DENTAL INSTRUMENTS

1st semester

LECTURE (1 hr/week)  PRACTICE (1 hr/week)

* 1. Introduction to the Szeged Dental School
* 2. History of Dentistry (Stone age – Greco-Roman Dentistry)
* 3. History of Dentistry (Greco-Roman Dentistry – Western Dentistry)
* 4. History of Dentistry (Western Dentistry – today)
* 5. Fully equipped dental surgery
* 6. Visiting a private dental practice
* 7. Dental instruments used in oral surgery
* 8. Dental instruments used in operative dentistry, endodontics
* 9. X-ray machine, Orto-pan tomogram
* 10. Dental instruments used in prosthetic dentistry
* 11. Dental Instruments used in orthodontics and children dentistry and periodontology, oral hygiene instruments
* 12. Exam
* 13. Semester overview

CHEMISTRY FOR DENTAL STUDENTS

1st semester (14 weeks)

WEEK LECTURE (2 hrs/week) SEMINAR (1 hr/week) PRACTICE (2 hrs/week – 8 weeks)

5. Properties of the most important nonmetals and their compounds. Biological importance and usage. Formation and physiological effects of free radicals.
7. Osmosis and its biological importance. Chemical equilibrium. LeChatelier’s principle. Electrolytic dissociation, strong

DENTAL ANATOMY

1st semester

LECTURE (2 hours/week)  PRACTICE

* 1. The object and importance of Dental Anatomy. Biometrics
* 2. Dental terminology and nomenclature. Orientation, surfaces. Shape elements, contact points, positions.
* 3. Primary tooth anatomy
* 4. Structure of permanent teeth
* 5. Maxillary incisors
* 6. Mandibular incisors
* 7. Maxillary and mandibular canines
* 8. Maxillary premolars
* 9. Mandibular premolars
* 10. Maxillary molars
* 11. Mandibular molars

Dental Anatomy. Biomimetics

* 3. Primary tooth anatomy
* 4. Structure of permanent teeth
* 5. Maxillary incisors
* 6. Mandibular incisors
* 7. Maxillary and mandibular canines
* 8. Maxillary premolars
* 9. Mandibular premolars
* 10. Maxillary molars
* 11. Mandibular molars

Tooth structure - drawing exercise in 2D and 3D, study of pulpal sections

1. Maxillary incisors. Natural tooth identification. Drawing exercise
8. Maxillary incisors. Tooth model reconstruction with plasticine
9. Mandibular incisors. Tooth model reconstruction with plasticine
10. Maxillary and mandibular canines. Tooth model reconstruction with plasticine
11. Maxillary premolars. Mandibular premolars. Tooth model reconstruction with plasticine

8. Dental Instruments used in operative dentistry, endodontics
9. X-ray machine, Orto-pan tomogram
10. Dental instruments used in prosthetic dentistry
11. Dental Instruments used in orthodontics and children dentistry and periodontology, oral hygiene instruments
12. Exam
13. Semester overview

Intra- and intermolecular chemical bonds.
Titration calculations.
Metals and their compounds. Complexes.
Metathesis reactions.
Nonmetals and their compounds. Practicing metathesis reactions.
Solutions.
Continuation of practicing simple chemical calculations.

Background of volumetric analysis. Using a pipette and a burette. The principle of photometry, Lambert-Beer law.

During weeks 5 to 9 students work in rotation and conduct one of the following experiments each week:

I) Quantitative determination of HCl content by titration with NaOH solution.
II-III) Qualitative analysis (2 weeks).
IV) Complexometric determination of calcium ions.
V) Determination of pKₐ of a known concentration weak acid solution through the preparation of different buffers.
VI) Quantitative determination of Fe(III)-content by permanganometric titration measuring the redox potential.
VII) Photometric determination of iron.
### 2nd semester (14 weeks)

<table>
<thead>
<tr>
<th>WEEK</th>
<th>LECTURE</th>
<th>SEMINAR</th>
<th>PRACTICE</th>
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<tbody>
<tr>
<td>4.</td>
<td>Oxo compounds. Structure of the carbonyl group. Chemical reactions of aldehydes and ketones: addition and condensation reactions. Enol-oxo tautomerism and aldime dimerization of oxo compounds. The role of these reactions in biochemical processes. Oxidation and reduction reactions. Important oxo compounds: quinones, coenzyme Q and vitamin K.</td>
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</table>


**COMMUNICATION IN DENTISTRY**

2nd semester

<table>
<thead>
<tr>
<th>LECTURE (1 hr/week)</th>
<th>PRACTICE (2 hours/week)</th>
</tr>
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<tbody>
<tr>
<td>1. General prelude, the attitude, point of view of the curse, what is psychology, the relation between psychology and medicine. The necessity and traits of self-evaluation (self-image, assertive attitude, games people play, and it's solution)</td>
<td>1. Introduction, technical details</td>
</tr>
<tr>
<td>2. Block in basic and biological elements of psychology (Sensation and perception). The psychology of social interactions (Basic elements of perception of people, schemas, stereotypes, attributions, the point of view of individual psychology)</td>
<td>2. Basic elements of communication</td>
</tr>
<tr>
<td>3. The psychology of social interactions (Basic elements of social behavior – the effect of people's presence on human achievement, human groups and roles, the human mass's symptom)</td>
<td>3. Factors which disturb the communicational process I.</td>
</tr>
<tr>
<td>4. The psychology of social interactions (submission, diffusion of responsibility, conformity to the great mass, the effect of minority on the majority)</td>
<td>4. Factors which disturb the communicational process II.</td>
</tr>
<tr>
<td>5. General psychology (attention, memory, imagination, human consciousness, thinking)</td>
<td>5. Verbal communication I.</td>
</tr>
<tr>
<td>7. Human values (The base of values - cognition, exploration, - self-respect and respecting people), the born-out syndrome (how to protect our mental health and harmony)</td>
<td>7. Factors which disturb the communicational process III.</td>
</tr>
<tr>
<td>8. Emotions (the evolution of them, theories of their functioning, the mechanism of facial feed-back, and it's practical utility)</td>
<td>8. Nonverbal communication I.</td>
</tr>
<tr>
<td>9. The personality (definitions, theories, the role of nature and nurture)</td>
<td>9. Nonverbal communication II.</td>
</tr>
<tr>
<td>10. The psychology of human development (The importance, sections, approaches of it)</td>
<td>10. Cultural presentation I.</td>
</tr>
</tbody>
</table>
NURSIG PRACTICE (SUMMER PRACTICE)

2nd semester

Students may perform the emergency ambulance practice out of the University (in their country) at a dental emergency ambulance. In this case they have to submit an acceptance letter from the head of the chosen surgery. Students have to submit a certificate about the practice, containing a short evaluation.

Detailed description of the practice requirements:
Getting to know the work of the Emergency Ambulance:
- Observing the administrative tasks in connection with patient examination.
  (assignments, computerized patient admission, ambulance diary, patient records)
- Procedure and practice of making a diagnosis
- Getting to know and practicing the duties related to patient examination.
- Observing the examination of X-ray results, and diagnosis making.
- Getting to know the procedure of patients referral to certain departments.

DENTAL MATERIALS AND TECHNOLOGY

3rd semester

LECTURE

(2 hrs/week)

* 1. Introduction to dental materials science.
   Importance of dental material knowledge in dentistry. History of dental materials.
   International standards for materials used in dentistry (ISO, DIN etc.). Classification of
dental materials based on structure and utilization
* 2. Types, classifications and applications of impression materials
   Presentation of elastic impression materials.
* 3. Examining, treating and preventive methods used in dentistry from technological point of
   view.
   Die materials and methods of model preparation
* 4. Burs and polishing instrument in dentistry.
* 5. Basic physical properties of materials. Test methods for materials in dental material science
* 6. Polymers used in dentistry (1st part).
   Practical aspects of polymers used in dentistry (2nd part)

PRACTICE

(1 hr/week)

1-2. Carving a premolar and an upper central incisor tooth in plaster (white)
3-4. Impression materials in practice (Impression gypsum products in practice, take impression from
   a coin, demonstration and use putty and wash materials)
5-6. Making impression with alginate on manikin, casting impression with gypsum. Basing the cast,
   five pointed trimming
University of Szeged, Faculty of Dentistry, Dental Medicine Program: Syllabi 2013/2014

ETHICS IN MEDICINE

3rd semester

LECTURE (1 hr/week) and PRACTICE (1 hr/week)

1. Introduction, basic moral concepts
2. Morals and law, short history of ethics
3. Basic ethical theories and principles of bioethics
4. Health and illness, informed consent
5. Abortion
6. Aids
7. Euthanasia and suicide
8. Impaired infants
9. Animal experimentation
10. Cloning
11. Transplantation
12. Patients’ rights
13. Justice in medicine and public health

ORAL BIOLOGY

4th semester

LECTURE

(1 hour/week)

* 1. The chemical composition of bone and teeth
* 2. The microstructure of teeth. The enamel, the dentine and the cementum
* 3. Formation and mineralization of hard tissues. Trace elements in teeth
* 4. The periodontium
* 5. The mastication, the deglutition and the speech
* 6. Measurement of the masticatory force
* 7. The dental pulp
* 8. The biochemistry of fluoride ion
* 9. The pharmacology and the toxicology of the fluoride ion. The detrimental effects of fluoride on teeth
* 10. The taste and the olfaction
* 11. The microbial flora of the mouth in health and diseases
* 12. The saliva and the salivary glands
* 13. The calcium metabolism of bones and teeth
* 14. Consultation

PRACTICE

(1 hour/week)

1. The chemical composition of bone and teeth
2. The bone and teeth mineralization. The trace elements in the teeth.
3. Microstructure of teeth (light microscopy)
4. The periodontium
5. The mastication, the deglutition and the speech
6. Measurement of the masticatory force
7. The dental pulp
8. Research methods in dentistry
9. Literature search
10. The taste and the olfaction
11. The microbial flora of the mouth in health and diseases
12. The saliva and the salivary glands
13. The calcium metabolism of bones and teeth
14. Consultation

DENTAL BIOMETRY AND EVALUATION OF RESEARCH RESULTS

4th/6th/8th semester

LECTURE

PRACTICE

1. The importance and applications of statistics in dental sciences. Introduction to Mathematics, Part I. (definition of functions, different type of determinations and analysis)
2. Introduction to Mathematics, Part II. (set theory, combinatorics). Populations, probability, discrete variables and probability distributions
3. Continuous variables and frequency distributions.
4. Theoretical background of tests of significance: null hypothesis, level of significance, degree of freedom, possible errors
5. Parametric tests. Verification of normality. Student’s t test for paired samples
6. Student’s t test for unpaired samples and the F test for variances
7. Written test (I.)
8. Analysis of variance (ANOVA-test)
9. Non-parametric methods (Wilcoxon, Mann-Whitney U-test etc.)
10. Analysis of discrete variables: $\chi^2$ test and Fisher exact test (contingency table)
11. Linear regression and the $t$-test of correlation. Linearization
* 12. Written test (II.)
* 13. Statistical analysis and data analysis in other statistical programs (Statistica 11)

ODONTOTECHNOLOGY (summer practice)

4th semester

2 x 35 hours (Odontotechnology) in July according to the group arrangement.

