

Fifth Year Curriculum(30 weeks)

1-Subject title	Prosthodontics	
2-Number of credits	Theory: 2	Clinical: 6
3-Number of contact hours	Theory: 1h/wk.	Clinic: 6h/wk.
4-Subject time	Fifth Year	

No.	Title of The Lectures		Hours
1	Occlusion in Complete Denture	<ul style="list-style-type: none"> • Occlusion • Articulation • Centric relation • Centric occlusion • Occlusal balance • Occlusal harmony • Occlusal interference • Maximum intercuspation <ul style="list-style-type: none"> ✓ Requirements of ideal complete denture occlusion ✓ Objectives of occlusion in complete denture • Requirement of complete denture occlusion • Types of occlusion • Balance occlusion <ul style="list-style-type: none"> ✓ Advantages of balance occlusion • Factors affecting the balanced occlusion (laws of articulation) <ul style="list-style-type: none"> ✓ Condylar guidance ✓ Incisal guidance ✓ Plane of occlusion ✓ The compensating curve ✓ Cuspal angulations • Interaction of the five factor • <i>Lingualized occlusion</i> • Monoplane or occlusion (neurocentric) • Types of occlusal scheme <ul style="list-style-type: none"> ✓ retention, stability and support of complete denture 	1
2	Occlusion in Complete Denture (Continue)		1
3	Retention, Stability And Support	<ul style="list-style-type: none"> • Retention • Factors affect in the retention of CD <ul style="list-style-type: none"> ✓ Mechanical factors ✓ Muscular factor • Denture surface <ul style="list-style-type: none"> ✓ Occlusal surface ✓ Polished surface 	1

		<ul style="list-style-type: none"> ✓ Impression surface • Stability ✓ Various factors that affecting the stability • Support • Nature of the Supporting tissue • Mandibular anatomical consideration • Mandibular residual ridge • Maxillary anatomic consideration • Factors that influence the form and size of the supporting bone 	
4	Retention, Stability And Support (Continue)		1
5	Post Insertion Problems	<ul style="list-style-type: none"> • Classification of Post-Insertion Denture problems ✓ Complaints about comfort of the denture ✓ Complaints about function of the denture ✓ Complaints about esthetics ✓ Complaints about phonetics • Complaints about comfort of the denture ✓ Sore spot ✓ Burning sensation ✓ Redness ✓ Pain in TMJ ✓ Tongue and cheek biting ✓ Swallowing & sore throat ✓ Nausea and gagging ✓ Clicking of teeth ✓ Fatigue of the muscles of mastication • Complaints about function of the denture ✓ Loose denture (poor retention) ✓ Unstable denture • Complaints about esthetics • Complaints about phonetics • Oral mucosal Lesions induced by removable dentures • Causes of Mucosal Irritation • Types of these lesions ✓ Denture stomatitis ✓ Angular Cheilitis ✓ Flabby ridge ✓ Denture irritation hyperplasia ✓ Traumatic ulcer ✓ Burning Mouth Syndrome ✓ Hypersensitivity 	1
6	Post Insertion Problems (Continue)		1
7	Complications Of Complete Denture	<ul style="list-style-type: none"> ▪ Changes occurred required Long term recall appointments ▪ Some Clinical Problems and Solutions associated with complete denture ✓ Problems of reduced salivary flow 	1

		<ul style="list-style-type: none"> ✓ Aetiology of reduced salivary flow ✓ Management of dry mouth ▪ Hard and soft materials for modifying the impression surface of dentures ▪ Other complications <ul style="list-style-type: none"> ✓ Flabby ridge ✓ Denture breakages ✓ Debonding of teeth ✓ Gagging reflex (retching) ✓ Burning mouth syndrome ✓ Disturbance of speech 	
8	Complications Of Complete Denture (Continue)		1
9	Immediate Denture	<ul style="list-style-type: none"> ▪ Introduction, Definition, Indications, Contraindications, Advantages, Disadvantages ▪ Types of immediate dentures ▪ Explanation to the Patient Concerning Immediate Dentures ▪ Diagnostic steps, Impression techniques, Jaw relations record, Try-in, Cast trimming, Waxing and flasking, Surgical splints, Setting of teeth, Processing and finishing, Insertion ▪ Post-operative care and instructions 	1
10	Immediate Denture (Continue)		1
11	Classification system for completely edentulous patients	<ul style="list-style-type: none"> ▪ Development of the classification system ▪ Diagnostic Criteria ▪ Integration of Diagnostic Findings ▪ Diagnostic Classification of Complete Edentulism ▪ Reasons for a Classification System ▪ Features govern classes differentiation from each other ▪ Guidelines for Use of the Complete Edentulism Classification System ▪ Bone height-mandible only ▪ Residual ridge morphology-maxilla only ▪ Muscle Attachments: Mandible only ▪ Maxillomandibular Relationship ▪ Integration of Diagnostic Findings ▪ Arrangement of artificial teeth in abnormal jaw relations ▪ Arrangement of anterior teeth in maxillary protrusion ▪ Arrangement of artificial teeth in abnormal jaw relations ▪ Arrangement of anterior teeth in mandibular protrusion 	1
12	Classification system for completely edentulous patients (Continue)	<ul style="list-style-type: none"> ▪ 	1
13	Posterior palatal seal area	<ul style="list-style-type: none"> ▪ Posterior palatal seal area 	1

		<ul style="list-style-type: none"> ▪ Anatomical and Physiological Considerations for Posterior Palatal Seal ▪ Methods of location of anterior vibrating line (AVL) ▪ Classification of soft palate ▪ Designs of the posterior palatal seal ▪ Methods or techniques of recording posterior palatal Seal area ▪ Error in recording of posterior palatal seal 	
14	Single CD	<ul style="list-style-type: none"> • Maxillary complete denture opposing by complete mandibular dentition • Techniques used to determine occlusal modifications prior to denture construction • Upper complete denture opposing by mandibular partial denture • Complications of single CD <ul style="list-style-type: none"> ✓ Combination Syndrome and Associated Changes (Kelly's Syndrome) ✓ Setting of teeth and occlusal concept ✓ fracture of Denture ✓ Wear of Teeth • Mandibular single denture • Steps for Single Denture construction 	1
15	Single CD (Continue)		1
16	Geriatric dentistry	<ul style="list-style-type: none"> ▪ Definitions ▪ Factors influencing Aging ▪ Goal of Geriatric dentistry ▪ Objectives of Geriatric dentistry ▪ Psychological disorders of elderly patients generally seen by prosthodontist ▪ Factors that influence the patient's response ▪ Seven basic personality traits will be considered in the light of their influence on success in dentistry ▪ Systemic Diseases and its dental relation ▪ Geriatric dentistry related to prosthetic part 2 	1
17	Maxillofacial Prosthesis	<ul style="list-style-type: none"> ▪ Objectives of maxillofacial prosthesis ▪ Maxillofacial Classification ▪ Extra Oral Appliances ▪ Intra Oral Appliances ▪ Retentive Aids in Maxillofacial Prosthodontics ▪ Steps of maxillofacial prostheses construction 	1
18	Maxillofacial Prosthesis (Continue)		1
19	Residual Ridge resorption	<ul style="list-style-type: none"> • Structural characteristics of alveolar 	1

		<ul style="list-style-type: none"> bone • Pathology of RRR • Pathogenesis of RRR • Direction of bone resorption • Patterns of bone resorption • Consequences of RRR • Etiology of RRR • RRR is a multi-factorial, biomechanical disease <ul style="list-style-type: none"> ✓ Metabolic factors ✓ Dietary Factors • Osteoporosis and residual ridge modeling • Prosthetic factors • Treatment and Prevention of RRR 	
20	Residual Ridge resorption (Continue)		1
21	Dental implantology	<ul style="list-style-type: none"> • implant classification <ul style="list-style-type: none"> ✓ Classification of endosseous implants according to their design ✓ Classification of endosseous implants according to their material ✓ Classification of endosseous implants according to surface characteristics ✓ Classification of endosseous implants according to the insertion technique ✓ Classification of endosseous implants according to surgical stages ✓ 6.classification of endosseous implants according to the time of installation ✓ 7.classification of endosseous implants according to time of prosthetic loading • Factors affecting healing <ul style="list-style-type: none"> ✓ Surgical technique ✓ Premature loading ✓ Surgical fit ✓ Bone quality and quantity ✓ Physical condition of the patient • Components of branemark implant system • Prosthetic options in implant dentistry • Overdenture (implant supported overdenture) • Basic sequence of procedures in implants treatment <ul style="list-style-type: none"> ✓ Radiographic stent • Implant success and survival • Indications of implant denture • Contradictions of implant denture • Characteristics of the osseointegrated implant • Basic guiding factors of 	1

