

Undergraduate Catalogue 2017

Faculty of

DENTISTRY

Faculty Administration

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Assistant Dean	Assoc. Prof. Roula Abiad
Executive Administrator	Mr. Khaled Najjar

Academic Staff

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Associate Professors	Dr. Hala Ragab, Dr. Sherine Badr Dr. Nayer Abo Elsaad, Dr. Mohammed Rayyan, Dr. Nagwa Sayed Dr. Roula Abiad
Assistant Professors	Dr. Mohamad Shokry
Senior Lecturer	Dr. Ahmad Abyad

History

In 1995, Beirut Arab University (BAU) established its Faculty of Dentistry as the 9th faculty, ensuring that the training & education given to future dentists equips them with the skills needed for prevention, diagnosis & treatment of abnormalities related to teeth & associated oral tissues.

Organizational Structure

The Faculty of Dentistry is constituted of the following Departments & Divisions:

Biological & Diagnostic Sciences includes: Oral Biology, Oral Diagnosis & Radiology, Oral Medicine & Oral Pathology

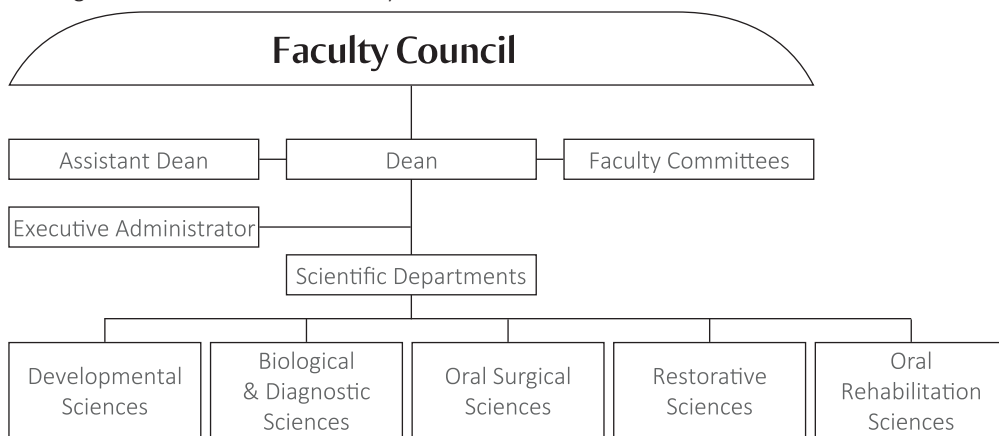
Developmental Sciences includes: Orthodontics, Pediatric Dentistry, Public Health & Behavioural Sciences

Oral Rehabilitation Sciences includes: Dental Biomaterials, Fixed Prosthodontics, Removable Prosthodontics

Oral Surgical Sciences includes: Oral & Maxillofacial Surgery, Periodontology, Implantology

Restorative Sciences includes: Dental Anatomy, Endodontics, Operative & Esthetic Dentistry

The organizational chart of the Faculty is as follows:



Vision

To be an internationally-recognized leading dental institution with an outstanding impact on oral health through excellence in education, patient-centered care, community-based research & public health services.

Mission

The Faculty of Dentistry is committed to provide its students with high quality dental education & advanced training through the integration of contemporary science-based knowledge & innovative technology into the delivery of patient care. In order to achieve the primary goal of improving the oral health of the diverse population, the Faculty will continue to respond effectively to changes in education, health care delivery & research to ensure a supply of committed professional graduates who are able to provide optimum oral health care service.

Objectives

- To prepare graduates with a strong foundation of evidence-based dental education, comprehensive clinical practice, cultural competency & values that satisfy the needs of the national, regional & international job-market through the continuous reform of curricula.
- To provide & promote the delivery of optimal patient-centered oral healthcare & community service with emphasis on prevention in a variety of settings to fulfill the needs of a diverse population.
- To contribute significantly to the advancement of high quality research.
- To act as a source of life-long learning & provide continual professional development.
- To strengthen academic cooperation & relations at the national & international levels.

Academic Program

- The Faculty of Dentistry offers a 10-semester full-time Bachelor Degree in Oral & Dental Surgery (B.D.S.). Each academic semester extends over a period of 16 weeks.
- The undergraduate program is structured to provide dental students with a comprehensive didactic dental education, as well as extensive clinical & laboratory training in all dental specialties & allied medical sciences.
- A Student fails in a course if he/she obtains a grade less than D in the pre-clinical or clinical examination.

Admission Requirements

To be accepted for an undergraduate degree, applicants must:

- Hold the official Lebanese Secondary School Certificate in a branch relevant to the chosen undergraduate field of specialization, or an official equivalent;
- Successfully pass an entrance exam to measure the level of proficiency in **English Language, an aptitude Test (thinking skills, scientific knowledge: Biology, Physics, Chemistry), a practical exam, as well as attend a personal interview.**

Learning Outcomes (ILOs):

a. Knowledge & Understanding:

On successful completion of the program, graduates should be able to:

- a1- Recognize the importance of biomedical sciences in relation to dentistry.
- a2- Recognize the properties, behaviour, environmental issues, limitations, related body response of the different dental materials that will help in their selection.
- a3- Recognize mechanism of cross infection & infection control & prevention to maintain safe working environment.
- a4- Identify & distinguish the different dental terms, instruments & materials used.
- a5- Describe the form & function of teeth, associated structures, consequences of tooth loss & relate them to state of health & disease.
- a6- Distinguish human diseases & pathogenic processes, including genetic disorders, & the manifestation of those diseases which are particularly relevant to the practice of dentistry.
- a7- Recognize basis of practice management, oral health promotion, prevention.
- a8- Distinguish ethical, medico-legal aspects & basis of practice management through planning, organizing & team leading aiming to a safe working environment.
- a9- Identify concepts & sequelae of normal & abnormal occlusion.
- a10- Recognize systemic disorders with oral manifestations which have interrelationship to oral health.
- a11- Describe diseases & disorders of the oral cavity & associated structures, their causes & sequelae together with the principles of their prevention, diagnosis & management.
- a12- Describe normal & abnormal craniofacial development, oral & oral related disorders, tooth development, eruption, occlusal development from birth to adolescence.
- a13- Recognize prevention & common signs & symptoms of orofacial pain, anxiety & apprehension & management of medical emergencies. Motor & sensory innervation of mouth & jaws.
- a14- Realize the importance of professional behaviour & proper communication with patient & oral health care team.
- a15- Distinguish different component of research & realize the importance of evidence based approach in patient management.

b. Intellectual Skills:

A graduating dentist should be able to:

- b1-Select the proper material for various situations, & analyze the causes of failure of dental materials, develop maintenance program, diagnose, explain & manage deterioration & failure.
- b2-Set differential diagnosis of similar pathological conditions based on medical evidences, clinical & radiographic findings.
- b3-Assess & evaluate the effects of medications interactions during dental management & manage dental & medical emergencies which may occur in dental practice & perform basic life support measures.
- b4-Integrate bio-medical clinical & surgical knowledge & therapies relevant to oral health care.
- b5-Analyze, interpret, & integrate collected diagnostic data to solve clinical problems based on current evidence.

b6-Design appropriate treatment plan for different dental problems, select the suitable treatment option, perform the technical steps satisfactorily based on the investigation outcomes & priorities of potential patient's clinical problems & evaluate treatment outcomes.

c. Professional & Practical Skills:

A graduating dentist should be able to:

- c1- Demonstrate how to perform different types of tooth preparation, direct & indirect restorations & manage hard tissue loss including caries as well as defective teeth to restore form & esthetics together with management of pulpal & periradicular diseases & disorders.
- c2- Select & manipulate the proper material & describe to the patient the possible risk & benefits.
- c3- Identify & manage problem in the mixed dentition in which interceptive treatment is indicated including space management.
- c4- Prescribe & monitor the effects of appropriate pharmaceutical agents taking into consideration drug & patient factors.
- c5- Integrate basic biomedical, behavioural & dental sciences with vital signs, symptoms & physical findings of the disease for a better delivery of dental care.
- c6- Detect abnormal & pathological conditions, as well as etiological and/or risk factors that may contribute to disease process.
- c7- Manage dental emergencies & promptly refer those situations that are beyond the scope of the general dentist to a specialist & carry out basic life support procedures.
- c8- Apply health promotion principles & prevention in a comprehensive approach based on risk assessment with proper dietary advice for better serving the community.
- c9- Perform simple dento-alveolar procedures & recognize when & how to refer patient with medical & dental problems to a specialist & administer local anesthesia.
- c10- Manage patients with functional disorders involving the occlusion & temporomandibular joint & orofacial pain.
- c11- Recognize abnormalities of facial growth & development & realize the appropriate time of intervention in potential orthodontic cases to refer for specialist advice or treatment.
- c12- Manage patients with periodontal diseases & conditions.
- c13- Manage rehabilitation of partially & completely edentulous patients.
- c14- Appraise indications, contraindications, limitations & risks as well as benefits of conscious sedation & general anesthesia.
- c15- Manage the oral health of children as well as adolescents & treat them with consideration for their expected growth, development, psychology & handicapping condition.
- c16- Apply current cross-infection control & ionizing radiation guidelines to work in a safe environment with no occupational hazards.

d.General & Transferable Skills:

The graduate should have the ability to:

- d1- Communicate effectively at all levels in both the scientific & professional contexts using verbal, non-verbal & written means taking into consideration human rights.
- d2- Utilize information technologies in a scientific approach to enrich & diversify professional experience.
- d3- Provide high quality comprehensive patient care with other health care providers, identify his role & respect others'. Moreover he/she should maintain confidentiality plan, obtain informed

consent & focus on patient's interest & expectations.

d4- Self-evaluate professional abilities, performance & progress & evaluate the validity of claims related to products or techniques.

d5- Acquire moral & ethical responsibilities of care toward the community & patients.

d6- Recognize the basic concepts of quality assurance & practice management.

d7- Work effectively & professionally as member of a health care team & learn who to manage time, set priorities manage occupational stress & display appropriate behaviour towards all members of the team & recognize their limitation.

d8- Access different sources to retrieve information relevant to oral health care. Acquire, analyze, process & communicate information in a scientific manner to solve problems & to guide clinical decision-making based on latest evidence.

d9- Recognize the value of continuous lifelong learning, self-assessment, problem solving & critical thinking in maintaining competency.

