

## Scientific Content for Faculty of Oral and Dental Medicine Kafrelsheikh University

Course Title	Course content	Weekly number of hours		total of hours
First year		theoretical	practical	
تشریح عام  General Anatomy	<u>General anatomy:</u> Anatomical terms Skin & fascia Skeletal system Muscular system Joints Nervous system <u>Special anatomy :</u> head and neck Scalp Face Parotid region Muscles of mastication Infratemporal fossa Temporomandibular joint Pterygopalatine fossa Dural venius sinsuses Orbit Deep fascia of the neck Posterior triangle of the neck Anterior triangle and its subdivisions Nerves and vessels of the neck Oral cavity and palate Pharynx Larynx	٢	٢	٤
هستولوجی عام General Histology	Cytology – epithelium – nucleus – connective tissue – cartilage – bone – blood – lymphatic system – muscular tissue – nervous tissue – vascular system – the skin – histology of digestive glands – histology of endocrine system	١	٢	٣
فسيولوجی عام General Physiology	Blood – central nervous system – respiration – cardiovascular system – endocrine – metabolism – digestion – autonomic nervous system	٣	٢	٥
کیمیاء حیویة	The main components of living organism and	٢	٢	٤

<b>Biochemistry</b>	their biochemical importance – carbohydrate chemistry and metabolism – lipid chemistry and metabolism – protein and amino acids chemistry and metabolism – minerals – hemoglobin and myoglobin structure and function – water – body fluids – buffering system – different types of solutions – enzymes			
اللغة الإنجليزية <b>English language</b>	Health and illness – parts of the body – function of the body – medical practitioners – allied health professionals – hospital primary care – medical education – symptoms and signs – infection – grammar – writing – lexis (confusable words) – why should we exercise regularly? – top major reasons to major in computing – what is science? – the tactics of study – what do you know about chemistry, physics, biology, geology, and zoology – physical fitness – what is democracy? – inventions and inventors – british English vs American English – special difficulties – major abbreviations.	٢	---	٢
مصطلحات طب الأسنان <b>Dental terminology</b>	Definition of different departments in faculty – define the different morphological parts of the tooth study some different terms used basically in dental biomaterials study some different terms used basically in dental anatomy study some different terms used basically in oral biology simple study of some common oral diseases study some different terms used basically in operative dentistry study some different term used basically in prosthodontics study some different term used basically in oral surgery study some different term used basically in endodontic study some different term used basically in orthodontics simple terms used in periodontology and oral			

	medicine			
علم الجودة Quality	Introduction – evidence based dentistry – problem solving – decision making – scientific search – evidence appraisal – applying evidence into practice – evaluation of results – introduction to dental ethics – principle features of dental ethics – dentist and patients – dentist and society – dentist and colleagues – ethics and research	١	---	١
حقوق الإنسان Human rights	القانون الجنائي وحقوق الانسان حق الانسان في تغيير جنسيته او التخلي عن احد جنسيته المواثيق الدولية المتعلقة بحماية حقوق الانسان العولمة والتنمية بالحقوق الاقتصادية والاجتماعية والثقافية حق الانسان في الشرعية الاسلامية حقوق المرأة في القانون العام والتامين الاجتماعى الحق في التقاضى وحقوق الانسان الحقوق المدنية و السياسية الحقوق الاقتصادية للانسان	١	---	١

## Second year

ميكروبيولوجى <b>Microbiology</b>	Introduction – general bacteriology – genetics & genetic engineering – host parasite relationships – antibiotics & chemotherapy – general virology – hypersensitivity – Antigen & Antibody – staphylococci & enterococci – mycobacteria – gram-negative rods – spirochetes- non-enveloped DNA containing viruses – DNA containing viruses – systemic mycology – immunity against bacterial infection – microbiology of dental caries – microbiology of periodontal diseases – guidelines on infection control in dental clinics.	١	٢	٣
أدوية <b>Pharmacology</b>	General pharmacology – autonomic nervous system – skeletal muscle relaxants – autacoids – respiration – renal pharmacology – cardiovascular pharmacology – pharmacology of blood – psycho-neuro- pharmacology – hormones – chemotherapy – drug abuse – drug interactions – vitamins and food supplements – locally action drugs – prescription writing – practical revision	٢	٢	٤
باثولوجيا عامة <b>General pathology</b>	Introduction: pathology, its related disciplines & technical points – inflammation ( acute & chronic) – healing ( repair) – cell injury and cell death – reversible cell injury ( degeneration) – irreversible cell injury (necrosis-apoptosis) gangrene – circulatory disturbance (thrombosis, embolism, ischemia, infarction, hyperemia, hemorrhage, shock, oedema) – granulomas (tuberculosis, leprosy, bilharziasis, syphilis, rhinoscleroma, actinomycosis) – infectious disease (viral diseases, fungal diseases, protozoal disease) –	٢	٢	٤