		<p>osseointegration</p> <ul style="list-style-type: none"> • Occlusion in implant-supported prostheses • Occlusal form and scheme 	
22	Dental implantology (Continue)		1
23	Esthetics in CD	<ul style="list-style-type: none"> ▪ Definition ▪ Factors Influencing the Appearance of Dentures ▪ Steps in achieving esthetic complete denture ▪ Additional clinical and technical considerations in anterior tooth selection patient preferences ▪ Gingival Contour ▪ Denture base factors ▪ Characterization ▪ Final Decision for Esthetics 	1
24	Characteristics Of Ideal Materials For Dental Implant	<ul style="list-style-type: none"> ▪ osseointegration ▪ Biomaterials ▪ Selection of Biomedical Materials ▪ Classification of implant materials ▪ Types of surface modification: ▪ Surface design ▪ Ceramic coating ▪ Super structure ▪ Guided Bone Regeneration 	1
25	Copy denture	<ul style="list-style-type: none"> • Definition • Aims • Indication • Technique for denture duplication • Laboratory procedure for denture duplication • Denture duplication technique <ul style="list-style-type: none"> ✓ The silicon putty ✓ The agar- Agar ✓ Modification/ Further application • Problem Areas in Fabrication and Solutions 	1
26	Over Denture	<ul style="list-style-type: none"> ▪ The important goals of overdenture ▪ Indications of Overdenture. ▪ Contraindications of Overdenture ▪ Advantages of overdenture prosthesis ▪ Disadvantage of overdenture ▪ Overdenture Classification ▪ Sequence of Treatment of Patient Who Need an Overdenture ▪ Impressions of the Abutment Teeth ▪ Denture Base designing ▪ Implant supported overdenture ▪ Type of implant overdenture ▪ Indication of Implant supported overdenture ▪ Contraindication ▪ Advantages of implant supported over denture ▪ Disadvantages of implant supported over denture 	1

27	Over Denture (Continue)		1
28	Neutral zone in CD	<ul style="list-style-type: none"> ▪ Definitions ▪ Neutral Zone Concept ▪ Objectives of Neutral zone Techniques ▪ Indications of Neutral zone Techniques ▪ Recording neutral zone in final impression stage ▪ Recording neutral zone in jaw relation visit ▪ Recording neutral zone in try in stage ▪ Recording neutral zone in finished denture ▪ Limitation for the success of neutral zone impression technique 	1
29	Attachments in over denture	<ul style="list-style-type: none"> • Function of attachment • Factors affecting attachment selection • Retentive Mechanism • Classification of Attachments • Types of attachments • Overdenture care 	1
30	Attachments in over denture (Continue)		1
Total			30

Clinical requirements

Lab number	Study unit title	Hours
1	cases of upper and lower complete dentures	
2	single complete denture against partial denture or natural teeth.	
3	immediate or flexible RPD.	
4	case repair.	
Total		180

Department of Oral Diagnosis

A- Basic information

1-Subject title	Oral Medicine	
2-Number of credits	Theory:2	Clinical:4
3-Number of contact hours	Theory:1h/wk.	Clinics:4 h/wk.
4-Subject time	Fifth year	

No.	Title of the lectures	Hours
1	The principles of oral diagnosis Clinical examinations	2
2	Laboratory investigations in dentistry	2
3	orofacial pain	2

4	T.M.J	2
5	Oral ulceration and Vesiculo-bullus lesions	3
6	White & red lesions	2
7	Early detection of oral cancer	2
8	Pigmented oral lesions	2
9	Benign, Premalignant and malignant lesions of the oral cavity	4
10	Neuromuscular disorder	2
11	Salivary gland diseases	2
12	Autoimmune diseases	3
13	Oral manifestation of allergic reaction	2
Total		30

Clinical requirements

Lab number	Study unit title	Hours
1	Laboratory investigations in dentistry	4
	clinic	
2	Viral infection	4
	clinic	
3	Bacterial infection	4
	clinic	
4	Fungal infection	4
	clinic	
5	Diseases of Respiratory tract	4
	clinic	
6	Diseases of cardiovascular system	4
	clinic	
7	Diseases of gastrointestinal tract	4
	clinic	
8	Renal diseases	4
	clinic	
9	Anemia	4
	clinic	
10	Leukemia	4
	Clinic	4
11	Bleeding and clotting disorders	4
	clinic	
12	Immunologic diseases	4
	clinic	

13	Diseases of thyroid gland	4
	clinic	
14	Diabetes mellitus	4
	clinic	
15	Orofacial pain and common headache disorders	4
	clinic	
16	Neuromuscular diseases	4
	clinic	
17	Temporomandibular disorders	4
	clinic	
18	Salivary gland disorders	4
	clinic	
19	Drugs in dentistry	4
	clinic	
20	Drugs induced oral lesions	4
	clinic	
21	Panoramic image interpretation	4
	clinic	
22	Allergy	4
	clinic	
23	Ulcerative ,vesicular, and bullous lesions	4
	clinic	
24	Red and white lesions of the oral mucosa	4
	clinic	
25	Pigmented lesions of the oral mucosa	4
	clinic	
26	Benign lesions of the oral cavity and the jaw	4
	clinic	
27	Oral and oropharyngeal cancer	4
	clinic	
28	LASER in oral medicine	4
	clinic	
29	Geriatric oral medicine	4
	clinic	4
30	Pediatric oral medicine	4
	clinic	
Total		120

Department of Oral & Maxillofacial Surgery

A- Basic information

1-Subject title	Oral Surgery	
2-Number of credits	Theory:2	Clinical: 6
3-Number of contact hours	Theory:1h / week	Clinic:6 h/week
4-Subject time	Fifth Year	

No.	Title of the lectures	Hours
1	Orofacial pain <ul style="list-style-type: none"> • Classification; somatic and neuropathic • Diagnosis • Somatic pain; odontogenic pain, oral mucous membrane disorders, temporomandibular joint disorders, muscle disorders • Neuropathic pain; trigeminal neuralgia, glossopharyngeal neuralgia, atypical odontalgia, postherpetic neuralgia • Vascular pain; giant cell arteritis and migraine. 	1
2	Preliminary management of patients with facial fractures <ul style="list-style-type: none"> • Etiology of maxillofacial trauma • Primary survey and advanced trauma life support (ATLS) <p style="text-align: center;">Secondary survey.</p>	1
3	Fractures of the mandible <ul style="list-style-type: none"> • Classification • Clinical features • Imaging • Treatment; closed treatment, methods of immobilization, period of treatment, open reduction and internal fixation (ORIF) • Teeth in the fracture line • Complications 	1
4	Fractures of the mandible Mandibular fractures that require special consideration: <ul style="list-style-type: none"> • Pediatric fractures, • Fractures of edentulous mandible • Condylar fractures • Comminuted fractures 	1
5	Fractures of the middle third of facial skeleton <ul style="list-style-type: none"> • Classification, clinical presentation imaging and treatment of: <ul style="list-style-type: none"> ✓ Le Fort fractures ✓ Zygomatic complex fractures 	1
6	Fractures of the middle third of facial skeleton <ul style="list-style-type: none"> • Classification, clinical presentation imaging and 	1

	<p>treatment of:</p> <ul style="list-style-type: none"> ✓ Orbital floor fractures ✓ Nasal bone fractures • Complications of fractures of middle third of facial skeleton 	
7	<p>Dentoalveolar and soft tissue injuries</p> <ul style="list-style-type: none"> • Factors affecting dentoalveolar injuries • Classification • Clinical presentation • Radiographic evaluation • Treatment • Splinting techniques • Complications. • Soft tissue injuries; classification, treatment and soft tissue injuries of special significance 	1
8	<p>Preprosthetic surgery</p> <ul style="list-style-type: none"> • Definition. • Preoperative assessment • Clinical examination and radiographic evaluation. • Bony recontouring procedures: alveoloplasty, maxillary tuberosity reduction, exostoses and excessive undercuts, mylohyoid ridge and genial tubercle reduction and torus removal. 	1
9	<p>Preprosthetic surgery</p> <ul style="list-style-type: none"> • Soft tissue procedures: unsupported hypermobile tissue on the alveolar ridge, inflammatory fibrous hyperplasia (epulis fissuratum), labial frenectomy, lingual frenectomy, ridge extension (vestibuloplasty) • Immediate dentures • Alveolar ridge preservation • Correction of abnormal ridge relationships 	1
10	<p>Potentially malignant disorders of the oral mucosa</p> <ul style="list-style-type: none"> • Classification and terminology • Risk factors, • Diagnostic methods and diagnostic aids <p>Potentially malignant disorders: leukoplakia, erythroplakia, palatal changes associated with reverse smoking, oral submucous fibrosis, actinic cheilitis and lichen planus.</p>	1
11	<p>Odontogenic diseases of the maxillary sinus</p> <ul style="list-style-type: none"> • Overview of the maxillary sinus • Clinical and radiographic examination • Non-odontogenic infections of the maxillary sinus • Odontogenic infections of the maxillary sinus • Oroantral communications and fistulae • Treatment 	1