Detailed description of the practice requirements:

1. week
   1. day – Drawing of teeth, carving teeth in wax (upper first incisor with root)
   2. day – Drawing of teeth (praemolars) and molars, carving teeth in wax (lower praemolar with root)
   3. day – Carving teeth in plaster, learn to use handpieces and burs
   4. day – Carving teeth in plaster, learn to use handpieces and burs
   5. day – Use of impression materials on manikin. Making study casts, bite registration. Mounting the casts in the articulator – demonstration

2. week
   1. day – Students laboratory: Mounting the casts in the articulator based on Bonwill triangle. Preparation of resin teeth, embedding them in plaster
   2. day – Students laboratory: Mounting the casts in the articulator for gnathology practice, mixing and polishing base plate acrylic material. Visiting the dental technical laboratory (2 groups from 8.00 am, 2 groups from 10.00 am)
   3. day – Students laboratory: Mounting the casts in the articulator for gnathology practice, mixing Pattern Resin, shaping a premolar tooth with burs in resin. Surgery: making a lower jaw alginate impression from each other, making a cast.
   4. day – Students laboratory: making resin teeth, mounting resin teeth in gypsum block, mixing self curing acrylic, shaping a premolar tooth with burs in resin
   5. day – Students laboratory: Power point presentation about a dental technical technical procedure with own photos taking in the laboratory. Evaluation of model mounting.

In the 2nd week students visit a dental technical laboratory in small groups (watch metal casting, ceramic works, model preparation, etc.) and make documentation about a technical procedure, which is presented in the last day of the summer practice. Pictures from the internet are not accepted!
Conditions of accepting the practice for those who spend the practice outside the University

Those students who don't come to the Dental Faculty Students Laboratory for the practice, have to bring a certification from the head of the laboratory, where they stay for the practice, in which he/she declares that the student spent two weeks in the lab and fulfilled the above mentioned tasks. This statement must arrive to the Dean's Office of the Dental Faculty till 20. August 2013. Students have to show their work prepared by themselves in the first week of Preclinical Course of Prosthodontics.

- An upper middle incisor with root carved in wax, coronal size about 2-3cm
- A lower premolar with root carved in wax, coronal size about 2-3cm
- An upper premolar carved in white plaster (only coronal part)
- A lower molar carved in white plaster (only coronal part)

A power point presentation about a dental technical procedure (4-7 slides) with photos made by the student. Pictures from the internet are not accepted! The presentation will be assessed; the mark will be counted among the results of the Preclinical Course of Prosthodontics. This is also a condition of accepting this course.

MEDICAL SOCIOLOGY

4th semester

LECTURE
(1 hrs/week)

- Development, division, research fields of medical sociology. The sociology of dentistry
- The medical profession.
- Professional socialisation among medical students.
- Gender differences among medical students in their professional socialisation. Role-conflicts between family and professional roles.
- Sociology of disability.
- Labeling and stigma. Illness as deviance, primary, secondary deviance.
- Deviance behaviours. Theories of deviance: biological, physical, psychological, sociological theories.
- Stratification and class. Social mobility. Social causes of illness, social patterns of illness (social aetiology of disease).
- Families and intimate relationships. The life-course.
- Practice of medical sociological research methods. Strategy and research methods of medical sociology.

HUNGARIAN LANGUAGE I-IV.

1st semester

PRACTICE
(4 hrs/week)

- Getting acquainted: Who are you? Where are you from? Conjugation of the verb 'to be', subject form of the personal pronouns.
- What is where in Szeged? Asking questions. Question words, existential sentences. Define and indefinite articles.
- Meeting students. The conjugation of verbs: present indefinite conjugation, singular forms. Cardinal numbers: telephone numbers and prices.
- Going shopping. The accusative form of nouns.
- Revision of grammar and vocabulary.
- Going to the cinema. Telling the time. Making an appointment. Plural forms of the verb (indefinite present tense). The postposition 'előtt'.
- TEST 1
- A Sunday out: museum, theatre. The plural form of nouns and adjectives. Expressing possibility. The

2nd semester

PRACTICE
(4 hrs/week)

- My family: possessive suffixes, genitive structure.
- I have an…: Possessives + case endings. Expressing possession.
- What is your friend like? Describing people. Calendar, dates.
- Revision
- TEST 1
- Students life: review of indefinite conjugation. Transitive and intransitive verbs.
- Definite conjugation.
- Daily routine: verbal prefixes.
- Weather and seasons.
- General revision.
- TEST 2
- Preparation for the oral exam.
- Oral tests

3rd semester

PRACTICE
(4 hrs/week)

- General revision.
- Travelling abroad: revision of case endings and postpositions. Noun formation.
- At the doctor's: kell, lehet, szabad, tilos. Suffix szor/szer/ször. Body parts.
- Revision
- TEST 1
- Where were you in the summer: past tense conjugations.
- What happened?: past tense definite and indefinite. Time expressions.
- Revision of grammar and vocabulary.
- Revision of grammar and vocabulary.
- TEST 2
- Preparation for the oral exam
- Oral tests

4th semester

PRACTICE
(4 hrs/week)

- Services: possessive suffixes in the plural. At the pharmacy.
- Private conversations: personal pronouns with case endings. Hat/het.
- Revision of past and present tense conjugation.
- Questions and question words.
- Word order and complex sentences.
- Grammar exercises and reading comprehension tasks.
- TEST 1
- Practising role-play and picture description.
**PRECLINICAL COURSE OF PROSTHODONTICS I.**

**5th semester**

**LECTURE**
(1 hr/week)

* 1. Topics of prosthodontics. Prosthetic appliances
* 2. Main principles of tooth preparation
* 3. Tools and methods of tooth preparation. Veneer crowns
* 4. How to avoid the harmful effects of tooth preparation
* 5. Classification of crowns. Types and indications of different finish lines
* 7. Impression methods
* 8. Procedure of dental impressions
* 9. Digital impression
* 11. WRITTEN TEST
* 12. Pulp protection. Provisional restorations
* 13. How to build up a destroyed tooth?

**PRACTICE**
(2 hrs/week)

1. Introduction the order of the laboratory order, instruments. Practicing the use of burs.
2. Preparation of resin teeth for veneer crown, knife edge finish line
3. Preparation of resin teeth for veneer crown, knife edge finish line
4. Preparation of embedded resin teeth for veneer crown, knife edge finish line.
5. Preparation of resin teeth int he manikin for veneer crown, knife edge finish line. Embedding removed natural tooth. WRITTEN ASSESSMENT
6. Preparation of resin teeth int he manikin, 90° shoulder
7. Preparation of resin teeth (front), chamfer finish line.
8. Preparation of resin teeth in the manikin, chamfer finish line
9. Preparation of resin teeth in the manikin, chamfer finish line
10. Preparation of resin teeth for partial crown (4/5) in the manikin
11. Preparation of resin teeth for partial crown (3/4) in the manikin
12. Upper central incisor preparation with chamfer as a practical exam
13. Provisional crown fabrication with prefabricated celluloid crown
14. Provisional crown fabrication with Scutan method

**PRECLINICAL COURSE OF PROSTHODONTICS II.**

**6th semester**

**LECTURE**
(1 hr/week)

* 1. Construction of complete crowns – Cast metal crowns, veneer crowns. (Resin faced and porcelain fused to metal crowns.)
* 2. Construction of complete crowns – Jacket crowns. (Resin and ceramic. Jacket crowns)
* 3. Construction of full crowns – fzkk ceranuc crowns
* 4. Laminate veneers, shade selection
* 5. Interim and definitive cementation of crowns. Removal of cemented fixed partial dentures
* 6. Post retained crowns. Classification, construction, indications and contraindications. 1st Midsemester written test (Topic: Crowns,

**PRACTICE**
(4 hrs/week)

1. Tooth preparation for abutment (Chamfer margin design), the students should collect one rooted teeth for modelling a post and core.
2. Preparation of tooth 21 for complete crown, with chamfer margin design. Construction of temporary crown onto the prepared abutment
3. Preparation of tooth 37 for complete cast metal crown. Preparation of tooth 44 for complete veneer crown
4. Impression making, construction of sectioned cast
5. Impression making, construction of sectioned cast
6. Mounting of the casts into articulator
PRECLINICAL COURSE OF OPERATIVE DENTISTRY I.

5th semester

LECTURE
(1 hr/week)
2. The definition of caries, histology, pathology. Diagnostics.
7. The definition of cavity lining, and base. Goals and theory.
8. Amalgam.
9. The classification of filling materials. Cements, composites, ormoecs, GIC
10. The adhesive technique
12. Written demonstration

PRACTICE
(4 hrs/week)
4. Practicing cavity preparation: Black cl. I., II. MO, OD, MOD (4)
5. Practicing cavity preparation from mirror: Black cl. I., II. MO, OD, MOD (4)
6. Practicing cavity preparation with high speed handpiece: Black cl. I., II. MO, OD, MOD (4)
10. Black cl. II. base fillings. Black cl. V. cavity filling with composite and GIC.

PRECLINICAL COURSE OF OPERATIVE DENTISTRY II.

6th semester

LECTURE
(1 hr/week)
1. Isolation in dentistry. Rubber dam. Matrix systems.
2. The anatomy of the pulp, and the pulp chamber.
4. The aims and principles of chemomechanical treatment.
6. The mechanical preparation – aims, principles and methods
7. The chemical preparation- aims, principles and methods
8. Rotary instruments for root canal treatment
9. Temporary seal of the root canal. Calcium-hydroxide
10. The root canal treatment – different ways
11. Materials used: points and sealers
12. Lentulo technique and lateral condensation
13. Restorations after root canal treatment

PRACTICE
(4 hrs/week)
3. Trepanation, access cavity. Theory and practice.
7. Chemomechanical preparation of the root canals.
10. Temporary root canal obturation. Ca(OH)2 in practice
11. Materials for root canal obturation. Performing root canal obturation with lateral condensing technique
12. Materials for root canal obturation. Performing root canal obturation with lateral condensing technique
PRECLINICAL COURSE OF OPERATIVE DENTISTRY Seminar II.