Career Opportunities

- Private dental practice either as a solo practitioner or as a partner in a group.
- Governmental, private & military hospitals as well as other health care institutions may employ dentists. These offer dentists the opportunity to care for more challenging patients in an interdisciplinary setting.
- Working in health centers located in rural & underserved areas fulfilling the basic humanitarian value of dentistry as a science.
- Dental school staff members have the opportunity to practice dentistry, in addition to researching, teaching & mentoring the next generation of dentists.
- Working as representatives in companies for dental equipment & materials.

Graduation Requirements

To receive a Bachelor Degree in Oral & Dental Surgery, a student must satisfactorily complete 180 credit hours with an overall minimum grade point average (GPA) of 2.0 + IC DL (International Computer Driving License). The following table summarizes the number of credits required for Bachelor granting program at the Faculty:

Program Requirements	Credits
I. University Courses*	
University Mandatory Courses	5
University Elective Courses	9
II. Faculty Core Courses	
Biomedical Courses	24
Basic dental courses	19
Preclinical dental courses	44
Clinical dental courses	73
III. Faculty Elective Courses	
	6
Total	180

* A total of 14 credits is required as General University Requirements; 5 credits are selected from the University Mandatory courses list including: ARAB 001 (2Cr.), ENGL 001 (2Cr.), BLAW 001 (1Cr.) & another 9 credits are selected from the University Elective courses list.

Major Core Courses

Course			Credits	Prerequisite
BCHM	221	Biochemistry	2	NONE
BIOL	221	Molecular Genetics	1	NONE
ANAT	221	Gross Anatomy	2	NONE
PHRM	221	Medical Botany	2	NONE
PHYL	221	Physiology	2	NONE
BIOM	221	Principles of Dental Biomaterials	1	NONE
DANT	221	Dental Anatomy	2	NONE
ANAT	222	Head & Neck Anatomy	3	ANAT 221
GHST	222	General Histology	1	NONE
MICR	222	Microbiology & Immunology	2	BCHM 221 or BIOL 221
BIOM	222	Applied Dental Biomaterials I	2	BIOM 221
DANT	222	Dental Anatomy & Occlusion	3	DANT 221
OPER	222	Preclinical Operative Dentistry I	2	DANT 221
PATH	223	Pathology	2	ANAT 221
PHBS	223	Behavioural Sciences	1	NONE
OCLS	223	Fundamentals of Occlusion	1	DANT 222
ORBL	223	Oral Biology I	3	GHST 222
BIOM	223	Applied Dental Biomaterials II	2	BIOM 221
ORAD	223	Oral Radiology	1	ANAT 222
FPRO	223	Preclinical Fixed Prosthodontics I	2	OPER 222
RPRO	223	Preclinical Removable Prosthodontics I	2	DANT 222
OPER	223	Preclinical Operative Dentistry II	2	OPER 222
MICR	224	Applied Microbiology & Infection Control	1	MICR 222
PHRM	224	Pharmacology	2	PHYL 221 & PHRM 221
PHBS	224	Research & Evidence Based Dentistry	2	NONE
OPTH	224	Oral Pathology I	2	ORBL 223
ORBL	224	Oral Biology II	2	ORBL 223
ENDO	224	Preclinical Endodontics I	2	ORAD 223 & OPER 223
FPRO	224	Preclinical Fixed Prosthodontics II	2	FPRO 223

Major Core Courses

RPRO	224	Preclinical Removable Prosthodontics II	2	RPRO 223
OPER	224	Preclinical Operative Dentistry III	2	OPER 223
PHBS	321	Practice Management	1	PHBS 223
GMED	321	General Medicine	2	PATH 223
OMED	321	Oral Medicine I	1	OPTH 224
ENDO	321	Preclinical Endodontics II	2	ENDO 224
FPRO	321	Preclinical Fixed Prosthodontics III	2	FPRO 224
RPRO	321	Preclinical Removable Prosthodontics III	2	RPRO 224
OPER	321	Preclinical Operative Dentistry IV	2	OPER 224
OSRG	321	Anesthesia	1	PHRM 224
ODTP	321	Oral Diagnosis, Radiology & Treatment Planning	3	ORAD 223 PERI 321*
PERI	321	Preventive Periodontology	2	MICR 224 ODTP 321*
GSRG	322	General Surgery, ENT & Ophthalmology	2	PATH 223
PHBS	322	Preventive & Public Health Dentistry	2	PHBS 224
OPTH	322	Oral Pathology II	2	OPTH 224
ORTD	322	Introduction to Orthodontics	1	OCLS 223
OMED	322	Oral Medicine II	1	OMED 321
FPRO	322	Preclinical Fixed Prosthodontics IV	2	FPRO 321
RPRO	322	Preclinical Removable Prosthodontics IV	2	RPRO 321
PERI	322	Periodontology I	1	PERI 321
ENDO	322	Endodontics I	3	ENDO 321 & ODTP 321
OPER	322	Operative Dentistry I	2	OPER 321
PEDI	421	Preventive & Pediatric Dentistry I	2	PHBS 322
ORTD	421	Orthodontics I	1	ORTD 322
OSRG	421	Oral Surgery I	3	OSRG 321
PERI	421	Periodontology II	2	PERI 322
FPRO	421	Fixed Prosthodontics I	3	FPRO 322
RPRO	421	Removable Prosthodontics I	2	RPRO 322
ENDO	421	Endodontics II	2	ENDO 322
OPER	421	Operative Dentistry II	2	OPER 322

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PEDI	422	Preventive & Pediatric Dentistry II	2	PEDI 421
ORTD	422	Orthodontics II	1	ORTD 421
OSRG	422	Oral Surgery II	3	OSRG 421
FPRO	422	Fixed Prosthodontics II	3	FPRO 421
RPRO	422	Removable Prosthodontics II	2	RPRO 421
ENDO	422	Endodontics III	3	ENDO 421
OPER	422	Operative Dentistry III	3	OPER 421
PHBS	521	Ethics & Professionalism in Dentistry	1	PHBS 321
PEDI	521	Pediatric Dentistry I	2	PEDI 422
OSRG	521	Oral Surgery & Implantology	2	OSRG 422
PERI	521	Periodontology III	1	PERI 421
FPRO	521	Fixed Prosthodontics III	3	FPRO 422
RPRO	521	Removable Prosthodontics III	2	RPRO 422
ENDO	521	Endodontics IV	3	ENDO 422
OPER	521	Operative Dentistry IV	2	OPER 422
PHBS	522	Interprofessional Education for Health Care	1	PHBS 521
CLNC	522	Clinical Comprehensive Care	2	PROS 522*
PEDI	522	Pediatric Dentistry II	3	PEDI 521
OSRG	522	Oral & Maxillofacial Surgery	3	OSRG 521
PROS	522	Prosthodontics	4	FPRO 521 & RPRO 521 CLNC 522*
REST	522	Restorative Dentistry	3	ENDO 521 & OPER 521

*: Co-requisite

DENT	501	Rotary Endodontics	2	NONE
DENT	502	Esthetic Dentistry (CAD CAM)	2	NONE
DENT	503	Oral Implantology	2	NONE
DENT	504	Laser Dentistry	1	NONE
DENT	505	Community Service	1	NONE
DENT	506	Advanced Radiology (CBCT)	1	NONE
DENT	507	Forensic Dentistry	1	NONE
DENT	508	Medical Emergencies	1	NONE

DENT	509	Dental Photography	1	NONE
DENT	510	Orofacial Pain & Pain Control	1	NONE
DENT	511	Prevention & Risk Assessment	1	NONE
DENT	512	Orthodontic Clinical Training	1	NONE
DENT	513	Restorative Dentistry Clinics	1	NONE
DENT	514	Prosthodontics Clinics	1	NONE
DENT	515	Mentored Research	1	NONE
DENT	516	Research Project	2	DENT 515

Description of Major Core Courses

BCHM 221 Biochemistry Cr: 2 (2 Lec., 1 Pract.)

Prerequisite NONE

The present course provides in-depth exposure to the principles of biochemistry most important to an understanding of health & disease. Major topics include an introduction to the chemistry of the major classes of biomolecules, including proteins, carbohydrates, lipids, enzymes & nucleic acids. An in-depth review of cell metabolism & how it is regulated at the level of the cell & the whole organism will follow the chemistry of biomolecules. Finally, several metabolic disorders will be explained to contrast normal & perturbed human biochemistry as well as demonstrate the clinical implications of human biochemistry. Therefore, this course is designed for students who are more likely to pursue the medical professions.

BIOL 221 Molecular Genetics Cr: 1 (1 Lec.)

