

**Removable Prosthodontics**

Upon completion of the course the student should be able to:

- describe the bearing of complete and partial dentures
- distinguish changes caused by partial and complete tooth loss
- describe the clinical and laboratory process of making complete and partial dentures and combined works
- describe the clinical production of special types of mobile prosthetic replacements (covering, immediate, CAD/CAM prostheses, epitheses, obturators and prostheses on implants)
- understand the vector analysis of forces in partial edentulous planning
- make complete and partial dentures
- independently clinically carry out the procedures for the placement and repair of mobile prosthetic replacements

**Fixed Prosthodontics**

Students will be able to:

- analyze the physiology and biomechanics of the stomatognathic system
- analyze the components of the stomatognathic system
- describe interactions between components of the stomatognathic system
- evaluate the direction and actions of chewing forces
- analyze x-rays and study models
- analyze the fixed prosthetic restoration as a means of therapy
- describe clinical and laboratory course of producing a fixed prosthetic restoration
- compare selection of materials and types of fixed prosthetic restorations regarding longevity, persistence, biocompatibility and success of the therapy
- analyze the influence of endocrine, immunologic, oncologic, metabolic and cardiovascular disease on planning, implementation and success of definitive fixed prosthetic treatment
- assess the biological properties of abutment teeth
- define the plan of fixed prosthetic therapy
- set the indications and estimate contraindications for making crowns
- set the diagnosis and indication for bridge constructions
- plan the making of bridge structures (selection of abutment teeth)
- define pre-prosthetic preparation of the patient for fixed prosthetic treatment
- distinguish occlusal concepts of fixed prosthetic therapy
- analyze the correctness of laboratory making of the fixed prosthetic restoration (test its relationship to the abutment teeth, to adjacent teeth, the marginal gingiva, antagonists)
- evaluate the correctness of technical production of bridge structures (statics, the body of the bridge - hygienic -conditions, the relationship to the alveolar ridge) ·
- analyze fixed prosthetic work in prevention and treatment of periodontal disease ·
- mount indication, plan and analyze the fixed prosthetic aspect of the combined prosthetic therapy
- evaluate the indication of the use of implants as a basis for making fixed prosthetic restorations
- implement the history and clinical examination for the needs of fixed prosthetic treatment
- perform preparation for a full metal, full acrylic, faceted acrylic, partial, metal-ceramic, full ceramic, modified, telescopic crown rosary, and richmond crown
- perform preparation for the inlay, onlay, overlay and esthetic veneer
- use appliances and instruments in fixed prosthetic practice
- apply local anesthesia for tooth preparation
- perform preparation of the tooth by following basic principles of preparation
- perform preparation of the cervical part of the teeth tangentially and with chamfer
- mount retraction cord in the gingival sulcus of teeth
- choose the appropriate impression trays
- choose the appropriate impression material and apply the appropriate impression technique

- analyze and harmonize the occlusal and articulatory relations
- choose a color and type of esthetic material for fixed prosthetic restoration
- fix the fixed prosthetic restoration temporarily and definitely, and know to choose the optimal means for cementation
- check clinical adaptation of the new fixed prosthetic restoration
- remove worn out fixed prosthetic restoration
- rehabilitate esthetical part of the damaged fixed prosthetic restoration
- directly develop a temporary fixed prosthetic restoration
- perform the preparation of the root canal for the post
- perform a direct and indirect procedure for the laboratory made root canal post
- try, adapt and fix the individual laboratory made post
- conduct a control check of the patient with fixed prosthetic restoration
- mount the facebow to the patient
- transfer reference points from the patient to the articulator
- register intermaxillary relations in the maximum intercuspitation, centric relation and eccentric positions.
- transfer models to the semi-adjustable articulator, and individualize it
- set indication and to make preparations for more complex bridge constructions, maryland bridge, inlay bridge, cantilever bridges

### **Pediatric dentistry**

After attending classes, the student will be able:

- describe and compare the forms of behavior of children in the dental office
- define and implement behavioral control methods in children
- establish a parent-child relationship in a dental office
- perform a clinical dental examination of the child
- describe and compare the growth and development of deciduous and permanent teeth
- distinguish and recognize deciduous and permanent teeth in the oral cavity
- explain and describe radiological techniques used in pediatric dentistry
- analyze X-rays by recognizing anatomical and pathological structures
- describe and perform a therapeutic procedure on deciduous and young permanent teeth
- distinguish and use drugs that are applied to prevention and therapy in pediatric dentistry
- describe and use materials and therapeutic agents used in pediatric dentistry

### **Clinical orthodontics**

After completing the course, the student will be able to:

- demonstrate the technique of taking alginate impressions in children and adolescents and the registration of habitual occlusion
- analyze the orthopantomogram
- perform an analysis of the latero-lateral cephalogram with supervision
- perform intraoral and extraoral photography of the patient
- critically assess the need for orthodontic therapy
- assess the right time to refer the child to an orthodontist
- present oral hygiene to a patient with an orthodontic appliance

### **Oral medicine**

At the end of the course students will be able to:

- define the epidemiology, etiology and clinical picture of oral mucosal disease
- define diagnostic procedures for the most common diseases of the oral mucosa and the possibilities of their treatment
- define the role of oral diseases in the development of general symptoms in the human body;
- analyze anamnestic data
- describe and define local status in the diagnosis of oral disease
- perform clinical tests of soft deposits and tartar, edema of the masticatory oral mucosa, capillary fragility, malignant changes of the oral mucosa with toluidine blue, xerostomia, vascular and pigmented efflorescences of the oral mucosa, acantholysis by Nikolsky test, lower saliva pH, salivary gal
- distinguish indications when it is necessary to refer the patient to: microbiological tests, exfoliative-cytological tests, taking a biopsy sample

- distinguish indications when the patient needs to be referred for laboratory tests (KKS, clotting time, gastric function testing, for liver and pancreatic tests, urine analysis, general allergological testing, square imaging, sialography, CT, MR, ultrasound.
- perform initial therapy for oral disease
- make a written finding of the disease

### **Oral surgery**

Upon completion of this course, the dental student will be able to:

- perform a detailed dental examination with an emphasis on oral surgery
- analyze radiological images with recognition of all anatomical and pathological lesions
- select and apply local anesthesia techniques used in oral surgery
- perform the complete procedure of tooth extraction, fractured tooth / root
- describe all complications during and after tooth extraction
- perform the installation of individual stitches and the removal of stitches
- recognize and describe the clinical aspects of odontogenic inflammation and treatment procedures
- establish indications / contraindications for the treatment of impacted teeth
- distinguish traumatic injuries of teeth and supporting tissues, plan and perform appropriate therapy
- recognize periapical pathological conditions and describe treatment options
- perform assistance in dentoalveolar surgery

### **Periodontology II**

Upon completion of the course the student will be able to:

- describe and explain diagnostic procedures, documenting and drafting of the treatment plan targeting the patients with periodontal disease
- explain the principles of the peri-implant disease diagnostics
- explain the importance of periodontal therapy in the overall patient oral rehabilitation
- explain non-surgical periodontal therapy in patients with gingivitis and periodontitis stages I, II and III
- compare the treatment protocols for gingivitis, periodontitis and peri-implantitis
- describe the basic surgical principles of the periodontal surgical procedures
- analyze the interactions between the modifying factors of the periodontal disease and mechanisms of periodontal wound healing
- critically analyze the protocols of „full mouth disinfection“ and „Guided biofilm therapy“

Skills to be acquired upon completion of the course:

- recognize periodontal and peri-implant health and disease
- apply and effectively use power driven instruments for root surface debridement in patients with gingivitis and periodontitis
- perform supra and subgingival manual instrumentation in patients with gingivitis and periodontitis
- perform diagnostic procedures in cases of peri-implant mucositis and peri-implantitis
- perform patient motivation and individualization of oral hygiene regimes.

### **Restorative dental medicine**

During seminars and clinical sessions, students consolidate and connect their theoretical knowledge acquired during previous courses and comparative lectures in the Course of Restorative Dentistry. Students practice recognition, diagnostics, operative therapeutic procedures of carious lesions, functional and aesthetic reconstruction of teeth with different materials.