12	<p>Benign cystic lesions of the oral cavity</p> <ul style="list-style-type: none"> • Definition • Classification of cysts (according to the WHO classification 2017) • Odontogenic cysts of inflammatory origin • Odontogenic and non-odontogenic developmental cysts • Clinical features • Radiographic features • Surgical management of cystic lesions • Enucleation: indications, advantages and disadvantages • Adjunctive treatment <ul style="list-style-type: none"> ✓ Peripheral ostectomy and curettage ✓ Cryotherapy ✓ Chemical treatment ✓ Topical 5-fluorouracil ✓ Marsupialization 	1
13	<p>Odontogenic tumors</p> <ul style="list-style-type: none"> • Definition • Classification of Odontogenic Tumors (according to the WHO classification of odontogenic cysts, tumors and maxillofacial bone tumors 2017) <ul style="list-style-type: none"> ✓ Epithelial odontogenic tumors ✓ Mixed epithelial and mesenchymal odontogenic tumors ✓ Mesenchymal odontogenic tumors. • Clinical features • Radiographic features • Ameloblastoma <ul style="list-style-type: none"> ✓ Ameloblastoma ✓ Unicystic ameloblastoma ✓ Peripheral/extraosseous) • Odontoma <ul style="list-style-type: none"> ✓ Compound type ✓ Complex type • Surgical treatment of odontogenic tumors • Enucleation and/or curettage, adjunctive treatment • Resection 	1
14	<p>Non-odontogenic tumors and fibro-osseous lesions of the jaw</p> <ul style="list-style-type: none"> • Classification (according to the WHO classification of odontogenic and maxillofacial bone tumors 4th edition 2017) • Giant cell lesions <ul style="list-style-type: none"> ✓ Central giant cell granuloma ✓ Brown tumor of hyperparathyroidism ✓ Cherubism 	1

	<ul style="list-style-type: none"> ✓ Aneurysmal bone cyst • Fibro-osseous lesions ✓ Fibrous dysplasia ✓ Ossifying fibroma ✓ Cemento-osseous dysplasia • Osteoma • Osteosarcoma 	
15	<p>Oral cancer</p> <ul style="list-style-type: none"> • Natural history of squamous cell carcinoma • Etiology • Site distribution • Clinical presentation • Staging (using the 8th edition of the cancer staging manual) and grading • Radiographic assessment • Surgical treatment, access to the oral cavity 	1
16	<p>Oral cancer</p> <ul style="list-style-type: none"> • Management of the neck • Postoperative follow up • Radiotherapy, radiotherapy techniques and fractionation • Chemotherapy, agents and scheduling • Palliative treatment and terminal care 	1
17	<p>Implant Treatment: Advanced Concepts</p> <ul style="list-style-type: none"> • Immediate post-extraction implants • Immediate loading versus delayed loading • Bone grafts and graft substitutes • Sinus lift procedure 	1
18	<p>Implant Treatment: Advanced Concepts</p> <ul style="list-style-type: none"> • Inferior alveolar nerve lateralization • Narrow and short implants • Image-guided implantology • Computer-Assisted Implant Surgery • Special implants (zygomatic and extra-oral implants) 	1
19	<p>Salivary gland diseases</p> <ul style="list-style-type: none"> • Overview of major and minor salivary glands • Clinical assessment • Imaging • Classification: <ul style="list-style-type: none"> ✓ Developmental ✓ Inflammatory ✓ Obstructive and traumatic lesion ✓ Functional ✓ Autoimmune conditions ✓ Neoplastic lesions • Inflammatory conditions (sialadenitis): Viral 	1

	<p>sialadenitis and Bacterial sialadenitis ,</p> <ul style="list-style-type: none"> • Obstructive conditions • Functional conditions: Xerostomia, Sialorrhea • Conditions of possible traumatic origin: Mucocele, Ranula 	
20	<p>Salivary gland diseases</p> <ul style="list-style-type: none"> • Autoimmune conditions: Sjögren syndrome, Immunoglobulin G4-related salivary gland disease • Other salivary gland conditions: Salivary duct cyst (Mucus retention cyst), Necrotizing sialometaplasia, Sarcoidosis, Sialadenosis (sialosis), Radioactive iodine sialadenitis • Neoplasms: benign and malignant (according to 4th edition of the WHO classification 2017). • Principles and complications of salivary gland surgery 	1
21	<p>Temporomandibular joint (TMJ) disorders</p> <ul style="list-style-type: none"> • TMJ anatomy • Evaluation and Radiographic examination of the TMJ • Disorders of the TMJ: • Structural (internal derangement) • Wilkes classification of internal derangement • Functional (myofascial pain) • Management: non-surgical, minimally invasive (arthrocentesis and arthroscopy) and surgery 	1
22	<p>Temporomandibular joint (TMJ) disorders</p> <ul style="list-style-type: none"> • Hypermobility of TMJ • Hypomobility of TMJ: • Classification of TMJ ankyloses • Treatment 	1
23	<p>Orthognathic surgery</p> <ul style="list-style-type: none"> • Definition • Treatment objectives • Clinical examination (facial evaluation in frontal and profile views) • Radiographic evaluation (Lateral cephalometric analysis) • Pre-surgical Orthodontic Considerations • Treatment Timing 	1
24	<p>Orthognathic surgery</p> <ul style="list-style-type: none"> • Mock surgery and fabrication of splints • Surgical treatment phase (mandibular excess, mandibular deficiency, maxillary excess, Maxillary and Midface Deficiency) • Distraction osteogenesis 	1
25	<p>Cleft lip and palate</p>	1

	<ul style="list-style-type: none"> • Epidemiology • Etiology • Classification • Prenatal diagnosis • Clinical manifestations • Management; presurgical orthopedics, primary operative management, treatment planning and timing, surgical procedures of cleft lip 	
26	<p>Cleft lip and palate</p> <ul style="list-style-type: none"> • Management; Surgical procedures of cleft palate, complications • Secondary operative management; alveolar bone grafting, goals and timing, procedure, source of bone graft, complications. 	1
27	<p>Laser and Cryosurgery in oral and maxillofacial surgery</p> <ul style="list-style-type: none"> • Laser • Classification of laser according to power: low-energy and high-energy • The advantages of laser • Hazards and precautions required when using laser • Cryosurgery • Cryosurgery techniques • Uses of cryosurgery • The advantages of using cryosurgery • The disadvantages of using cryosurgery 	1
28	<p>Vascular anomalies</p> <ul style="list-style-type: none"> • Classification (according to ISSVA 2018) <ul style="list-style-type: none"> ➤ Hemangioma <ul style="list-style-type: none"> • Clinical presentation and staging • Investigations • Treatment <ul style="list-style-type: none"> ✓ In the proliferative phase ✓ In the involutive phase ✓ Residual lesions ➤ Vascular malformations <ul style="list-style-type: none"> • Classification according to the vessel type and whether high or low flow • Clinical presentation with emphasis on the intraosseous venous malformation • Investigations • Treatment 	1
29	<p>Principles of reconstructive surgery of defects of the jaws</p> <ul style="list-style-type: none"> • Goals of reconstruction • Biologic basis of bone reconstruction • Types of grafts (autogenous, allogeneic, 	1

	xenogeneic) <ul style="list-style-type: none"> • Osteoinduction, Osteoconduction and Osteogenesis • Assessment of patient in need for reconstruction • Goals of mandibular reconstruction • Defect types and localizations • Mandibular reconstruction • Surgical principles of maxillofacial bone grafting procedures 	
30	Principles of reconstructive surgery of defects of the jaws <ul style="list-style-type: none"> • Maxillary reconstruction • Goals of maxillary reconstructive surgery • Computer-assisted surgical planning • Flaps for maxillofacial reconstruction • Definition • Classifications • Examples of flaps in maxilla-mandibular reconstruction (palatal flap, tongue flap, buccal fat pad flap, Facial Artery Musculomucosal Flap, Temporalis muscle flap, Submental Flap, Vascularized Iliac Crest Grafts 	1
Total		30

Clinical requirement	
<ul style="list-style-type: none"> • Extraction of teeth (simple extraction) • Surgical extraction of teeth • Surgical assistant in minor oral surgery and dental implants. • Participating in oral and maxillofacial surgery ward rounds 	6 hours/ week 180 hours/ year

Department of Orthodontics

A- Basic information

1-Subject title	Orthodontics	
2-Number of credits	Theory:2	Clinical: 4
3-Number of contact hours	Theory:1 h/wk	Clinic/ Seminars: 4 hrs./w
4-Subject time	Fifth Year	

No.	Title of the lectures	Hours
1	Orthodontic diagnosis and treatment planning: a- Personal data b- Consent form c- Clinical examination i. General body stature	1
2	ii. Face examination in 3 dimensions iii. skeletal examination iv. Soft tissue examination	1
3	v. Occlusion	1
4	vi. Dentition vii. Temporomandibular joint	1
5	d- Diagnostic aids i. Cephalometrics	1
6	ii. Orthopantomography iii. Other views	1
7	iv. Study models	1
8	v. Photography vi. 3D imaging	1
9	e- Treatment planning	1
10	f- Treatment of Medically compromised patients	1
11	g- Orthodontic indices	1
12	Space analysis, Bolton's ratio	1
13	Teeth extraction in orthodontics	1
14	Serial extraction	1
15	Vertical and transverse problems: a. Deep bite	1
16	b. Open bite	1
17	c. Crossbite and scissors bite	1

18	Treatment of common local factors: a. supernumerary and hypodontia b. Early loss of deciduous teeth c. Retained teeth, delayed eruption, impaction, ankylosis d. Abnormal eruptive behavior e. Large frenum	1
19	f. Bad oral habits	1
20	Treatment of aberrant position of canines	1
21	Treatment of general factors: a. Class I treatment (crowding, spacing, biprotrusion)	1
22	<u>Continue</u> class I treatment (method of space creation)	1
23	b. Class II div. 1 treatment	1
24	c. Class II div. 2 treatment	1
25	d. Class III treatment	1
26	Treatment of adults a- Periodontal problems	1
27	b- Orthognathic surgery	1
28	Cleft lip and palate	1
29	<u>Continue</u> cleft lip and palate	1
30	Digital orthodontics (digital approach in orthodontic diagnosis and treatment)	1
Total		30