Prerequisite NONE

The course is an introduction to molecular genetics. It covers the major topics; DNA structure, Eukaryotic gene organization, DNA replication, Transcription, Processing (splicing & maturation) & Translation. Furthermore, the course will review the concept & the applications of three molecular genetic techniques in clinical diagnosis, such as nucleic acid hybridization, polymerase chain reaction & DNA sequencing. Finally, an explanation of gene therapy approach through recombinant DNA technology will be discussed.

ANAT 221 Gross Anatomy Cr: 2 (2 Lec., 1 Pract.)

Prerequisite NONE

Provides students with knowledge about the normal anatomical structures of the different body systems & organs & their clinical applications. The course also covers the development of the pharyngeal arches, practical study of the human skeleton, joints heart & its big blood vessels, lungs & their pleurae, abdominal & pelvic viscera & brain.

PHRM 221 Medical Botany Cr: 2 (2 Lec., 1 Pract.)

Prerequisite NONE

The course aims to provide the students with thorough information & practical skills about the classification, identification (macro- & microscopically) of medicinal plants belonging to different medicinal families, focusing on those applied in dental care preparations & clinical dental practice. It aims also to promote the skills, knowledge, attitudes & behaviours that facilitate effective interprofessional education (IPE) collaborative practice between health care providers. Through interactive learning students will discover ways in which they can work together to optimize patient's care, respecting each other's roles & responsibilities. The course employs a range of interactive methods & technologies. The content is oriented towards quality in health care, problem solving & other approaches that support dental care in different practice settings.

PHYL 221 Physiology Cr: 2 (2 Lec.)

Prerequisite NONE

This course provides a basic understanding of the functions & regulation of the human body organs. It develops an awareness & sense of responsibility regarding the functions of the human body organs & their role in maintaining homeostasis. The course explores & manipulates models, diagrams & other creative representations of the human body systems which include the circulatory, muscular, nervous, cardiovascular, renal & endocrine systems.

BIOM 221 Principles of Dental Biomaterials Cr: 1 (1 Lec.)

Prerequisite NONE

Defines & recites an overview for the basic science of physical, chemical & mechanical properties of dental materials used in all branches of the dental field (metals, polymers, ceramics & composites). Their introductory clinical applications are also presented.

DANT 221 Dental Anatomy Cr: 2 (1 Lec., 3 Pract.)

Prerequisite NONE

The course aims to provide intensive knowledge about tooth nomenclature & numbering systems of permanent & deciduous teeth. It also deals with the anatomical characteristics & landmarks of permanent anterior & premolar teeth. The course comprises practical sessions; student is provided the opportunity to develop his/her manual skills by carving in wax anterior teeth & premolars.

ANAT 222 Head & Neck Anatomy Cr: 3 (2 Lec., 2 Pract.)

Prerequisite ANAT 221

Provides a comprehensive detailed study to the head & neck including: Scalp, face, cranial cavity, orbit, parotid, temporal, infra-temporal, TMJ, pterygo-palatine fossa, submandibular region, mouth cavity, palate, tongue, nasal cavity, para-nasal sinuses, eyeball, ear & facial nerve & development of face, palate, tongue, salivary, pituitary & thyroid glands as well as nose. In addition, it includes cervical vertebrae, posterior triangle, anterior triangle, thyroid gland, jugular, carotid, subclavian vessels, last 4

cranial nerves, cervical plexus, sympathetic trunk, cervical fascia, facial spaces, neck lymph nodes, pharynx & larynx.

GHST 222 General Histology Cr: 1 (1 Lec., 1 Pract.)

Prerequisite NONE

The course aims to provide the students with knowledge about the normal histological structure of the different body tissues & organs necessary for understanding the pathological changes that might occur in case of disease.

MICR 222 Microbiology & Immunology Cr: 2 (2 Lec., 1 Pract.)

Prerequisite BCHM 221 or BIOL 221

The course focuses on explaining the structure of different microorganisms in relation to their environmental & nutritional requirements. The course aims at rendering the students familiar with different laboratory techniques for isolation & identification of pathogenic viruses, bacteria & fungi. This would create a chance for pharmacy & dental students to work together on isolation & identification of oral microbiota & other infectious agents from different prospective to optimize patient's care, respecting each other's role & responsibilities. It aims also to promote the skills, knowledge, attitudes & behaviours that facilitate effective interprofessional education (IPE) collaborative practice between health care providers. Emphasis will be placed on learning the complex nature & functioning of human immune system, host-parasite relationship in addition to different types of hypersensitivity reactions & autoimmune diseases.

BIOM 222 Applied Dental Biomaterials I Cr: 2 (2 Lec., 1 Pract.)

Prerequisite BIOM 221

Provides the students with theoretical & practical information regarding the properties & manipulation of restorative dental materials as regards their presentation modes, composition, manipulation, properties & limitations. In addition to working sessions for demonstration & practicing optimal manipulation of the studied materials.

DANT 222 Dental Anatomy & Occlusion Cr: 3 (2 Lec., 2 Pract.)

Prerequisite DANT 221

The course aims to familiarize students with the general anatomical characteristics of the human oral dentition. Emphasis is placed on the prevention of periodontal disease & dental caries based on external crown form & function of occluding tooth surfaces. The course also provides understanding of the basic principles of occlusion. The course comprises practical sessions; student is provided the opportunity to develop his/her manual skills by carving in wax maxillary & mandibular molars.

OPER 222 Preclinical Operative Dentistry I Cr: 2 (1 Lec., 3 Pract.)

Prerequisite DANT 221

The course provides students with the basic knowledge & skills necessary for adequate performance of intra-coronal cavity preparation. Students are introduced to biological, epidemiological, & clinical aspects of dental caries, as well as instruments & equipment used in the clinical setting. Students will be able to apply correct nomenclature to caries classification, identify & name the restorative instruments & equipment, & describe methods of caries assessment & treatment. Students will be trained on natural-size Typodont teeth in clinical simulation environment. Students are expected to do self-assessment to their practical skills according to set criteria. Basic standards of infection control are followed during laboratory sessions.

PATH 223 Pathology Cr: 2 (2 Lec.)

Prerequisite ANAT 221

Introduces students to the fundamental basis of etiology, pathogenesis with emphasis on disease prevention, compensation of the damaged functions & recovery. Knowledge of these mechanisms is needed for elaboration of principles & methods of therapy & prophylaxis.

Also it provides the students with basic understanding of the mechanisms of development & outcomes of the main systems' diseases as bridge between basic theoretical disciplines & clinical practice.

PHBS 223 Behavioural Sciences Cr: 1 (1 Lec.)

Prerequisite NONE

Behavioural Science is the study of human behaviour in terms of its psychological, social & communicative aspects. The course introduces a number of topics that relate human behaviour to dentistry, such as oral health & quality of life, stress & inflammation, cognitive & emotional determinants of dental pain, dental fear & anxiety, managing patient anxiety, techniques of pain-reduction, psycho-social factors of oral health problems, psycho-social reactions & oral health disorders, the social context of dental care, enabling contact between the patient & the dental staff by using effective communication skills, benefits of communication skills & their components, using communication skills when treatment complications arise, using communication skills with other members of the health team, etc. While developing students' theoretical knowledge & understanding of these topics, the course also provides case studies to enable students to transfer & apply the acquired knowledge in real-life situations later on.

OCLS 223 Fundamentals of Occlusion Cr: 1 (1 Lec.)

Prerequisite DANT 222

This course covers the definitions of basic terms of occlusion, muscles of mastication & mandibular movements, laws of articulation, anterior & posterior occlusal determinants as well as requirements of ideal occlusion are also described. Anatomy & disorders of TMJ, clinical occlusal analysis, surface tooth loss & its implications in addition to static & dynamic occlusion, classification & management of oral & facial pain will be discussed in details.

ORBL 223 Oral Biology I Cr: 3 (3 Lec., 1 Pract.)

Prerequisite GHST 222

The scope of this course includes a range of basic & applied sciences that underpin the practice of dentistry. These subjects include: molecular & cellular regulation of tooth development & its supporting tissues, basic chemistry, crystallography & ultra structure of the enamel, dentin, & cementum. The course also familiarizes students with the general composition & main structural features of pulp & periodontal ligament. These subjects will be integrated with the relevant disease processes, for example, dental caries, oral hygiene & fluoride; dental restorations, dentin adhesion, & dentin hypersensitivity. The course also helps the students to develop a spirit of inquiry that leads them to seek better ways to promote & preserve oral & general health.

BIOM 223 Applied Dental Biomaterials II Cr: 2 (2 Lec., 1 Pract.)

Prerequisite BIOM 221

Provides the students with theoretical & practical information about composition, properties & manipulation of auxiliary laboratory & prosthetic dental materials. In addition, the student demonstrates & practices the manipulation of these materials in the practical sessions.

ORAD 223 Oral Radiology Cr: 1 (1 Lec., 1 Pract.)

Prerequisite ANAT 222

The course aims to provide students with the specialist knowledge necessary for practicing different intraoral radiographic techniques & processing. Implement, perform & manage effective decontamination & infection control procedures according to guidelines in dental x-ray room. It also covers basic principles of radiation biology, safety & protection with analysis of unsatisfactory radiographs. In addition, interpreting intraoral & panoramic dental x-ray films with identifying normal anatomic landmarks of maxilla & mandible, periodontal diseases & caries.

FPRO 223 Preclinical Fixed Prosthodontics I Cr: 2 (1 Lec., 2.5 Pract.)

Prerequisite OPER 222

Introduces & orients students to fixed prosthodontic science, terminology & classifications, instruments used in fixed prosthodontics, principles of tooth preparation, full veneer metal crown & all ceramic crown preparations. Students will perform tooth preparation for full veneer metal crown on typodont molars. They will also prepare centrals for all ceramic crowns.

