

In the Name of God



Islamic Republic of Iran
Ministry of Health, Treatment and Medical Education
Tehran University of Medical Sciences

Curriculum of Periodontics Postgraduate (MSc) Program

In the Name of God

Section I:

Title: **Periodontics**

Degree: **Master of Science in Clinical Dentistry (MSc)**

Introduction (not more than ۱۰۰ words including general comments on the field and its developments, advancements and history)

Periodontics is a branch of dentistry science employed to preserve and promote the teeth's adjacent tissues and implant (prevention, diagnosis and treatment) and regeneration of jaws` soft and hard tissue and replacement of missing teeth with dental implants. Emphasis in this major is on the teeth`s health preservation and dental implants by using all the preventive methods and modern treatment techniques.

Definition (the main subject of study and services provided by the graduates)

The main subjects and services provided by the graduates of the program consist of: a. diagnosis b. prevention c. treatment d. consulting e. education f. research g. managing h. self learning

۱. Role in diagnosis, requesting required lab examination, taking diagnostic actions, diagnosing the disease, determining the prognosis, prescribing medications and non-surgical treatments, performing related surgical maintenance care, precise documentation in treatment and therapeutic process, multidisciplinary participation in treatment and consulting with related medical experts in order to complete patients health documents.

۲. Role in prevention: identification of predisposed population and target groups and conducting preventive actions in different levels of the society in the field of periodontal tissue`s diseases and implants.

۳. Role in consultation: providing professional consultation for patients and colleagues, scientific associations and health care system.

۴. Role in education: teaching the patients and their relatives and other members of health care system, educating the undergraduate and post graduate students

as a faculty member, teaching the GP colleagues in retraining courses and lifetime learning based of evidences.

۵. Role in research: proposing research projects, analyzing data, preparing the reports, writing a scientific article and publication, criticizing related articles and regarding the research ethics.

۶. Role in management: leading the dental implant treatment team, leading dental and oral health care team and managing periodontal teaching, research and treatment

The Aim of the Course (including its vision and mission)

Our mission is to train capable and ethically oriented specialists in comprehensive service delivery in the field of prevention, preservation and orodental health promotion (periodontal medicine, periodontal plastic surgery, oral soft and hard tissue regeneration surgery, implants).

In the next ۱۰ years, we`ll reach global standards in the field of education. In the field of research and science reproduction we`ll be the best in the region and in health care service to provide, preserve and promote the health we`ll be one of the bests in the region.

General Competencies (including communicative, interviewing, educational, writing, reporting, critical thinking, problem solving, managerial ones as well as professionalism)

- A. Competencies: prevention and diagnosis of periodontal diseases, periimplantitis and related conditions, performing comprehensive implant and periodontal and retentive treatments, lifetime evidence based learning, professionalism in periodontics , making individual and team contact, practice based learning
- B. Major professional practical skills (Diagnosis and therapeutic actions): achieving the correct diagnosis be precise evaluation and examination of the patient and intra and extra oral hard and soft tissues beside patient`s history and complaints. Determining the prognosis regarding all aspects, presenting comprehensive treatment plan(inter and intra disciplinary) , recording and reporting the patients` medical documents, conducting phase ۱ periodontal treatment, performing various periodontal surgical and implant techniques

(including: periodontal surgical flaps, gingivectomy, curettage, biopsy, various periodontal reconstructive and respective surgeries, hemi section/root resection, periodontal plastic surgery, preprosthetic and implant surgeries: namely putting the implant in all oral regions and in every edentulous types, various bone regeneration surgeries including bone grafts, guided bone regeneration, sinus floor augmentation and implant soft tissue related surgeries), necessary skills for minimizing the patient's post-op pain and discomfort, wound management, assessing treatment results in case further treatments is needed for preservation or improvement of treatment results, diagnosing and treating any biological side effects occurred around implant, designing and conduction the related research projects (literature review, statement of the problem, aim and theories of suggested research), codification scientific articles, critical evaluation of scientific literature, meeting infection control codes properly, evaluation of the conditions and side effects resulted by dental treatments regarding the damage to periodontal and periimplant tissues, delivering periodontal and implant treatments to special patients, methods of resuscitation (basic and advanced), delivering treatment under general anesthesia and sedation, controlling the related medical emergencies

Professionalism and ethical expectations from residents: It is expected that graduates:

- C. **In the area of altruism:** preferring the patient's interests to their own, observance of justice while working with different patients, considering all physical, psychological, social and belief-related aspects of patients while treating them, spending enough time in all phases of patient care, paying attention to patients' demands and discomforts, observance of the patients' bill of rights.
- D. **In the area of dutifulness and responsibility:** have enough commitment to do their tasks, answer patients' questions, provide patients and their accompaniers with information regarding the patient's status in the most appropriate way, avoid unnecessary interferences with colleagues' work and interact with the health team members, ask patients' permission for examining and taking any diagnostic-therapeutic measures, and instructing patients properly regarding prevention, appearance of side effects, disease reoccurrence and improvement of life quality.
- E. **In the area of honor and honesty:** be truthful, honest and confidant and respect patient's privacy.
- F. **In the area of respecting others:** respect patients' conventions, traditions and habits, respect patient as a human being, respect patients' time and observe order and regularity, respect patients' accompaniers, colleagues and

therapeutic team members, and have an appearance appropriate to professional prestige.

- G. **In the area of professional career:** accept critique, know their scientific limitations, ask for advice and help if needed, improve their knowledge and skills constantly, do diagnostic-therapeutic measures according to available facilities and scientific achievements, and observe the standards of completing medical record and reporting.

Specific Competencies and Skills (Special Qualifications)

١. Training specialist with theoretical and practical knowledge capable of prevention, diagnosis and treatment of patients suffering periodontal diseases and periimplantitis.
٢. Training specialist capable of being a member of treatment team of various surgical treatments on patients seeking dental implants.
٣. Training specialist that believe themselves as an inseparable member of comprehensive health care.
٤. Training periodontists that believe in lifetime learning
٥. Training specialists who treat patients according to evidence based dentistry
٦. Training specialist who could teach and research in this field as a faculty member in the university
٧. Meeting ethical and professional codes during treatment with treatment team, staff and patients.
٨. Being Capable of establishing an effective cooperative smart contact with the patient, his relatives and the treatment team
٩. Training the residents to successfully pass the theoretical and practical national board exam.

The Terms and Conditions of Admission to the Course

(specific conditions including exams, interview, CV, Recommendations, etc.)

Applicant's documents, including his/her DDS/BDS degree, CV, Recommendation, etc will be reviewed by the faculty members of Restorative Dentistry Department. Based on the documents, the applicant will be accepted for either an interview or a three month evaluation period to be an observer in Restorative Dentistry Department. If he/she could successfully pass the interview/evaluation period, he/she will be accepted to continue as a MSc student.

Educational Strategies, Methods and Techniques

The following educational strategies are considered in endodontics: Learner-centered education, learning based on problem solving, integration of basic and clinical sciences, evidence-based learning, lifelong community-oriented education, and systematic education.

Student Assessment

A variety of assessment methods including theoretical exam, DOPS, OSCE, Seminar presentation, portfolio, etc, depending on the course, is implemented.

Number and Type of Credits and Tables of the Courses (including compulsory and optional [elective] courses)

Duration:

The Periodontics MSc program is a ۳ year full time program in accordance with the regulations of the Council of Dental and Specialty Educations.

The educational system:

The educational system of the Periodontics MSc program is semestrial. Theoretical, practical and workshop courses are set in four areas of common basic sciences, specific basic sciences, related sciences and specialty sciences.

Course structure

The course structure of the Periodontics MSc program consisting of common and specialized basic science, related science and specialty science courses is as follows:

Basic science courses (common and specific)

These courses are considered to be the infrastructure of related science and specialty science courses and their aim is to remind, update, expand and deepen the topics that are presented in this MSc program.

Overall basic science courses consist of ۲۳ units presented as common and specialized science courses.

