

## REQUIREMENTS

<b>Semmelweis University Faculty of Dentistry</b> Department of Conservative Dentistry
<b>Name of the course:</b> CONSERVATIVE DENTISTRY AND ENDODONTICS, PRE-CLINICAL II <b>Credit value:</b> : Cons Prop II: 4 <b>Lessons (in hours):</b> 56 <b>lectures:</b> 1 <b>practices:</b> 3 <b>seminars:-</b> <b>Type of the course:</b> <u>compulsory</u> obligatory elective elective <b>Frequency of announcement (per semester or year):</b> per year
<b>Academic year:</b> 2019-2020
<b>Subject code<sup>1</sup>:</b>
<b>Lecturer of the course:</b> Zsuzsanna Tóth DMD, PhD  <b>Contact:</b> Department of Conservative Dentistry, 1088 Budapest, Szentkirályi u. 47. Phone: +361-317-1598  <b>Function:</b> clinical director, associate professor
<b>The goals of the course in point of view of the education:</b> This subject serves as the foundation of clinical teaching of conservative dentistry. The goal is to acquire a level of theoretical and practical knowledge that can be used to treat live patients. During practice the students learn: <ul style="list-style-type: none"><li>• the theoretical, practical steps of preparing inlays, onlays and the steps of preparing them in the dental laboratory</li><li>• the theoretical basics of endodontics</li><li>• the symptomatology, diagnosis and therapy of pulpal diseases and their consequences</li><li>• trepanation of the pulp chamber, the mechanical preparation of the root canal and the root canal obturation on extracted human teeth</li></ul>
<b>Location of the course (address of lecture hall, seminar room etc.):</b> Dental Educational Center, Department of Conservative Dentistry, 1088 Budapest, Szentkirályi u. 47. Árkövy lecture hall and Propaedeutics lab
<b>Competences acquired by completion of the course:</b> Upon successful completion of the subject the student learns the theoretical, practical and dental technical steps of inlay/onlay making, the process, circumstances, diagnosis and therapy of the development of pulpal diseases, knows and uses the instruments, tools, machines required for endodontic treatments, has learned and able to apply the rules of root canal treatment and with this knowledge the student is suitable to perform root canal treatment and then restore the tooth.
<b>Pre-study requirements and prerequisites of course registration and completion:</b> <ul style="list-style-type: none"><li>- Anatomy (Maxillofacial Anatomy) IV.</li><li>- Conservative Dentistry and Endodontics, Pre-clinical I.</li><li>- General Dental Propaedeutics</li></ul>
<b>Number of students required for announcement of course (min., max.):</b> -

**Method of course registration: Neptun system****Detailed course/lecture description<sup>2</sup>:** *(to facilitate credit recognition in other institutions)*

This subject includes one theory and three hours of practice a week.

During practice the task is to prepare cavities for inlay/onlay restorations. Students practice access cavity preparation (trepanation), root canal preparation and root canal obturation on extracted human teeth with continuous monitoring of theoretical knowledge.

**CONSERVATIVE DENTISTRY AND ENDODONTICS, PRECLINICAL II. Lectures:**

1. Preparing for indirect restorations. Direct and indirect methods. Materials of indirect restorations
2. Tooth preparation for cast metal restorations and their cementation process
3. Tooth-coloured indirect restorations. (Ceramic, composite). Temporary filling. Cementation
4. Consequential diseases of caries, pulpal diseases
5. Consequential diseases of caries, periapical diseases
6. Indication, contra-indication, limitations of root canal treatment. Urgent cases in dentistry.
7. Trepanation, extirpation. Instruments used in endodontics
8. Working length determination (preoperative X-ray, needle-control, anatomical and physiological forams). Use of electronic apex-locators. Step-back technique
9. Irrigant solutions and medication used in endodontics
10. Sealing of root canals. Lateral condensation. The problems of control X-rays.
11. Functional and esthetic restoration of root canal treated teeth.
12. Patient assessment and treatment plan.
13. Equipments in a dental office. Infection control
14. Consultation. Preparing for the exam

**Courses (*obligatory and elective*) which in part or entirely overlap the topics of above course:**

Successful completion of the course lays the foundation of student patient care within the framework of the Conservative dentistry subject and later, in the 5th year, the Clinical dentistry subject, so the knowledge acquired here is repeated that we can successfully expand.

**Special academic work required for completion of the course<sup>3</sup>:-****Attendance on practices and lectures, replacement in case of missed sessions:**

Attendance at lectures is not obligatory, but attendance at lectures and its materials are essential for completing the practical work and passing the exam. Participation at practice is compulsory. The absenteeism shall in no case exceed 25% of the practises. More than 10 min delay from one practice is an absence. Three delays are counted as one absence. We cannot ensure a date to remedy absence. Absence does not need to be justified.

**Consequences of absence from sessions and exams:**

Work done at practice is controlled and valued by practice teacher. Students during the semester write tests to give proof of their theoretical knowledge. There is no retake for missed tests. Three delays (upto 25%) are counted as one absence. More than 25% delay from one practice is also an absence. A maximum of 3 absences are allowed. We cannot ensure a date to remedy absence. In these cases signature can not be given.

**Method of checking acquired knowledge during the study period<sup>4</sup>:**

Students must prepare in advance for the practices from the submitted material. This is regularly checked and evaluated orally and / or in writing by the teacher. During the semester, several small and large tests take place, the topic of which also applies to the material of the lectures. The results of the evaluations are included in the end-of-semester rating. We provide two opportunities to replace or in case of failure to correct the big, topic and module closing tests, but in case of small tests there is no possibility for a replacement or correction. The work done on the practices is monitored and evaluated by the practice leaders at all times.