6th
(1 hr/week)
1. Introduction
2. Pulpal considerations
3. Macro- and microscopy of the endodontium
4. Pulpal and periapical diseases
5. RCT - indications and contraindication
6. RCT - instruments
7. Length measurement
8. RCT - materials
9. RCT - techniques
10. RCF - materials
11. RCF - techniques
12. Retreatment
13. RCT - Coronal restauration
14. Test

GNATOLOGY

5th semester

<table>
<thead>
<tr>
<th>LECTURE</th>
<th>PRACTICE</th>
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<tbody>
<tr>
<td>(1 hr/week)</td>
<td>(3 hrs/week)</td>
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<tr>
<td>1. Introduction to Gnatology, it's significance in dentistry. Functional units involved in mastication. Anatomical terminology of the mouth</td>
<td>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</td>
</tr>
<tr>
<td>2. Morphology of osseous structures involved in mastication and the temporo-mandibular joint</td>
<td>2. Forming mandibular buccal cones. Marking reference lines and points on the mounted upper cast. Cutting off the occlusal surface of the mounted upper cast. Re-tracing the markings on the occlusal surface of the upper cast</td>
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<tr>
<td>4. Occlusal contacts in central occlusion. Orientation in the oral cavity</td>
<td>4. Forming the buccal ridges of maxillary buccal cusps. Shaping the triangular ridges of the maxillary buccal cusps</td>
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<tr>
<td>5. Masticatory muscles, their function and innervation</td>
<td>5. Forming the mesial and distal cusp ridges of the maxillary and mandibular buccal cusps</td>
</tr>
<tr>
<td>6. WRITTEN TEST</td>
<td>6. Forming the maxillary lingual cones and the cusp ridges of the maxillary lingual cusps</td>
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<td>7. Specific positions of the mandible</td>
<td>7. Shaping the lingual surfaces and triangular crests of the maxillary lingual cusps</td>
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<tr>
<td>8. Mandibular movements, tooth guidance. Dynamics of occlusal relationships, border-movements, mandibular movement envelope</td>
<td>8. Forming the mesial and distal marginal ridges of the maxillary posterior teeth. Building up the triangular ridges of the mandibular buccal cusps</td>
</tr>
<tr>
<td>9. The process of chewing. Occlusal relations in natural dentition</td>
<td>9. Building up the mandibular lingual cones. Forming the lingual surfaces and the triangular ridges of the mandibular lingual cusps</td>
</tr>
<tr>
<td>10. Articulators (arcon, non-arcon types)</td>
<td>10. Forming the mesial and distal cusp ridges of the mandibular lingual cusps. Face-bow and it's use</td>
</tr>
</tbody>
</table>
10. HOST REACTIONS TO BIOMATERIALS AND DEGRADATION OF BIOMATERIALS IN THE BIOLOGICAL ENVIRONMENT

*1. Introduction to biomaterials science. Historical overview. Classes of biomaterials used in dentistry and medicine
*2. Bulk and mechanical properties of materials and investigation methods (chemical bonds and structure, mechanical testing methods)
*3. Surface characteristics of materials and investigation methods (contact angle, ESCA, SIMS, IRS, STM, AFM)
*4. Metals (stainless steels, Co-Cr alloys, Ti alloys)
*6. Polymers, types of polymers, polymerization, mechanical and thermal properties
*7. Ceramics, glasses and glass-ceramics (bioinert, calcium-phosphate ceramics, bioactive glasses)
*8. Composites and natural materials (proteins, polyacrylamides, polynucleotides)
*9. Host reactions to biomaterials and degradation of biomaterials in the biological environment
*10. Titanium implants and biointegration. Thin films, coatings and biomaterials
*12. Consultation

BIO- AND ALLOPLASTIC MATERIALS IN DENTISTRY

5th semester

LECTURE
(2 hrs/week)

*1. Introduction to biomaterials science. Historical overview. Classes of biomaterials used in dentistry and medicine
*2. Bulk and mechanical properties of materials and investigation methods (chemical bonds and structure, mechanical testing methods)
*3. Surface characteristics of materials and investigation methods (contact angle, ESCA, SIMS, IRS, STM, AFM)
*4. Metals (stainless steels, Co-Cr alloys, Ti alloys)
*6. Polymers, types of polymers, polymerization, mechanical and thermal properties
*7. Ceramics, glasses and glass-ceramics (bioinert, calcium-phosphate ceramics, bioactive glasses)
*8. Composites and natural materials (proteins, polyacrylamides, polynucleotides)
*9. Host reactions to biomaterials and degradation of biomaterials in the biological environment
*10. Titanium implants and biointegration. Thin films, coatings and biomaterials
*12. Consultation

PATHOPHYSIOLOGY

5th semester

LECTURE

Introduction to Pathophysiology;
Inflammation I.: Definition, causes, mediators and signs of acute inflammation. Regulation and outcome of acute inflammation.

Inflammation II.: Chronic inflammation. Local and generalized reactions of inflammation: fever, inflammatory pain.

Pathophysiology of leukocytes I.: Immunology: In vivo allergic reactions, autoimmunity, immunodeficiency.


Starvation and obesity. Diabetes mellitus, hypoglycemia

SEMINAR/PRACTICE

Safety regulations. Review of physiologic background of circulation and normal ECG.

In the practice room: Registration and analysis of ECG. Determination of spirometric parameters.

Seminars: Inflammation I. (Lecture topic of the 1st week).
In the practice room: Registration and analysis of ECG. Determination of spirometric parameters.

Seminars: Inflammation II. (Lecture topic of the 2nd week).

Seminars: Pathophysiology of leukocytes I.: Immunology (Lecture topic of the 3rd week).

Seminars: Endocrinology I. (Lecture topic of the 4th week).

Seminars: Endocrinology II. (Lecture topic of the 5th week).
Cardiovascular system I: Pathophysiology of pulmonary diseases: Development of atherosclerosis.

Seminar: Starvation and obesity. Disturbances of carbohydrate metabolism (Lecture topic of the 4th week).

Cardiovascular system II: Pathophysiology and ECG of acute coronary syndromes: angina pectoris, myocardial infarction.

Seminar: Cardiovascular system I. (Lecture topic of the 7th week).


Seminar: Cardiovascular system II. (Lecture topic of the 8th week).

Cardiovascular system IV: Gastrointestinal diseases I: Nausea, vomiting, (Lecture topic of the 5th week).

Seminar: Cardiovascular system III. (Lecture topic of the 9th week).

Peripheral circulatory diseases: Disturbances of acid-base metabolism:
- Respiratory acidosis and alkalosis.
- Metabolic acidosis and alkalosis.

Seminar: Disturbances of acid-base metabolism (Lecture topic of the 6th week).

Pathophysiology of pulmonary diseases II: Abnormal breathing patterns, dyspneas. Obstructive pulmonary diseases: COPD, asthma bronchiale, cystic fibrosis.

Seminar: Kidney diseases II. (Lecture topic of the 2nd week).

In the practice room: Investigation of urine and renal function: proteinuria, hematuria, pyuria, hypoglycemia, ketone bodies, urobilinogen, urine sediment and casts.

Pathophysiology of gastrointestinal diseases I: Respiratory acidosis and alkalosis.

Seminar: Pathophysiology of pulmonary diseases I. (Lecture topic of the 3rd week).


Seminar: Diseases of liver and biliary tract (Lecture topic of the 8th week).


Seminar: Pathophysiology of leucocytes II. (Lecture topic of the 10th week).


Seminar: Pathophysiology of salt-water balance I. (Lecture topic of the 11th week).

Pathophysiology of salt-water balance II: Hyper- and hypokalemia, disturbances of trace elements and vitamins.

Seminar: Pathophysiology of salt-water balance II (Lecture topic of the 12th week).

Cardiovascular system V: Disturbances of electrical impulse generation and conduction.

Seminar: Pathophysiology of salt-water balance II (Lecture topic of the 13th week).

6th semester

LECTURE
Pathophysiology of kidney diseases I: Proteinuria, hematuria, glycosuria, ketonuria, pyuria, bacteruria, polyuria, oliguria and anuria.

Seminar: Safety regulations. Seminar: Thermoregulation. (Please download and study the material from our website or coospace before class).


Seminar: Kidney diseases I. (Lecture topic of the 1st week).

In the practice room: Investigation of urine and renal function: proteinuria, hematuria, pyuria, hemoglobinuria, ketone bodies, urobilinogen, urine sediment and casts.

Pulmonary diseases I: Abnormal breathing patterns, dyspneas. Obstructive pulmonary diseases: COPD, asthma bronchiale, cystic fibrosis.

Seminar: Kidney diseases II. (Lecture topic of the 2nd week).

In the practice room: Investigation of urine and renal function: proteinuria, hematuria, pyuria, hemoglobinuria, ketone bodies, urobilinogen, urine sediment and casts.

Pulmonary diseases II: Restrictive pulmonary diseases (pleural disorders, pulmonary edema, embolism, hypertension), hypoxias, respiratory failure.

Seminar: Pathophysiology of pulmonary diseases I. (Lecture topic of the 3rd week).


Seminar: Pathophysiology of pulmonary diseases II. (Lecture topic of the 4th week).

Gastrointestinal diseases I: Nausea, vomiting, dysphagia. Abnormalities of gastric juice secretion, peptic ulcer.

Seminar: Gastrointestinal diseases I: (Lecture topic of the 5th week).

Gastrointestinal diseases II: Diseases of absorption, diarrhea, constipation. Intestinal obstruction. Acute and chronic pancreatitis.

Seminar: Gastrointestinal diseases II: (Lecture topic of the 6th week).


Seminar: Diseases of liver and biliary tract (Lecture topic of the 7th week).


Seminar: Pathophysiology of leucocytes II. (Lecture topic of the 8th week).

Red blood cell diseases I: Polycytemias, Anemias - ineffective erythropoiesis.

Seminar: Red blood cell diseases I. (Lecture topic of the 9th week).

Red blood cell diseases II: Anemias due to blood loss, hemolysis.

Seminar: Red blood cell diseases II. Hemostasis I: Bleeding disorders (platelet disturbances).

Hemostasis II: Bleeding disorders (vascular, clotting factor disturbances), thrombosis and embolism.

Seminar: Hemostasis II: (Lecture topic of the 10th week).

In the practice room: Determination of WBC, RBC, platelet, eosinophyl and reticulocyte count. Staining and analysis of blood smear.

Pathophysiology of the CNS I: Multiple sclerosis, neurodegenerative diseases: Alzheimer's, Parkinson's and Huntington's disease. Pathogenesis of psychiatric disorders.

Seminar: Pathophysiology of the CNS I. (Lecture topic of the 11th week).

In the practice room: Determination of WBC, RBC, platelet, eosinophyl and reticulocyte count. Staining and analysis of blood smear.

Pathophysiology of the CNS II: Circulatory diseases of the CNS. Cerebral edema. Pain, headaches, seizures and epilepsy.

Seminar: Pathophysiology of the CNS. (Lecture topic of the 14th week).