Clinical requirements

Item	Minimum Requirements	Hours
	Treatment of at least one patient: 1- Diagnosis :(Mandatory) a- Case sheet filling & presentation b- Upper and lower impression. c- Study models preparation d- Extra & intra oral photographs e- Cephalometric tracing 2- Treatment plan:(Mandatory) 3- Insertion(Optional) 4- Adjustment or Activation(Optional)	
Total	The student should receive at least one orthodontic case to enter the final exam	120

Department of pedodontics and preventive dentistry

A- Basic information

1-Subject title		Pediatric Dentistry	
2-Number of credits		Theory:2	Clinical: 3
3-Number of contact hours		Theory:1hour /wk.	.Clinic:3/ wk
4-Subject time		Fifth Year	
No.	Title of the lectures		Hours
1	Diagnosis and treatment planning	Advantages of treatment planning, The diagnostic methods, Components of oral examination and diagnosis	1
2	Preliminary medical and dental history	Clinical examination , Radio graphic examination	1
3	Art and science of behavior management	Child development, Major area of development, Variables influencing children's dental behaviors ,classification of children's behavior	1
4	Non pharmacologic management of patient behavior	, Purpose, Classifying children, s cooperative behavior	1
5	Pharmacologic management of patient behavior	Degree of sedation, Indications for pharmacological behavior management technique, Pre-treatment documentation and assessment,	1
6	Sedation in pediatric dentistry	Conscious sedation, Routes of drug administration, Enteral sedation ,Rectal route, Intra muscular route, Intravenous route, Inhalation, Drugs and agents used for sedation, General anesthesia	1
7	management of traumatic injuries to the teeth and supporting tissues of children,		1
8	classification of injuries to the anterior teeth of children classification methods of clinical examination		1
9	Traumatic injuries of the primary teeth and its effect on permanent teeth		1
10	Treatment of injury of permanent teeth, emergency treatment, temporary restoration		1

	of fractured teeth		
11	Advances in Pediatric Dentistry: Advances in diagnostic aids, Advances in cavity preparation methods		1
12	Advances in endodontics, Advances in local anesthesia		1
13	Advances in restorative materials, Advances in surgical procedures, miscellaneous		1
14	Acquired disturbances of oral structures		1
15	Developmental disturbances of oral structures		1
16	Gingivitis and periodontal disease in children:	Introduction simple gingivitis, eruption gingivitis, acute gingival disease; herpes simplex viral infection.	1
17	Acute candidacies (thrush), acute bacterial infection, chronic non specific gingivitis, gingival diseases modified by systemic factors.		1
18	Gingival lesions of genetic origin, ascorbic acid deficiency gingivitis.		1
19	Periodontal diseases in children, early onset periodontitis, prepubertal periodontitis, localized juvenile periodontitis.		1
20	Papillon – Lefevere syndrome, gingival recession, extrinsic stains and deposits on teeth		1
21	Management of space problems, planning for space maintenance, loss of primary incisors		1
22	Space Maintenance for the First and Second Primary Molar and the Primary Canine Area, premature loss of second primary molar		1
23	Loss of the Second Primary Molar Before Eruption of the First Permanent Molar, Areas of Multiple Primary Molar Loss		1
24	Development of dental arch and	deciduous phase, mixed dentition	1

	occlusion;	phase.	
25	Arch length analysis;	Nance analysis, Moyers mixed dentition analysis, Tanaka and Johnston analysis, Bolton analysis.	1
26	Dental problems of the disabled child	first dental visit, Radiographic examination, Preventive dentistry, Management of a child with special care needs during dental treatment , immobilization,	1
27	Mental disability, Down syndrome, Intellectual disability, Learning disability		1
28	Fragile X syndrome, cerebral palsy, autism,		1
29	Respiratory diseases, hearing loss, visual impairment, epilepsy		1
30	Heart disease, hemophilia, sickle cell anemia, viral hepatitis, AIDS, children with systemic diseases		1
			30

Clinical requirement

No	Title	hours
1	Diagnosis and treatment planning	3
2	Preliminary medical and dental history, Clinical examination , Radiographic examination	3
3	Demonstration how to obtain a complete case sheet	3
4	Monitoring the developing dentition and recognition of any sign of malocclusion	3
5	Types of Caries removal techniques	3
6	Restoration of primary and young permanent teeth with variety types of restorative materials	3
7	Management of traumatic injuries of the anterior teeth	3
8	Minor oral surgery	3
9	Minimal intervention dentistry	3
10	Pulp therapy for permanent dentition	3
11	Pulp therapy for primary dentition	3
12	Materials used for pulp therapy	3
13	Chrome steel crowns	3
14	Management of simple cases of dental anomalies and other developmental defects	3
15	Maintenance of pulp vitality by use of regenerative materials	3

16	Root canal treatment for anterior non vital teeth	3
17	Extraction for non restorable primary and permanent teeth or over-retained primary dentition and permanent teeth for space creation for orthodontic treatment	3
18	Management of molar incisor hypomineralization MIH	3
19	Behavior management for young patients	3
20	Infection control re-assurance and guidance of students	3
21	Tooth colored restoration technique	3
22	Radiographic prescription and interpretation of results	3
23	Space maintainers	3
24	Fluoride application as a preventive measure	3
25	Amelogenesis imperfecta	3
26	Supernumerary teeth and their impact on teeth eruption	3
27	Management of medically compromised children	3
28	Peg teeth management	3
29	ART technique	3
30	Prosthesis usage in pediatric dentistry	3
Total		90

Department of Pedodontics and Preventive dentistry

A- Basic information

1-Subject title	Preventive Dentistry	
2-Number of credits	Theory:2	Clinical: 3
3-Number of contact hours	Theory:1 hour /wk.	Clinic:3 hours /wk
4-Subject time	Fifth year	

No.	Title of the lectures	Hours
1	Prevention of oral diseases (introduction) <ul style="list-style-type: none"> • What is preventive dentistry? • prevention is better than a cure • Is preventive dentistry still needed? • Levels of prevention • Caries prevention: how far it had come in one century! 	1
2	Dental caries development <ul style="list-style-type: none"> • Etiology of dental caries • Inorganic and organic components of tooth • Terminology of dental caries • Dynamics Process of De-/Remineralization 	1

	<ul style="list-style-type: none"> • The development of a carious lesion • Root caries • Clinical appearance of root caries • Classification of root caries 	
3	<p>Diagnosis of dental caries</p> <ul style="list-style-type: none"> • Detection systems of caries • visual and tactile examinations • Radiographic techniques • Electrical current measurement (electronic resistant method) • Fiber Optic Transillumination (FOTI and DiFOTI) (Enhanced visual techniques) • Fluorescent techniques • Other techniques like Dyes, Ultrasound techniques, Photo-thermal Radiometry (PTR). 	1
4	<p>Fluoride in Dentistry</p> <ul style="list-style-type: none"> • Introduction • Fluoride in Environment • Fluoride Metabolism (Absorption, Distribution and Excretion of Fluoride in the Body). 	1
5	<p>Fluorides in prevention and controlling dental caries</p> <ul style="list-style-type: none"> • Mechanism of action • Fluoride's effect on tooth mineral • Fluoride effect on plaque and bacterial metabolism 	1
6	<p>Topical fluoride therapy Professionally applied fluoride</p> <ul style="list-style-type: none"> • Introduction • Advantages and disadvantages of topical fluoride application • Fluoride Compounds • Classification of Professionally applied fluoride. 	1
7	<p>Topical fluoride therapy :Self- applied fluoride</p> <ul style="list-style-type: none"> • Requisites for self-applied fluoride agents • Fluoride dentifrices and Mechanism of Action • Fluoride mouth rinses, Indications and Recommendations. 	1
8	<p>Safety and toxicity of fluoride</p> <ul style="list-style-type: none"> • Fluoride Toxicity • Factors influencing acute toxicity • Management of acute toxicity • Recommendations for parents • Chronic Toxicity(Dental fluorosis and bone fluorosis) 	1

9	Dental sealants <ul style="list-style-type: none"> • definition • History • indication and contraindication • sealant in adult • Ideal sealants materials • Requisites for Sealant Retention • Sealant Placement Guidelines • Fluoride-Releasing Sealants • Glass ionomer sealants • Colored Versus Clear Sealants • Sealants for proximal enamel surfaces • Sealing over caries lesions 	1
10	New approach in restorative dentistry <ul style="list-style-type: none"> • Minimally Invasive Treatment Technique • Minimally Invasive Cavity Preparation • Non-machinery Preparation • LASER • Chemo mechanical Caries Removal • Preventive Resin Restorations • Remineralization Treatment 	1
11	Microbiology of dental caries <ul style="list-style-type: none"> • Microbial ecology in the oral cavity • Acquisition of the resident oral microflora • Site distribution of oral bacteria • Ecological factors affecting the growth and metabolism of oral bacteria • Dental biofilms: development, structure, composition and properties • Development of dental biofilms • Pellicle formation • Microbial colonization • Initial microbial colonization • Microbial succession • Microbial composition of the climax community (mature biofilm) • Virulence of microorganisms • Major dental caries-associated bacteria • Other caries-associated bacteria 	1
12	Saliva and host defense mechanism <ul style="list-style-type: none"> • Function of saliva 	1