	immunity and hypersensitivity (the immune system, immunodeficiency disease, hypersensitivity, autoimmune diseases)- genetic disorders – radiation injury – nutritional deficiencies – cellular adaptation and disorders of growth (atrophy, hypertrophy, hyperplasia, metaplasia, dysplasia) – neoplasia- general principles of neoplasia (classifications, criteria of benign and malignant tumours, grading, staging, methods of spread of malignant tumors) – aetiology of cancer – detailed study of the most common tumours.			
التشريح الوصفي <b>Dental anatomy</b>	Introduction – permanent maxillary incisors- permanent mandibular incisors- permanent maxillary canine - permanent mandibular canine - permanent maxillary premolars - permanent mandibular premolars – primary anterior teeth – chronology – permanent maxillary molars - permanent mandibular molars – physiologic tooth form – geometric outline of teeth – primary posterior teeth – occlusion of the primary teeth & permanent teeth.	٢	٣	٥
خواص المواد <b>Dental biomaterial</b>	Introduction & structure of matter& Physical properties of dental materials - Mechanical properties of dental materials - Hardness &Viscoelasticity- Metals & alloys- Adhesion- Corrosion- Polymers and polymerization - Gold alloys - Cobalt-chromium and titanium – Investment- Casting - Wrought dental alloys- Joining of metals- Dental Cement & Cavity liner materials- Dental amalgam- Composite resin- Adhesive systems- Impression materials- Model & Die materials- Dental ceramics& porcelain fused to metals- Polymeric denture base material- Soft lining	٢	٢	٤

	materials & artificial teeth- Endodontic materials- Dental waxes- Dental implant materials			
الإسعافات الأولية <b>First aid</b>	First aids & golden rules of first aid – characteristics of first aider- triage and mass causality – general trauma – specific trauma (head trauma, spinal trauma, chest trauma, abdominal trauma) – shock (types & management)- bleeding (types & first aid) – care of patient with burn – care of patient with poisoning- care of drowning - care of common bites & stings – care of fractures – angina & heart attach – contents of first aid kit.	١	١	٢
مكافحة العدوى <b>Infection control</b>	Infection control: an overview infection control in dentistry – chain of infection – nosocomial infection & health care associated infections- standards precautions – concept of hand hygiene – personal protective equipment- proper processing of patient care of equipment: cleaning, disinfection, sterilization- environmental surface control safe waste disposal including sharp instruments- aseptic techniques (applying & removing personal protective equipment – infection control & dental radiology- infection control & occupational health- safety goals & risk for nosocomial infection.	١	١	٢

Third year				
<p>تكنولوجيا الاستعاضة الصناعية</p> <p><b>Preclinical Removable Prosthetic Dentistry</b></p>	<p>Introduction to the course- Anatomical landmarks related to denture construction- Impression trays&amp; Construction of master casts - Record blocks</p> <p>Jaw relation terminology for edentulous patient&amp; Mandibular Movement- Articulators and mounting</p> <p>Selection of artificial teeth- Basic arrangement of anterior teeth- Basic arrangement of posterior teeth</p> <p>Complete denture wax-up and flasking procedure-</p> <p>Deflasking of complete denture - Relief in complete denture- Principles of selective grinding, finishing , and polishing of the dentures</p> <p>- Denture repair- Laboratory techniques in relining and rebasing - Types of Removable Partial Dentures and parts of a Removable Partial Denture and their functions- Classification of partially edentulous arches- Surveying of partially edentulous casts</p> <p>Abutment teeth preparation (anterior &amp;. Posterior teeth preparation) - Direct Retainers. (a. Intra-coronal direct retainers, b.Extra-coronal direct retainers: Suprabulge Direct Retainers)</p> <p>Direct Retainers ( Infra bulge Direct retainers)</p> <p>Indirect Retainers- Major Connector I. (• General Considerations • Mandibular Major Connectors. • Minor Connectors)</p>	١	٤	٥
	<p>Designing removable partial dentures- Lab procedures for removable partial denture construction- Acrylic removable partial dentures</p>			
<p>تكنولوجيا التيجان والجسور</p>	<p>Introduction &amp; terminology- Primary impression</p>	١	٤	٥