Related science courses

These courses discuss the scientific relationship with other specialty fields of dentistry and teach knowledge, creativity and making correct decisions to residents so that they can participate in team work attempts to provide comprehensive care for patients by recognizing abilities, priorities, limitations and new developments in science

Related science courses consist of ۱۷ units which are presented in a joint program with different educational departments.

Specialty science courses

Specialty science courses are aimed to enhance and deepen the level of knowledge, create belief and high quality skills in the field of the MSc of Periodontics and consist of ۱۰۶ units in this field. These courses will be delivered and led by faculty members.

These courses as the main content of post graduate program are taught with the purpose of enhancing the level of knowledge and awareness besides creating belief and high quality skills in the field of periodontics. Specialized science courses consist of ۶۸ units of postgraduate program which will be delivered and led by the department. The total number of courses in the postgraduate program is ۱۷۰ units. The resident will enter the department since the first semester and deliver the specialized courses

Common Basic Science

Code	Course	Units			Hours				Prerequisite
		Theoretical	Practical	Workshop	Theoretical	Practical	Workshop	Total	
۱	Medical Education(۱)	-	-	۱	-	-	۵۱	۱	
۲	Medical Education(۲)	-	-	۲	-	-	۱۰۲	۲	
۳	Histology & Embryology	۰,۵	۰,۵	-	۹	۱۷	-	۱	
۴	Research Methodology & EBD	-	-	۲	-	-	۱۰۲	۲	
۵	Practical English	۱	-	-	۱۷	-	-	۱	
۶	Clinical Photography	-	-	۱	-	-	۵۱	۱	
۷	Medical Emergency	-	-	۰,۵	-	-	۲۴	۰,۵	
۸	Medical Regulation & Ethics	-	-	۱	-	-	۵۱	۱	
۹	Infection Control & Patient's safety	-	-	۱	-	-	۵۱	۱	
۱۰	Clinical Management & Governance	-	-	۱	-	-	۵۱	۱	
Total		۱,۵	۰,۵	۹,۵	۲۶	۱۷	۴۸۳	۱۱,۵	

Specialized Basic Science

Code	Course	Units			Hours				Prerequisites
		Theoretical	Practical	Workshop	Theoretical	Practical	Workshop	Total	
۱۱	Applicable Immunology	۱	۰,۵	-	۱۷	۱۷	-	۱,۵	
۱۲	Applicable Head & Neck Anatomy	۱	۰,۵	-	۱۷	۱۷	-	۱,۵	
۱۳	Oral and Maxillofacial Pathology	۱	۰,۵	-	۱۷	۱۷	-	۱,۵	
۱۴	Genetics in Periodontology	۰,۵	-	-	۹	-	-	۰,۵	
۱۵	Clinical pharmacology	۲	-	-	۳۴	-	-	۲	
۱۶	Oral Physiology & Biology	۱	-	-	۱۷	-	-	۱	
۱۷	Tissue Engineering & Biomaterials & Modern Technologies in Periodontology and Implant	۱	۱	-	۱۷	۳۴	-	۲	
۱۸	Oral Applicable Oral Microbiology	۱	۰,۵	-	۱۷	۱۷	-	۱,۵	
Total		۸,۵	۳	-	۱۴۵	۱۰۲	-	۱۱,۵	

Related Sciences

Code	Course	Units	Hours	پ	ت	ج
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		Theoretica —	Practical	Workshop	Theoretica —	Practical	Workshop	Total	
۱۹	Orthodontics	۱	۱	-	۱۷	۳۴	-	۲	
۲۰	Occlusion	۰,۰	۰,۰	-	۹	۱۷	-	۱	
۲۱	Endodontics	۰,۰	۰,۰	-	۹	۱۷	-	۱	
۲۲	Oral and Maxillofacial Medicine	۱	۱	-	۱۷	۳۴	-	۲	
۲۳	Internal Medicine	۲,۰		-			-	۲,۰	
۲۴	Anesthesia	۱,۰		-			-	۱,۰	
۲۵	Dental and implant Prosthesis	۳		-			-	۳	
۲۶	Restorative Dentistry	۰,۰	۰,۰	-	۹	۱۷	-	۱	
۲۷	Oral and Maxillofacial Surgery	۱	۱	-	۱۷	۳۴	-	۲	
۲۸	Oral and Maxillofacial Radiology	۰,۰	۰,۰	-	۹	۱۷	-	۱	
Total		۱۷		-	-	-		۱۷	

Specialty sciences

س	د	ر	Course	Units	Hours	س	د	ر
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		Theoretical	Practical	Workshop	Theoretical	Practical	Workshop	Total	
۲۹	Case Presentation(۱)	۲	-	-	۳۴	-	-	۲	
۳۰	Case Presentation(۲)	۲	-	-	۳۴	-	-	۲	۲۹
۳۱	Case Presentation(۳)	۲	-	-	۳۴	-	-	۲	۳۰
۳۲	Literature Review(۱)	۲	-	-	۳۴	-	-	۲	
۳۳	Literature Review(۲)	۳	-	-	۵۱	-	-	۳	۳۲
۳۴	Thesis (۱)	-	-	۲	-	-	۱۰۲	۲	
۳۵	Thesis (۲)	-	-	۲	-	-	۱۰۲	۲	۳۴
۳۶	Thesis (۳)	-	۲	-	-	۶۸	-	۲	۳۵
۳۷	Thesis (۴)	-	-	۲	-	-	۱۰۲	۲	۳۶
۳۸	Thesis (۵)	-	-	۲	-	-	۱۰۲	۲	۳۷
۳۹	Theoretical Periodontology(۱)	۴	-	-	۶۸	-	-	۴	
۴۰	Theoretical Periodontology(۲)	۴	-	-	۶۸	-	-	۴	۳۹
۴۱	Theoretical Periodontology(۳)	۴	-	-	۶۸	-	-	۴	۴۰
۴۲	Implant Preclinic	-	۱	-	-	۳۴	-	۱	
۴۳	Periodontics Preclinic	-	۱	-	-	۳۴	-	۱	
۴۴	Implant Clinic(۱)	-	۳	-	-	۱۰۲	-	۳	۴۳
۴۵	Implant Clinic(۲)	-	۳	-	-	۱۰۲	-	۳	۴۴
۴۶	Periodontology Clinic(۱)	-	۸	-	-	۲۷۲	-	۸	

۴۷	Periodontology Clinic(۲)	-	۱۰	-	-	۳۴۰	-	۱۰	۴۶
۴۸	Periodontology Clinic(۳)	-	۹	-	-	۳۰۶	-	۹	۴۷
Total		۲۳	۳۷	۸	۳۹۱	۱۲۰۸	۴۰۸	۶۸	-

Ethical issues

The graduates should,

- Observe the Patient's Bill of Rights^۱ when working with the patients.
- Strictly observe Biosafety and Patient Safety Rules* concerning the patients, personnel and workplace.
- Observe the Rulebook for Dress Code^۲.
- Strictly observe the Regulations of Working with the Laboratory Animals^۳.
- Carefully preserve resources and equipment.
- Truly respect faculty members, the staff, classmates and other students and work for creating an intimate and respectful atmosphere.
- Observe social and professional ethical considerations in criticism.

^۱, ^۲ and ^۳ are contained in the Enclosures.

* Biosafety and Patient Safety Rules will be set out by the Educational Departments and will be available to the students.

Section II

Unit title: Medical Education (۱)

Unit code: ۱

Number and type of unit: ۱ workshop unit

Educational hours within the course duration: ۵۱h

Prerequisite: none

Aims:

The aim of the Medical Education (۱) and (۲) units is for the residents to obtain the necessary ability to take part in the education and evaluation of theoretical, workshop, preclinical and clinical courses in their specialty field.