PRECLINICAL COURSE OF ORAL SURGERY

6th semester

LECTURE
(2 hrs/week)
* 2. Local anaesthesia in dentistry. Anatomical and pharmacological considerations
* 3. Complications of anaesthesia. Methods of local anaesthesia
* 4. Indications of tooth extraction. Simple tooth extractions
* 5. Complications of tooth removal. Normal and disturbed wound healing

PRACTICE
(1 hr/week)
Practice in local anaesthesia in dentistry and tooth extraction. Related problems. 10 simple extractions, assistance to dento-aveolar surgery.
6. Misplaced and impacted teeth
* 7. Opening of the maxillary sinus and its management
* 8. Dental inflammations
* 9. Endodontic surgery. Surgical procedures related to orthodontic treatment
* 10. Trismus
* 11. Clinicopathology of cysts
* 12. Dentoalveolar trauma
* 13. Written exam
* 14. Discussion

**ORAL SURGERY (summer practice)**

4 x 35 hours, four weeks in July/August.

Detailed description of the practice requirements:
Practice in local anaesthesia in dentistry and tooth extraction. Related problems.
10 simple extractions, assistance to dento-alveolar surgery.

**ADVANCED IMAGING TECHNIQUES IN DENTISTRY**

6th semester

<table>
<thead>
<tr>
<th>LECTURE</th>
<th>PRACTICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1 hr/week)</td>
<td>(1 hr/week)</td>
</tr>
</tbody>
</table>
* 1. The basics of general radiology I. Modern imaging techniques I. |
* 2. The basics of general radiology II. Modern imaging techniques II. |
* 3. Interpretation in the dento-maxillo-facial radiology |
* 4. Radiographic diagnostic methods in the operative dentistry |
* 5. Modern digital imaging techniques. |
* 6. Modern digital imaging techniques in the dental practice, Digora system |
* 7. Nuclear medicine in dentistry |
* 8. Radiographic diagnostic methods for the periodontal diseases |
* 9. Modern imaging techniques in the implantological diagnosis and in therapy |
* 10. Cone Beam CT in dentistry |
* 11. Using of lateral cephalometric projection in the dental practice |
* 12. WRITTEN ASSESSMENT |
* 13. The practical questions of the mobile X-ray machine’s application |
* 14. Consultation |

**PUBLIC HEALTH**

6th semester

<table>
<thead>
<tr>
<th>LECTURE</th>
<th>PRACTICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1 hr/week – 7x2 hrs)</td>
<td>(1 hr/week – 7x2 hrs)</td>
</tr>
</tbody>
</table>
* General epidemiology of infectious diseases. Epidemiology of airborne and enteric diseases in dental practice. - |
* - |
* Epidemiology of hematogenic, cutaneous, and sexually transmitted diseases in dental practice. - |
* - |
* Epidemiology of zoonoses, transmissible spongiform encephalopathy. Epidemiology of health care associated infections. - |
* - |
* Nutrition in public health. Disorders of under- and overnutrition. - |
* - |
* Food quality and safety. - |
* - |
* Environmental epidemiology; sewage, soil pollution; hazardous waste, waste management in dental office. - |
* - |
* Occupational diseases caused by chemicals and chemical safety in dental care. - |

5th semester

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
<th>Practice/ Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Human dentition. Types of teeth</td>
<td>Vocabulary practice</td>
</tr>
<tr>
<td>2.</td>
<td>Dental Specialties</td>
<td>Word building</td>
</tr>
<tr>
<td>3.</td>
<td>Taking medical history</td>
<td>Lexical drill</td>
</tr>
<tr>
<td>4.</td>
<td>Communication in dental practice</td>
<td>Question-answer practice</td>
</tr>
<tr>
<td>5.</td>
<td>Interpreting the patient.</td>
<td>Dialogues</td>
</tr>
<tr>
<td>6.</td>
<td>Examining the patient</td>
<td>Role-play</td>
</tr>
<tr>
<td>7.</td>
<td>Written test</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Autumn break</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Basic dental instruments</td>
<td>Reading comprehension</td>
</tr>
<tr>
<td>10.</td>
<td>Preventive dentistry</td>
<td>Role-play</td>
</tr>
<tr>
<td>11.</td>
<td>Brushing techniques</td>
<td>Vocabulary practice</td>
</tr>
<tr>
<td>12.</td>
<td>Dental floss</td>
<td>Lexical drill</td>
</tr>
<tr>
<td>Week</td>
<td>Topics</td>
<td>Practice/Skills</td>
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</tr>
<tr>
<td>1.</td>
<td>Dental diseases</td>
<td>Reading comprehension</td>
</tr>
<tr>
<td>2.</td>
<td>Dental plaque</td>
<td>Vocabulary practice</td>
</tr>
<tr>
<td>3.</td>
<td>Periodontal diseases</td>
<td>Lexical drill</td>
</tr>
<tr>
<td>4.</td>
<td>Gingivitis</td>
<td>Word building</td>
</tr>
<tr>
<td>5.</td>
<td>Dental caries</td>
<td>Dialogues</td>
</tr>
<tr>
<td>6.</td>
<td>Restorative materials.</td>
<td>Role-play</td>
</tr>
<tr>
<td>7.</td>
<td>Written test</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Spring break</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Anaesthesia in dentistry</td>
<td>Reading comprehension</td>
</tr>
<tr>
<td>10.</td>
<td>Complications of anaesthesia</td>
<td>Vocabulary practice</td>
</tr>
<tr>
<td>11.</td>
<td>Extractions.</td>
<td>Dialogues</td>
</tr>
<tr>
<td>12.</td>
<td>Scaling techniques</td>
<td>Lexical drill</td>
</tr>
<tr>
<td>13.</td>
<td>Bleaching techniques</td>
<td>Role-play</td>
</tr>
<tr>
<td>14.</td>
<td>Written test</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Oral assessment</td>
<td></td>
</tr>
</tbody>
</table>

### PHARMACOLOGY

#### 5th semester

**LECTURE (2 hrs/week)**

1. General pharmacology, pharmacodynamics
2. Pharmacokinetics
3. Adverse effects of drugs
4. Drug interactions
5. Autonomic nervous system: Introduction
6. Cholinergic and Adrenergic agonists
7. Cholinergic and Adrenergic antagonists
8. Local anaesthetics
9. Chemotherapy and Antibiotics I
10. Chemotherapy and Antibiotics II
11. Chemotherapy of viral and fungal infections
12. Non-steroidal anti-inflammatory drugs
13. Antihelmintic drugs, treatment of protozoal infections
14. Antiseptics and disinfectants
15. Agents acting on the blood

**PRACTICE (1 hr/week)**

- Prescription writing
- Pharmacodynamic and kinetic examples
- Computer Lab: Drug-receptor interaction examples for drug interactions
- Computer Lab: Symptomimetics
- Computer Lab: Sympatholytics
- Local anaesthetics in dental practice
- Computer Lab: Autonomic nervous system and local anaesthetics
- To recapitulate chemotherapy
- To recapitulate chemotherapy
- Haemostatic drugs

#### 6th semester

**LECTURE (2 HRS/WEEK)**

1. Sedative-hypnotic drugs, anxiolytics
2. Opioid and non-opioid analgesics
3. General anaesthetics, antiepileptic drugs
4. Antiparkinson drugs, centrally acting muscle relaxants
5. Antidepressive drugs, Antipsychotic drugs
6. Cardiotonic drugs
7. Antiarrhythmic drugs
8. Pharmacology of atherosclerosis, antihypertensive drugs

**PRACTICE (1 HR/WEEK)**

- Drugs of convulsive types, psychostimulants
- Consultation (opioids)
- Interactions with centrally acting drugs
- Computer Lab: CVS drugs
- Computer Lab: CVS drugs
- Consultation: CVS drugs

### HUNGARIAN LANGUAGE VI.

**6th semester**

- Written test
- Oral assessment

## General and Systemic Pathology for Dentistry Students

### 5th semester

**Lecture 3 hours/week**

- Pathology of cellular injury and death. Cellular adaptations of growth and differentiation. Postmortem changes
- Acute inflammation I.
- Acute inflammation II.
- Pathology of chronic inflammation.
- Immunopathology I
- Immunopathology II. AIDS. Pathology of transplant rejection.
- Neoplasia I.
- Neoplasia II.
- Clinical aspects of neoplasia.
- Vascular pathology II.
- Vascular pathology III. Heart failure.
- Pathology of the heart I.

**Organ demonstration 1 hour/week**

- Actual postmortem cases are presented to the students on each week
- Actual postmortem cases are presented to the students on each week
- Actual postmortem cases are presented to the students on each week
- Actual postmortem cases are presented to the students on each week
- Actual postmortem cases are presented to the students on each week

**Practice 2 hours/week**

- Autopsy/ Histology of the cellular injury and death
- Autopsy/ Histology of degeneration
- Autopsy/ Histology of circulation
- Autopsy/ Histology of the inflammation
<table>
<thead>
<tr>
<th>Lecture 2 hours/week</th>
<th>Organ demonstration 2 hours/week</th>
<th>Practice 2 hours/week</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Pathology of the liver.</td>
<td>Actual postmortem cases are presented to the students on each week</td>
<td>Autopsy/Histology of the urinary tract</td>
</tr>
<tr>
<td>2  Pathology of the biliary tract. Pathology of the pancreas.</td>
<td>Actual postmortem cases are presented to the students on each week</td>
<td>Autopsy/Histology of the urinary tract</td>
</tr>
<tr>
<td>3  Pathology of the bowels.</td>
<td>Actual postmortem cases are presented to the students on each week</td>
<td>Autopsy/Histology of the respiratory tract</td>
</tr>
<tr>
<td>4  Pathology of the peritoneum.</td>
<td>Actual postmortem cases are presented to the students on each week</td>
<td>Autopsy/Histology of the respiratory tract</td>
</tr>
<tr>
<td>5  Hemopathology II.</td>
<td>Actual postmortem cases are presented to the students on each week</td>
<td>Autopsy/Histology of the gastrointestinal tract</td>
</tr>
<tr>
<td>6  Hemopathology III. Neuropathology I.</td>
<td>Actual postmortem cases are presented to the students on each week</td>
<td>Autopsy/Histology of the gastrointestinal tract</td>
</tr>
<tr>
<td>7  Neuropathology II.</td>
<td>Actual postmortem cases are presented to the students on each week</td>
<td>Autopsy/Histology of the hematopoietic and the lymphoid system</td>
</tr>
<tr>
<td>8  Neuropathology III.</td>
<td>Actual postmortem cases are presented to the students on each week</td>
<td>Autopsy/Histology of the hematopoietic and the lymphoid system</td>
</tr>
<tr>
<td>9  Immunopathology.</td>
<td>Actual postmortem cases are presented to the students on each week</td>
<td>Autopsy/Histology of the genital system</td>
</tr>
<tr>
<td>10  Pathology of the male genital tract.</td>
<td>Actual postmortem cases are presented to the students on each week</td>
<td>Autopsy/Histology of the genital system</td>
</tr>
</tbody>
</table>
ENDODONTOLOGY

CLINICAL MODULE - DENTISTRY

7th semester

LECTURE
(1 hr/week)
* 3. Examination of patient with endodontic problems (Anamnesis, clinical examination)
* 4. Diagnostics in endodontics
* 5. Treatment planning in endodontics
* 7. Diseases with a pulpal etiology. Gangrena Simplex et Complicata
* 8. Failures during shaping and obturation of the root canal.
* 10. Irrigation (Protocols, chemicals, instruments)
* 11. Retreatment, revision
* 12. WRITTEN DEMONSTRATION

ESTHETICS OF THE FACE

7th/9th semester

LECTURE
1. Esthetics of the face, characteristics and factors determining the smile
2. Introduction to facial anatomy and esthetics
3. Historical overview
4. Dental esthetics, pink and white harmony
5. Surgical aspects of facial surgeries
6. Prevailing of esthetic aspects during the planning process of orthognathic surgery
7. Dysgnathic surgeries
8. Developmental disorders and their treatment
9. Injuries and complications
10. Scar treatment, after care, laser therapy
11. Dermatological aspects
12. Epithesis, facial prostheses
13. Ambulatory interventions-Botox, injectable fillers, hyaluronic acid

ESTHETIC DENTISTRY I.