<p><b>Preclinical Fixed Prosthodontics</b></p>	<p>and related procedures- Principles of tooth preparation- <math>\frac{3}{4}</math> tooth preparation &amp; modifications Inlays &amp; onlays tooth preparation - Complete cast crown tooth preparation- PFM Preparation- All-ceramic tooth preparation Provisional restorations (Ready-made) 2nd semester- Laboratory steps for cast restoration reconstruction- Working cast and Die fabrication Wax Pattern and spruing- Investment and Investing Burn-out- Dental Casting Alloys- Casting Techniques- Casting Failures- Finishing and Polishing.</p>			
<p>تكنولوجيا طب الأسنان التحفظي</p> <p><b>Preclinical Conservative Dentistry</b></p>	<p>Introduction to Conservative Dentistry Objectives and Terminology - Tooth numbering Dental Caries: -Definition -Classification -Sites and Progression of Caries -Black's classification -Classification according to site and stage principles of Cavity Preparation - biologic principles- mechanical principles - Outline Form Resistance and Retention Form. - Convenience Form -Removal of Remaining Carious Dentin -Finishing Enamel Walls Instruments and Instrumentation *General Classification *Hand Instruments *Powered Cutting Equipment (Hand pieces, Burs, Abrasives) class I- classII- class III-class V Pulp Protection Therapy:</p>	١	٤	٥



	- Varnishes - Liners - Bases Dental Matrices & separation Amalgam Restoration Composite restoration			
بيولوجيا الفم <b>Oral Biology</b>	Tooth development- Enamel -Dentine Cementum – Pulp- Periodontal ligament Embryology - Alveolar bone - Oral mucosa Salivary glands- Eruption Shedding Growth of maxilla and mandible Temporomandibular joint & Maxillary sinus & Lymph drainage of the teeth and oral tissues	٢	٢	٤
أمراض الباطنة <b>Internal medicine</b>	Cardiovascular system- chest – gastrointestinal – hepatology – renal – blood – endocrine – neurology – rheumatology	٢	١	٣
جلدية وتناسلية <b>Dermatology</b>	Viral skin diseases with oral manifestations: Herpes simplex Herpes zoster Warts Kaposi's sarcoma Fungal diseases: Candidiasis Autoimmune skin diseases with oral lesions: Pemphigus vulgaris Systemic lupus Psoriasis Lichen planus Behcet's disease Erythema multifarma Oral leukoplakia Sexually transmitted diseases: Syphilis AIDS			
جراحة عامة <b>General surgery</b>	Anatomy of neck- Thyroid gland, anatomy, physiology, goiters- Thyrotoxicosis, solitary thyroid nodule- Malignant thyroid diseases - Wound healing- Parotid gland- Submandibular, sublingual glands- Midline neck swelling- Lateral neck swelling- Shock- Hemorrhage - Cervical lymphadenopathy- Skin tumours- Ulcers, sinuses, fistulae, of the neck- Blood transfusion- Surgical site infections- Post-operative complications - Oral cavity lesions	٢	١	٣
انف واذن وحنجرة <b>ENT</b>	<b>Otology</b> (Symptomatology- Clinical Examination. Investigations- Differential Diagnosis of Painful Ear- Differential Diagnosis of Discharging Ear)			

	<p><b>Rhinology</b> (Symptomatology- Clinical Examination- Investigations. DD of Nasal Obstruction: ١. Diffuse causes- ٢. Septal causes- Causes from the roof-DD of Headache- Nasal Trauma)</p> <p><b>Pharyngology</b> (Symptomatology- Clinical Examination. Investigations- Differential Diagnosis of Sore Throat-Sleep Disturbances)</p> <p><b>Nsopharynx</b> (Mouth breathing Management)</p>			
<p>رمد</p> <p><b>Ophthalmology</b></p>	<p>Anatomy of the eye, orbit and ocular appendages. -Cavernous sinus thrombosis -Anatomy of midfacial bones, blood supply &amp; innervation - le Fort fractures -Modified le Fort classification practical points and management. -Visual acuity testing, cranial nerves examination. Important causes of visual acuity drop (cataract - endophthalmitis - Age related macular degeneration - glaucoma - diabetic retinopathy - endophthalmitis ) -conditions of common interest between ophthalmology and dentistry ( Marcus Gunn Jaw Winking - DISEASES causing jaw pain - Behcet disease - Sjogren's syndrome - Ophthalmic complication of dental anesthesia )</p> <p>Differential diagnosis of red eye .</p>			