Subtitles

۱. The role of the faculty members in the field of education
۲. Principles of teaching-learning
۳. Types of learning
۴. Skills regarding the process of teaching
۵. Characteristics and duties of faculty
۶. Lesson plan
۷. Educational aims
۸. Principles of preparing educational contents
۹. Speech
۱۰. The text of questions and answers
۱۱. Small group education
۱۲. Different methods of group training
۱۳. Roll fulfillment and simulation
۱۴. Clinical education
۱۵. Educational aids
۱۶. Smart boards
۱۷. PowerPoint preparation

Unit title: Medical Education (۲)

Unit code: ۲

Number and type of unit: ۲ workshop units

Educational hours within the course duration: ۱۰۲h

Prerequisite: none

Aims:

The aim of the Medical Education (۱) and (۲) units is for the residents to obtain the necessary ability to take part in the education and evaluation of theoretical, workshop, preclinical and clinical courses in their specialty field.

Subtitles

۱. Specific lesson plans
۲. Student evaluation and its methods
۳. Multiple-choice questions
۴. Descriptive questions
۵. Level classification of exam questions
۶. Evaluation
۷. Dops design
۸. OSCE exams
۹. Oral exam
۱۰. Question analysis
۱۱. Plan evaluation
۱۲. Course planning
۱۳. Log book
۱۴. Port folio
۱۵. Perspectives based on learning ability
۱۶. Standard patent
۱۷. Integration in education

Unit Title: Histology and Embryology

Unit Code: ۳

Number and type of unit: ۱ practical-theoretical unit (۰,۵ theoretical unit- ۰,۵ practical units)

Educational hours within course duration: ۲۶ h

Prerequisite: none

Aims: Identification of organs & formation, growth and development of oral and maxillofacial tissues.

Subtitles:

۱. Oral tissues structure
 ۲. Oral, head and neck embryology
 ۳. Tooth and adjacent tissues` growth and development
 ۴. Bone, enamel, dentin, pulp, adjacent tooth tissues and oral mucosal tissue
- Histology
۵. Tooth`s physiologic movements

Education method: lecture presentation, module, Q&A, microscopic lamella observation, presentation

Evaluation method: seminar presentation, Essay

Unit title: Research methodology and EBD
 Number and type of unit: ۲ workshop units
 Educational hours within the course duration: ۱۰۲h
 Prerequisite: none

Unit code: ۴

Aims:

Acquisition of knowledge and familiarity with the methods of research in the field of education and skill acquirement in order to publish the results of research.

Subtitles:

	Content	Method of learning-teaching	Duration (hours)
۱	Principles of research and evidence-based dentistry and designing questions in evidence-based dentistry	Problem oriented lecture	۲
۲	A review of the scientific resources	Problem oriented lecture	۲
۳	Search engines and important and practical sites in dentistry	Workshop	۶
۴	Familiarity with resource management software for all types of studies in dentistry	Practical	۹
۵	Types of studies in dentistry	Interactive lectures	۳
۶	Descriptive studies	Lecture, discussion in small groups	۳
۷	Indicators of health and disease measurement	Problem oriented lecture	۲
۸	Indicators of measuring correlation	Problem oriented lecture	۲
۹	Principles of analytical-observational studies	Lecture	۳
۱۰	Interventional studies	Problem oriented lecture	۲
۱۱	Review studies	Lecture	۳
۱۲	Evaluation of diagnostic tests	Problem oriented lecture	۲



۱۳	Errors and causation	Problem oriented lecture	۳
۱۴	Principles of descriptive statistics	Problem oriented lecture	۶
۱۵	Estimation and hypothesis testing	Problem oriented lecture	۶
۱۶	Critical evaluation	Lecture	۳
۱۷	Prioritization and topic selection and proposal	Lecture, discussion in small groups	۳
۱۸	Objectives, hypothesis and variables and research management and ethics	Lecture, discussion in small groups	۳
۱۹	Methods of data collection and questionnaires	Lecture, discussion in small groups	۳
۲۰	Sampling and sample size calculation	Lecture, discussion in small groups	۳
۲۱	Research Errors - Bias	Problem oriented lecture	۳
۲۲	Interactions and research errors - confounding	Problem oriented lecture	۳
۲۳	Special considerations in cohort studies and case-control studies	Lecture, discussion in small groups	۳
۲۴	Special considerations in interventional studies	Lecture, discussion in small groups	۳
۲۵	Special considerations in evaluating diagnostic tests	Lecture, discussion in small groups	۳
۲۶	Qualitative studies	Problem oriented lecture	۳
۲۷	Familiarity with statistical tests used in dentistry	Problem oriented lecture	۶

Unit Title: Practical English

Unit code: ۰

Number and type of unit: ۱ theoretical unit

Educational hours within the course duration: ۱۷h

Prerequisite: none

Aims: promoting grammar and conversation level related to field in order to giving presentations and discussion in the international scientific communities and writing articles in English, conducting scientific writing

Subtitles:

۱. Specialized grammar principles
۲. Specialized presentation principles
۳. Specialized writing principles
۴. Specialized scientific writing principles
۵. Specialized scientific discussion principles
۶. Primary translation techniques principles
۷. Article presentation in international scientific community principles

(lecture presentation
and poster presentation)

Education method: group discussion, lecture presentation and also writing in English

Evaluation method: Writing a correspondence and an article in English and presentation

Unit title: Clinical photography *

Unit code: ٦

Number and type of unit: ١ workshop unit

Educational hours within the course duration: ٥١h

Prerequisite: none

Aims:

Familiarity with types of cameras and taking specialized photographs from dental patients and storing them.

Minimum skills expected:

The resident must be continuously proficient regarding the steps needed in emergencies and must apply them on standardized patient. For this purpose, a flowchart of emergency treatments must be displayed by residents.

Subtitles

	Content	Method of learning-teaching	Duration (hours)
١	Familiarity with types of standard and proper cameras and learning how to use cameras and a fulcrum	Workshop	١
٢	Familiarity with a types of retractors, mirrors and how to use them	Workshop	١
٣	Portrait and profile photography	Workshop	١
٤	Intra-oral and extra-oral photography	Workshop	١
٥	Taking photographs from radiographs and casts	Workshop	١
٦	Familiarity with ٣ dimensional pictures and how to prepare them	Workshop	١
٧	Familiarity with the resolution of possible problems established during the workshop and group photography	Workshop	١
٨	Executing standard photographs and their	Workshop	٢

	analysis		
۹	Taking ۳ dimensional graphs and analyzing them	Workshop	۳
۱۰	Superimposing photographs and radiographs	Workshop	۱
۱۱	Familiarity with storage of images (two-dimensional and three-dimensional)	Workshop	۱
۱۲	Familiarity with software related to photography and editing pictures	Workshop	۱
۱۳	Power point slide presentation	Workshop	۱

Main reference:

Mastering Digital Dental Photography, ۲۰۰۶ Ed.

Unit title: Medical emergencies

Unit code: V

Number and type of unit: ۰,۰ workshop unit

Educational hours within the course duration: ۲۴h

Prerequisite: none

Aims:

Skill acquisition in the diagnosis and treatment of common medical emergencies in dental clinics in Skill Labs and learning on training models

Subtitles

۱. How to obtain medical history and its role in the prevention and diagnosis of emergencies and examinations

۲. Equipment and facilities in emergencies

۳. Common emergencies and their management, including hypersensitivity reactions, respiratory problems and changes in the level of consciousness

۴. CPR

۵. Circulation – Airway- Breathing techniques

۶. Application of drugs in medical emergencies

۷. Practical skills in medical emergencies (injection, serum therapy ...)

۸. Familiarity with emergency materials and facilities in the department and shared facilities in the school

☒ It is recommended that sessions be held as ۳h workshop sessions and this course be taught by Oral and Maxillofacial Surgeons (which can be organized in collaboration with the Department of Emergency Medicine)

Unit title: Medical Regulation and Ethics
 Number and type of unit: ۱ workshop unit
 Educational hours within the course duration: ۵۱h
 Prerequisite: none

Unit code: A

Aims:

Empowering residents in morality theories, their professional obligations towards the society and the legal rights of patients and colleagues. During this course the recognition skills of residents regarding ethical issues and their analysis is strengthened so that they can make the best decisions considering ethical and legal regulations in educational and research environments as faculty members and researchers and during service delivery as a therapist.