7th/9th semester

LECTURE
(1 hr/week)
* 1. Introduction to esthetics: Extra oral factors, smile line and incisal edge, red-white harmony. Planning, diagnostic wax up.
* 2. Diagnostic wax up: Planning, fabrication of diagnostic wax model, controlled preparation

ESTHETIC DENTISTRY II.

8th/10th semester

PRACTICE
(1 hr/week)
* 1. Color theory (lecture)
* 2. Layering composite: Anatomic stratification (lecture)
* 3-4. Stratification technique (practice)
* A practice on front teeth
* 5. Stratification technique ("accessory" Practice)
* 6. Shoulder preparation for full ceramic crowns (lecture)
* 7-8. Shoulder preparation for ceramic crowns (practice)
* 9. Veneers: Ceramic and composite (planning, preparation, bonding)
* 10-11. Veneer preparation
* 12. Manufacturing of temporary prostheses
* 13. Consultation

INFECTION CONTROL IN DENTISTRY

7th semester

LECTURE and PRACTICE
(Lecture 1 hr/week, practice 1 hr/week)
* 1. Introduction into infection control. Why does the dentist need infection control?
* 2. Introduction to infectious diseases
* 3. Blood-borne pathogens
* 4. Oral and respiratory diseases
* 5. Disinfection
* 6. Sterilization
* 7. Instrument processing, surfaces and equipment asepsis
ORAL SURGERY I.
7th semester

Practice
3 hrs/week
Practice in basic dentoalveolar surgery:
- apicectomy
- excochleation
- incision
- bone correction
Minimal requirements of semester 5 simple tooth extraction.

ORAL SURGERY II.
8th semester

Practice
3 hrs/week
Practice in basic dentoalveolar surgery:
- apicectomy
- excochleation
- incision
- bone correction
Minimal requirements of semester 5 simple tooth extraction.

INTERNAL MEDICINE
7th semester

LECTURE
(3 hrs/week)
* Examination of the heart
  Carditis, valvular heart disease
* Diagnostic methods in internal medicine
  Diagnostic methods in internal medicine
* Arrhythmias
  Ischaemic heart disease, myocardial infarction
* Acute heart failure
  Acute heart failure. Therapy
* Chronic heart failure
  Chronic heart failure. Therapy
* Hypertension
  Hypertension. Therapy
* Disorders of the peripheral arteries and veins
  Methods and specific questions of the anticoagulant therapy
* Acute respiratory insufficiency
  Acute respiratory insufficiency
* Chronic pulmonary disorders
  Chronic pulmonary disorders. Therapy
* Diabetes mellitus
  Diabetes mellitus. Therapy
* Acute and chronic renal disorders
  Acute and chronic renal disorders. Therapy
* Hyperlipidaemia, hyperuricaemia
  Anemias

PRACTICE
(2 hrs/week)
* Examination of the heart
  Carditis, valvular heart disease
* Diagnostic methods in internal medicine
  Diagnostic methods in internal medicine
* Arrhythmias
  Ischaemic heart disease, myocardial infarction
* Acute heart failure
  Acute heart failure
* Chronic heart failure
  Chronic heart failure
* Hypertension
  Hypertension
* Disorders of the peripheral arteries and veins
  Methods and specific questions of the anticoagulant therapy
* Acute respiratory insufficiency
  Acute respiratory insufficiency
* Chronic pulmonary disorders
  Chronic pulmonary disorders
* Diabetes mellitus
  Diabetes mellitus
* Acute and chronic renal disorders
  Acute and chronic renal disorders
* Hyperlipidaemia, hyperuricaemia
  Anemias

8th semester (15 weeks)

LECTURE
(4 hrs/week)
* Haemostatic disorders
  Leukaemias, lymphomas
* Principles of antibiotic therapy
  Consultation
* Principles of antibiotic therapy
  Consultation

PRACTICE
(2 hrs/week)
* Esophageal disorders
  Disease work up of patients with esophageal disorders, functional evaluation of patients with esophageal disorders (esophageal manometry, 24 h pH-metry, evaluation of the biliary reflux)
* Diseases of the stomach
  Diarrhoea, constipation
* Diseases of the gallbladder and the biliary tract
  Inflammatory bowel diseases
* Diseases of the liver
  Biliary reflux
* Diseases of the pancreas
  Pancreatitis

GASTROINTESTINAL TUMORS

* Gastrointestinal tumors
  Esophageal disorders
* Diseases of the thyroid gland
  Hypothyroidism
* Diseases of the hypophysis and the parathyroid gland
  Hypothyroidism
* Diseases of the adrenal gland
  Addison's disease
* Degenerative, and autoimmune connective tissue disorders
  Rheumatoid diseases
* Degenerative, and autoimmune connective tissue disorders
  Consultation

ORAL MEDICINE I.
7th semester

LECTURE
(2 hrs/week)
* 1. Anatomical and histological structures of the mouth
  Methods and specific questions of the anticoagulant therapy
* 2. Pathology of the oral mucosa. Primary and secondary skin lesions
  Methods and specific questions of the anticoagulant therapy
* 3. Patient examination: anamnesis, clinical and other examination
  Methods and specific questions of the anticoagulant therapy
* 4. Developmental and genetic disorders
  Methods and specific questions of the anticoagulant therapy
* 5. Physical, chemical and iatrogenic diseases
  Methods and specific questions of the anticoagulant therapy
* 6. Bacterial diseases
  Methods and specific questions of the anticoagulant therapy
* 7. Viral diseases
  Methods and specific questions of the anticoagulant therapy
* 8. Fungal diseases
  Methods and specific questions of the anticoagulant therapy
* 9. Diseases of the lip
  Methods and specific questions of the anticoagulant therapy
* 10. Diseases of the tongue
  Methods and specific questions of the anticoagulant therapy
* 11. Written exam
  Methods and specific questions of the anticoagulant therapy
* 12. Immune-based diseases. Allergic diseases
  Methods and specific questions of the anticoagulant therapy

PRACTICE
(1 hr/week)
* Patient presentations according to the lectures’ topics.
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**ORAL MEDICINE II.**

**8th semester**

**LECTURE**
(1 hr/week)

* 1. Oral Symptoms of the Neuroendocrine System and the Diseases of Metabolism
* 2. Oral Symptoms of the Gastrointestinal, Hepatic, Cardiovascular and Urogenital System
* 3. Diseases of the Salivary Glands
* 4. Oral Symptoms of the Blood and Blood-Forming Tissues
* 5. Oral Symptoms of the Psychological and Psychiatric Diseases
* 6. Benign Tumors of the Oral Cavity
* 7. Tumourlike Lesions of the Oral Cavity
* 8. Premalignant Lesions of the Mouth
* 9. Differential Diagnosis of the White Lesions and Ulcers of the Oral Cavity
* 10. Written Exam
* 11. Malignant Epithelial and Salivary Tumors of the Oral Cavity
* 12. Other Tumors of the Oral Cavity (Lymphomas, Sarcomas)
* 13. Therapy of the Tumors of the Oral Cavity
* 14. Consultation

**PRACTICE**
(2 hrs/week)

* Patient presentations according to the topics of the lectures

**OPERATIVE DENTISTRY I.**

**7th semester**

**LECTURE**
(6 hrs/week)

* 1. Etiology of caries, the role of dental plaque
* 2. Epidemiology, risk factors, indices. The role of prevention. Digestion, fluoride.
* 3. Etiology of caries, the role of diet, age, gender and habit

**PRACTICE**
(1 hr/week)

* On the first practice the 4th year student has to get familiar with the office equipment. On the second practice two patients will be called, the student has to take their status and history, after that one of them will be treated on the same appointment. The data and the status of the other patient will be recorded in a notebook and the patient will be informed that he/she will be called for another appointment.

**OPERATIVE DENTISTRY II.**

**8th semester**

**LECTURE**
(5 hrs/week)

* 1. The Peri-Endo frontier. The comparison of apical and marginal periodontal. Contact between the pulpal space and the periodontium. Peri-Endo lesions

**PRACTICE**
(1 hr/week)

* On the first practice two patients will be called, the student has to take their status and history, after that one of them will be treated on the same appointment. The data and the status of the other patient will be recorded in a notebook and the patient will be informed that he/she will be called for another appointment.
2. Focal infection


4. Apexification and avulsion

5. Endodontic treatment in high risk patients. Local and general effects of different endodontic materials.

6. WRITTEN DEMONSTRATION


8. Magnification in endodontics


10. Endodontic surgery II. - microsurgery

11. Bleaching of root canal treated teeth


13. WRITTEN DEMONSTRATION

14. Consultation

OPERATIVE DENTISTRY SEMINAR II.

8th semester

1. Introduction

2. Pulpal considerations

3. Macro- and microscopy of the endodontium

4. Pulpal and periapical diseases

5. RCT - indications and contraindication

6. RCT - instruments

7. Length measurement

8. RCT – materials

9. RCT – techniques

10. RCF – materials

11. RCF – techniques

12. Retreatment

13. RCT - Coronal restauration

14. Test

PROSTHODONTICS I.

7th semester

LECTURE

(1 hr/week)

1. Administration, health insurance system in Hungary

2. Prosthetic treatment planning.

3. The clinical anatomy of edentulous mouth: basic definitions. Consequences of total edentulousness, state of edentulousness.

4. The clinical anatomy of the edentulous maxilla (edentulous ridge, hard and soft palate, soft palate, maxillary tuberosity, buccal space). The definition and parts of complete denture. The supportive factors of functional stability of the complete denture.

5. The clinical anatomy of the edentulous mandible I. (alveolar ridge, retromolar pad, retromylohyoid space)

6. The clinical anatomy of the edentulous mandible II. (sublingual region, buccal shelf, region of buccinator and masseter muscles). The perioral muscles.

