

Research Proposals and Courses Uploading Links for Second Semester (Spring) 2019/2020 Faculty of Dentistry

#	Department	Level	Course title	Course Code	Research topics	Upload link
1	Elective	1 st	Introduction to Dentistry	ITD211	<ol style="list-style-type: none"> History of dentistry in the ancient Egypt History of dentistry in old China History of dentistry in Europe from 16th to 18th century Dentistry in Arabian middle age History of dental caries and dental restorations History of infection control and dental anesthesia Dental team work Objectives of pediatric dentistry, orthodontics & role of pedodontist, orthodontist Objectives of oral & maxillofacial surgery, radiology & role of oral surgeon, radiologist Objectives of Oral medicine & periodontology & role of Oral physician & periodontist Objectives of prosthodontics (fixed, removable) & role of prosthodontist Objectives of Oral pathology & role of pathologist 	
2	Elective	1 st	Dental ethics and law	ETH211	<ol style="list-style-type: none"> 1-ethical decision making and its steps 2- ethical theories and its principles in dentistry 3- codes and principles of dental ethics 4- ethical legal consent 5- ethical guidance for occupational groups 6- dental records and its importance 	

موضوعات الابحاث تشمل مقررات لائحة 184 و ما يعادلها من مقررات لائحة 220

3	Medical science	1 st	Microbiology	MIC121	<ol style="list-style-type: none"> 1- Mechanism of Dental plaque & rule of bacteria in Formation, causes, prevention & treatment 2- Dental Caries & rule of Streptococcus. Mutans & Lactobacillus spp. 3- Microbial flora in oral cavity & host defence mechanisms that operate in oral cavity. 4- Hepatitis viruses & importance to study in dentistry 5- Give an overview on HIV & Acquired immunodeficiency syndrome, focusing on its importance in dentistry 6- Give an overview of the Immune system, focusing on antigens, immunoglobulin structure & function, humoral and cell-mediated immune response. 7- Antimicrobial chemotherapy with specific reference to the choice of antibiotics in dentistry. 8- Causes of oral ulcerations with specific reference to Candida & Oral Candidiasis 9- Sterilization and disinfection, while focusing on its importance in dentistry. 10- Mycobacterium tuberculosis, causes, prevention & treatment with specific reference to Oral manifestations of tuberculosis 	
4	Basic science	1 st	General chemistry	GCH111	<ol style="list-style-type: none"> 1. Application of gas laws in anaesthesia 2. Gas Laws and Clinical Application 3. Application of charles' law in medicine 4. Fundamental gas laws relevant to critical care medicine 5. Colligative Properties of Electrolyte Solutions 	

5	Basic science	1 st	Biology	BIO111	<ul style="list-style-type: none"> 1- Effect of oxidative stress on liver and kidney and role of peroxisomes and antioxidants for elimination of reactive oxygen species 2- The history and evolution of human cloning and role of cloning in medicines. 3- Cell receptors role in cellular communications and effect on human body 4- Cellular respiration and photosynthesis similarities and differences 5- Cell cycle phases, mitosis and regulation 6- Meiosis, gamete production and fertilization in primates 7- Stem cells. 8- Cellular mechanisms of aging and disease 9- Transport mechanisms in animalia 10- Effect of smoking, alcohol and drug use by parents on the embryonic development of the child. 11- Enzymes, hormones and their role in different bioactivities 	
6	Basic science	1 st	Genetics	GEN111	<ul style="list-style-type: none"> 1- Clinic and genetics of chromosomal diseases associated with structural chromosome rearrangements. 2- What is the numerical chromosomal abnormalities? How it can be easily tested? Discuss the most common. 3- Explain how genetic factors increase cancer susceptibility 4- Mutations of genes in humans: mechanisms and consequences. 5- Genetic polymorphism and diseases. 6- Mendelian inheritance 7- Hereditary of sex-linked traits 8- DNA technology in medical genetics 9- Autosomal recessive disorders 10- Multifactorial diseases 11- Mitochondrial disorders 	