Subtitles

	Content	Method of learning-teaching	Duration (hours)
۱	General and practical ethics and professionalism	Workshop	۱
۲	Altruism, respect, job sublimity and justice	Workshop	۱
۳	Honor and honesty, conscientiousness	Workshop	۱
۴	History and moral philosophy, and the four principles of bioethics	Workshop	۱
۵	Ideologies and moral theories	Workshop	۱
۶	Diagnostic tools in ethical decision making	Workshop	۱
۷	Informed consent, acquittal and determination of substitute decision-making capacity	Workshop	۱
۸	Confidentiality and speaking the truth	Workshop	۱
۹	The relationship of dentist	Workshop	۱



	with other members of the health		
۱۰	Principles of office management, medical documentation, communication of dentists with patients	Workshop	۱
۱۱	Familiarity with the medical council, dental regulations, responsibility, medical malpractice and errors, atonement	Workshop	۱
۱۲	Understanding the implications of certification, and the rules of court proceedings	Workshop	۱
۱۳	Conflict of interest	Workshop	۱
۱۴	Ethics in educational environments	Workshop	۱
۱۵	Islamic jurisprudence traditions and its relation to ethics in dentistry	Workshop	۱
۱۶	Challenges in medical ethics	Workshop	۱
۱۷	Integrated case presentation	Case presentation and literature review	۱

Unit title: Infection Control & Patient's Safety
Number and type of unit: ۱ workshop unit
Educational hours within the course duration: ۵۱h
Prerequisite: none

Unit code: ۹

Aims:

For residents to understand and perform methods and skills of patient safety in dental clinics and hospitals.

Subtitles

۱. Patient safety
۲. The importance of human factors in patient safety.
۳. Understanding complex and effective systems in patient care and safety
۴. Establishment and use of effective teams
۵. Lessons from past mistakes to avoid future risks
۶. Recognition and management of health risks
۷. Ways to improve quality in order to improve safety
۸. Increasing communications between patients, staff, and supervisors
۹. Care, prevention and infection control
۱۰. Immunity and safety in infectious diseases
۱۱. Increase and improvement of drug safety
۱۲. Microbiology of common infectious diseases in dentistry and their transmission
۱۳. * Participation in educational departments and implementing given trainings

In teamwork each resident discusses related issues.

*This section is evaluated by faculty members in ۵ integrated sessions during the resident's clinical interventions in the department while implementing given trainings. Additional clinical training is also presented. It is expected that the trained issues become institutionalized in residents and in future semesters faculty members monitor it and affect it in their evaluation.

Reference:

Patient Safety Curriculum Guide, Multi-professional Edition, World Health Organization Publications, available in the following website:

http://whqlibdoc.who.int/publications/۲۰۱۱/۹۷۸۹۲۴۱۵۰۱۹۵۸_eng.pdf

Unit title: Clinical Management and Governance

Unit code: ۱۰

Number and type of unit: ۱ workshop unit

Educational hours within the course duration: ۵۱h

Prerequisite: none

Aims:

Understanding the models and tools of management of service quality, needs of service excellence, patient safety, management and evaluation exert, believing the need to improve the quality of oral health services through the establishment of models and tools for quality management including models of clinical service governance.

Minimum practical skills expected:

It is expected that in the end of this course residents demonstrate management of clinical services while providing oral health care and in higher semesters demonstrate it automatically.

Subtitles

	Content	Method of learning-teaching	Duration (hours)
۱	Quality and methods for its improvement	Workshop	۱
۲	Management of the quality of oral health care	Workshop	۱
۳	Governance of clinical services and its prerequisites	Workshop	۱
۴	Models and tools of quality management	Workshop	۱
۵	Patient safety	Workshop	۱
۶	Clinical efficacy	Workshop	۱
۷	Concepts of clinical efficacy and evidence based dentistry and clinical audit	Workshop	۱
۸	Interaction with patients, concomitant and community	Workshop	۱
۹	Education, training and managing staff	Workshop	۱
*۱۰	Improvement of the quality of services of the specialty	Workshop	۵



* ۱۱	Evaluating the substantiation and performance of clinical governance concepts in the specialty	Workshop	۳
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Unit title: Applicable Immunology

Unit code: ۱۱

Number and type of unit: ۱,۵ theoretical-practical units (۱ theoretical unit, ۰,۵ practical units)

Educational hours within the course duration: ۳۴h

Prerequisite: none

Aims: increasing the knowledge about organs and immunity system function, immune response, immunity system diseases and their application in dentistry science field and familiarity with practical immunologic diagnostic methods

Subtitles:

۱. Innate immunity in periodontal diseases
۲. Acquired immunity in periodontal diseases
۳. Immunology in healthy periodontal conditions
۴. Immunology in various periodontal diseases
۵. Effective cellular interactions in regulating inflammatory mediators
۶. Treatment strategies for stopping the host cellular signals in periodontal diseases
۷. Familiarity with practical immunologic diagnostic methods

Education method: presentation, module, group discussion, demonstration

Evaluation method: seminar presentation, Essay

Unit title: Applicable Anatomy

Unit code: ۱۲

Number and type of unit: ۱,۰ theoretical-practical units (۱ theoretical unit, ۰,۰ practical units)

Educational hours within the course duration: ۳۴ h

Prerequisite: none

Aims: acquiring knowledge about oral and maxillofacial tissues and structures

Subtitles:

۱. salivary glands histology and anatomy
۲. TMJ anatomy and histology
۳. Oral cavity and adjacent orofacial muscles anatomy
۴. Periodontium and implant and related structures surgical anatomy
۵. Head and neck anatomic spaces
۶. Maxillary sinus embryology and histology and anatomy
۷. Head and neck and oral cavity neuroanatomy

Education method: Autopsy on cadavers

Evaluation method: Autopsy on cadavers

Unit title: Oral and maxillofacial pathology

Unit code: ۱۳

Number and type of unit: ۱,۵ theoretical-practical units (۱ unit theoretical, ۰,۵ units' practical)

Educational hours within the course duration: ۳۴h

Prerequisite: none

aims: acquiring knowledge and theoretical-practical skill in diagnosis and treatment of periodontium related lesions and oral mucosa.

Theoretical Subtitles:

۱. white lesion
۲. Red lesions
۳. Oral ulcers
۴. Exospheric lesions
۵. Neck tumors
۶. Precancerous lesions
۷. Tumors and periodontal cysts including reactionary soft and hard tissue lesions, benign and malignant hard and soft tissue lesions, periodontal cysts

Practical Subtitles:

۱. Histological samples preparation methods
۲. Non-specialized staining
۳. Soft and hard tissue specialized staining
۴. Practical diagnosis of related lesions histological sample
۵. Familiarity with histomorphometric methods for assessing bone samples
۶. Familiarity with modern pathological methods

Education method:

theoretical: presentation, Q&A

practical: presentation, lab education

Evaluation method: seminar presentation or essay

Unit title: Genetics in Periodontics

Unit code: ۱۴

Number and type of unit: ۰,۰ theoretical units

Educational hours within the course duration: ۹h

Prerequisite: none

Aims: familiarity with general genetic principles, hereditary and cognition of genetic diseases and modern methods in genetic diseases diagnosis, genetic role in incidence and treatment results in patients predisposing periodontal disease and periimplantitis

Subtitles:

۱. Genetic and genomics modern assessing methods
۲. Various genetic defects and inheritance
۳. Genetic research in skeletodental deformities
۴. Genetic role in developed periodontal diseases` incidence
۵. Genetic role in medically related periodontics
۶. Periodontal treatment results in patients predisposed to periodontal diseases
۷. Genetic role in compromising the dental implant treatment.