7. The fabrication of complete dentures I. (anatomical impression and model and definitive impression and model)

8. The fabrication of complete dentures II. (assessment of the occlusal plane, the occlusal vertical dimension and the centric relation)

9. The fabrication of complete dentures III. (setting up of artificial teeth and try-in)

10. The fabrication of complete dentures IV. (processing of denture in the dental laboratory, reocclusion)

11. WRITTEN ASSESSMENT

12. Prosthetic rehabilitation of cancer patients

13. The fabrication of complete dentures V. (insertion of denture, reocclusion, remontage, relining the denture)

14. Consultation

PRACTICE, SURGERY

(4 hrs/week)

1. Dental instruments used in prosthetic dentistry, practice of impression making in the dental surgery

2. Medical and dental history of the patients, extraoral and intraoral examination, making diagnostic impression and cast

3. Planning of fixed dental prosthesis from the cast of patients

4. Tooth preparation for abutment, construction of temporary crown

5. Tooth preparation for abutment, construction of temporary crown

6. Tooth preparation for abutment, construction of temporary crown

7. Tooth preparation for abutment, construction of temporary crown

8. Making impressions

9. Making impressions and bite registration

10. Checking the metal framework in the mouth, color matching

11. Checking the fixed prosthesis in the mouth, luting with interim cement

12. Definitive cementation

13. Checking the fixation of prosthesis

14. Evaluation

PRACTICE, LABORATORY

(3 hrs/week)

1. Practice of tooth preparation

2. Preparing 13,16 abutments with chamfer

3. Making precision and antagonist impressions

4. Making precision and antagonist impressions

5. Making section cast

6. Modellation wax patterns of a faced metal bridge

7. Modellation wax patterns of a faced metal bridge

8. Visiting the dental laboratory to watch investing and casting technique

9. Visiting the dental laboratory to watch investing and casting technique

10. Finishing, polishing the framework

11. Fabrication a post and core

12. Making individual trays, definitive impressions and master models for lower and upper complete dentures

13. Making wax rims and bite registration for complete denture

14. Evaluation
DENTAL DIAGNOSTICS AND TREATMENT PLANNING
8th semester

LECTURE
(1 hr/week)
* 1. Case history, diagnosis in dentistry. Documentation
* 2. Decision making in dental therapy
* 3. Diagnosis and therapy in oral surgery
* 4. Diagnosis and therapy in conservative dentistry. Diagnosis and therapy in endodontics.
* 5. Diagnosis, treatment planning and therapy in stomato-oncology. Saliva diagnostic methods
* 6. Diagnosis and classification of TMD Case presentations
* 7. Diagnosis and therapy in prosthetic dentistry Case presentations
* 8. Diagnosis and therapy in pediatric dentistry and orthodontics
* 9. Diagnosis and therapy in parodontology.
* 10. Diagnosis and therapy of tooth wear. Diagnostic of tooth discoloration.
* 11. MTO (WRITTEN ASSESSMENT)

PRACTICE, LABORATORY
(1 hr/week)
* 1. Oral assessment; screening
* 2. Case history, case report
* 3. Sealants and preventive resin restorations
* 4. Restorative procedures for primary teeth
* 5. Restorative procedures for primary teeth
* 6. Minimal Invasive Technic
* 7. Pulp therapy; pulpotomy, pulpectomy
* 8. Diagnostic methods
* 9. MTO I.
10. Protective crown (permanent incisor) (model)
11. Stainless steel crown
12. Management of the fractured permanent incisors
13. Consultation
14. MTO II.

PROSTHODONTICS II.
8th semester

LECTURE
(1 hr/week)
* 1. Therapy of partial edentulism
* 2. Parts of removable partial denture (RPD) – base plate, saddle
* 3. Parts of RPD – cast clasps
* 4. Parts of RPD – type of clasps
* 5. Removable partial denture – theoretical bases
* 6. Fabrication of clasp retained RPD
* 7. Parts of RPD – precision attachments
* 8. Fabrication of RPD with precision attachment
* 9. Fabrication of RPD with telescopic crowns
* 10. Hybrid prosthesis, theoretical bases
* 11. Fabrication of hybrid prosthesis
* 12. MTO (WRITTEN ASSESSMENT)
* 13. Interim and immediate dentures
* 14. RPD design for different cases

PRACTICE, Surgery
(4 hrs/week)
1. 1st patient: Medical and dental history of the patients, extraoral and intraoral examination, making anatomical (primary) impression and cast
2. Planning and drawing the borders of complete removable denture
3. Making functional impression
4. Registration of the occlusal plane, the occlusal vertical dimension and the centric relation
5. Trying-in the set-up complete dentures in the mouth
6. Delivering the total removable dentures
7. Review session, remountage, if needed
8. 2nd patient: Medical and dental history of the patients, extraoral and intraoral examination, making anatomical (primary) impression and cast
9. Planning and drawing the borders of complete removable denture
10. Making functional impression
11. Registration of occlusal plane, the occlusal vertical dimension and the centric relation
12. Trying-in complete dentures in the mouth
13. Delivering the complete dentures
14. Recall

PRACTICE, Laboratory
(3 hrs/week)
1. Making individual trays, definitive impressions and master models for lower and upper complete dentures
2. Making wax rims and bite registration
3. Mounting the casts in an articulator
4. Setting up of artificial teeth, MTO
5. Setting up of artificial teeth
6. Setting up of artificial teeth, MTO
7. Trying-in procedure
8. Preparing dentures for delivery
9. Finishing and polishing the dentures. Reocclusion. Practising the planning RPD on study cast and on designing sheets. Bending a wire clasp.
10. Finishing and polishing the dentures. Reocclusion. Practising the planning RPD on study cast and on designing sheets. Bending a wire clasp.
11. Planning of partial removable dentures, surveying the models
12. Making denture design for partial denture with metal framework
13. Making denture design for partial denture with metal framework
14. Evaluation of semester

PEDIATRIC DENTISTRY I.
8th semester

LECTURE
(1 hr/week)
* 1. Fundamentals of pediatric dentistry
* 2. Patient management
* 3. Morphology of primary teeth
* 4. Materials in pediatric dentistry
* 5. Eruption and shedding of teeth
* 6. Cariology of primary teeth
* 7. Pulp lesions in primary teeth
* 8. Cariology of permanent teeth
* 9. Treatment of permanent teeth
* 10. Local anesthesia, pharmacology; General anesthesia and pain control for the children
* 11. Traumatic dental injuries in childhood
* 12. Radiology in pediatric dentistry
* 13. Prevention in pediatric dentistry

PRACTICE
(2 hrs/week)
1. Oral assessment; screening
2. Case history, case report
3. Sealants and preventive resin restorations
4. Restorative procedures for primary teeth
5. Restorative procedures for primary teeth
6. Minimal Invasive Technic
7. Pulp therapy; pulpotomy, pulpectomy
8. Diagnostic methods
9. MTO I.
10. Protective crown (permanent incisor) (model)
11. Stainless steel crown
12. Management of the fractured permanent incisors
13. Consultation
14. MTO II.
PERIODONTOLOGY I.
7th semester

LECTURE (1 hr/week)
1. The topics of the Periodontology. Introduction to periodontal diseases
2. Biochemistry and physiology of the connective tissue
3. Biochemistry and physiology of the bone
4. Dental plaque and calculus
5. Microbiology of periodontal diseases
6. Immune responses in periodontal diseases
7. Mechanisms of destruction of the periodontal tissues
8. The epidemiology of periodontal diseases
9. The risk factors of periodontal diseases
10. Endocrine disorders as a systemic modifiers of periodontal diseases
11. Genetics and periodontal diseases
12. Tobacco use and its relation to periodontal diseases
13. Systemic effects of periodontal diseases

PRACTICE (2 hrs/week)
1. Seminar: Power driven instruments
2. Seminar: Hand instruments
3. Phantom course: practicing the use of scalers
4. Phantom course: practicing the use of universal curettes
5. Phantom course: practicing the use of Gracey curettes
6. Phantom course: treatment positions
7. Written and practical examination
8. Seminar and phantom course: General guidelines for periodontal surgery: instruments, local anesthesia, periodontal dressing, suturing
9. Phantom course: General guidelines for periodontal surgery: instruments, local anesthesia, periodontal dressing, suturing
10. Seminar: periodontal splinting. Phantom course: practicing of intra- and extracoronal periodontal splinting
12. Examination and treatment of patient with gingivitis
13. Examination and treatment of patient with gingivitis

PERIODONTOLOGY II.
8th semester

Lecture (1 hr/week)
1. Classification and symptoms of periodontal diseases
3. Gingival diseases modified by other systemic conditions
4. The periodontal abscess. Necrotizing gingivitis.
5. Non-plaque induced inflammatory gingival lesions
6. The chronic periodontitis
7. The aggressive periodontitis
8. Periodontitis modified by systemic conditions
9. Basic principles of periodontal treatment
10. Treatment planning of chronic and aggressive periodontitis
12. The use of drugs in periodontal therapy

Practice (2 hrs/week)
1. Revision of periododontics
2. Prosthetics
3. Prosthetic appliances
4. Methods of tooth preparation
5. Procedure of dental impressions
6. Written test
7. Autumn break
8. Types of crowns
9. Types of prostheses
10. Types of bridges
11. Inlays
12. Veneer crowns
13. Written test
14. Oral assessment

BASIC TREATMENT IN DENTAL MEDICINE (summer practice)
8th semester

4th year dental students have to perform a practice of four weeks (4x35 hours) in Basic Treatment in Dental Medicine.

Requirements for accepting the summer practice:
- attendance of practices
- completing the tasks given by the instructor
- pieces upper or lower total removable denture or 1 piece of partial removable denture or 1 piece of post and core with crown or 1 piece of short bridge

The summer practice is a criterium topic! Each student must fulfill it.