	<ul style="list-style-type: none"> • Composition of saliva • Salivary flow rate • Influence of saliva on dental caries • Oral immune system • Non-specific immune factors • Specific immune factors • Immunization of dental caries 	
13	<p>Caries risk assessment</p> <ul style="list-style-type: none"> • Goals of Caries Risk Assessment • Caries Disease Indicators • Caries Risk Factors • Caries Protective Factors • Factors in Low, Moderate and High Caries • Cariogram 	1
14	<p>infection control</p> <ul style="list-style-type: none"> • Transmission of infection • Standard precautions • Components of infection control • Treatment room features • Single use disposable instruments • Biomedical waste management 	1
15	<p>Oral hygiene measures (Mechanical)</p> <ul style="list-style-type: none"> • Acquired pellicle • Dental plaque • Dental calculus • Mechanical plaque control aids • Toothbrushes • Tooth brushing methods • Powered toothbrush • Objectives of toothbrushing • Interdental Cleaning aids • Dental floss • Wooden tips • Interdental brushes • Miswak • Oral irrigation devices • Gingival massage 	1
16	<p>Oral hygiene measures (Chemical)</p> <ul style="list-style-type: none"> • Ideal properties of chemical plaque control agents • Modes of action • Chlorhexidine • Triclosan • Essential oil mouthwashes or Listerine • Enzymes 	1

	<ul style="list-style-type: none"> • Sanguinarine extracts • Metal ions • Antibiotics • Dentifrices • Composition of dentifrices 	
17	Diet and dental caries <ul style="list-style-type: none"> • Role of carbohydrates in caries development • Evidences • Factors affecting food cariogenicity • Physical form of food and clearance time • Types of fermentable carbohydrate • The basic Stephan curve • Frequency of intake sugar and dental caries 	1
18	Non- sugar sweeteners <ul style="list-style-type: none"> • The sweetness of sugars • Non- sugar sweeteners • Bulk sweeteners • Intense sweeteners • Protective factors in food • Fruit and dental caries • Testing food cariogenicity 	1
19	Dietary counseling in dental practice <ul style="list-style-type: none"> • Nutritional status assessment <ul style="list-style-type: none"> ▪ Body Mass Index • Assessment of dietary intake • Objectives of dietary assessment • 24-hour recall • Dietary record • Food frequency questionnaires • Evaluation of cariogenic potentiall • Evaluation of nutritive value • Dietary counseling • Approach to counseling • Motivation 	1
20	Nutrition and dental health <ul style="list-style-type: none"> • Nutrition dental caries • Systemic effect <ul style="list-style-type: none"> ▪ Morphology of the teeth ▪ The quality of the hard tissues • Quality of saliva • Evidences of the effect of some nutrients on dental caries • Nutrition and eruption of teeth 	1

21	Prevention of periodontal disease and oral cancer by nutrition <ul style="list-style-type: none"> • Nutrition and periodontal health • The mechanisms by which nutrition may affect periodontal disease • Effect of food texture on periodontal health • Nutrition and oral mucosal disease • Nutrition and oral cancer • Primary prevention • Secondary prevention 	1
22	Probiotics and dental health <ul style="list-style-type: none"> • Caries-related mechanisms of probiotic activity • Probiotics and counts of <i>mutans streptococci</i> • Probiotics and caries occurrence • Probiotics and periodontal health 	1
23	Diagnosis and prevention of dental erosion <ul style="list-style-type: none"> • Prevalence • Early detection • Etiology • Protection against erosion • Prevention of erosion 	1
24	Prevention of malocclusion <ul style="list-style-type: none"> • Normal development • Etiology of malocclusion • Interceptive measures • Tooth anomalies • Risk assessment 	1
25	preventive measure for population with developmental disabilities <ul style="list-style-type: none"> • Disability definition • Classification of disabling conditions • The issues regarding the delivery of care to people with disabilities • Dental management and preventive measures among disabled individuals • The risk factors for dental caries among disabled individuals • People with physical (neurological) impairment • Visual Deficits • Hearing problems • Mentally retardation • Specialized Equipment for disabled patient management • Dental care for Institutionalized disabled individual 	1
26	preventive treatment strategies for medically compromised	1

	<p>populations</p> <ul style="list-style-type: none"> • Introduction • Eating disorders: Characteristics and preventive treatment strategies • Depression: Characteristics and preventive treatment strategies • Diabetes mellitus: Characteristics and preventive treatment strategies • Epilepsy: Characteristics and preventive treatment strategies • Blood disorders: Characteristics and preventive treatment strategies 	
27	<p>Ozone in the prevention of dental diseases</p> <ul style="list-style-type: none"> • Definition and physical properties • Mode of action • Safety • Application of ozone in dentistry • Effects of ozone on oral microorganisms and oral cells • Ozone for disinfecting dentures • Ozone instruments designed for dentistry • Ozone in the management of incipient caries • Ozone in the management of open caries • Treating root caries with ozone 	1
28	<p>Geriatric dentistry</p> <ul style="list-style-type: none"> • population characteristics • Physiologic Changes • Functional status • common oral manifestation • preventive measures • long term care 	1
29	<p>Implant care</p> <ul style="list-style-type: none"> • Dental implant parts • Dental implant and biofilm • Implant Maintenance <ul style="list-style-type: none"> • Professional care in dental clinic • Home care 	1
30	<p>Protection of the dentition</p> <ul style="list-style-type: none"> • Impact of dental trauma • Types of traumatic dental injuries to teeth • Sports dentistry • Protective mouth-guards • Evidence of effectiveness • mouth-guards and oral & systemic infections 	

Total		30
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Clinical requirement

No	Title	hours
1	Diagnosis and treatment planning	3
2	Diagnosis and treatment planning	3
3	Preliminary medical and dental history, Clinical examination , Radio graphic examination	3
4	Preliminary medical and dental history, Clinical examination , Radio graphic examination	3
5	Demonstration and use of Primary prevention program by removal of dental plaque and calculus and application of fluoride and fissure sealants	3
6	Demonstration and use of Primary prevention program by removal of dental plaque and calculus and application of fluoride and fissure sealants	3
7	Monitoring of developing dentition and recognition and prevention (through use of space maintainers) or interception of any occurrence of malocclusion	3
8	Monitoring of developing dentition and recognition and prevention (through use of space maintainers) or interception of any occurrence of malocclusion	3
9	Caries removal and restoration of primary and young developing permanent dentition with variety of restorative materials	3
10	Caries removal and restoration of primary and young developing permanent dentition with variety of restorative materials	3
11	Trauma management in anterior teeth	3
12	Trauma management in anterior teeth	3
13	Minimal intervention dentistry by removal of dental decay and choice of suitable restorative material	3
14	Minimal intervention dentistry by removal of dental decay and choice of suitable restorative material	3
15	Pulp therapy for primary dentition	3
16	Pulp therapy for primary dentition	3
17	Management of simple cases of dental anomalies and other developmental defects	3
18	Management of simple cases of dental anomalies and other developmental defects	3
19	Maintenance of pulp vitality by use of regenerative materials and Root canal treatment for anterior non vital teeth	3
20	Maintenance of pulp vitality by use of regenerative materials and	3

	Root canal treatment for anterior non vital teeth	
21	Extraction for non restorable primary and permanent teeth or over-retained primary dentition and permanent teeth for space creation for orthodontic treatment	2
22	Extraction for non restorable primary and permanent teeth or over-retained primary dentition and permanent teeth for space creation for orthodontic treatment	2
23	Management of molar incisor hypomineralization MIH	3
24	Behavior management for young patients	3
25	Behavior management for young patients	3
26	Infection control re-assurance and guidance of students	3
27	Infection control re-assurance and guidance of students	3
28	Tooth colored restoration technique	3
29	Tooth colored restoration technique	3
30	Radiographic prescription and interpretation of results	3
Total		90

Department of periodontics

A- Basic information

1-Subject title	Periodontics	
2-Number of credits	Theory:2	Clinical:3
3-Number of contact hours	Theory:1h/wk.	Clinic:3 h/wk.
4-Subject time	Fifth year	

No	Lectures	Hours
1	Periodontal examination and diagnosis <ul style="list-style-type: none"> - Overall appraisal of the patient - Medical history - Dental history: <ul style="list-style-type: none"> o Chief complaint - Photographic documentation - Clinical Examination: <ul style="list-style-type: none"> o Extraoral examination o Intraoral examination o Examination of the periodontium o Visual examination of biofilm and calculus o Visual examination of the gingiva - Probing force and angulation - Periodontal examination: <ul style="list-style-type: none"> o Suppuration o Probing depth o Probing around implants o Bleeding on probing 	1