Education method: presentation, module

Evaluation method: written exam

Unit title: Applicable Pharmacology

Unit code: ۱۰

Number and type of unit: ۳ theoretical units

Educational hours within the course duration: ۳۴h

Prerequisite: none

Aims: deepening knowledge about practical medication in periodontology and acquiring knowledge about common medications, their effects and interactions in dentistry and immune response regulating drugs

Subtitle:

۱. general familiarity with:
 - absorption, distribution, excretion mechanisms and effects of drugs in the body
 - familiarity with effects and side effects of drugs (toxic effects, idiosyncrasies-allergies etc.)
۲. Common drugs used in periodontics` interaction with other medications
۳. prescribing drugs in pregnancy and breast-feeding period
۴. Familiarity with prescription principles
۵. acquiring knowledge about pharmacology of analgesics
۶. Acquiring knowledge about the pharmacology of steroid anti-inflammatory drugs and NSAIDs
۷. Antibiotics
۸. Local and systemic anti- fungal drugs
۹. Anti-viral drugs
۱۰. Acquiring knowledge about anti-histamines
۱۱. Acquiring knowledge about local anesthetic drugs
۱۲. Acquiring knowledge about sedative drugs
۱۳. Acquiring knowledge about effective drugs against CNS and PNS
۱۴. Acquiring knowledge about effective drugs against saliva secretion volume
۱۵. familiarity with effective drugs in mucodermal autoimmune diseases
۱۶. Acquiring knowledge about various side effects of drugs in mouth
۱۷. Acquiring knowledge about antiseptics in dentistry
۱۸. Acquiring knowledge about host response regulatory drugs
۱۹. Familiarity with herbal drugs in periodontal diseases
۲۰. Familiarity with local delivery system

Education method: presentation and module

Evaluation method: seminar presentation, essay



Unit title: Oral Physiology and Biology

Unit code: ۱۶

Number and type of unit: ۱ theoretical units

Educational hours within the course duration: ۱۷h

Prerequisite: none

Aims: familiarity with oral and maxillofacial physiology and biology

Subtitle:

۱. familiarity with formation process and mineralization of periodontal and dental tissues
۲. Acquiring knowledge about chemical composition of dental tissues
۳. Enamel, dentin, pulp, cement, bone and PDL physiology
۴. Oral mucosa, saliva, taste buds and lymphatic nodules physiology
۵. pain and it`s control physiology
۶. Oral functions physiology (chewing, swallowing, speech and respiration)
۷. Dental eruption and resorbtion physiology
۸. Acquiring knowledge about bone resorbtion and regeneration mechanisms
۹. familiarity with muscles` reflex mechanisms
۱۰. Familiarity with the role of age and hormones in oral and dental

structure

۱۱. maxillary sinus biology and physiology
۱۲. Neuromuscular system physiology
۱۳. Neuromuscular disorders` effect on dental and maxillofacial system

Education method: presentation, module

Evaluation method: written exam

Unit title: Tissue engineering and biomaterials and modern technologies in periodontology and implant
Unit code: ۱۷
Number and type of unit: ۳ theoretical-practical units (۱ unit theoretical, ۲ unit practical)

Educational hours within the course duration: ۵۱h

Prerequisite: none

Aims: familiarity with tissue engineering principles, identification of various grafting materials, their application and various membranes and implant surfaces

Subtitles:

۱. Basic tissue engineering principles (passive and active tissue engineering)
۲. Gene therapy in periodontal diseases
۳. PRP, rhPDGF, rhBMP-۲ application in bone and periodontal regeneration
۴. Membranes
۵. Bone grafting materials
۶. Gingival grafting material
۷. EMD and biologic mediators
۸. Root surface biomodification
۹. Implant surface modification
۱۰. Biologic glues
۱۱. Bio-products in periodontology and implants

Education method: presentation, module, lab education

Evaluation method: seminar presentation, essay

Unit title: Oral applicable microbiology

Unit code: ۱۸

Number and type of unit: ۱,۵ theoretical-practical units (۱ unit theoretical, ۰,۵ unit practical)

Educational hours within the course duration: ۳۴h

Prerequisite: none

Aims: familiarity with organisms in healthy and unhealthy conditions (carries, periodontal disease and periimplantitis and endodontics)

Subtitles:

۱. Familiarity with oral microbial flora
۲. Familiarity with biofilm (plaque) formation process in supra structural level, dental plaque growth dynamics, dental plaque physiologic characteristics, special bacterial behavior in biofilm, transmission translocation principles and bacterial cross infection
۳. Familiarity with related microorganisms to various periodontal and implant diseases
۴. Distinct propatogens` hallmarks
۵. Familiarity with related microorganisms to dental carries formation
۶. Familiarity with related microorganisms to pulp and periapical tissues
۷. Familiarity with related microorganisms to with common oral infections and dental abscess
۸. The probiotics` effects on microbial diseases treatment
۹. Modern bacterial and viral identification methods (practical course if possible)
۱۰. Microbial interaction with immune system
۱۱. Prebiotic and probiotic in periodontal diseases treatment and periimplantitis

Education method:

- theoretical: presentation, module
- practical: demonstration

Evaluation method: seminar presentation, essay

Unit title: Orthodontics

Unit code: ۱۹

Number and type of unit: ۲ theoretical-practical units (۱ unit theoretical, ۱ unit practical)

Educational hours within the course duration: ۵۱ h

Prerequisite: none

Aims: familiarity with attitudes and capabilities of orthodontists in common treatments and capability of conducting multidisciplinary treatments (ortho-perio) and conducting at least one case of minor tooth movement

Subtitles:

۱. familiarity with orthodontic treatment plan in patients with history of periodontal disease
۲. Orthodontic consideration in forced eruption
۳. Important consideration in orthodontic anchorage with prosthetic implants or temporaries
۴. Orthodontic consideration in impacted teeth exposure
۵. Familiarity with minor tooth movements
۶. Conducting at least one case of minor tooth movement
۷. Orthodontic treatment strategies in promoting periodontal treatment's results
۸. Forced eruption, methods and limitations

Education method: presentation, module, case presentation, PBL

Evaluating method: seminar presentation, Essay, *case presentation

*NOTE: the resident should present at least one case treatment in cooperation with orthodontics department.

Unit title: occlusion

Unit code: ۲۰

Number and type of unit: ۱ theoretical-practical units (۰,۵ units theoretical, ۰,۵ practical units)

Educational hours within the course duration: ۲۶h

Prerequisite: none

Aims: familiarity with occlusion and TMJ disorders

Subtitles:

۱. TMJ physiology
۲. TMJ diseases pathogenesis
۳. Occlusal function and dysfunction
۴. Clinical examination and screening patients with TMJ disorders
۵. Diagnostic methods in patients with suspicion to TMJ disease
۶. Conducting treatment in patients suffering from various TMJ disorders (occlusal therapy, physiotherapy, laser therapy etc. and their indications)
۷. Diagnostic casts and their indication in patients

Education methods: presentation, module, clinical education, case presentation, PBL

Evaluation method: seminar presentation, Essay, making at least one night guard

Unit title: Endodontics

Unit code: ۲۱

Number and type of unit: ۱ theoretical-practical units (۰,۵ units theoretical, ۰,۵ practical units)

Educational hours within the course duration: ۲۶h

Prerequisite: none

Aims: familiarity with attitudes and capabilities of endodontists in common treatments and capability of conducting multi disciplinary treatments

Subtitles:

۱. familiarity with new subjects about pulp and periodontium
۲. Common endo-perio lesions from endodontics aspect
۳. Internal and external resorptions
۴. Procedural accidents affecting treatment results
۵. Pre-radicular surgeries
۶. Various canal sealer materials and their indication
۷. Dental traumas and endodontic management

Education methods: presentation, module, case presentation, PBL

Evaluation method: seminar presentation, essay, *case presentation

*NOTE: the resident should present at least one case treatment in cooperation with endodontics department.