SURGICAL CONSIDERATIONS IN DENTISTRY
7th semester

Practice (2 hrs/week)
1. Internal medicine questions in dental practice
2. Antibiotics in dentistry and oral surgery
3. Cardiac risk patients in dental practice
4. Dental treatment of patients with bleeding disorders
5. Maxillary sinus diseases and their management
6. Forensic odontology
7. Differential diagnosis of neck masses
8. Differential diagnosis of facial pain
9. Head and neck skin tumors
10. Odontogenic tumors
11. Bisphosphonate induced osteonecrosis of the jaws
12. Sedoanalgiesia
13. Written exam

HUNGARIAN LANGUAGE VII.
7th semester

Week Topics Practice/ Skills
1. Examination of patient with endodontic problems Revision
2. Root canal treatment Reading comprehension
3. Prosthodontics Vocabulary practice
4. Prosthetic appliances Word building
5. Methods of tooth preparation Lexical drills
7. Written test Role-play
8. Autumn break
9. Types of crowns
10. Types of prostheses
11. Types of bridges
12. Inlays
13. Veneer crowns
14. Written test
15. Oral assessment

HUNGARIAN LANGUAGE VIII.
7th semester

Week Topics Practice/ Skills
1. Examination of patient with endodontic problems Revision
2. Root canal treatment Reading comprehension
3. Prosthodontics Vocabulary practice
4. Prosthetic appliances Word building
5. Methods of tooth preparation Lexical drills
7. Written test Role-play
8. Autumn break
9. Types of crowns
10. Types of prostheses
11. Types of bridges
12. Inlays
13. Veneer crowns
14. Written test
15. Oral assessment
8th semester

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
<th>Practice/ Skills</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Fixed bridges</td>
<td>Revision</td>
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<tr>
<td>2.</td>
<td>Removable partial dentures</td>
<td>Reading comprehension</td>
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<td>3.</td>
<td>Complete dentures</td>
<td>Word building</td>
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<tr>
<td>4.</td>
<td>Dental implants</td>
<td>Lexical drill</td>
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<tr>
<td>5.</td>
<td>Orthodontic appliances</td>
<td>Dialogue</td>
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<td>6.</td>
<td>Orthodontics for children</td>
<td>Case study</td>
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<td>7.</td>
<td>Written test</td>
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<td>8.</td>
<td>Spring break</td>
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<tr>
<td>10.</td>
<td>Dental care in diabetes</td>
<td>Dialogue</td>
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<td>11.</td>
<td>Xerostomia and Haltosis</td>
<td>Reading comprehension</td>
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<td>12.</td>
<td>Prevention of cross infections</td>
<td>Case study</td>
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<td>13.</td>
<td>Cosmetic dentistry</td>
<td>Reading comprehension</td>
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<td>14.</td>
<td>Revision for the written test</td>
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<td>15.</td>
<td>Revision for the oral examination</td>
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DERMATOLOGY

7th semester

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Practice</th>
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<tbody>
<tr>
<td>Skin and mucous membrane anatomy and physiology</td>
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<tr>
<td>Types of skin lesions</td>
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<tr>
<td>Skin immunology</td>
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<td>Allergic skin reactions</td>
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<td>Urticaria</td>
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<tr>
<td>Allergic skin diseases</td>
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<td>Eczema</td>
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<td>Drug allergy</td>
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<td>Autoimmune skin diseases</td>
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<td>Diseases of the connective tissue</td>
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<td>Vascuilitis</td>
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<td>Vesciculobullous autoimmune skin diseases</td>
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<td>Viral, bacterial and fungal diseases of the skin</td>
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<tr>
<td>and mucous membrane</td>
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<td>Sexually transmitted diseases</td>
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<td>Dermatoses caused by parasites</td>
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<td>Immunodermatologic disorders and papulo-squamous d</td>
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<tr>
<td>Atopic dermatitis</td>
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<td>Psoriasis</td>
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<td>Lichen ruber planus</td>
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<td>Pityriasis rosea</td>
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<td>Disorders of the vessels</td>
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<td>Varicosity</td>
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<td>Thrombophlebitis</td>
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<td>Deep vein thrombosis</td>
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<td>Postthrombotic syndrome</td>
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<td>Leg ulcer</td>
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<td>Disorders caused by physical agents</td>
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<tr>
<td>Artefact, combustio, congelatio</td>
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<tr>
<td>Seborrhoeic dermatoses</td>
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<td>Acne</td>
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<td>Rosacea</td>
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<td>Perioral dermatitis</td>
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<tr>
<td>Alopecia</td>
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<tr>
<td>Skin tumours</td>
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<td>Benign lesions</td>
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<tr>
<td>Praecancerous lesions</td>
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<tr>
<td>Cancers, melanoma malignum</td>
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9th semester

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Practice</th>
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<tbody>
<tr>
<td>1. Career with dental certificate</td>
<td>Consultation</td>
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<tr>
<td>2. Quality control in dental practice</td>
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<td>3. HR in dental practice</td>
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<tr>
<td>4. Service area competitor analysis</td>
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<td>5. Praxis marketing elements</td>
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<td>6. Branding and identity</td>
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<td>7. Connection between medical ethics and right</td>
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<td>8. Equipment in dental surgery, Design and function in dental office</td>
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<tr>
<td>9. Problems of dental practice building and leading</td>
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<tr>
<td>10. The difficulties of the foundation of dental practice</td>
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<td>11. Tariff of charges in dental office</td>
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<tr>
<td>12. Taxation of charges in dental office</td>
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<tr>
<td>13. Consultation, written demonstration</td>
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</table>

DISEASES OF TEMPOROMANDIBULAR SYSTEM

9th semester

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Seminar</th>
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<tbody>
<tr>
<td>1. Pathology of temporomandibular system</td>
<td>Consultation</td>
</tr>
<tr>
<td>2. Anatomy, normal function of temporomandibular joint and muscles, innervations</td>
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<tr>
<td>3. Inflammatory and degenerative thicknesses</td>
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<tr>
<td>4. Symptoms of TMJ dysfunction</td>
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<td>5. Etiology of TMJ dysfunction</td>
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<tr>
<td>6. Clinical examination methods, diagnostics</td>
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<td>7. Imaging methods, importance of MRI</td>
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<td>8. Differential diagnostics</td>
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<td>9. Conservative therapy I.: Medicaments</td>
<td></td>
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<tr>
<td>10. Conservative therapy II.: Splints</td>
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<tr>
<td>11. Conservative therapy III.: Physio- and Physiotherapy</td>
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<tr>
<td>12. Conservative therapy IV.: Psychodiagnostic and psychotherapy</td>
<td></td>
</tr>
<tr>
<td>13. Correction of occlusion, prosthetic treatment of TMJ</td>
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</tr>
</tbody>
</table>

The practical knowledge of the topics, patient examination methods, students get skill in taking case history and examination of the patients. Introduction of the preparation of splints, students make and insert a splint themselves.
DENTAL IMPLANTOLOGY I.

9th semester

Lecture (2 hrs/week)
1. Osseointegration, bone-physiology, bone-healing
2. History of dental implantology. Types, design of dental implants. The definition of an implant system
3. Prosthetic aspects of implant planning
4. X-ray diagnoses in implantology, CT, 3D etc.
5. Procedure of implant surgery
6. Consultation before implant surgery: indications and contraindications. Anatomical consideration of the jaws, Surgical planning
7. Bone augmentation procedures and different methods
8. Implant surgery combined with sinus elevation, bone augmentation
9. The dental office and the personnel requirements of dental implantology. Legal aspect of implantology, written consent
10. Immediate loading
11. Loss of implants, recall, overview
12. Implantology in orthodontics
13. Exam

OPERATIVE DENTISTRY Seminar III.

9th semester

Seminar (1 hr/week)
Current topics of operative dentistry according to contemporary scientific literature

DENTAL IMPLANTOLOGY II.

10th semester

Practice (2 hrs/week)
1. The DenTi Implant system in implantology practice I.
2. The DenTi Implant system in implantology practice II.
3. The Straumann Implant system in implantology practice I.
4. The SGS Implant system in implantology practice
5. The CAMLOG Implant system in implantology practice
6. The Nobel Biocare Implant system in implantology practice I.
7. The Nobel Biocare Implant system in implantology practice II.
8. The Ankylos Implant system in implantology practice I.
9. The Ankylos Implant system in implantology practice II.
10. Spring Congress
11. The MDI Implant system in implantology practice
12. Written exam, Evaluation of course
13. Semester overview

OPERATIVE DENTISTRY III.

9th semester

Practice (4 hrs/week)
Requirements and evaluation of operative dentistry practice

Patient management:
On the first practice two patients will be called, the student has to take their status and history, after that one of them will be treated on the same appointment. The data and the status of the other patient will be recorded in a notebook and the patient will be informed that he/she will be called for another appointment.
On the first practice the 5th year student will treat his/her patient from the previous year or summer practice. If there's no such a patient the student will get someone from the notebook to treat. If there's a patient a student wants to treat he/she has to inform the assistants of the department at least two weeks before that practice.
The students can get extra patients from the notebook or from previously agreed patient examination at the admission office. Giving appointment, administration and any changing is the students' responsibility.
Only the points gained during the semester are considered. Points predetermined on the beginning of the semester define practical grades.
Not fulfilling the following conditions results in automatic failure of the semester:
By the end of the 4th year at least one from all Black cavity types should be performed, but VI.cl.
By the end of the 5th year it's recommended to perform at least one of all Black cavity types should be performed, but VI.cl.
Temporary prosthesis
1. Surface properties and modifications of dental implants. Characteristics of titanium
2. Hands on practice on manikin
3. The components of an implant system. Theoretical background of implantology: osseointegration, soft tissue integration, loading
4. Implant-prosthetic treatment planning: alternative treatment plans. Team work, documentation. Special fields: young, old patients, smoking etc.
5. Implant planning with CT and guide systems
6. Types of implant supported prostheses, indication, conditions 1. Temporary prosthesis
7. Types of implant supported prostheses, indication, conditions 2. Occlusion, articulation, Abutments
8. Dental technical aspects of implantology. Laboratory steps of preparing fixed prosthesis
9. Dental technical aspects of implantology. Laboratory steps of preparing removable prosthesis
10. Implant retained hybrid prosthesis
11. Maintenance, oral hygiene, recall. Prosthetic problems and their solution. Possible complications during
### Orthodontics I.

**9th semester**

**Lecture**

(1 hr/week)
- 1. History of Orthodontics
- 2. Classification and Terminology of Dentofacial Problems
- 3. Malocclusions and Functional Disorders
- 4. Clinical Orthodontic Diagnosis, Functional Analysis
- 5. Orthodontic Study Cast Analysis
- 6. Radiographic Analysis for Orthodontic Diagnosis
- 7. Treatment Plan and Documentation of Orthodontic Treatment
- 8. Removable Plate-Appliances
- 9. Functional Appliances
- 10. Fixed Appliances
- 11. Extraoral Appliances and Auxiliary Appliances used in Orthodontics
- 12. Anchorage in Orthodontics
- 14. Consultation

**Practice**

(2 hrs/week)
- 1. Clinical Examination: Anamnestic Records, Written Orthodontic Documentation
- 2. Clinical Examination: Intraoral and Functional Examination
- 3. Orthodontic Impression, Preparation of the Study Cast
- 4. Orthodontic Impression, Preparation of the Study Cast
- 5. Orthodontic Impression, Preparation of the Study Cast
- 6. Measurements on the Orthodontic Study Casts
- 7. Orthodontic photo documentation
- 8. MTO I.
- 9. Cephalometric Analysis of the Lateral Radiograph
- 10. Cephalometric Analysis of the Lateral Radiograph
- 11. Cephalometric Analysis of the Frontal Radiograph
- 12. Cephalometric Analysis of the Frontal Radiograph and Orthopantomogram
- 13. Cephalometric Analysis of the Frontal Radiograph and Orthopantomogram
- 14. MTO II.