RPRO 223 Preclinical Removable Prosthodontics I Cr: 2 (1 Lec., 2 Pract.)

Prerequisite DANT 222

The course presents introduction & history of removable prosthodontics. It provides the students with the information about the anatomy of the supporting structures & steps of complete denture construction. Handling & pouring impressions, temporary & permanent denture bases, recording maxillo-mandibular relations, mandibular movements considerations & significance are also demonstrated.

OPER 223 Preclinical Operative Dentistry II Cr: 2 (1 Lec., 2.5 Pract.)

Prerequisite OPER 222

The course endorses student's abilities to solve problems relevant to restoration of carious & non-carious lesions including diagnosis & treatment options. Isolation & moisture control techniques will be introduced & methods of disease control & caries prevention. Students are expected to master intra-coronal cavity preparation of anterior & posterior teeth. Students will also practice application of pit & fissure sealants.

MICR 224 Applied Microbiology & Infection Control Cr: 1 (1 Lec., 1 Pract.)

Prerequisite MICR 222

Dentists are exposed to a wide variety of potentially infectious microorganisms in their clinical environment. The course aims to give the students the knowledge & understanding about the best protocols & procedures necessary for working safely. The course aims also at rendering the students familiar with the most common oral microbiota & the most appropriate methods for sterilizing dental clinic equipment. Emphasis is focused on applying the standard guidelines of preventive measures to inhibit cross infection for the best practice in dental clinic. Dental students are subjected to the experience of sample collection by medical lab students to emphasize IPE experience.

PHRM 224 Pharmacology Cr: 2 (2 Lec.)

Prerequisite PHYL 221 & PHRM 221

The broad goal of the course is to inculcate rational & scientific basis of therapeutics keeping in view the dental profession. In this sense, the course aims to introduce the predoctoral dental students to basic pharmacology, whilst building up skills & analytical apprehension of drug mechanisms, pharmacological actions, adverse effects & major drug interactions relevant to their field of study. It puts more emphasis on the pharmacotherapy of dental conditions which they may face on the dental chair. In addition, the course addresses the essential elements as well as the legislative principles of prescription writing of the commonly used drugs in the dental field, including controlled drugs.

PHBS 224 Research & Evidence Based Dentistry Cr: 2 (2 Lec.)

Prerequisite None

The course introduces the concept & techniques of biostatistics used in dental research. It also presents an overview of the research methodology & basics of statistical methods in analysis & interpretation of oral health research. The course emphasis on understanding of the importance of sampling, collection, describing & interpreting of data. Examples from current basic science research, survey research, & clinical will be presented & discussed. The course also discusses the structure of scientific writing for a proposal of a research study & its different sections. Finally, it introduces students to the principles of Evidence Based Dentistry, focusing on the first three steps (Ask, Acquire & Appraise). The course is a mixture of lectures where instructor(s) explain the principles & discussion where students receive

feedback on exercises to formulate PICO questions, search for primary/ secondary evidence & appraise observational studies & clinical trials. Students in small groups analyze scientific literature & learn about general patterns of clinical judgment, clinical thinking, decision making, & application of scientific evidence into every day practice.

OPTH 224 Oral Pathology I Cr: 2 (2 Lec., 1 Pract.)

Prerequisite ORBL 223

This course aims to provide the students with basic knowledge about different oral diseases, such as dental caries, pulp & periapical diseases. The students will be introduced to different types of oral & para-oral cysts, & common types of odontogenic tumors. The course combines lectures with case presentations & microscopical images for different oral diseases.

ORBL 224 Oral Biology II Cr: 2 (2 Lec., 1 Pract.)

Prerequisite ORBL 223

This course focuses on the latest scientific developments related to oral biology & health, covering basic science in a clinical context. The course covers the oral mucosa & its relationship to the oral mineralized tissues, composition & main structural features of bone. This course also deals with the process of shedding & eruption, salivary glands, saliva biochemistry, as well as temporomandibular joint & maxillary sinus. These subjects will be integrated with the relevant disease processes, for example, histological changes in bone that result from tooth movements, & the potential diverse changes resulting from orthodontic tooth movement & cranio-mandibular joint dysfunction. Finally, the course teaches the students how to choose & study significant scientific problems using modern scientific approaches.

ENDO 224 Preclinical Endodontics I Cr: 2 (1 Lec., 2.5 Pract.)

Prerequisite ORAD 223 & OPER 223

This course orients the students to endodontic science, root canal anatomy & morphology, principles of access cavity preparation. Instruments: descriptions & uses, working length determination & basics of single root canal preparation.

FPRO 224 Preclinical Fixed Prosthodontics II Cr: 2 (1 Lec., 2 Pract.)

Prerequisite FPRO 223

Designed to introduce students to know metal ceramic crown preparation & design along with the partial coverage restoration, working casts & dies fabrication, types & materials, dental waxes types & pattern fabrication, spruing function & techniques. Also investing materials & techniques, alloys for casting & casting defects.

RPRO 224 Preclinical Removable Prosthodontics II Cr: 2 (1 Lec., 2 Pract.)

Prerequisite RPRO 223

The course provides information about articulators, functions, advantages, requirements & classification. Value & techniques for mounting casts are explained. Artificial teeth selection, arrangement of artificial teeth are also demonstrated. Complete denture occlusion, waxing-up & festooning complete dentures, processing waxed-up dentures & processing errors are discussed. Posterior palatal seal, relief, denture repair are presented. Retention & stability of complete denture are also covered.

OPER 224 Preclinical Operative Dentistry III Cr: 2 (1 Lec., 2.5 Pract.)

Prerequisite OPER 223

The course focuses on properties, manipulation, & application of dental restorations. Moreover, the course emphasizes on when is it necessary; & how to provide pulp protection, with highlights on recent materials used for this purpose. Principles of extensive cavity preparation of amalgam as well as inlay gold restoration are also featured. Intensive training will be provided on the application of various dental restorative materials under complete isolation using rubber dam. All topics are introduced in the form of lectures & clinical simulation sessions simultaneously to reinforce student's intellectual & practical skills.

PHBS 321 Practice Management Cr: 1 (1 Lec.)

Prerequisite PHBS 223

The course aims at introducing some basic management techniques in a dental practice related to starting & running an office. Topics include an overview on the health system in Lebanon & financing modalities of the dental care, the possible financial remuneration systems for the dentist, key points for starting a new practice & designing a dental office, describing the key role of the dental assistant & the management of patients' records. Principles of dental ergonomics, four-handed dentistry & importance of infection control are reviewed. Finally, patient's rights & dentist's duties are introduced.

GMED 321 General Medicine Cr: 2 (2 Lec., 1 Pract.)

Prerequisite PATH 223

The course aims to provide the student with adequate knowledge in understanding the pathophysiology of common medical diseases related to dentistry. Recognizing their signs & symptoms, selecting the proper laboratory investigations suitable for each case & different treatment modalities of these diseases. Also to deal properly with the medical emergencies that could happen in dental office in addition to basic life support procedures.

OMED 321 Oral Medicine I Cr: 1 (1 Lec.)

Prerequisite OPTH 224

The course aims to cover the fundamental basis of oral medicine through the study of signs & symptoms of oral diseases whether of local or systemic origin. It allows the students to recognize, diagnose & treat the oral manifestations of systemic diseases, including ulcerative, vesiculo-bullous as well as red & white lesions. It also covers the etiology & management of patients with orofacial pain.

ENDO 321 Preclinical Endodontics II Cr: 2 (1 Lec., 3 Pract.)

Prerequisite ENDO 224

Presents root canals instrumentation techniques in straight & curved root canals. Obturation materials & different obturation techniques. Classify & describe clinical, radiographic & histological picture of pulp & periapical diseases.

FPRO 321 Preclinical Fixed Prosthodontics III Cr: 2 (1 Lec., 2 Pract.)

Prerequisite FPRO 224

The course aims to introduce to the student different types of post used in treatment of endodontically treated teeth, different pontics design, complete & partial coverage retainers & different types of connectors used in fixed prosthodontics. Also, introducing the methods of clinical diagnosis.

RPRO 321 Preclinical Removable Prosthodontics III Cr: 2 (1 Lec., 2 Pract.)

Prerequisite RPRO 224

The course provides instructions for the fabrication of removable partial denture prostheses. It starts with the introduction, scope, terminology, objectives & indications. It also discusses the classification of partially edentulous arches, Kennedy's classification & Applegate's rules. Objectives, principles & uses of surveyor are also described. The course is also designed to present various components of RPD which include denture base, occlusal rests & similar components, intracoronal & extracoronal direct retainer as well as basic principles of clasp design.

OPER 321 Preclinical Operative Dentistry IV Cr: 2 (1 Lec., 3 Pract.)

Prerequisite OPER 224

The course provides in-depth knowledge on adhesive dentistry. Students will be able to describe the composition, the physical, chemical & biological properties of composite resins & indirect esthetic restoration. They will be trained to practice successful bonding techniques, matricing, multi-chromatic layering for anterior restoration, bulk-fill & incremental layering for posterior composite resins restoration, finishing & polishing procedures. Inlay cavity preparation will also be practiced. The concept of minimal invasive dentistry will be featured. By the end of this course, students will be ready for apply the knowledge & skills obtained in pre-clinical courses in their clinical practice.

OSRG 321 Anesthesia Cr: 1 (1 Lec., 1 Pract.)