<b>Fourth year</b>				
التشخيص <b>Oral Diagnosis</b>	Introduction to oral diagnosis – Diagnostic Chart – Patient history – Clinical examination – Extra-oral examination – Intra-oral examination - Lymph nodes – Laboratory aids to diagnosis – Biopsy – Peripheral oral Exophytic lesions – Advanced diagnostic technique – Methods of differential diagnosis of oral ulcer – Methods of differential diagnosis of red & white lesions – Diagnosis of oro-facial pain.	١	٢	٣
التيجان والجسور <b>Fixed Prosthodontics</b>	Diagnosis and treatment planning - Tooth loss and bridge types - Framework design and metal selection for metal ceramic restoration - Pontic design – Connectors - Color and shade selection - Porcelain application for metal ceramic restoration - Try-in procedure in FPD - Luting agents and cementation procedures - Principal of occlusion - Bite registration – Laser - Restoration of endodontically treated teeth.	١	٣	٤
باثولوجيا الفم <b>Oral Pathology</b>	Introduction & ental Caries – Pulp Lesions – Periapical Lesions – Osteomyelitis – Oral Cysts – Developmental Anomalies of Oral & paraoral structures – Odontogenic Tumors – Bone Lesions– Reactive Lesions – White Lesions – Premalignant Lesions – Benign Non odontogenic Tumors – Malignant Non odontogenic Tumors – Salivary Gland Diseases – Salivary Gland Tumors.	٢	٢	٤
جراحة الفم والتخدير الموضعي <b>Oral Surgery</b>	Introduction to LA – Pharmacology of LA drugs and Vasoconstrictives – Armamentaria – General considerations for LA delivery – Anatomical considerations – hemoglobin and myoglobin structure and function – Maxillary	١	٢	٣

	techniques – Mandibular techniques – Supplementary & Extraoral techniques – Local complications of LA – Systemic complications of LA and drug-drug interactions – Dental extraction Surgical extraction– Impaction – Complications of extraction – Medically compromised patients.			
الاستعاضة الصناعية  <b>Removable prosthodontic department</b>	Diagnosis and Mouth Examination – Prin Impressions – Secondary Impression Theories Making – Retention and stability of comp denture – Face bow and articulator – Jaw Relation – Try-In – Denture insertion – Occlusal disharmony and Selective grinding – Patient complaints Relining and rebasing of Complete denture – Treatment of some complete denture problem Management of flat Ridges and neutral zone technique Single Comp Denture – Tooth supported over denture – Immed complete &Partial dentures – Complete denture occlusion – Implant supported over denture – Geriatrics.	١	٢	٣
أشعة الفم  <b>Oral Radiology</b>	Radiation physics – Radiation characteristics Dental x-ray equipment & film – Normal anatomy Intra-oral Radiographic Techniques (Periapical, Bitewing & Occlusal) – Paralleling technique – Bisecting technique – Bite wings technique Processing – Errors Occlusal & localization technique – Radiation protection & infection control – Radiation biology Dental X-ray image characteristics – Panoramic radiograph – Extra-oral technique and landmarks Digital	١	٢	٣

	radiograph– Principles of radiographic interpretation – Interpretation of periodontal diseases Interpretation of caries – Interpretation of traumatic injury Inflammatory jaw lesions – Cyst of the jaws –Bone diseases – Bone tumors – advanced techniques (MRI- CT- Cone Beam ).			
طب الأسنان التحفظي <b>Conservative Dentistry</b>	Preliminary consideration of operative procedures – treatment planning –biological consideration of restorative materials – treatment of incipient caries –treatment of moderate and deep carious lesions – non carious lesions – dentine hypersensitivity – glass ionomer – adhesion.	١	٣	٤
علاج الجذور <b>Endodontic</b>	Scope of endodontic- internal anatomy- instruments- access opening- working length determination- apex locator- irrigation- cleaning and shaping- rotary instrumentation- obturation materials- endodontic techniques- endodontic sealer- endodontic misshapes- case selection.	١	٣	٤