After completing the course, the student will be able to:

- adapt and select appropriate types of manual and rotary instruments in RDM depending on the clinical situation
- recognize carious lesions and choose an appropriate restorative approach depending on the localization and extension of the lesion
- perform preparation and restoration of simple class I, II and V cavities with amalgam and adhesive materials
- perform preparation and restoration of Class III and IV cavities for adhesive materials
- demonstrate the handling and application of materials for conservative tooth reconstruction in the dental office
- recognize different types of trauma to teeth and supporting tissues
- perform appropriate dental therapy after trauma
- demonstrate the handling and application of materials for conservative tooth reconstruction in the dental office

- illustrate the modern principles of crown reconstruction of endodontically treated teeth (setting of intracanal retention, indirect restorations – onlay, overlay, crown, post-endodontic crown whitening)

### **Endodontics**

Upon completion of the course the student should be able to:

- Describe etiological factors for development of the pulpal and periapical diseases
- Describe in detail endodontal tooth morphology of all teeth
- Describe characteristics and correct application of hand and engine driven endodontic instruments
- Describe pathohistological and clinical characteristics of pulpitis and apical periodontitis
- List therapeutic guidelines in treatment of inflammatory and regressive changes in the tooth pulp, and lesions of the apical parodontitis
- List the methods for vital pulp therapy
- Describe characteristics and correct usage of the endodontic materials
- Apply the previous knowledge from restorative dentistry
- List the indications for the antibiotics usage in endodontics
- Autonomously take medical history
- Autonomously establish endodontic diagnose (application of all diagnostic tests, radiological analysis)
- Determine correct therapy plan in treatment of diseases of the dental pulp and apical parodontal tissue
- Determine the appropriate type and application technique of anesthesia
- Perform all types of field isolation techniques
- Perform direct and indirect pulp capping
- Technically correctly perform pulpotomy
- Technically correctly perform vital pulp extirpation
- Instrument the root canal at single and multi rooted teeth utilizing ascendant instrumentation technique
- Obturate the root canal at single and multi rooted teeth utilizing cold lateral condensation technique
- Assess the patient risk group in the endodontic office and apply appropriate premedication measures
- Recognise urgent conditions in endodontics and apply appropriate therapy

### **Introduction to Scientific Research**

After completing the course, the student will be able to:

- describe the development of science and the laws of scientific research work
- demonstrate the search of databases and literature
- make hypotheses
- demonstrate designing experiments and writing a scientific paper
- analyze a scientific article

### **Health Care Management**

Upon completion of the course students will be able to:

- define the concept of management in health and dental medicine
- describe the types of teams
- analyze personal, interpersonal and communication skills
- define conflict management style and negotiation skills
- analyze the way of conducting a successful business meeting
- explain business literacy

### **Dental implantology**

Upon completion of the course the student should be able to:

- perform methods of clinical examination in dental implantology
- analyze radiological images in dental implantology
- select and analyze the appropriate indication / contraindication for implant-prosthetic rehabilitation
- describe the surgical procedure for the insertion of dental implants
- select the appropriate procedure for the insertion of dental implants
- describe the procedures for taking impressions in implant prosthetics
- distinguish individual prosthetic possibilities on dental implants
- explain the assessment of success in dental implantology
- describe the procedures for maintaining implant-prosthetic work

### **Maxillofacial surgery**

Upon completion of the course the student should be able to:

- define surgical anatomy of the maxillofacial region, clinical picture of the most common diseases of the oral cavity, head and neck

- recognize specific pain conditions and causes of their occurrence
- perform routine diagnostics, prevention, treatment and possible complications of the most common diseases of the maxillofacial region, impact of delay in establishing diagnosis because of functional and aesthetic significance of the region
- recognize and use of basic instruments
- performe minor surgical procedures - skin suture, suturing the mucosa due to postextraction bleeding, wound dressing, suture extraction
- exame the function of the respiratory tract in patients with tracheostomy,
- exame the neck and oral cavity,
- discern pathological changes with the normal mucosa and skin.

### **Gerodontology**

Upon completion of the course the student should be able to:

- describe the physiology of aging and aging
- analyze the physiological and pathological changes of the stomatognathic system of elderly
- define the most common general diseases and disorders of the elderly people and their treatment
- differentiate specific prevention and therapy of dental medical discipline in maintaining homeostasis of the dental system of the elderly compared to younger people specially prosthodontic therapy.