Prerequisite PHRM 224

The course aims to provide overview of spectrum of pain & anxiety control in dentistry, The course will be divided into two main subjects, the first is concerning of the local anesthesia in dentistry, which will focus upon innervations of the teeth & surrounding maxillary & mandibular structures, the pharmacology of local anesthetic drugs & vasoconstricting agents & the local anesthetic armamentarium. The course will educate students in specific injection techniques for administration of local anesthesia in dentistry, enable the students to identify & manage complications that may arise during & after injection of LA. The second subject will be concerning of the principles of conscious sedation & general anesthesia.

ODTP 321 Oral Diagnosis, Radiology & Treatment Planning Cr: 3 (2 Lec., 2 Pract.)

Prerequisite ORAD 223; Corequisite PERI 321

The course provides the student with basic knowledge & skills that are involved in the diagnostic process & treatment planning. The course allows students to effectively communicate with patients & establish sound patient dentist relationship, undertake an appropriate systematic intra- & extra-oral clinical examination. The course covers various topics on the interviewing process, clinical examination methods & relevant aspects of the diagnostic tools employed in formulating an appropriate treatment plan. Also, recognizing the methods of prevention & management of medical & dental emergencies that could happen in dental office. In addition, it covers latest technologies used for digital imaging as cone-beam computed tomography (CBCT) & its application in various dental specialties & maxillofacial problems. Students are expected to complete their patient's needs in a safe environment & apply basic standards of infection control.

PERI 321 Preventive Periodontology Cr: 2 (1 Lec., 2 Pract.)

Prerequisite MICR 224; Corequisite ODTP 321

The course introduces the students to the scientific basis of periodontics with emphasis on "Preventive Periodontology". The basic micro & macro anatomy of the periodontium as well as the etiology, clinical features & classification of periodontal diseases are covered. The course will develop the students' skills to provide patients with comprehensive education regarding oral hygiene measures. It will reinforce the importance of periodontal oral health in relation to the general health of the patient. In addition students will gain clinical experience by accomplishing phase I periodontal therapy through detection & removal of dental plaque, calculus, & stains.

GSRG 322 General Surgery, ENT & Ophthalmology Cr: 2 (2 Lec., 1 Pract.)

Prerequisite PATH 223

The course aims to provide the student with the knowledge & skills necessary to identify, analyze & manage general surgical problems including surgical emergencies, in order to maintain efficient, cost effective & professional patient care & enable the development & application of appropriate professional attitude, ethical principles & communication skills. In addition to ensuring collaboration of health care providers by facilitating effective inter-professional education (IPE) aiming to promote the skills, knowledge, attitudes & behaviours through interactive learning students to optimize patient's care.

It also presents general information & knowledge of ear, nose, throat & neck diseases especially those related to dental medicine & surgery, their symptoms & signs, their underlying pathophysiology & management.

In addition it provides students with basic knowledge in eye anatomy, physiology, function of vision & diagnosis as well as treatment of most common eye diseases. The relationship between dental & ophthalmic infections is highlighted.

PHBS 322 Preventive & Public Health Dentistry Cr: 2 (2 Lec.)

Prerequisite PHBS 224

The course aims to enable the students to understand the basic concepts & methods of dental health education, including principles of motivation & communication as well as the basic concepts & methods of prevention of dental diseases. The student will also recognize the steps of proper planning, designing & implementation of a dental health educational program, & the importance of pilot studies timing, continuous evaluation & follow up. The students will understand the importance of conducting surveys in establishing data base & how to conduct them. The course also covers the basic epidemiologic aspects of dental caries & periodontal diseases including epidemiology, indices used to measure the condition & the multifactorial aspect of the disease with the prediction of risk factors in addition to the methods used to prevent them including health education, plaque control (mechanical & chemical), fluoride & pit & fissure sealant. The course also highlighted the importance of nutrition, diet history analysis & dietary recommendations. Moreover, the course introduce the student to problem based learning (PBL) & team based learning (TBL).

OPTH 322 Oral Pathology II Cr: 2 (2 Lec., 1 Pract.)

Prerequisite OPTH 224

Provides the student with the ability to diagnose various common oral & dental diseases, interpret different radiographic picture according to their pathologic bases. The students will also be able to define the different pathological aspects of oral diseases & neoplasms with a close focus on oral cancer. The students are expected to be open-minded, flexible & possess personal skills in presentation, communication & critical thinking. They will possess the ability to pursue further studies & research in the various pathological conditions to direct them towards improving community health.

ORTD 322 Introduction to Orthodontics Cr: 1 (1 Lec., 1 Pract.)

Prerequisite OCLS 223

The course aims to provide students with the basic knowledge of craniofacial growth & development, including the development of the dentition. It clarifies the principles of classification of malocclusion & possible etiological factors which provides basic knowledge required for the guidance of normal dental development & the prevention of future malocclusions. It guides the student through systematic organized diagnosis of developed as well as developing malocclusions including up-to-date diagnostic aids in addition to classical diagnostic tools.

OMED 322 Oral Medicine II Cr: 1 (1 Lec., 1 Pract.)

Prerequisite OMED 321

The course implements the recognition, diagnosis & treatment of oral manifestations of immunologic, autoimmune & infectious diseases. Acquire the knowledge, understanding, skills & attitudes necessary to prevent, diagnose & manage common oral manifestations related to chemo/radio therapy. In addition it deals with dental management of medically compromised patients including hematological & bleeding disorders.

FPRO 322 Preclinical Fixed Prosthodontics IV Cr: 2 (1 Lec., 2 Pract.)

Prerequisite FPRO 321

The course aims to introduce the methods of soft tissue management in relation to the prepared teeth, the various materials & techniques regarding impression bite registration & provisional restorations. Also clarify the try-in step, select the shade of teeth & how to communicate with dental lab.

RPRO 322 Preclinical Removable Prosthodontics IV Cr: 2 (1 Lec., 2 Pract.)

Prerequisite RPRO 321

This course is a continuation of RPRO 321 which describes indirect retainers as regards forms & functions as well as factors affecting its effectiveness. The major connectors requirements, types including maxillary & mandibular as well as minor connectors are also presented. Stress breakers, types, indications & advantages are described. The course focuses on planning removable partial denture, laboratory procedures for casting & finishing metal framework & the construction of acrylic partial denture.

PERI 322 Periodontology I Cr: 1 (1 Lec.)

Prerequisite PERI 321

The course aims to provide a thorough education in periodontics for an improved understanding of periodontal diseases. The course will cover the recognition & understanding of the clinical manifestations of periodontal pocket, trauma from occlusion & their significant role in periodontal disease progression. In addition it covers the prognosis & comprehensive treatment plan of various forms of periodontal disease. It also focuses on the clinical features of various forms of periodontal diseases with emphasis on rationales & principles of non-surgical therapeutic modalities.

ENDO 322 Endodontics I Cr: 3 (1 Lec., 5 Pract.)

Prerequisite ODTP 321 & ENDO 321

This course emphasizes on endodontic diagnosis & treatment planning, clinical & radiographic examination of pulp & periapical diseases; non-traumatic endodontic emergencies: pretreatment, inter-appointment & post obturation emergencies; Drugs used in endodontics & retreatment of failure. During this course the student is introduced to the clinics to start practicing diagnosis while he still has preclinical session to master his practical skills.

OPER 322 Operative Dentistry I Cr: 2 (1 Lec., 3 Pract.)

Prerequisite OPER 321

The course provides students with profound knowledge regarding patient assessment, diagnosis, & treatment planning that will be implemented in the clinical setting. They will be able to manage tooth pain & hypersensitivity, deep carious lesions & properly select suitable type of dental restoration. Students will develop their clinical skills in handling simple to moderate operative cases in conservative approach according to set criteria. Students are expected to complete their patient's needs in safe environment & apply basic standards of infection control.

PEDI 421 Preventive & Pediatric Dentistry I Cr: 2 (1 Lec., 2 Pract.)

Prerequisite PHBS 322

The course aims to enable the students to recognize the developmental stages of dentition & occlusion as well as morphological difference between primary & permanent teeth. It helps the student understands the mechanism of eruption & exfoliation & identify problems associated with the eruption process to help them to develop future clinical diagnostic sense. The course also aims to enable the students to identify children with potential occlusal problems, & intercept, prevent, treat & eliminate factors involved in producing oro-facial abnormalities including the use of different habit breaking appliances & different types of space maintainers.

ORTD 421 Orthodontics I Cr: 1 (1 Lec., 1 Pract.)

Prerequisite ORTD 322

The objectives of this course is to provide students with a strong foundation in the area of clinical application of various orthodontic appliances. The potential & limitations of the appliances will be emphasized along with the biological effects of different types of forces applied by the appliances.

The student will be trained to apply the principles of critical thinking & problem solving related to the comprehensive care of patients aiming at differentiating simple cases that a general practitioner can treat from those demanding referral to the orthodontist with special emphasis on interceptive treatment.

The student will be involved in the prescription & clinical use of removable appliances in the prevention & interception of developing occlusal problems as well as simple orthodontic tooth movement.

OSRG 421 Oral Surgery I Cr: 3 (2 Lec., 2 Pract.)

Prerequisite OSRG 321

The course aims to educate the students in the basic principles of sterilization, disinfection & antiseptics. The course also will enable the students to have intellectual & clinical skills in basic & complicated exodontias. Also, the course will give the students an idea about impacted teeth & their surgical management. Finally, it educates the students how to evaluate & manage the medically compromised patients in dental clinic.

PERI 421 Periodontology II Cr: 2 (1 Lec., 2 Pract.)

Prerequisite PERI 322

The course provides an in depth knowledge in surgical management of different periodontal diseases with an emphasis on indications, contraindications as well as the principles that govern various periodontal surgical procedures. It also focuses on different periodontal flap techniques & uses of laser in various dental procedures. Students are exposed to wide range of patients with various periodontal problems, all get clinical experience in non surgical treatment & observation in different surgical periodontal procedures.