	<ul style="list-style-type: none"> ○ Attachment loss and level ○ Attached gingiva ○ Wasting disease of the teeth ○ Tooth mobility ○ Furcation involvement ○ Trauma from occlusion ○ Pathologic migration of the teeth - Radiographic examination - Laboratory aids to clinical diagnosis 	
2	<p>Bone loss and patterns of bone destruction</p> <ul style="list-style-type: none"> - Bone destruction caused by the extension of gingival inflammation: <ul style="list-style-type: none"> ○ Histopathology ○ Rate of bone loss ○ Mechanisms of bone destruction - Bone destruction caused by trauma from occlusion - Bone destruction caused by systemic disorders - Factors determining bone morphology in periodontal disease: <ul style="list-style-type: none"> ○ Normal variation in alveolar bone ○ Exostoses ○ Trauma from occlusion ○ Buttressing bone formation ○ Food impaction - Bone destruction patterns in periodontal disease: <ul style="list-style-type: none"> ○ Horizontal bone loss ○ Vertical or angular defects ○ Osseous craters ○ Bulbous bone contours ○ Reversed architecture ○ Ledges ○ Furcation involvement 	1
3	<p>Radiographic aids in the diagnosis of periodontal disease</p> <ul style="list-style-type: none"> - Normal interdental bone - Radiographic techniques - Bone Loss: <ul style="list-style-type: none"> ○ Amount ○ Distribution - Radiographic appearance of periodontal disease <ul style="list-style-type: none"> ○ Periodontitis ○ Interdental craters ○ Furcation involvement ○ Periodontal abscess ○ Clinical probing ○ Trauma from occlusion - Digital intraoral radiography 	1
4	<p>Advanced diagnosis §</p> <ul style="list-style-type: none"> - Objectives of diagnosis - Advances in periodontal probing - Generations of periodontal probes: 	1

	<ul style="list-style-type: none"> ○ First-generation (conventional) probes ○ Second-generation (constant-pressure) probes i- Pressure-sensitive probe ii- Electronic pressure-sensitive (Yeaple) probe ○ Third-generation (automated) probes: i- Foster-Miller probe ii- Florida Probe® iii- Toronto Automated probe iv- InterProbe™ ○ Fourth-generation probes: i- Three-dimensional (3D) probes ○ Fifth-generation probes: i- UltraSonographic (US) probe - Advances in microbiologic/biochemical analyses <ul style="list-style-type: none"> ○ Conventional culture techniques ○ Molecular biology techniques: i- DNA-analysis method ii- Checkboard DNA-DNA hybridization iii- Polymerase Chain Reaction (PCR) ○ Immunologic-based tests for putative pathogens: i- Immunofluorescent microscopy ii- ELISA iii- Flow cytometry iv- Latex agglutination test v- Microbiologic enzyme assay - Advances in characterizing host response <ul style="list-style-type: none"> ○ Assessment of the susceptible host using makers in peripheral blood ○ Identification of host constituent in GCF ○ Salivary biomarkers ○ Subgingival temperature - Advanced Imaging Modalities <ul style="list-style-type: none"> ○ Conventional radiograph ○ Digital radiograph ○ Subtraction radiography ○ Computer-assisted-densitometric-image-analysis (CADIA) ○ Cone Beam Computed Tomography (CBCT) <p>§ For each section, mention the limitations for the “conventional” technique to justify using more advanced methods. For the rest of diagnostic modalities, mentioning principle of action/mechanism, advantages, and disadvantage is essential.</p>	
5	<p>Periodontal response to external forces</p> <ul style="list-style-type: none"> - Occlusion - Assessment of occlusion - Adaptive capacity of the periodontium to occlusal forces - Trauma from occlusion: <ul style="list-style-type: none"> ○ Classification of trauma from occlusion: i- Acute and chronic 	1

	<ul style="list-style-type: none"> ii- Primary and secondary - Stages of tissue response to trauma from occlusion: <ul style="list-style-type: none"> o Stage I: Injury o Stage II: Repair o Stage III: Adaptive remodeling of the periodontium - Relationship between plaque-induced periodontal diseases and trauma from occlusion - Clinical and radiographic signs of trauma from occlusion - Pathologic tooth migration: <ul style="list-style-type: none"> o Pathogenesis: <ul style="list-style-type: none"> i- Weakened periodontal support ii- Changes in the forces exerted on the teeth - Treatment 	
6	<p>Immunology</p> <ul style="list-style-type: none"> - Innate immunity <ul style="list-style-type: none"> o Components of innate immunity: <ul style="list-style-type: none"> i- Saliva: <ul style="list-style-type: none"> ● Salivary peroxidase system ● Lactoferrin ● Lysozyme ii- Gingival epithelial barrier iii- Gingival crevicular fluid o Pathogen recognition and activation of cellular innate responses: <ul style="list-style-type: none"> i- Toll like receptors ii- Pro inflammatory cytokines o Cells of innate immunity: <ul style="list-style-type: none"> i- Neutrophils ii- Macrophages 	1
7	<p>Immunology</p> <ul style="list-style-type: none"> - Adaptive immunity <ul style="list-style-type: none"> o Characteristics o Cellular elements o Cellular immunity to dental plaque o The humoral response to plaque o Osteo-immunology in periodontal diseases - Therapeutic Strategies 	1
8	<p>Tooth mobility</p> <ul style="list-style-type: none"> - Introduction - Types: <ul style="list-style-type: none"> o Physiologic mobility o Pathologic mobility - Directions of movement: <ul style="list-style-type: none"> o Horizontal o Vertical - Factors influencing tooth mobility - Classification of tooth mobility - Initial & secondary tooth mobility - Sign & symptoms 	1

	<ul style="list-style-type: none"> - Treatment: <ul style="list-style-type: none"> ○ Situation I: Increased mobility of a tooth with increased width of PDL but normal height of the alveolar bone ○ Situation II: Increased mobility of a tooth with increased width of PDL & reduced height of alveolar bone ○ Situation III: Increased mobility of a tooth with reduced height of alveolar bone & normal width of PDL ○ Situation IV: progressive mobility of a tooth (teeth) as a result of gradually increasing width of PDL in teeth with reduced height of alveolar bone ○ Situation V: Increased bridge mobility despite splinting 	
9	<p>Epidemiology of periodontal diseases</p> <ul style="list-style-type: none"> - Introduction: The need for epidemiology - Measuring the occurrence of conditions or diseases: <ul style="list-style-type: none"> ○ Prevalence ○ Risk ○ The odds ○ Incidence - Typical measurement of periodontal disease - True and surrogate measures of the periodontal condition - Epidemiologic study designs: <ul style="list-style-type: none"> ○ Randomized controlled trials ○ Cohort studies ○ Case-control studies - Suspected modifiable causative factors for periodontal disease: <ul style="list-style-type: none"> ○ Tobacco smoking ○ Nutrition ○ Dental plaque 	1
10	<p>Determination of prognosis</p> <ul style="list-style-type: none"> - Definitions - Types of prognosis - Overall versus individual tooth prognosis - Detrimental factors: <ul style="list-style-type: none"> ○ Overall clinical factors: <ol style="list-style-type: none"> i. Patient age ii. Disease severity iii. Biofilm control iv. Patient compliance ○ Systemic and environmental factors: <ol style="list-style-type: none"> i. Smoking ii. Systemic disease or condition iii. Genetic factors iv. Stress ○ Local factors <ol style="list-style-type: none"> i. Biofilm and calculus ii. Subgingival restorations 	1

	<ul style="list-style-type: none"> ○ Anatomic factors <ul style="list-style-type: none"> i- Short, tapered roots ii- Cervical enamel projections iii- Enamel pearls iv- Bifurcation ridges v- Root concavities vi- Developmental grooves vii- Root proximity viii- Furcation invasion ix- Tooth mobility x- Caries xi- Tooth vitality xii- Root resorption ○ Prosthetic and Restorative Factors - Prognosis of specific periodontal diseases: <ul style="list-style-type: none"> ○ Prognosis for patients with gingival disease: <ul style="list-style-type: none"> i- Biofilm-induced gingival diseases ii- Prognosis for patients with periodontitis § - Determination and reassessment of prognosis <p>§ Diagnostic and prognostic criteria according to the new classification of periodontal disease and conditions (2017) must be considered in this section</p>	
11	<p>Interrelationships of periodontal disease and therapy with other dental disciplines</p> <p>Restorative interrelationships</p> <ul style="list-style-type: none"> - Biologic considerations: <ul style="list-style-type: none"> ○ Margin placement and biologic width ○ Biologic width evaluation ○ Margin placement guidelines ○ Marginal fit ○ Crown contour - Aesthetic tissue management: <ul style="list-style-type: none"> ○ Managing interproximal embrasures ○ Pontic design ○ Correcting open gingival embrasures <p>Periodontal – orthodontic interaction</p> <ul style="list-style-type: none"> - Orthodontic tooth movement in adults with periodontal tissue breakdown - Orthodontic treatment considerations - Periodontal surgery associated with ortho therapy <p>Prosthodontic and Periodontic interaction</p>	1
12	<p>Periodontal surgery. General principles</p> <ul style="list-style-type: none"> - Rationale for periodontal surgery - Indications - Contraindication - Surgical instruments <ul style="list-style-type: none"> ○ Excisional and incisional instruments i- Periodontal knives (gingivectomy knives) ii- Interdental knives iii- Surgical blades 	1