Unit title: Oral and maxillofacial medicine

Unit code: ۲۲

Number and type of unit: ۲ theoretical-practical units (۱ unit theoretical unit-۱ practical unit)

Educational hours within the course duration: ۶۰ h

Prerequisite: none

Aims: familiarity with attitudes and capabilities of oral medicine specialists in common treatments and capability of conducting multi disciplinary treatments

Subtitles:

۱. indications and common examinations` interpretation (blood, urine, stool, serologic, immunologic and microbiologic)
۲. Intra and extra oral examinations
۳. Herpes labialis, aphthous, candidiasis and their treatment
۴. Various lesions (cystic and tumoral) in hard and soft oral tissues
۵. Mucodermal diseases and their treatment and the prognosis of implant treatments in such patients
۶. Incisional and excisional biopsy indications
۷. Oral cavity precancerous lesions
۸. Oral and systemic manifestations of patients with leukemia, diabetes, osteopenia, osteoporosis, hepatic diseases and AIDS
۹. Patients` vital signs assessment
۱۰. Necessary considerations in surgical treatments for patients with

history

of chemotherapy and radiotherapy

Education method: presentation, module, case presentation, PBL

Evaluation method: seminar presentation, essay, *case presentation

*NOTE: the resident should present at least one case treatment in cooperation with oral medicine department.

Unit title: Internal medicine

Unit code: ۲۳

Number and type of unit: ۲,۰ theoretical-practical units (observer)

Educational hours within the course duration:

Prerequisite: none

Aims: familiarity with systemic diseases signs and diagnosis, primary familiarity with treatment of these patients and identification of necessary consideration in periodontal and implant treatments in these patients, familiarity with medical consultation with physicians.

Subtitle:

۱. Familiarity with diagnostic methods in hepatic and GI diseases
۲. Familiarity with diagnostic methods in internal secretory glands` diseases
۳. Familiarity and necessary considerations in periodontal or implant surgery in cardiovascular patients
۴. Familiarity and necessary considerations in periodontal or implant surgery in autoimmune disease
۵. Familiarity and necessary considerations in patients suffering cancer and under treatment
۶. Familiarity and necessary considerations in renal diseases and dialysis
۷. Familiarity and necessary considerations in hematologic diseases
۸. Familiarity and necessary considerations in infectious patients(AIDS, hepatitis etc.)
۹. Familiarity and necessary considerations in MS, scleroderma and osteoporosis etc.
۱۰. Familiarity and necessary considerations in special diseases
۱۱. Considerations related to elderly patients

Education method: presentation, module, clinical education, case presentation, PBL

Evaluation method: seminar presentation, essay

Unit title: Anesthesia

Unit code: ۲۴

Number and type of unit: ۱,۰ theoretical-practical units

Educational hours within the course duration:

Prerequisite: none

Aims: familiarity with general anesthesia principles for conducting periodontal and implant surgery under general anesthesia and sedation and necessary considerations in these patients` surgery

Subtitle:

۱. Familiarity with anesthetic drugs and sedation
۲. Necessary considerations in patients before and after the anesthesia and sedation
۳. Necessary considerations during surgery in patients under general anesthesia
۴. Practical familiarity with various anesthetic and sedation methods
۵. Anesthetic drugs interaction with other common prescribed drugs in periodontics
۶. Anesthesia and sedation side effects and complications
۷. Pain control

Education method: presentation, module, clinical education

Evaluation method: seminar presentation, essay

Unit title: Dental prosthesis and implant

Unit code: ۲۰

Number and type of unit: ۳ theoretical-practical units

Educational hours within the course duration:

Prerequisite: none

Aims: familiarity with prosthodontists` attitudes and capabilities in common treatments and capability of performing multidisciplinary (prosthesis-perio) treatments.

Subtitles:

۱. Implant treatment plan in fully edentulous patients
۲. Dental prosthesis considerations in treatment plan of patients with partial edentulous areas
۳. Implant prosthesis considerations in treatment plan of patients with partial edentulous areas
۴. Aesthetic consideration for implant placement in aesthetic zone
۵. Prosthetic considerations in teeth under root amputation treatment
۶. Splints
۷. Temporary prosthesis (in implant and dental treatment plan)
۸. Treatment strategies in patients with decreased intramaxillary space and occlusion disorder
۹. Diagnostic cast and radiographic and surgical guide
۱۰. Biomechanics and its role in implant treatment plan
۱۱. Familiarity with crown and bridge fabrication steps with close and open tray technique
۱۲. Familiarity with maxillofacial prosthesis

Education method: presentation, module, case presentation, PBL

Evaluation method: seminar presentation, essay, *case presentation

*NOTE: the resident should present at least one case treatment in cooperation with prosthodontics department.

Unit title: Restorative dentistry

Unit code: ۲۶

Number and type of unit: ۱ theoretical-practical units (۰,۵ theoretical units, ۰,۵ practical units)

Educational hours within the course duration: ۲۶h

Prerequisite: none

Aims: familiarity with attitudes and capabilities of restorative dentistry specialists in common treatments and capability of conducting multi disciplinary treatments

Subtitle:

۱. Important considerations in restorative-aesthetic treatment in patients with periodontal disease in anterior region
۲. FRC treatment and its indication
۳. Immediate and temporary restorations after anterior teeth extraction and its considerations
۴. Bleaching types and its indications
۵. Splint types from restorative aspect
۶. Iatrogenic restorative complications management's methods during periodontal diseases

Education method: presentation, module, case presentation and PBL

Evaluation method: seminar presentation, essay, *case presentation

*NOTE: the resident should present at least one case treatment in cooperation with restorative dentistry department and a segmental splinting

Unit title: Oral and maxillofacial surgery

Unit code: ۲۷

Number and type of unit: ۳ theoretical-practical units (۱ unit theoretical, ۲ unit practical)

Educational hours within the course duration: ۵۱ h

Prerequisite: none

Aims: familiarity with attitudes and capabilities of oral and maxillofacial surgeons in common treatments and capability of conducting multi disciplinary treatments

Subtitles:

۱. Vestibuloplasty surgery types and techniques
۲. Distraction osteogenesis method
۳. Important considerations in performing implant surgery in patients needing maxillofacial prosthesis
۴. Nerve transpositioning surgery method and its limitation
۵. Impacted wisdom and canine teeth surgery techniques
۶. Multiroot teeth periradicular surgeries
۷. Epulis fissuratum removal surgeries
۸. Bone grafting surgery from femur region
۹. Surgery principles in OR (under general anesthesia)
۱۰. Familiarity with common maxillofacial surgeries
۱۱. Oral and maxillofacial infection management
۱۲. Oral and maxillofacial surgeons` attitude toward managing side effects of vital nerves and vessels of crucial organs
۱۳. Performing at least one case of vestibuloplasty
۱۴. Performing at least one case of impacted third molar surgery
۱۵. Performing at least one case of periapical surgery
۱۶. Familiarity and performing at least one case of biopsy from hard tissues

Education method: presentation, module, case presentation, PBL

Evaluation method: seminar presentation, essay

*the resident will be an active observer in surgeries performed in the hospital

Unit title: Oral and maxillofacial radiology

Unit code: ۲۸

Number and type of unit: ۱ theoretical-practical units (۰,۵ unit theoretical, ۰,۵ unit practical)

Educational hours within the course duration: ۲۶h

Prerequisite: none

Aims: Familiarity with common and modern methods of intra and extra oral radiographs and differential diagnosis of common oral and dental lesions using the imaging techniques

Subtitle:

۱. Radiobiology and irradiation safety
۲. Anatomic landmarks identifications in extra oral radiographs
۳. Identification of possible disadvantages in extra and intra oral radiograph clichés
۴. CT scan and its interpretations
۵. CBCT and its interpretations
۶. MRI and its interpretations
۷. Digital radiographs (advantages and disadvantages)
۸. Primary familiarity with nuclear medicine
۹. Differential diagnosis of oral and maxillofacial regions by using radiographic views
۱۰. Radiographs standardization for conducting research projects
۱۱. Using radiographic guide for treatment plan in implant cases
۱۲. Employing software related to implants
۱۳. Differential diagnosis of various maxillary sinus diseases based of radiographic views
۱۴. One case CBCT interpretation and reporting

Education method: presentation, module, case presentation, PBL

Evaluation method: seminar presentation, essay

Unit title: Case presentation \

Unit code: ۲۹

Number and type of unit: ۲ theoretical units

Educational hours within the course duration: ۲۴h

Prerequisite: none

Aims: capability of criticizing and assessing diagnosis, determining the prognosis and treatment plan in easy to moderate periodontal cases