FPRO 421 Fixed Prosthodontics I Cr: 3 (1 Lec., 5 Pract.)

Prerequisite FPRO 322

The aim is to provide basic guidelines to fully comprehend the patient's body language. Clarifying the treatment plan options, types & conditions of abutments to identify hopeless teeth. To understand the biocompatibility of different materials used in fixed prosthodontics & explaining the hybrid prosthesis along with its clinical steps.

RPRO 421 Removable Prosthodontics I Cr: 2 (1 Lec., 3 Pract.)

Prerequisite RPRO 322

The course deals with the management of the completely edentulous patient. Topics include examination, diagnosis & treatment plan, impressions objectives, preliminary & final impression techniques as well as materials used. The course describes the techniques for recording maxillo-mandibular relationship, selection & arrangement of artificial teeth, principles of occlusion, try in, insertion as well as instructions given to the patient.

ENDO 421 Endodontics II Cr: 2 (1 Lec., 2.5 Pract.)

Prerequisite ENDO 322

Introduces students to root resorption; Vital pulp therapy: direct & indirect pulp capping, pulptomy & revascularization; management of open apex: Apexification & apexogenesis in permanent teeth; traumatic injuries: classification & treatment.

OPER 421 Operative Dentistry II Cr: 2 (1 Lec., 2.5 Pract.)

Prerequisite OPER 322

The course provides advanced knowledge & skills in the area of adhesive dentistry. Students will be able to master direct & indirect esthetic restorations as well as in-office bleaching. Management of mutilated teeth will be featured & clinically students are expected to be competent to complete more complex cases. As part of the course, student will be asked to present their clinical cases with all required documentation in seminar format & group discussion.

PEDI 422 Preventive & Pediatric Dentistry II Cr: 2 (1 Lec., 1.5 Pract.)

Prerequisite PEDI 421

The course is designed to help the student to recognize the morphologic modifications of cavity preparations in primary teeth & develop the clinical judgment concerning the restorative materials used. Principles of pulp therapy, the concepts, etiologic factors, & clinical picture of nursing & rampant caries are also covered. This course also provides practical & relevant information that help the student to provide recommendations to parents regarding nursing habits to prevent the conditions. Early childhood caries (ECC) is also covered with special emphasis on management & prevention of the disease as well as the value of caries. Child management both psychologically & pharmacologically will also be addressed to allow students to be prepared with some information about the child psychology before being in charge of treating child patient. Students will be allowed to enter the clinics with senior students to give oral hygiene instructions to the pediatric patients & parents & to be familiar to the atmosphere.

ORTD 422 Orthodontics II Cr: 1 (1 Lec., 1 Pract.)

Prerequisite ORTD 421

This course emphasizes the skills of comprehensive treatment planning in cases such as arch length deficiency, missing & impacted teeth in addition to providing the students with a good understanding of the interdisciplinary approach of treating malocclusions, management of surgical as well as cleft lip & palate cases.

The causes of orthodontic relapse & the importance of retention will be discussed in detail along with the design of different retention appliances.

The clinical experience of the student will be reinforced through the early treatment of children with developing malocclusions.

OSRG 422 Oral Surgery II

Cr: 3 (2 Lec., 2 Pract.) Prerequisite OSRG 421

The course aims to educate the students about basic principles of wound healing. It teaches all possible techniques for soft & hard tissues pre-prosthetic surgeries, differential diagnosis of the oral & head & neck cysts & oral tumors with description of its different treatment approaches. Also, how to diagnose the different diseases of the salivary glands & its possible treatment modalities. The course enables the students to assess & manage maxillary sinus odontogenic disease.

FPRO 422 Fixed Prosthodontics II

Cr: 3 (1 Lec., 5 Pract.) Prerequisite FPRO 421

The aim is to explain the different types of laminate veneer restoration, several options to treat mutilated & periodontally compromised teeth, on the other hand clarifying uses of laser in fixed prosthodontics & recent classifications, materials, techniques for new ceramic systems.

RPRO 422 Removable Prosthodontics II

Cr: 2 (1 Lec., 2.5 Pract.) Prerequisite RPRO 421

The course helps the student to recognize patients' complaints, post-insertion care & changes. Management of residual ridge resorption, problems, surgical & prosthetic management are also discussed. It focuses on complete denture relining, types & uses of different relining materials. Prosthetic management & comprehensive care for geriatric patients are covered. Advanced prosthodontic treatment are introduced as tooth supported overdentures. Phonetics & speech problem of prosthetic origin are discussed.

ENDO 422 Endodontics III

Cr: 3 (1 Lec., 4.5 Pract.) Prerequisite ENDO 421

Emphasizes on procedural accidents, prevention & management. Nickel-Titanium rotary instruments: Application & description of different techniques of instrumentations using different systems of Niti Files. Endodontic microbiology: association of bacteria & periapical disease, indications & techniques for culturing. Endodontic periodontal interrelationship; & geriatric endodontics.

OPER 422 Operative Dentistry III Cr: 3 (1 Lec., 4.5 Pract.)

Prerequisite OPER 421

The course aims to increase the esthetic concept & application of dental materials in clinical esthetic dentistry. In-depth knowledge is provided on the fundamentals of esthetic dentistry, smile design, dental illusion, dental photography, & esthetic work-up. Students will be able to manage esthetic tooth defects & clinically practice diastema closure, composite build-up, & direct composite veneers. By the end of this course, the student will start from the point view of art & build up the concept of esthetics in patient evaluation & treatment.

PHBS 521 Ethics & Professionalism in Dentistry Cr: 1 (1 Lec.)

Prerequisite PHBS 321

The course aims at providing the student with the legal rules governing the profession & an understanding of the importance of clinician-patient sound relationship for the success of the delivered treatment. The ethical principles that prevail on the practice of dentistry are presented, together with the rights & obligations of the dentist towards his patients, colleagues & public authorities, as well as patient's duties towards his dentist. Documentation, report writing techniques for legal necessities and/or for referrals are taught. The Lebanese taxation system is presented & professional skill development is highlighted as one of the dentist's obligations. Finally, the mission & scope of authority of both Lebanese Dental Association (LDA) & the Ministry of Public Health (MOPH) are described together with most relevant funds, boards & regulations.

PEDI 521 Pediatric Dentistry I Cr: 2 (1 Lec., 3 Pract.)

Prerequisite PEDI 422

The course represents a substantial foundation for practicing comprehensive dentistry with children. The topics teach the student basic knowledge concerning clinical assessment of the child, diagnosis & treatment plan formulation, various caries assessment modalities & their role in caries prediction & management. The course is also designed to help the student to recognize the behavioural characteristics' of children & implement techniques of behavioural management for children. It is also designed to help the students to recognize management techniques for children with traumatic injuries. Students will be able to practice standard comprehensive preventive & therapeutic oral health care for children from birth, childhood through adolescence based on proper anticipatory guidance.

OSRG 521 Oral Surgery & Implantology Cr: 2 (1 Lec., 2 Pract.)

Prerequisite OSRG 422

The course aims to introduce the students to the scope of maxillofacial surgery & provides them with knowledge about the principles, bacteriology, causes & propagation of odontogenic infection & its different types of presentation either intraoral or extraoral (fascial spaces of infection) & its management. The second part of the course aims to give a good knowledge about implant dentistry. It will introduce the candidates to the different types of dental implants, the treatment planning for implant cases & the delayed versus the immediate surgical techniques for implant placement.

PERI 521 Periodontology III Cr: 1 (1 Lec.)

Prerequisite PERI 421

The course is a continuation of previous course & is designed to provide students with an in-depth awareness of etiology, diagnosis as well as different periodontal plastic & aesthetic surgeries. In addition, it covers management of periodontal surgical complications. Moreover, it focuses on laser application for periodontal therapy as well as periodontal considerations of dental implant.

FPRO 521 Fixed Prosthodontics III Cr: 3 (1 Lec., 5 Pract.)

Prerequisite FPRO 422

The course provides the principles of esthetic along with the necessary knowledge to deal with single tooth replacement & mouth rehabilitation cases. Causes of tooth surface loss, occlusal analysis & correction will be emphasized. Rationale & presurgical treatment planning for dental implants are also discussed. In addition to TMD management using different types of occlusal splints & prosthetic failure will be discussed.

RPRO 521 Removable Prosthodontics III Cr: 2 (1 lec., 2.5 Pract.)

Prerequisite RPRO 422

The course deals with the management of the partially edentulous patient. Topics include examination, diagnosis & treatment plan, mouth preparation, primary & final impressions, principles & philosophies of design, maxillo-mandibular relationship, trial fitting of metal framework. Principles of tooth selection, try-in, check occlusion, denture insertion, patient's instructions & complaints are discussed.

ENDO 521 Endodontics IV Cr: 3 (1 Lec., 5 Pract.)

Prerequisite ENDO 422

Provides students with clinical experiences necessary for preparation endodontically treated teeth for restoration, effect of restoration on success & failure, effect of RCT & loss of tooth structure on strength of endodontically treated teeth, structural & esthetic consideration; sonic & ultrasonic instruments in endodontics; bleaching of discolored teeth & surgical endodontics.

OPER 521 Operative Dentistry IV Cr: 2 (1 Lec., 2.5 Pract.)

Prerequisite OPER 422

The course offers clinical experience in interdisciplinary approach where students will be able to practice operative & esthetic dentistry of more complex cases using appropriate sequential treatment plan. Students are expected to provide independent clinical judgment with decreasing supervision. They will be competent in judging failed restoration & making proper decision regarding repair or replacement. At the end of the course, student will be asked to present a completed comprehensive case with smile analysis & treatment offered.