موضوعات الأبحاث تشمل مقررات لائحة 184 و ما يعادلها من مقررات لائحة 220

7	Basic science	2 nd	Statistics	STA221	1.Types of statistical data 2.Types of frequency distribution tables 3.Types of charts and their uses 4.Measures of central tendency in statistics 5.Measures of dispersion in statistics	
8	Elective	2 nd	Dental practice managements	DPM421	Dental practice design and management are the doors for success of dental treatment, discuss the previous statement with special reference to: 1. Dental office design. 2. The role of each member in the dental team in the dental practice. 3. Management of patients with special conditions.	
9	Elective	2 nd	Forensic dentistry	FOD321	Select and analyze forensic dentistry real case solving with dental forensic evidence, where forensic dentists play a central role in bringing unsolved investigations by justice officials to a satisfactory conclusion in variable types of cases such as: a. Criminal case in court b. Accident c. Mass disaster d. Age estimation of missing person e. Personal identification (establishing individual identity)	
10	Medical science	2 nd	General Pathology	GPT221	Acute inflammation. Repair .Thrombosis Embolism .Infarction Gangrene .Edema Shock .Benign tumors Malignant tumors .Chronic inflammation Syphilis .Tuberculosis Bilharziasis .Fungal infection Carcinogenesis	
11	Medical science	2 nd	Biochemistry -1		Biological importance of carbohydrates.	
12	Medical science	2 nd	Biochemistry -2		Diabetes mellitus: Effects of diabetes mellitus on carbohydrates metabolism	

موضوعات الأبحاث تشمل مقررات لائحة 184 و ما يعادلها من مقررات لائحة 220

13	Conservative dentistry	2 nd	Dental materials II	DMT212	<ol style="list-style-type: none"> 1.properties, casting and recent advances in base metal alloys 2.properties, methods of strengthening and casting of gold alloys 3.properties and different processing methods of dental ceramics 4.Emerging new ceramics (advantages, disadvantages, properties and applications) 	
14	Conservative dentistry	3 rd	Conservative dentistry II	COD322	<ol style="list-style-type: none"> 1.Contemporary pulp capping materials and future perspectives 2.Recent advances in matrices and wedges 3.Effect of resin composite formulation on clinical behavior 4.Amalgam restoration: the material of yesterday 	
15	Conservative dentistry	3 rd	Endodontics II	END322	<p>Success of endodontic treatment is multi factorial process, discuss the different steps to be applied in each case with special reference to the following:</p> <ol style="list-style-type: none"> 1. The methods of tooth working length determination and their accuracy level. 2. The different techniques used for root canal cleaning and shaping mentioning the advantages & disadvantages of each. 3. Different methods used for root canal disinfection. 4. Different methods used for root canal Obturation and how to avoid obturation errors. 5. Different types of root canal sealers used in obturation with special focus on the advantages and disadvantages of each type. 	
16	Conservative dentistry	3 rd	Fixed prosthodontics II	FPD322	<ol style="list-style-type: none"> 1.Definitive Working Casts and Dies: From conventional to Digital Approach 2.Laboratory Fabrication of Successful Metal Restorations: Steps, Failures and Innovations 	
17	Oral medicine, radiology, diagnosis and periodontology	3 rd	Dental Radiology	RAD321	<ol style="list-style-type: none"> 1. Biological damaging effects of x-ray. 2. Radiation protection (operator, patient and environment). 3. Digital Radiography. 4. Image Receptors (conventional and digital). 5. Differential diagnosis of periapical inflammatory jaw lesions. 	

موضوعات الأبحاث تشمل مقررات لائحة 184 و ما يعادلها من مقررات لائحة 220

					6. Differential diagnosis of multi-locular radiolucent lesions with well-defined margins. 7. Differential diagnosis of peri-coronal lesions. 8. Panoramic radiography (principle, technique, anatomical landmarks, advantages, disadvantages and applications). 9. Radiographic interpretation (concepts, ideal requirements, interpretation formulation and significance). 10. Processing (latent image formation, chemistry types and errors).	
18			Radiology 1.		Mechanism of x-ray production (nature of x-ray and machine components)	
19			Radiology 2.		Digital Radiography.	
20	Conservative dentistry	4 th	Conservative dentistry IV	COD424	1. Contemporary approaches in management of deep caries 2. Dental caries is an epidemic disease: the possible attributes 3. Biocompatibility of contemporary restorative materials 4. Evidence based guidelines for management of teeth discoloration	
21	Conservative dentistry	4 th	Endodontics IV	END424	Management of non-vital immature teeth is becoming an easy challenge nowadays. Discuss the previous statement with special reference to: 1. Pulp regeneration and revascularization newly introduced procedures in endodontics. 2. Nanotechnology as an assisting factor in the success of pulp regeneration and revascularization. 3. Radiographic assessment role in the successful regeneration techniques. 4. Different methods for tooth isolation during endodontic treatment.	
22	Conservative dentistry	4 th	Fixed prosthodontics IV	FPD424	1. Dental Connectors in fixed Prosthodontics Success & Failure 2. Principles of Ideal Ceramo-metallic Pontic Design	