	<ul style="list-style-type: none"> ○ Surgical curettes and sickles ○ Periosteal elevators ○ Surgical chisels ○ Tissue forceps ○ Scissors and nippers ○ Needleholders ○ Additional instruments - Fundamentals of periodontal surgery: <ul style="list-style-type: none"> ○ Incisions: <ul style="list-style-type: none"> i- Horizontal incisions ii- Vertical incisions - Papilla management - Flap elevation 	
13	<p>Sonic and ultrasonic instrumentation and irrigation</p> <ul style="list-style-type: none"> - Power-driven instruments: overview - Mechanism of action of power scalers - Type of power instruments - Mechanized instruments vs manual instruments - Clinical outcomes of power-driven instruments: <ul style="list-style-type: none"> ○ Special considerations ○ Root surface roughness ○ Aerosol production ○ Cardiac pacemakers - Principles of instrumentation - Power-driven devices and COVID-19-associated limitations - Irrigators: <ul style="list-style-type: none"> ○ Mechanism of action of irrigation ○ Clinical outcomes of irrigation ○ Individuals with special considerations 	1
14	<p>Gingivectomy and local excision</p> <ul style="list-style-type: none"> - Gingivectomy: <ul style="list-style-type: none"> ○ Indications and contraindication ○ Advantages and disadvantages ○ Surgical procedure - Gingivoplasty - Gingival curettage - Periodontal dressings (Periodontal Packs) <ul style="list-style-type: none"> ○ Zinc oxide–eugenol dressing ○ Non-eugenol dressing - Postoperative instructions - Management of postoperative pain 	1
15	<p>Flap surgery</p> <ul style="list-style-type: none"> - Objectives, indication, and contraindications - Flap techniques: § <ul style="list-style-type: none"> ○ Modified Widman flap ○ Undisplaced flap 	1

	<ul style="list-style-type: none"> ○ Apically displaced flap ○ Distal wedge flap ○ Papilla preservation flap - Full and partial thickness flap - Osteoplasty - Suturing techniques <p>§ For each surgical technique demonstrate advantage, disadvantage, and surgical technique</p>	
16	<p>Mucogingival and aesthetic surgery</p> <ul style="list-style-type: none"> - Objectives - Techniques to increase attached gingiva: <ul style="list-style-type: none"> ○ Gingival augmentation apical to recession: <ul style="list-style-type: none"> i- Free gingival graft ii- Free connective tissue graft iii- Apically displaced flap § ○ Gingival augmentation coronal to recession <ul style="list-style-type: none"> i- Free gingival graft ii- Subepithelial connective tissue graft iii- Pouch and tunnel technique - Techniques to deepen the vestibule - Techniques to remove the frenum: <ul style="list-style-type: none"> ○ Frenectomy and frenotomy: <ul style="list-style-type: none"> i- Procedure - Techniques to improve aesthetics: <ul style="list-style-type: none"> ○ Root coverage ○ Papilla reconstruction - Therapy to correct excessive gingival display: <ul style="list-style-type: none"> ○ Surgical techniques ○ Osseous surgery <p>§ This technique has been described sufficiently in previous lecture. Brief reminder of the concept and technique is only required</p>	1
17	<p>Furcation: involvement and treatment</p> <ul style="list-style-type: none"> - Introduction - Anatomy of furcation area: <ul style="list-style-type: none"> ○ Root complex ○ Root trunk ○ Root cone ○ Furcation entrance - Local anatomic factors - Classification of furcation involvement - Diagnosis: <ul style="list-style-type: none"> ○ Clinical ○ Radiographic analysis - Differential diagnosis: <ul style="list-style-type: none"> ○ Pulpal pathologies ○ Trauma from occlusion - Treatment: <ul style="list-style-type: none"> ○ Objectives 	1

	<ul style="list-style-type: none"> ○ Scaling and root planing ○ Furcation plasty ○ Tunnel preparation ○ Root resection/separation, tooth division & hemisection ○ Tooth extraction ○ Treatment guidelines according to degree of involvement ○ Regeneration of Furcation Defects: <ul style="list-style-type: none"> i- Guided tissue regeneration & Bone grafting ○ Failures of furcation therapy <p>- Prognosis</p>	
18	<p>Laser therapy[§]</p> <ul style="list-style-type: none"> - Laser physics and biologic interactions - Laser Types: <ul style="list-style-type: none"> ○ Diode Laser ○ Neodymium:Yttrium-Aluminum-Garnet Laser ○ Erbium:Yttrium-Aluminum-Garnet Laser ○ Er,Cr:YSGG Laser ○ CO₂ Laser - Laser applications in periodontics: <ul style="list-style-type: none"> ○ Aesthetic and pre-prosthetic surgeries ○ Nonsurgical periodontal therapy: <ul style="list-style-type: none"> i- Lasers in the management of periodontitis ii- Lasers in the management of peri-implantitis - Advantages and disadvantages - Complications and risks of laser therapy <p>[§] Case scenario, questions about decision whether using laser or not should be formulated</p>	1
19	<p>Locally delivered, controlled-release antimicrobials</p> <ul style="list-style-type: none"> - Objectives - Types: <ul style="list-style-type: none"> ○ Chlorhexidine-based products: <ul style="list-style-type: none"> i- Chlorhexidine chip ii- PerioCol-CG iii- Chlo-Site ○ Doxycycline-based products: <ul style="list-style-type: none"> i- Ligosan slow release ii- Doxycycline gel ○ Periodontal Plus AB ○ Minocycline Microspheres - Rationale for local delivery and controlled release - Clinical significance - Clinical indications: <ul style="list-style-type: none"> ○ Adjunctive therapy ○ Surgical therapy ○ Peri-implantitis ○ Tobacco smoking - Adverse effects 	1

20	<p>Management of medically compromised patients</p> <ul style="list-style-type: none"> - Cardiovascular diseases: <ul style="list-style-type: none"> o Hypertension o Angina pectoris o Myocardial infarction o Previous cerebrovascular accident o Congestive heart failure o Cardiac pacemakers o Infective endocarditis - Renal disease - Chemotherapy 	1
21	<p>Management of medically compromised patients</p> <ul style="list-style-type: none"> - Endocrine/metabolic disorders: <ul style="list-style-type: none"> o Diabetes mellitus o Thyroid disorders o Adrenal Insufficiency - Pregnancy - Hemorrhagic disorders - Blood dyscrasias - Liver diseases - Neurologic Disorders: <ul style="list-style-type: none"> o Epilepsy - Infectious diseases: <ul style="list-style-type: none"> o COVID-19 o Hepatitis o AIDS o Tuberculosis 	1
22	<p>Gingival crevicular fluid (GCF)</p> <ul style="list-style-type: none"> - Introduction - Permeability of junctional and sulcular epithelia - Function - Amount: <ul style="list-style-type: none"> o Methods for estimating GCF amount - Composition: <ul style="list-style-type: none"> o Cellular elements o Electrolytes o Organic compounds - Methods of collection: <ul style="list-style-type: none"> o Absorbing paper strip: <ul style="list-style-type: none"> i- Intra-crevicular method ii- Extra-crevicular method o Crevicular washing o Micropipettes or capillary tubes - Cellular and humoral activity in GCF - Clinical significance: <ul style="list-style-type: none"> o Circadian periodicity o Sex hormones o Mechanical stimulation o Smoking 	1

	<ul style="list-style-type: none"> ○ Periodontal therapy - Drugs in GCF - GCF as a diagnostic/prognostic tool for periodontal disease 	
23	<p>Dentin hypersensitivity 605.e1</p> <ul style="list-style-type: none"> - Introduction - Epidemiology - Etiology - Theories of dentin hypersensitivity: <ul style="list-style-type: none"> ○ Direct innervation ○ Odontoblast receptor ○ Fluid movement/hydrodynamic - Diagnosis - Measurement methods - Prevention and management <ul style="list-style-type: none"> ○ Classification of desensitizing agents: <ul style="list-style-type: none"> i- Mode of administration ii- Mechanism of action 	1
24	<p>Tissue regeneration. General principles</p> <p>Periodontal Wound Healing</p> <ul style="list-style-type: none"> - Wound healing: Outcomes and definitions <ul style="list-style-type: none"> ○ Healing patterns in the periodontal tissues ○ Outcomes of periodontal wound healing: <ul style="list-style-type: none"> i- Repair ii- Reattachment iii- New attachment iv- Regeneration v- Resorption vi- Ankylosis - Phases of wound healing: <ul style="list-style-type: none"> ○ Inflammation phase ○ Granulation phase ○ Matrix formation and remodeling (maturation) phase - Factors that affect healing: <ul style="list-style-type: none"> ○ Local factors ○ Systemic factors - Periodontal wound healing: <ul style="list-style-type: none"> ○ Healing after nonsurgical treatment ○ Healing after periodontal surgery: <ul style="list-style-type: none"> i- Gingivectomy ii- Flap operation iii- Grafting procedures ○ Healing after regenerative therapy ○ Healing after implant placement: <ul style="list-style-type: none"> i- bone tissue interface ii- Mucosal interface 	1
25	<p>Regenerative periodontal therapy</p> <ul style="list-style-type: none"> - Regenerative capacity of bone cells - Regenerative capacity of gingival connective tissue cells - Regenerative capacity of periodontal ligament cells 	1