Subtitles:

۱. Presenting diagnosis and prognosis of at least ۲ cases of easy periodontal case and assessing various possible treatment plans (ideal and substitute)
۲. Active participation and discussion about diagnosis, prognosis and treatment plan of patients presented in the class “case presentation”
۳. Presenting at least one complete case (with photography) from start to finish

Education method: case presentation, panel discussion

Evaluation method: lecture presentation

Note: case presentation should be accompanied by references and related articles

Unit title: Case presentation ۲

Unit code: ۳۰

Number and type of unit: ۲ theoretical units

Educational hours within the course duration: ۳۶h

Prerequisite: Case presentation ۱

Aims: capability of criticizing and assessing diagnosis, determining the prognosis and treatment plan in complex periodontal cases and implants

Subtitles:

۱. presenting diagnosis and prognosis of at least ۲ cases of complex periodontal cases(multidisciplinary and implant cases) and assessing various possible treatment plans(ideal and substitute)*(accompanied by photographs, radiographies and diagnostic casts)

۲. Active participation and discussion about diagnosis, prognosis and treatment plan of patients presented in the class “case presentation”

۳. Presenting at least one complete case (multidisciplinary and implant cases accompanied by photographs) from start to finish and discussion about performed treatment

Education methods: case presentation, panel discussion

Evaluation method: lecture presentation

*”case presentation ۲” classes should be held in presence of related departments attending.

** Case presentation should be accompanied by references and related articles

Unit title: Case presentation ۳

Unit code:۳۱

Number and type of unit: ۳ theoretical units

Educational hours within the course duration: ۳۴h

Prerequisite: Case presentation ۳

Aims: capability of criticizing and assessing diagnosis, determining the prognosis and treatment plan in complex periodontal cases and implants and preparation for presentation in post graduate board exam

Subtitles:

۱. Presenting diagnosis and prognosis of at least ۳ cases of complex periodontal cases (multidisciplinary and implant cases) and assessing various possible treatment plans (ideal and substitute)*(accompanied by photographs, radiographies and diagnostic casts)
۲. Active participation and discussion about diagnosis, prognosis and treatment plan of patients presented in the class “case presentation”
۳. Presenting at least one complete case (multidisciplinary and implant cases accompanied by photographs) from start to finish and discussion about performed treatment

Education methods: case presentation, panel discussion

Evaluation method: lecture presentation

*”case presentation ۳” classes should be held in presence of related departments attending.

** case presentation should be accompanied by references and related articles

Unit title: literature review \

Unit code: ۳۲

Number and type of unit: ۲ theoretical units

Educational hours within the course duration: ۳۴h

Prerequisite:

Aims: familiarity with periodontal surgeries history and gingival grafts and implant and reliable articles playing role in clinical decision and also familiarity with evidence based periodontics` articles and criticizing method, discussion and literature review

Subtitles:

۱. Published articles describing periodontal flaps and mucogingival surgeries
۲. Related articles to basic important subjects in periodontics and implants
۳. Evidence based periodontics articles related to non-surgical treatments

Reference: all English journals related to periodontics and implants

Education method: group discussion, Q&A

Evaluation method: seminar presentation, essay

Unit title: literature review ۲

Unit code: ۳۳

Number and type of unit: ۳ theoretical units

Educational hours within the course duration: ۵۱h

Prerequisite: literature review ۱

Aims: familiarity with reliable new international published studies in periodontics and implant and also familiarity with evidence based periodontics articles in the field of periodontics and implant treatments, criticizing and literature review

Subtitles:

۱. Systematic review articles or Meta-analysis related to periodontics or implants
۲. Clinical articles in the field of modern preventive methods, diagnosis, treatment and prognosis related to periodontal diseases and implant

Reference:

۱. Journal of Clinical Periodontology
۲. Journal of Periodontology
۳. Clinical Oral Implant Research
۴. Journal of Oral and Maxillofacial Implant

Education method: group discussion, Q&A

Evaluation method: seminar presentation, essay

Unit title: Thesis (١) to (٥)

Unit code: ٣٤-٣٨

Number and type of unit: ten practical-workshop units

Educational hours within the course duration: ٤٧٦ h

Thesis (١) - Aim: Selection of research subject with in the area of specialty.

This course is held in two work shop units and must be taken to account in the educational program. The research subject will be chosen with the assistance of the relevant supervisor throughout the work shop sessions. Field research must be done out of work shop time and the outcome of it must be presented during the work shop sessions. The resident must have gathered his/her documents to present the proposal by the end of the semester. The proposal must be preregistered in the research council and the evidence suggesting that the resident has passed the course by the dead line must be handed to postgraduate director.

Thesis (٢)- Aim: Registration of research subject.

This course is held in two work shop units and the resident must participate in sessions held in collaboration with statistical consultant and/or statistic experts or epidemiologists. The resident must complete his/her proposal by the end of the semester and must register it in the relevant site. Meetings must also be held with the supervising professor during these sessions.

Thesis (٣)- Aim: Performing the research.

This course is held in two practical and must be taken to account in the educational program. The time and manner of performance of this unit is up to the supervisor and can be organized in continuous or interrupted sessions. The supervisor must inform the postgraduate director of the department about the progress so that other educational programs can be coordinated. If the research requires more time than one semester, the measures that must be taken during that semester should be confirmed by the supervisor.

Thesis (٤)- Aim : writing the thesis and relevant article.

It is a two unit work shop course must be taken to account in the educational program. The resident should statistically analyze data, extract the results and write the thesis under the supervision of the supervisor and statistical consultant. The resident is obliged to write and submit at least one paper to a valid journal. If the research is to be done in more than one semester, the resident must analyze and extract the primary results.

Thesis (٥)- Aim: Defense of thesis



This is a two unit work shop course that should be considered in the educational program. The resident must complete the thesis, present his findings and defend the thesis. ۵۴

Notice: It is apparent that all researches may not follow this sequence and timing and may require more time. It is possible to extend the performance to reschedule the dead line only with the confirmation of the vice dean of research.

Unit title: Theoretical Periodontics \

Unit code: ۳۹

Number and type of unit: ۴ theoretical units

Educational hours within the course duration: ۱۸h

Prerequisite: none

Aims: familiarity with the principles of periodontics and implants and subsequent treatments

Subtitle:

۱. Normal periodontium
۲. Classification of periodontal diseases
۳. Etiology and pathogenesis of periodontal diseases
۴. Periodontal diseases epidemiology
۵. Relation between periodontal and systemic diseases
۶. Oral malodor
۷. Clinical and Para clinical periodontal disease diagnosis
۸. Periodontal diseases prognosis
۹. Treatment plan in periodontal diseases
۱۰. Non-surgical periodontal treatments
۱۱. Anatomy and biology of adjacent dental implant tissues and osseointegration
۱۲. Quality and quantity of edentulous ridge bone for placing implant
۱۳. Gingival enlargement and its treatments
۱۴. Risk assessment

References: Carranza, Lindhe

Education method: module (studying textbook), Q&A

Evaluation method: seminar presentation, essay

NOTE: it's obvious that various periodontal diseases classification is based on the textbook of all sessions

Unit title: Theoretical Periodontics ٣

Unit code: ٤٠

Number and type of unit: ٤ theoretical units

Educational hours within the course duration: ٦٨h

Prerequisite: Theoretical Periodontics ١

Aims: familiarity with various periodontal and implant surgeries

Subtitle:

١. Periodontal surgery general principles
٢. Various hard and soft tissues periodontal surgery techniques
٣. Furcation involvement and its treatment
٤. Laser in periodontal therapy
٥. Occlusal trauma and its treatment
٦. Muccodermal diseases and desquamative gingivitis
٧. Clinical evaluation of implant candidates
٨. Diagnostic imaging for implant candidates
٩. Implant treatment plan
١٠. Implant standard surgery
١١. Implant placement timing
١٢. Retentive treatments
١٣. Risk assessment in implant treatments
١٤. Periodontal therapy and implant in special cases (children, elder persons, females, systemic complications)