موضوعات الأبحاث تشمل مقررات لائحة 184 و ما يعادلها من مقررات لائحة 220

23	Medical science	4 th	General medicine and dermatology General medicine I & II	GMD421	1- HCV in Egypt 2- Skin lesions and systemic diseases 3- COVID-19 4- HBV associated skin diseases 5- Disease outbreaks around the world	
24	Oral medicine, radiology, diagnosis and periodontology	4 th	Oral Medicine, Diagnosis & Periodontology I	OMD411	1. Lichenoid drug reactions (etiology, differential diagnosis and treatment) 2. Dental implications of hemolytic anemia 3. Diagnosis of patients with bleeding disorders (history – clinical examination – laboratory investigations) 4. Differential diagnosis of cervical lymphadenopathy	
25			Oral Medicine, Diagnosis & Periodontology II	OMD422	1. Differential diagnosis of glossodynia 2. Role of dentist in diagnosis and treatment of diabetic patients 3. Medical emergencies in dental practice; Prevention, diagnosis and management 4. Clinical implications of viral hepatitis in dental practice 5. Differential diagnosis of oral ulcerative lesions in AIDS 6. Diabetes and periodontal disease.	
26	Oral surgery	4 th	Oral surgery II	OSG422	1. Management of Medically compromised patients with Heart Diseases 2. Management of Medically compromised patients with Liver Diseases 3. Management of Medically compromised patients with Renal Diseases 4. Management of Medically compromised patients with Respiratory Diseases 5. Management of Medically compromised patients with Thyroid & Adrenal cortex Diseases. 6. Management of Post-extraction Hemorrhage including Introduction (patient motivation & management of psychogenic shock), Content (clinical examination, local and systemic causes of bleeding, Laboratory investigations required, treatment of the cause) & conclusion (dental management)	

موضوعات الأبحاث تشمل مقررات لائحة 184 و ما يعادلها من مقررات لائحة 220

27	Orthodontics	4 th	Orthodontics II	ORT422	1.Effect of growth on selection of orthopaedic appliances. 2.Anchorage preparation in orthodontic treatment. 3.Accelerated orthodontic tooth movement. 4.Recent trend in orthodontic diagnosis. 5.Management of Angle class 1 malocclusion.	
28	Removable prosthodontics	4 th	Removable prosthodontics IV	RPD424	1.Sequalae of wearing complete denture 2.Overdenture attachment 3.Loading protocols for dental implants 4.Principles of occlusion in complete denture 5.Applications of neutral zone in complete denture 6.Residual ridge preservation	
29	Medical science	4 th	General surgery 2 (ENT)		Oro-antral fistula	
30	Removable prosthodontics	5 th	Removable prosthodontics V	RPD513	Treatment modalities of free-end saddle cases	
31	Removable prosthodontics	5 th	Removable prosthodontics VI	RPD526	Management of palatal defects	
32	Conservative Dentistry	5 th	Endodontics V	END 515	Diagnosis is the primary step for successful management of endodontic cases. Discuss the previous statement with special reference to: 1. Diagnostic tools used for evaluation of the vitality and periodontal condition of the tooth. 2. Different management routes for vital and non-vital teeth with immature roots. 3. Classification and management of diagnosed endo-perio problems.	
33	Conservative Dentistry	5 th	Endodontics VI	END526	Management of traumatized teeth needs special management to reach a successful outcome leading to perfect function and esthetics. Discuss the previous statement with special reference to: 1. Classification of different traumatic injuries and the management of each. 2. Indications and contraindications of endo-surgery	

					<p>3. Different techniques used for bleaching of endodontically treated teeth</p> <p>4. Different solutions used for restoration of endodontically treated teeth</p>	
34	Conservative Dentistry	5 th	Conservative Dentistry	COD515	<p>1- Smile design : transition from mock-up to digitalization</p> <p>2- Bonding to tooth structures, a procedure of variable efficiency requiring further innovation</p>	
35	Conservative Dentistry	5 th	Conservative Dentistry	COD526	<p>1- Tooth erosion: A multifactorial condition</p> <p>2- Rehabilitation of mutilated teeth: challenges solved using biomimetic restorations</p> <p>3- Repair or replacement of restoration : a critical question</p>	