<b>Fifth year</b>				
طب الاسنان التحفظي <b>Conservative Dentistry</b>	Restoring contact and contours- classII ,IV, V direct composite- Posterior composite- indirect tooth colored restorations- Additional conservative esthetic procedure- laser in operative dentistry- Failure of restorations- Repair versus failure	١	٤	٥
التيجان والجسور <b>Fixed Prosthodontics</b>	Periodontal consideration In FPD- Esthetic consideration In FPD- All-ceramic restorations- Fiber reinforced composite restoration- Resin bonded restorations- Porcelain laminate veneers- Implant supported prosthesis- Retainers- Care and maintenance- Failures of fixed prosthodontics- Repair of crown and bridge- Removal of fixed prostheses	١	٤	٥
طب الفم <b>Oral medicine</b>	Basic immunity- Allergy- White and red lesions- Ulcerative and vesiculobullous lesions of the oral mucosa- Tongue diseases- Blood dyscrasias- Bleeding and clotting disorders- Dental management of systemic diseases- Infectious diseases (AIDS)- Hyperpigmentation- Salivary gland diseases- Medical chart	٢	٢	٤
أمراض اللثة <b>Periodontology</b>	Anatomy of the periodontium- Dental plaque- Microbial Interactions with the Host- Classification of periodontal Diseases- Dental calculus & Local Predisposing Factors in periodontal disease- Influence of Systemic Disorders on the Periodontium- Gingival inflammation and Acute gingival conditions- Gingival enlargement- Plaque control- periodontal chart- Instrument and instrumentation- Chronic periodontitis + Periodontal pocket- Aggressive periodontitis	٢	٢	٤

	+ Periodontal abscess- Determination of the prognosis + Treatment plan- Chemotherapeutic agents- Periodontal flaps and the flap technique for pocket therapy- Gingival surgical techniques- Furcation involvement- Osseous Surgery- Regenerative techniques- Mucogingival surgery- Supra and sup gingival scaling and root planing			
جراحة الفم والوجه والفكين والتخدير العام <b>Oral and Maxillofacial Surgery</b>	Revision on dental extraction- Preprosthetic surgery- Orofacial infections- Cysts of the oral and para-oral region- Oral and maxillofacial tumours- Dental and maxillofacial traumas- Temporomandibular joint disorders- Salivary gland diseases- Craniofacial deformities	٢	٣	٥
تقويم الأسنان <b>Orthodontics</b>	Ethics and medico-legal issues. Growth and development of the head. Development of normal occlusion. Etiology of malocclusion. Terminology and classification of malocclusion. Diagnostic procedure in orthodontics. Biomechanical principles in orthodontics. Tissue changes in orthodontics. Iatrogenic effects in orthodontics. Sequele of untreated malocclusion. Preventive orthodontics. Interceptive orthodontics. Orthodontic appliance design. Therapeutic extraction. Adjunctive orthodontics. Orthodontic retention and relapse. Impressions and wire bending. Description of normal occlusion. Problem based learning	٢	٢	٤
طب أسنان الأطفال وصحة الفم	<b>Pedodontics:</b> Development of dentition, teeth eruption- Differences between primary	٢	٢	٤



<b>Pediatric Dentistry and Dental Public Health</b>	<p>and permanent dentition- Development of occlusion- Preventive orthodontics and space management- Problems in early mixed dentition- Interceptive Orthodontics- Oral Habits- Caries In Children- Basic behavioral guidance technique- Advanced behavioral guidance technique- Examination and Radiology in pediatric dentistry- psychological and pharmacological management in children- Oral surgery in children (L.A and exodontia)- Restorative Dentistry (Class I, Class II, Class III, Class V, strip crowns)- Restorative Dentistry (Stainless Steel Crowns)- Pulp Therapy in children (Pulpotomy)- Pulp Therapy in children (Pulpectomy)- Pulp therapy in young permanent dentition- Traumatic injuries in primary dentition- Traumatic injuries in young permanent dentition- Children with special needs (Medically compromised)- Children with special needs (Intellectually disabled)- Gingival diseases in children.</p> <p><b>Public health:</b> epidemiology of dental caries, caries indices, epidemiology of periodontal diseases, periodontal indices, caries risk and caries assessment, fluoride, fissure sealant, minimally invasive dentistry, a traumatic restorative technique, health education.</p>			
<b>Removable prosthodontic department</b> الاستعاضة الصناعية	<p>Introduction and diagnosis for partial denture- Mouth preparation- Impression techniques for R.P.D- Occlusal relationships for R.P.D- Class I- Class II- Class III and Class IV- Try in &amp; insertion for R.P.D- Patient Complains- Tissue damage- Introduction to maxillofacial prosthesis- Acquired maxillary defect- Congenital defect- Stent- splint- Radiation</p>	١	٤	٥

علاج الجذور Endodontic	Diagnosis Endodontic radiography Periapical pathosis Endodontic emergency Management of incompletely formed roots Vital pulp therapy Endo-perio problems Traumatic injuries Periapical surgery Restoration of endodontically treated teeth Bleaching	١	٣	٤
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