Anatomy of mandible and maxilla.
24. The branches of carotid artery. (Art. carotis int. and ext.)
25. The connection between upper teeth and the maxillary sinus.
26. Anatomy of salivary glands.
27. Management of dental emergency.
28. The type of diagnostic methods making diagnosis in oral surgery.
29. The lymphatic system of head and neck.

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

Dr. Szalma József (SZJFACO.PTE), Dr. Vajta László Ferenc (VALMAAO.PTE)

OSR-DAS-T DENTO-ALVEOLAR SURGERY - SUMMER PRACTICE

Course director:

DR. JÓZSEF SZALMA, associate professor
Department of Dentistry, Oral and Maxillofacial Surgery

0 credit • signature • Criterion requirement subject • spring semester • recommended semester: 6

Number of hours/semester: **0 lectures + 120 practices + 0 seminars = total of 120 hours**

Course headcount limitations (min.-max.): **1 – 30**

Prerequisites: **OSP-KT1-T completed + OSP-MR1-T completed + OSP-PO1-T completed**

The subject can only be registered in case of a PASSED and valid health aptitude test!

Topic

The aim of training: students have to make oneself master of base element of dento-alveolar surgery. They have to get information about directive and every day practice of cross infection control.

They have to get practical safety in patient treatment, before therapy they have to question their own patients and plan the steps of therapy. They have to do 30 extractions of teeth with the necessary adjuvant treatment.

Conditions for acceptance of the semester

Maximum of 15 % absence allowed

Mid-term exams

According to Codes of Studies and Examinations.

Making up for missed classes

No possibility

Reading material

- *Obligatory literature*

Szabo Gy.: Oral and Maxillofacial Surgery, Semmelweis, 2001.

- *Literature developed by the Department*

Lecture notes

- *Notes*

- *Recommended literature*

Stanley F. Malamed: Local Anesthesia, Mosby 1990

Larry J. Peterson, Edward Ellis III, James R. Hupp, Myron R. Tucker: Oral and Maxillofacial Surgery, 1998

Lectures

Practices

1-120 Patient treatment in the clinical practice

Seminars

Exam topics/questions

-

Information – The following skills of the Booklet for Clinical Skills shall be accomplished in the framework of the subject

Participants

Dr. Szalma József (SZJFACO.PTE), Dr. Orsi Enikő (OREFABO.PTE), Dr. Vajta László Ferenc (VALMAAO.PTE)