The condition for signing the semester is the appropriate level of continuous and consistent theoretical preparation and the appropriate level of practical performance. The grades given for theory and practice must separately reach an average of 2.0. The topic and module closing tests must individually reach a level of at least 2.0. An additional condition for the acceptance of the semester is the passing of the practical exam during the diligence period.

**Requirements of an accepted semester (*signature of the lecturer*):**

A minimum of 75% attendance is required at the practices, and absences at any way may not exceed 25% of the practices.

The condition for signing the semester is the appropriate level of continuous and even theoretical preparation and the appropriate level of practical performance. The grades given for theory and practice must separately reach an average of 2.0. The topic and module closing tests must individually reach a level of at least 2.0. An additional condition for the acceptance of the semester is the passing of the practical exam during the diligence period.

**Type of the exam:** Final exam

**Requirements of the exam<sup>5</sup>:**

The grades given for each theoretical topic must separately reach an average of 2.0. The proper identification of an extracted human tooth and the translation of dentally related topics from English to Hungarian must also reach an average of 2.0.

**Topics A**

1. Definition of dental caries, localisation and progression in the anatomical crown.
2. Histology of dental caries. (Enamel, dentin and root caries).
3. Treatment possibilities of caries incipient.
4. Hand instruments and power driven cutting equipments (micromotor, turbine, burs).
5. Isolation of the operating field, its methods and instruments.
6. Classification of cavities according to Black. Cavity design, nomenclature.
7. Rules and steps in case of preparation for amalgam fillings.
8. Rules and steps in case of preparation for composite fillings.
9. Class I. cavity preparation for composite restorations.
10. Class II. cavity preparation for composite restorations.
11. Class III. cavity preparation for composite restorations.
12. Class IV. cavity preparation for composite restorations. Treatment of fractured front-teeth.
13. Class V. cavity preparation for composite restorations. Treatment of wedge shaped cervical abrasion of teeth.
14. Aim of making fillings. Requirements for restorative materials. Classification of restorative materials.
15. Aims and materials of temporary fillings. Types of base materials, their purpose.
16. Composition and characteristics of dental amalgam.
17. Glass ionomer cements: compositions and reason for application.
18. Composition, classification and properties of composites.
19. Adhesive filling technique. (Total-/self etch systems and their applications)

20. Making a composite filling in case of class III. and IV. cavities. (Steps and execution)
21. Making a composite filling in case of class I. and II. cavities. (Steps and execution)
22. Making an amalgam filling in case of class I. and II. cavities. Matrix systems.
23. Making an amalgam filling in case of class V. cavities. Amalgam finishing and polishing.

## Topics B

1. Definition, indication and materials of inlays. The difference between cavity preparation for composite fillings and inlays.
2. Cavity preparation for metal inlay, onlay and overlay.
3. Cavity preparation for esthetic inlay, onlay.
4. Differences between the clinical procedures of direct and indirect inlay restorations. (metal and esthetic)
5. Materials used for cementation of metal and esthetic inlays. Pretreatment of inlay surface.
6. Anatomical structures of teeth. Signing of the teeth. Mühlreiter signs.
7. Anatomy and histology of the pulp. Description of the pulp chamber.
8. Pulp diagnostic procedures.
9. Treatment of dental pulp. Direct and indirect pulp capping, amputation of pulp (pulpotomy).
10. Diseases of the dental pulp. Reversible and irreversible pulpitis, pulp necrosis.
11. Consequences of pulp necrosis. Etiology, symptoms, diagnostics of acute and chronic periapical periodontitis.
12. Etiology, symptoms, diagnostics of acute and chronic apical abscess.
13. Definition, aims, indications, contraindications of root canal treatment.
14. Hand and engine driven instruments used in root canal treatments.
15. Anatomy of the apex and the periapical periodontium.
16. Significance and methods of root canal length determination.
17. Root canal preparation by step-back technique. Apical stop / apical constriction.
18. Aims, materials and procedure of root canal irrigations and root canal medicaments.
19. Root canal filling by lateral condensation technique, materials, instruments.
20. Definition of vital extirpation, steps and instruments until root canal shaping.
21. Steps of vital extirpation from root canal shaping till filling completion.

### **Grading of courses<sup>6</sup>:**

The prerequisite for applying for the exam is the existence of the signature of the semester. The grade of the exam is five levels, its value can be modified by the results of the practical exam passed during the diligence period.

### **Exam registration:**

In Neptun system

**Rules of repeating exams:**

In Neptun system based on the current university study and exam regulations.

**List of textbooks, lecture notes and recommended textbooks:**

1. Ritter AV, Boushell LW, Walter R: Sturdevant's Art and Science of Operative Dentistry 7th ed. St. Louis, Mosby, 2018.
2. Torabinejad M, Walton RE, Fouad AF: Endodontics. Principles and Practice. 5th ed. St.Louis, Missouri, Saunders/Elsevier 2014

**Signature of course lecturer:**

**Zsuzsanna Tóth DMD, PhD**

**Signature of head of department:**

**Zsuzsanna Tóth DMD, PhD**

**Date of submission:****Opinion of OKB:****Notes from the Dean's Office:****Signature of Dean:**

<sup>1</sup> Filled out by the Dean's Office following approval

<sup>2</sup> Detailed and numbered for each week of theoretical and practical lessons one by one, indicating the names of lecturers and instructors

<sup>3</sup> Eg. field practice, medical chart analysis, survey conducting, etc.

<sup>4</sup> Eg. homework, report, midterm exam etc. Topics, dates, method of retake and replacement.

<sup>5</sup> List of topics in case of theoretical exam, thematic and method in case of practical exam.

<sup>6</sup> Method of inclusion of theoretical and practical exams. Method of inclusion of midterm assessments.