References: Carranza, Lindhe, Misch

Education method: module (studying textbook), Q&A

Evaluation method: seminar presentation, essay

Unit title: Theoretical Periodontics ٣

Unit code: ٤١

Number and type of unit: ٤ theoretical units

Educational hours within the course duration: ٦٨h

Prerequisite: Theoretical Periodontics ٣

Aims: accruing knowledge about periodontal reconstructive surgeries, periodontium preparation for restorative treatments, periodontal plastic and aesthetic surgeries, treatment of complex patients candidate for dental implants, periimplantitis disease treatment

Subtitle:

١. Periodontal reconstructive surgeries
٢. Recent advancements in periodontal and implant surgeries
٣. Periodontal plastic and aesthetic surgeries
٤. Microsurgery (minimally invasive surgeries)
٥. Localized bone augmentation
٦. Advanced implant surgeries
٧. Pre-prosthetic surgeries
٨. Implant surgery in aesthetic zone
٩. Sinus lifts surgeries
١٠. Computer assisted implant surgery
١١. Biomechanics, treatment plan and prosthetic considerations
١٢. Implant treatment failures and side effects
١٣. Periimplantitis treatments
١٤. Site preservation
١٥. Tissues engineering and biomaterial in and implant periodontal therapy

References: Carranza, Lindhe, Misch

Education method: module (studying textbook), Q&A

Evaluation method: seminar presentation, essay

Unit title: implant preclinic

Unit code: ٤٢

Number and type of unit: ١ practical units

Educational hours within the course duration: ٣٤h

Prerequisite:

Aims: practical familiarity with implants and related surgeries

Subtitle:

١. Practical familiarity with various implant systems` components
٢. Performing implant surgery on model
٣. Performing various bone augmentation surgeries including: ridge splitting, bone graft, GBR etc.
٤. Familiarity with systems and equipments related to implants

Education method: demonstration and modeling

Evaluation method: seminar presentation, essay, presenting a model based on thought sessions as a project

Unit title: periodontics preclinic

Unit code: ٤٣

Number and type of unit: ١ practical units

Educational hours within the course duration: ٣٤h

Prerequisite:

Aims: familiarity with various specialized equipments and tools of periodontal surgeries and capabilities and acquiring skills in their application, practical familiarity with various periodontal surgeries, capabilities and acquiring skills in performing periodontal surgeries and different types of sutures on models

Subtitle:

١. Performing various hard and soft tissue surgeries on model
٢. Performing all kinds of sutures on the model
٣. Familiarity with different surgical and non-surgical periodontal equipment (such as electrosurgery, cryosurgery, laser, PRGF etc.)

Education method: demonstration and modeling

Evaluation method: seminar presentation, essay, presenting a model based on thought sessions as a project

Unit title: implant clinic \

Unit code: ۴۴

Number and type of unit: ۳ practical units

Educational hours within the course duration: \ . ۲h

Prerequisite: periodontology clinic ۲

Aims: familiarity with diagnosis, treatment plan and surgery in implant candidate and also implant placement

Subtitle:

۱. Participation in examination and treatment plan of implant candidates (beside the attending)
۲. Attending at least ۲ . implant surgeries as surgical aid and writing the operation description
۳. Placing at least ۰ posterior implants or simple over denture
۴. Placing at least ۰ implants in aesthetic zone
۵. Employing “ostell” for assessing implant stability

Evaluation method: presenting the Log book

NOTE: document completion (including clinical findings, consultations, diagnosis and treatment plan) and also retentive treatment is necessary for patients undergoing treatment

Unit title: implant clinic ۳

Unit code: ۴۰

Number and type of unit: ۳ practical units

Educational hours within the course duration: ۱۰۲h

Prerequisite: implant clinic ۱

Aims: acquiring skills in diagnosis and treatment plan of implant candidates, capability of placing anterior and posterior implants or over denture, capability of periimplantitis treatment

Subtitle:

۱. Active participation in patients` examination and presenting the treatment plan
۲. Attending as implant surgeries aid and the operation description
۳. performing at least ۱۰ second step implant surgery and papilla reconstruction techniques and surrounding soft tissues management(such as FGG or apically flap)
۴. Placing at least ۱۰ implants
۵. Treating at least ۳ periimplantitis cases
۶. At least ۱ chin- graft case
۷. At least ۵ sinus lift (open & closed) cases
۸. At least ۵ lateral bone augmentation cases
۹. At least ۱ vertical bone augmentation
۱۰. At least ۱ ramus graft case
۱۱. Following at least ۳ patients treated by implant ۳ and ۶ month after loading

Evaluation method: presenting the Log book

NOTE: document completion (including clinical findings, consultations, diagnosis and treatment plan) and also retentive treatment is necessary for patients undergoing treatment

Unit title: periodontology clinic ١

Unit code: ٤٦

Number and type of unit: ٨ practical units

Educational hours within the course duration: ٢٧٢h

Prerequisite:

Aims: acquiring skills in complete supra and infra gingival germs removal, practical familiarity with various periodontal surgeries, capability of performing simple periodontal surgeries*

Subtitle:

١. performing at least ١٠ cases of non-surgical treatment of patients suffering periodontitis (disregarding the surgical patients)

٢. periodontal surgeries' aid:

-various types of periodontal flaps, curettage, gingivectomy (at least ١٠ cases)

-crown lengthening surgery (at least ٢٠ cases)

٣. performing at least ١٠ cases of simple periodontal surgeries

٤. assessing at least ١ case of tooth mobility using periotest on the patient

Evaluation method: presenting the Log book

NOTE: document completion (including clinical findings, consultations, diagnosis and treatment plan) and also retentive treatment is necessary for patients undergoing treatment

Unit title: periodontology clinic ۲

Unit code: ۴۷

Number and type of unit: ۱۰ practical units

Educational hours within the course duration: ۳۴۰ h

Prerequisite: periodontology clinic ۱

Aims: acquiring skills in performing various periodontal surgeries technique, familiarity with treatment decisions in patients with systemic diseases and intradepartmental patients and acquiring skill in presenting treatment plan for patients

Subtitle:

۱. At least ۲۰ cases of full mouth periodontal flap surgery
۲. At least ۱ case of gingivectomy surgery
۳. At least ۱۰ cases of soft tissue graft surgery
۴. At least ۳۰ cases of crown lengthening surgery
۵. At least ۲ cases of impacted tooth exposure
۶. furcation involvement treatment:
 - at least ۵ cases of resective treatment
 - at least ۵ cases of regenerative treatment
۷. at least ۵ cases of reconstructive surgery in periodontal lesions

Evaluation method: presenting the Log book

NOTE: document completion (including clinical findings, consultations, diagnosis and treatment plan) and also retentive treatment is necessary for patients undergoing treatment

NOTE: presenting at least ۲ cases of full mouth surgeries with standard follow-ups including further charting and evaluation of treatment results in periods of ۳, ۶, ۹ and ۱۲ months after the treatment is completed. It is obvious that the final evaluation of this requirement will be presented in “Perio ۳”

Unit title: periodontology clinic ۳

Unit code: ۴۸

Number and type of unit: ۱۲ practical units

Educational hours within the course duration: ۴۰۸h

Prerequisite: periodontology clinic ۲

Aims: acquiring skill and dexterity in performing various periodontal surgeries' techniques and also in performing advanced periodontal surgeries and bone augmentation, expertise in presenting treatment plan in referred patients from other departments (consultation)*

Subtitle:

۱. At least ۱۰ cases of periodontal reconstructive surgery
۲. At least ۱ case of periodontal surgery under general anesthesia or sedation
۳. At least ۵ cases of soft tissues augmentation (edentulous ridge)
۴. At least ۵ cases of socket preservation
۵. At least ۱۰ cases of tooth adjacent soft tissues grafting

Evaluation method: presenting the Log book

NOTE: document completion (including clinical findings, consultations, diagnosis and treatment plan) and also retentive treatment is necessary for patients undergoing treatment