### Orthodontics II.

**10th semester**

**Lecture**

(1 hr/week)
- 1. Biology, Types and Mechanics of Orthodontic Tooth Movement
- 2. Interceptive Orthodontics, Early Treatments
- 3. Characteristics of Orthodontic Treatment During Mixed Dentition Period and Pubertal Growth
- 4. Conservative Dentofacial Orthopedic Treatments in Late Childhood and Puberty
- 5. Adult Orthodontics
- 6. The Role of Orthodontics in Interdisciplinary Therapy
- 7. Dentoalveolar Surgical Interventions Associated to Orthodontic Treatments
- 8. Preparation and Planning of Orthognathic Surgical Interventions
- 9. Combined Ortho-Surgical Treatments
- 10. Comprehensive Treatment of Craniofacial Malformations
- 11. Modalities and Appliances of the Retention
- 12. Causes of the Relapse, Complications of Orthodontic Treatment
- 13. Dental and Hygienic Care of Patients Wearing Orthodontic Appliances
- 14. Consultation

**Practice**

(2hrs/week)
- 1. Seminar: Removable Orthodontic Appliances
- 2. Clinical Presentation of Removable Orthodontic Appliances
- 3. Clinical Presentation of Removable Orthodontic Appliances
- 4. Clinical Presentation of Removable Orthodontic Appliances
- 5. Seminar: Fixed Orthodontic Appliances
- 6. Clinical Presentation of Fixed Orthodontic Appliances
- 7. Clinical Presentation of Fixed Orthodontic Appliances
- 8. Clinical Presentation of Fixed Orthodontic Appliances
- 9. Seminar: Braking of Bad Habits
- 10. Braking of of Bad Habits
- 11. Seminar: Complex Care of Children with Cleft Lip and Palate
- 12. Complex Care of Children with Cleft Lip and Palate in Practice
- 13. Hygienic Coaching, Motivation and Professional Cleaning of Patients Who Wear Fixed Orthodontic Appliance
- 14. Consultation
## ORAL SURGERY III.
### 9th semester

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Practice</th>
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</thead>
<tbody>
<tr>
<td>(2 hrs/week)</td>
<td>(4 hrs/week)</td>
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<tr>
<td>1. Principles of trauma management. Conservative treatment of facial trauma. Mandibular fractures</td>
<td>Minimal practice requirement:</td>
</tr>
<tr>
<td>2. Trauma: Midface, frontal skull base fractures</td>
<td>- 10 simple tooth extractions</td>
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<tr>
<td>3. Temporomandibular joint surgery</td>
<td>- 3 operation:</td>
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<tr>
<td>4. Orthognathic surgery</td>
<td>Apicectomy</td>
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<tr>
<td>5. Preprosthetic surgery</td>
<td>Tooth extraction by operation</td>
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<tr>
<td>6. Distraction osteogenesis of the facial skeleton</td>
<td>Extraction of impacted or displaced tooth</td>
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<tr>
<td>7. Sial gland diseases</td>
<td>Incision (drainage) of abscess</td>
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<tr>
<td>8. Bisphosphonate related osteonecrosis of the jaws</td>
<td>Cystectomy</td>
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<td>9. Cleft lip and palate surgery</td>
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<td>10. Otolaryngologic and diagnosis of oral cancer</td>
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<td>11. Scientific search engines and databases</td>
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<td>12. Surgical management of oral cancer. Reconstruction</td>
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<td>13. Written exam</td>
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<td>14. Discussion</td>
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## PEDIATRIC DENTISTRY II.
### 9th semester

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1 hr/week)</td>
<td>(4 hrs/week)</td>
</tr>
<tr>
<td>1. Diagnostic methods, oral assessment; screening</td>
<td>Diagnostic methods</td>
</tr>
<tr>
<td>2. Bad habits in childhood</td>
<td>Caries prevention in childhood</td>
</tr>
<tr>
<td>3. Caries therapy for primary teeth</td>
<td>The caries lesion and its management in children and adolescents</td>
</tr>
<tr>
<td>4. Oral diseases and parodontology in childhood</td>
<td>Pedodontic endodontics</td>
</tr>
<tr>
<td>5. Secondary diseases of caries in permanent dentition</td>
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<tr>
<td>6. Minimal invasive therapy</td>
<td></td>
</tr>
<tr>
<td>7. Pulp therapy for permanent teeth</td>
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<tr>
<td>8. Dental surgery in pediatric dentistry</td>
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<tr>
<td>9. Prosthetic dentistry in childhood</td>
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<tr>
<td>10. TMD</td>
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<tr>
<td>11. Traumatic injuries of primary teeth</td>
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<tr>
<td>12. Traumatic injuries of permanent teeth</td>
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<tr>
<td>13. Assessment of semester</td>
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<tr>
<td>14. Consultation</td>
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</tbody>
</table>

## PEDIATRIC DENTISTRY III.
### 10th semester

<table>
<thead>
<tr>
<th>Practice</th>
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<tbody>
<tr>
<td>(3 hrs/week)</td>
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<tr>
<td>Diagnostic methods</td>
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</tbody>
</table>

## PERIODONTALOLOGY III.
### 9th semester

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1 hr/week, ie. 2 hours/fortnight)</td>
<td>(3 hrs/week)</td>
</tr>
<tr>
<td>1. Aim, indications and contrainindications of periodontal surgery</td>
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<tr>
<td>2. Aim and indication of periodontal plastic surgery</td>
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<tr>
<td>3. Elimination of periodontal pocket: gingivectomy and gingivoplasty. Treatment of enlargement of gingiva</td>
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<tr>
<td>4. Periodontal surgery: access therapy</td>
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<td>5. Periodontal wound healing: regeneration or reparation</td>
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<tr>
<td>6. GTR. Flap preparation and suturing in regenerative surgical procedures</td>
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<tr>
<td>7. Grafting procedures</td>
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<td>8. Biomediators in regenerative procedures</td>
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<td>9. Pedicile soft tissue graft in root coverage procedures</td>
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<tr>
<td>10. Free soft tissue graft in root coverage procedures</td>
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<tr>
<td>11. Gingival augmentation, crown-lengthening procedures, the deformed edentulous ridge</td>
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<tr>
<td>12. Electrosurgery and lasers in periodontal surgical procedures</td>
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<tr>
<td>13. Postsurgical care. Outcome of surgical periodontal therapy</td>
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</tbody>
</table>

## PERIODONTALOLOGY IV.
### 10th semester

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1 hr/week)</td>
<td>(3 hrs/week)</td>
</tr>
<tr>
<td>1. Supportive periodontal therapy</td>
<td></td>
</tr>
<tr>
<td>2. Treatment of furcation-involved teeth</td>
<td></td>
</tr>
<tr>
<td>3. Endodontics and periodontics. Treatment of dentin hypersensitivity</td>
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</tr>
<tr>
<td>4. Occlusal therapy</td>
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<tr>
<td>5. Prosthetic rehabilitation of periodontitis patients.</td>
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<tr>
<td>6. Orthodontics and periodontal therapy</td>
<td>Treatment of patient with chronic or aggressive periodontitis.</td>
</tr>
<tr>
<td>7. Outcomes of periodontal therapy</td>
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<tr>
<td>8. The use of drugs in periodontal therapy</td>
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<tr>
<td>9. The use of antisepsics in periodontal therapy</td>
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<tr>
<td>10. Peri-implant mucositis and peri-implantitis</td>
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<tr>
<td>11. Treatment of risky patients I</td>
<td></td>
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<tr>
<td>12. Treatment of risky patients II</td>
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<tr>
<td>13. HIV-associated periodontal conditions</td>
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<tr>
<td>14. Consultation</td>
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</table>

## PREVENTIVE DENTISTRY
### 9th semester

<table>
<thead>
<tr>
<th>Lecture</th>
<th>Practice</th>
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</thead>
<tbody>
<tr>
<td>(1 hr/week)</td>
<td>(1 hr/week)</td>
</tr>
<tr>
<td>1. Definitions and objectives of preventive dentistry</td>
<td>Visiting a medical department ward to maintain dental preventive instruction and motivation for in-patients</td>
</tr>
<tr>
<td>2. Definitions of dental caries and role of fluorides</td>
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<tr>
<td>3. The effects of diet for general health and for dental caries</td>
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</tr>
<tr>
<td>4. Preventive measures in periodontology</td>
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<tr>
<td>5. Preventive strategy and the orthodontic therapy</td>
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</tbody>
</table>
6. Preventive measures in prosthodontics  
7. Iatrogen infections in dentistry and their prevention  
8. Aetiology of oral precancerous lesions and their prevention  
9. Exam – giving possibilities to get suggested mark for the examination

**PROSTHODONTICS III.**  
9th semester

Practice  
(6 hrs/week)

1. Medical and dental history of the patients, extraoral and intraoral examination, making diagnostic impression and cast  
2. Medical and dental history of the patients, extraoral and intraoral examination, making diagnostic impression and cast, jaw registration  
3. Planning of fixed/removable dental prosthesis  
4. Tooth preparation for abutments, construction of temporary crown  
5. Tooth preparation for abutments, construction of temporary crown  
6. Tooth preparation for abutments, construction of temporary crown  
7. Tooth preparation for abutments, construction of temporary crown  
8. Precision/master impressions and jaw registration  
9. Precision/master impressions and jaw registration  
10. Try in of fixed part & metal framework in the mouth, shade selection  
11. Trial insertion of waxed-up dentures  
12. Insertion of completed denture  
13. Check up  
14. Review

**TREATMENT OF TRAUMATIC DENTAL INJURIES IN CHILDHOOD**  
10th semester

Lecture, Seminar  
(Lecture: 2 hrs/week, Seminar: 1 hr/week)

1. Traumatic injuries in childhood  
2. Orofacial trauma in childhood  
3. Injuries to the primary dentition  
4. Crown and root fractures in the permanent teeth  
6. Injuries to developing teeth, Endodontic management  
7. Treatment with implants in the trauma situation  
8. Radiographic findings  
9. Soft tissue injuries; injuries to the supporting bone  
10. Orthodontic Management of the Traumatized Dentition  
11. Prevention of dental and oral injuries  
12. Follow-up procedures and recall schedule following the various trauma types  
13. Consultation  
14. MTO

**FORENSIC MEDICINE**  
9th semester

LECTURE  
week (2 hrs/ every second week)

1. Introduction. Essential law.  
2. Medical law – Duties of the doctor  
3. Medical malpractice in dentistry  
5. Autopsy  
6. Classification of wounds I. (blunt force and sharp injuries)  
7. Classification of wounds II. (heat and cold injuries, shot wounds)  
8. Trauma of the head, face and denture  
9. Mid-term assessment  
10. Medical documentation, documentation of injuries – expert opinion in dental cases  
11. Autopsy  
12. Accidents (traffic, sport, household)  
13. Forensic aspects of alcohol and drug abuse  
14. Identification of the living and of the dead  
15. DNA investigations in forensic medicine