	<ul style="list-style-type: none"> - Role of epithelium in periodontal wound healing - The possible outcomes of periodontal therapy - Regenerative concepts: <ul style="list-style-type: none"> o Grafting procedures o Root surface biomodification o Guided tissue regeneration - Assessment of periodontal regeneration: <ul style="list-style-type: none"> o Clinical assessment <ul style="list-style-type: none"> i- Pocket probing. ii- Attachment level iii- Gingival indices iv- Alveolar bone level o Radiographic methods o Re-entry operations o Histologic methods 	
26	<p>Reconstructive surgical techniques:</p> <ul style="list-style-type: none"> o Non- bone graft associated new attachment: <ul style="list-style-type: none"> i- Principles ii- Procedure <p>Bone Graft associated new attachment or combination of both approaches</p> <ul style="list-style-type: none"> i- Types of bone graft: <ul style="list-style-type: none"> ● Autogenous graft ● Allograft ● Xenograft ● Alloplastic (synthetic) materials <ul style="list-style-type: none"> - Guided tissue regeneration (principle, advantages, disadvantages, and indications) 	1
27	<p>Advanced regenerative approaches</p> <ul style="list-style-type: none"> - Enamel matrix Derivatives - Acellular dermal matrix allograft - Clinical applications of growth factors - Cell therapy for periodontal regeneration - Gene therapeutics for periodontal tissue repair - Factors influencing the success or failure of all regeneration techniques 	1
28	<p>Oral implantology</p> <p>Peri-implant anatomy and Peri-implant diseases classification</p> <ul style="list-style-type: none"> - Introduction - Epithelial structure around natural tooth - Epithelial structure around dental implant - Structure of the interface between the tooth and gingivae - Structure of the interface between implant and oral epithelium - Structure of the interface between the implant and connective tissue - Keratinized tissue (attached gingiva) around implant - Clinical Comparison of Teeth and Implants - Peri-implant health - Peri-implant mucositis: 	1

	<ul style="list-style-type: none"> ○ Diagnosis ○ Treatment - Peri-implantitis <ul style="list-style-type: none"> ○ Diagnosis ○ Treatment 	
29	<p>Oral implantology</p> <p>Implant-related complications and failure</p> <ul style="list-style-type: none"> - Definitions of implant survival and success - Types and prevalence of implant complications - Surgical complications: <ul style="list-style-type: none"> ○ Hemorrhage and hematoma ○ Neurosensory disturbances ○ Implant malposition - Biologic Complications: <ul style="list-style-type: none"> ○ Inflammation and proliferation ○ Dehiscence and recession ○ Peri-implantitis and bone loss ○ Implant loss or failure - Prosthetic or mechanical complications: <ul style="list-style-type: none"> ○ Screw loosening and fracture ○ Implant fracture ○ Fracture of restorative materials - Aesthetic and phonetic complications: <ul style="list-style-type: none"> ○ Aesthetic complications ○ Phonetic problems 	1
30	<p>Oral implantology</p> <p>Supportive implant treatment</p> <ul style="list-style-type: none"> - Rationale for supportive implant treatment - Examination of implants <ul style="list-style-type: none"> ○ Peri-implant probing ○ Microbial testing ○ Stability measures ○ Implant percussion ○ Radiographic examination - Assessment of peri-implant health <ul style="list-style-type: none"> ○ Evaluation of biofilm control ○ Evaluation of peri-implant health and disease ○ Evaluation of implant osseointegration ○ Evaluation of implant restorations - Implant maintenance <ul style="list-style-type: none"> ○ Methods for patient oral hygiene ○ Methods for professional recall maintenance - Treatment of peri-implant diseases <ul style="list-style-type: none"> ○ Peri-implant mucositis ○ Peri-implantitis - Referral of patients to the periodontist 	1
Total		30

B- Clinical requirement

Credit hours required	Details
3 h/week (90 h/year)	<p>Clinical:</p> <ul style="list-style-type: none"> - Recording medical and dental history - Patient's education and motivation - Oral hygiene instructions (OHI) - Recording periodontal indices: <ul style="list-style-type: none"> ● Bleeding on probing (BOP) ● Plaque index (% of plaque) ● Probing pocket depth (PPD) ● Clinical attachment loss (CAL) - For periodontitis cases, determination of bone loss level by radiograph or clinically - Diagnosis according to classification of periodontal disease and conditions (2017) - Non-surgical periodontal therapy (manual/ultrasonic scaling, root planing) and removal of all plaque retentive factors - Referral of cases that potentially requiring surgical therapy - Maintenance and follow-up after 3 months <p>Requirements:</p> <ul style="list-style-type: none"> - Recording periodontal indices and diagnosis (min= 15) - Non-surgical periodontal treatment: <ul style="list-style-type: none"> ● Scaling (min= 8) ● Root planing (min= 3 teeth) ● Periodontal surgery assistant (one case optional)

Department Of Restorative and Aesthetic Dentistry

A- Basic information

1-Subject title	Conservative Dentistry	
2-Number of credits	Theory:2	Clinical:6
3-Number of contact hours	Theory:1h/2wk Endodontics 1h/2wk Fixed Prosthodontic.	Laboratory/ Clinic:6h/wk.
4-Subject time	Fifth Year	
No.	Title of the lectures/ Endodontics	Hours
1	Endodontic diagnosis	1
2	Pain control in Endodontics	1
3	Endodontic radiography	1
4	Working length Determination	1

5	Microbiology	1
6	Microbiology	1
7	Intracanal instruments	1
8	Intracanal instruments	1
9	Obturation of the root canal system	1
10	Obturation of the root canal system	1
11	Endodontic Emergency Treatment	1
12	Restoration of Endodontically Treated Teeth	1
13	Endodontic-Periodontal Relations	1
14	Tooth discoloration and bleaching.	1
15	Tooth discoloration and bleaching.	1
Total		15

Number	Title of the lectures Fixed Prosthodontics	Hours
1	Terminology, definition of fixed partial denture , Effect of Tooth Loss, Comparism with R.P.D	1
2	Types of Fixed Bridge including Basic Bridge Design	1
3	Components of Fixed Bridge; ♦ Retainers.-----	1
4	Components of Fixed Bridge; ♦ Pontics..... ♦ Connectors.-----	1
5	♦ Clinical Consideration for Bridge Construction.- _Abutment Tooth(evaluation and selection) _Crown/Root Ratio. _Splinting of teeth. _Patient Occlusal Status. _General Factors.	1
6	♦ Clinical Situations affecting Bridge Design; ♦ (Post. Tilted Abutments, Span Length, Pier Abut., Arch	1

	Curvature)	
7	♦ Resin bonded bridge	
8	♦ Diagnosis And Treatment Plan. a. Intra-oral Examination. b. X-Rays Examination. c. Diagnostic Cast Examination.	1
9	♦ Gingival retraction and impression(techniques)and impression disinfection	1
10	♦ provisional Restoration , Oclusion and Aesthetics (Principles of occlusion occlusal plane, Anterior guidance) Bite Registration, and Articulation	1
11	♦ provisional Restoration , Oclusion and Aesthetics (Principles of occlusion occlusal plane, Anterior guidance) Bite Registration, and Articulation	1
12	♦ Try-in and Shade Selection (Colour dimensions Hue,Chroma,and Value).	1
13	♦ Final Cementation of F.P.Ds.(Techniques)	1
14	♦ Failure in Fixed Prosthodontics.	1
15	♦ Porcelain in Fixed Prosthodontics (Current Ceramic).	1
Total		15

Clinical Requirements

Minimum Requirement	Hours
The students are required to complete the following restorations:- a. Amalgam Restorations Class I, Class II, Compound and complex restorations. b. Composite (tooth colored) Restorations Class I, Class II, Class III, Class IV ,and Class V. c. Fixed prosthesis including crown and bridge work. d. Endodontic treatment for anterior teeth and premolars. e. Seminars	6h/wk
Total	180 h/year

Research project

Research project	1hr./ week includes lecture and supervisors' consultations
Credits	Theory : 2

ت	اسم المادة (research method)	عدد المحاضرات
1	statistics	3
2	Medical research ethics	2
3	Biosafety	2
4	Designing research	3
5	Citation in academic writing	3
6	Planning a research protocol	2
	المجموع	15

Summary: Fifth Year

Total Theories - Hours/ Week: 9

Total Theories - Hours/ year: $9 \times 30 = 270$

Total Practical Hours/ Week: 35

Total Practical Hours/ year: $35 \times 30 = 1050$

Total Hours / Year: 1320

Total credits: 53

Total credits for the five years : 223

Notes:

- Each studying hour is equal to 60 minutes
- The theoretical hour is equal to one studying credit for 15 weeks
- Two practical hours are equal to one studying credit for 15 weeks
- Each academic year includes 30 weeks for the 1st, 2nd and 3rd years and 38 weeks
- For the 4th and 5th years with the summer training
- The 4th and 5th academic year students should complete summer training program of 8 weeks with the following subject Fourth year

Number	Subject
1	Oral surgery
2	Pedodontics
3	prosthodontics
4	Restorative dentistry
5	Periodontics
6	Orthodontics

Fifth year

Number	Subject
1	Oral medicine
2	Oral surgery
3	Restorative dentistry
4	prosthodontics
5	Orthodontics
6	Pedodontics
7	prevention
8	Periodontics