PHBS 522 Interprofessional Education for Health Care Cr: 1 (1 Lec., 1 Pract.)

Prerequisite PHBS 521

The course aims to foster the knowledge, skills, attitudes & behaviours that facilitate effective interprofessional (IP) collaborative practice among health care providers. Through interactive learning, students will explore ways in which their professions can work together in order to optimize patient's care respecting each other's roles & responsibilities. The course employs a variety of interactive methods & technologies. This course provides students with the fundamental IP competencies, which are necessary for a coordinated & safe IP collaboration that decreases medical errors, & improves patient's safety, & outcomes regardless of their practice environment &

professional discipline. The course employs a variety of interactive learning methods & technologies including simulation. The content addresses the errors in health care settings, case studies about patients with acute and/or chronic illnesses, as well as IP core competencies including understanding roles & responsibilities for self & others, IP conflict management, IP communication, IP collaborative leadership, team functioning, & collaborative patient-centered approach.

CLNC 522 Clinical Comprehensive Care Cr: 2 (2 Lec.)

Corequisite PROS 522

This course is designed to endorse the concept of total patient care. Throughout the courses, students are provided with ample opportunities to develop their competency in treatment planning & case presentation. During the senior year, in the integrated clinics, students provide total care for their patients following a model resembling a private practice. They are also responsible for the completion of the treatment of their assigned patients. All comprehensive clinical experiences are grouped into a single course, at which students present & discuss their documented cases in a scheduled seminar sessions as a partial fulfillment of their graduation requirements (OSCE). A multidisciplinary committee will evaluate the student's work.

PEDI 522 Pediatric Dentistry II Cr: 3 (2 Lec., 2.5 Pract.)

Prerequisite PEDI 521

The course includes gingival & periodontal diseases affecting the child patient from birth through adolescence to help the students identify the condition, readily diagnose it & manage the child patient with prescription of medication whenever needed. The different pathological conditions that might affect the oral & paraoral tissues in children & infants are also covered. It is designed as well to help the student comprehend the different categories of children with special needs as well as medically compromised patients. The influence of diet & nutrition on the oral conditions of children is also covered. Minimal intervention as a concept in patient management is highlighted throughout the course.

OSRG 522 Oral & Maxillofacial Surgery Cr: 3 (2 Lec., 2 Pract.)

Prerequisite OSRG 521

The course aims to educate the students in the initial management of patients with facial trauma. Familiarize them with diagnosis & different techniques of managing facial trauma cases. Give a general idea about the different causes of facial pain & its possible treatment modalities. Also, familiarize them with the reconstruction modalities of the jaws. The course gives an idea about the anatomy of TMJ & the different disorders that can occur within the TMJ & the different ways for their management. Finally, the course introduces the students to the principles of corrections of dentofacial deformities & management of patients with orofacial clefts.

PROS 522 Prosthodontics Cr: 4 (1 Lec., 7.5 Pract.)

Prerequisite FPRO 521 & RPRO 521; Corequisite CLNC 522

The course is designed to provide students with the technique for partial denture relining, rebasing & repair. Other forms of partial dentures, attachments used in prosthodontics, factors affecting their selection are also presented. The course also presents macro & micro anatomy of dental implants, prosthetic components & steps along with impression techniques & selection of abutments, criteria of success & failure. It also covers the role of the prosthodontist in maxillofacial prosthesis.

REST 522 Restorative Dentistry Cr: 3 (1 Lec., 6 Pract.)

Prerequisite ENDO 521 & OPER 521

The course is designed to give the student the sufficient knowledge about the overall view over his treatment just before becoming an official dentist. It will help him assess his treatment success rate through evaluation of the endodontic outcome. Root canal treatment & restoration versus single tooth implant. Iatrogenic effects on the dental pulp & protecting the pulp from the effect of restorative materials. Finally, the interaction between the general dentist & the endodontist.

DENT 501 Rotary Endodontics Cr: 2 (1 Lec., 2 Pract.)

Prerequisite NONE

Nickel titanium rotary instruments is a new generation of endodontic instruments that have added a striking new dimension to the practice of endodontics. This course aims to orient the students with the different rotary NiTi systems available in the market & train them to use those instruments in their future clinical life.

DENT 502 Esthetic Dentistry (CAD CAM) Cr: 2 (1 Lec., 2 Pract.)

Prerequisite NONE

The course is designed to introduce students to the current & emerging technologies for digital intra-oral impressions & CAD/CAM dentistry. This course will provide an understanding of the latest advances in dental CAD/CAM technology & related restorative options. Students will gain an overview of science, clinical indications, materials & techniques. They will also gather hands-on experience acquiring a digital impression, designing a digital restoration & milling a final restoration.

DENT 503 Oral Implantology Cr: 2 (1 Lec., 2 Pract.)

Prerequisite NONE

The course is designed to give the student an idea about the history of dental implantology. It is aimed to teach the candidate about the different types of dental implants, concepts of osseointegration & factors aiding in increasing the success rate of dental implantology. Students will be able to take an idea about the difference between delayed & immediate implantation. Recent adjunctive surgical techniques, which is performed with dental implants such as sinus lift, ridge expansion, ridge splitting, GBR & the use of PRF & PRP will be taught. Finally, dealing with complications that may arise with dental implants will be covered.

DENT 504 Laser Dentistry Cr: 1 (1 Lec.)

Prerequisite NONE

The laser course will equip the students with technical knowledge along with valuable clinical expertise in the use of dental lasers on patients in different dental applications with emphasis on clinical application of both soft & hard lasers for the treatment of periodontal diseases & conditions.

DENT 505 Community Service Cr: 1 (1 Lec.)

Prerequisite NONE

The course is designed to help the students to understand the importance of WHO pathfinder surveys in the assessment of the oral health conditions & treatment needs of the population, as well as the planning & evaluation of oral health services.

DENT 506 Advanced Radiology (CBCT) Cr: 1 (1 Lec.)

Prerequisite NONE

The course is designed to provide students with advanced knowledge in oral & maxillofacial radiology including conventional dental radiography, cone beam computed tomography (CBCT), CT scan as well as magnetic resonance imaging (MRI). It also covers other imaging modalities as nuclear medicine & bone scan, sialography & computer assisted maxillofacial imaging.

DENT 507 Forensic Dentistry Cr: 1 (1 Lec.)

Prerequisite NONE

The objective of this course is for students to obtain in- depth knowledge & understanding of forensic dentistry history & various scientific identification methods to assist in identification of victims related to crime or accident. It also emphasizes that all dental professionals do take part in one way or another in forensic dentistry by keeping accurate, current, detailed & legible dental records to aid in the identification of individuals who are victims of criminal acts, murder investigations, missing persons, or mass fatalities.

DENT 508 Medical Emergencies Cr: 1 (1 Lec.)

Prerequisite NONE

This course is designed to improve the ability of the dental student to plan, manage & handle office medical emergencies as a part of the dental team. Also, it includes the discussion of the importance of a thorough health history in dealing with medical emergencies, background information on emergencies, vital signs & emergency kit components. Finally, it provides scenarios of medical emergency situations & how to handle them.

DENT 509 Dental Photography Cr: 1 (1 Lec.)

Prerequisite NONE

This course is designed for students with little or no background in photography. It provides an introductory part in history of photography & the basic components of recent cameras. This course uses the advanced digital camera to build basic skills in students who have an interest in photography, but no prior experience. Using a combination of lecture, demonstration, & hands-on exercises, this course will explore the basic photographic techniques & artistic concerns involved in making photographs. These include camera handling, composition, effective use of light & file management. Students attending the course must have a digital camera with aperture priority, shutter priority, & exposure compensation. The student will know how to use the components in different conditions to take specific photos especially while taking professional dental photos for their case presentation or documentations. The course goal is to understand the factors affecting different conditions that results in the final outcome of a properly managed photograph.

DENT 510 Orofacial Pain & Pain Control Cr: 1 (1 Lec.)

Prerequisite NONE

The course discuss the anatomy of the head & neck emphasizing the anatomy of the TMJ & muscles of mastication. It gives an overview of the theory & principles of orofacial pain. It focuses on acquisition of clinical skills in evaluation, diagnosis & treatment of a wide variety of TMD & orofacial pain disorders. By the end of the course the student would have a wide knowledge to conclude the differential diagnosis of odontogenic & non-odontogenic orofacial pain & the different ways for their management.

DENT 511 Prevention & Risk Assessment Cr: 1 (2 Prac.)

Prerequisite NONE

This course includes current, evidence-based content on preventive dentistry that dental clinicians will utilize during patient assessment. The course will let the candidate understand preventive dentistry which is a comprehensive approach that should calibrate the entire dental team in the individualized care & education of each patient in the dental practice. It helps to develop students' skills to prevent, detect, assess & treat dental problems & to evaluate their predictors. By the end of this course, the candidate will be capable to develop a management strategy & a follow up regimen based on patient's specific risk assessment.

DENT 512 Orthodontic Clinical Training Cr: 1 (1 Lec.)

Prerequisite NONE

This course is an opportunity for any interested student to acquire additional experience in limited objective tooth movement. The student will attend postgraduate orthodontic clinics to monitor & assist the residents in conducting treatment. The student will be allowed to attend postgraduate seminars in Orthodontics & other postgraduate orthodontic lectures of particular interest.

DENT 513 Restorative Dentistry Clinics Cr:1(2.5 Pract.)

Prerequisite NONE

This course will give the students the opportunity to practice & treat cases requiring Operative Dentistry & Endodontic under direct supervision. The primary aim of this course is to allow students to expand their skills in diagnosis & management of diseases related to loss of hard tooth structure. Students are allowed to perform different services as direct composite & amalgam restorations, indirect inlay/onlay restorations. Moreover, students will enhance their skills in diagnosis & treatment of non-vital teeth & assess the outcome of care while maintaining the highest moral & professional ethical standards.

DENT 514 Prosthodontics clinics Cr:1(2.5 Pract.)

Prerequisite NONE

This course will let the students to perform & practice a supervised treatment for patients requiring prosthodontics care. The main objective of this course is to allow the students to develop further practical skills through performing common prosthetic procedures including complete dentures, partial dentures, custom metallic posts, & fixed porcelain fused to metal as well as all ceramic crowns & bridges. At the end of the course, the improved gained practical skills will aid the students in the more advanced successive prosthodontics courses.

DENT 515 Mentored Research Cr: 1 (1 Lec.)

Prerequisite NONE

This course will prepare students to apply their previous gained knowledge regarding the different research methodologies. It also allows the student to design a research protocol in his field of interest under the supervision of his/her mentor. By the end of this course, the student will construct an effective research proposal that will serve as the starting point for the study that he will conduct later within research project course.

DENT 516 Research Project Cr: 2 (2 Lec.)

Prerequisite DENT 515

The mentored research course is a prerequisite for this course. This course is designed to develop skills in research methods through active participation in research activities. By the end of this course, the research work of the candidate must be presented in a scientific manner through publishing as a journal article, conference poster/oral presentation in a national or international scientific meetings.

Study Plan

Bachelor Degree in Oral & Dental Surgery (B.D.S) (180 Credit Hours)

First Semester (18 Credits)			Crs.	Pre-co/requisites
BCHM	221	Biochemistry	2	NONE
BIOL	221	Molecular Genetics	1	NONE
ANAT	221	Gross Anatomy	2	NONE
PHRM	221	Medical Botany	2	NONE
PHYL	221	Physiology	2	NONE
BIOM	221	Principles of Dental Biomaterials	1	NONE
DANT	221	Dental Anatomy	2	NONE
University Elective (General)¹			6	
Second Semester (18 Credits)			Crs.	Pre-co/requisites
ANAT	222	Head & Neck Anatomy	3	ANAT 221
GHST	222	General Histology	1	NONE
MICR	222	Microbiology & Immunology	2	BCHM 221 or BIOL 221
BIOM	222	Applied Dental Biomaterials I	2	BIOM 221
DANT	222	Dental Anatomy & Occlusion	3	DANT 221
OPER	222	Preclinical Operative Dentistry I	2	DANT 221
University Elective (General)¹			5	
Third Semester (18 Credits)			Crs.	Pre-co/requisites
PATH	223	Pathology	2	ANAT 221
PHBS	223	Behavioural Sciences	1	NONE
OCLS	223	Fundamentals of Occlusion	1	DANT 222
ORBL	223	Oral Biology I	3	GHST 222
BIOM	223	Applied Dental Biomaterials II	2	BIOM 221
ORAD	223	Oral Radiology	1	ANAT 222
FPRO	223	Preclinical Fixed Prosthodontics I	2	OPER 222
RPRO	223	Preclinical Removable Prosthodontics I	2	DANT 222
OPER	223	Preclinical Operative Dentistry II	2	OPER 222
University Elective (General)¹			2	

Fourth Semester (18 Credits)			Crs.	Pre-co/requisites
MICR	224	Applied Microbiology & Infection Control	1	MICR 222
PHRM	224	Pharmacology	2	PHRM 221 & PHYL 221
PHBS	224	Research & Evidence Based Dentistry	2	NONE
OPTH	224	Oral Pathology I	2	ORBL 223
ORBL	224	Oral Biology II	2	ORBL 223
ENDO	224	Preclinical Endodontics I	2	ORAD 223 & OPER 223
FPRO	224	Preclinical Fixed Prosthodontics II	2	FPRO 223
RPRO	224	Preclinical Removable Prosthodontics II	2	RPRO 223
OPER	224	Preclinical Operative Dentistry III	2	OPER 223
University Elective (General)¹			2	

Fifth Semester (18 Credits)			Crs.	Pre-co/requisites
PHBS	321	Practice Management	1	PHBS 223
GMED	321	General Medicine	2	PATH 223
OMED	321	Oral Medicine I	1	OPTH 224
ENDO	321	Preclinical Endodontics II	2	ENDO 224
FPRO	321	Preclinical Fixed Prosthodontics III	2	FPRO 224
RPRO	321	Preclinical Removable Prosthodontics III	2	RPRO 224
OPER	321	Preclinical Operative Dentistry IV	2	OPER 224
OSRG	321	Anesthesia	1	PHRM 224
ODTP	321	Oral Diagnosis, Radiology & Treatment Planning	3	ORAD 223 & PERI 321*
PERI	321	Preventive Periodontology	2	MICR 224 & ODTP 321*

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Sixth Semester (18 Credits)			Crs.	Pre-co/requisites
GSRG	322	General Surgery, ENT & Ophthalmology	2	PATH 223
PHBS	322	Preventive & Public Health Dentistry	2	PHBS 224
OPTH	322	Oral Pathology II	2	OPTH 224
ORTD	322	Introduction to Orthodontics	1	OLCS 223
OMED	322	Oral Medicine II	1	OMED 321
FPRO	322	Preclinical Fixed Prosthodontics IV	2	FPRO 321
RPRO	322	Preclinical Removable Prosthodontics IV	2	RPRO 321
PERI	322	Periodontology I	1	PERI 321
ENDO	322	Endodontics I	3	ENDO 321 & ODTP 321*
OPER	322	Operative Dentistry I	2	OPER 321

Seventh Semester (18 Credits)			Crs.	Pre-co/requisites
PEDI	421	Preventive & Pediatric Dentistry I	2	PHBS 322
ORTD	421	Orthodontics I	1	ORTD 322
OSRG	421	Oral Surgery I	3	OSRG 321
PERI	421	Periodontology II	2	PERI 322
FPRO	421	Fixed Prosthodontics I	3	FPRO 322
RPRO	421	Removable Prosthodontics I	2	RPRO 322
ENDO	421	Endodontics II	2	ENDO 322
OPER	421	Operative Dentistry II	2	OPER 322
Faculty Electives ²				

Eighth Semester (18 Credits)			Crs.	Pre-co/requisites
PEDI	422	Preventive & Pediatric Dentistry II	2	PEDI 421
ORTD	422	Orthodontics II	1	ORTD 421
OSRG	422	Oral Surgery II	3	OSRG 421
FPRO	422	Fixed Prosthodontics II	3	FPRO 421
RPRO	422	Removable Prosthodontics II	2	RPRO 421
ENDO	422	Endodontics III	3	ENDO 421
OPER	422	Operative Dentistry III	3	OPER 421
Faculty Electives ²			1	

Ninth Semester (18 Credits)			Crs.	Pre-co/requisites
PHBS	521	Ethics & Professionalism in Dentistry	1	PHBS 321
PEDI	521	Pediatric Dentistry I	2	PEDI 422
OSRG	521	Oral Surgery & Implantology	2	OSRG 422
PERI	521	Periodontology III	1	PERI 421
FPRO	521	Fixed Prosthodontics III	3	FPRO 422
RPRO	521	Removable Prosthodontics III	2	RPRO 422
ENDO	521	Endodontics IV	3	ENDO 422
OPER	521	Operative Dentistry IV	2	OPER 422
		Faculty Electives ²	2	

Tenth Semester (18 Credits)			Crs.	Pre-co/requisites
PHBS	522	Interprofessional Education for Health Care	1	PHBS 521
CLNC	522	Clinical Comprehensive Care	2	ODTP 321 & PROS 522*
PEDI	522	Pediatric Dentistry II	3	PEDI 521
OSRG	522	Oral & Maxillofacial Surgery	3	OSRG 521
PROS	522	Prosthodontics	4	FPRO 521 & RPRO 521 & CLNC 522*
REST	522	Restorative Dentistry	3	ENDO 521 & OPER 521
		Faculty Electives ²	2	

* Co-requisite

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Faculty Electives			Crs.	Pre-co/requisites
DENT	501	Rotary Endodontics	2	NONE
DENT	502	Esthetic Dentistry (CAD CAM)	2	NONE
DENT	503	Oral Implantology	2	NONE
DENT	504	Laser Dentistry	1	NONE
DENT	505	Community Service	1	NONE
DENT	506	Advanced Radiology (CBCT)	1	NONE
DENT	507	Forensic Dentistry	1	NONE
DENT	508	Medical Emergencies	1	NONE
DENT	509	Dental Photography	1	NONE
DENT	510	Orofacial Pain & Pain Control	1	NONE
DENT	511	Prevention & Risk Assessment	1	NONE
DENT	512	Orthodontic Clinical Training	1	NONE
DENT	513	Restorative Dentistry Clinics	1	NONE
DENT	514	Prosthodontics Clinics	1	NONE
DENT	515	Mentored Research	1	NONE
DENT	516	Research Project	2	DENT 515

¹ A total of 14 credits is required as General University Requirements; 5 credits are selected from the University Mandatory courses list including: ARAB 001 (2Cr.), ENGL 001 (2Cr.), BLAW 001 (1Cr.) & another 9 credits are selected from the University Elective courses list + ICDL.

² A total of 6 credits is required as Faculty Electives.

- The list of University Requirement courses & their descriptions are presented in the introductory pages of this catalogue.