Undergraduate Catalogue 2014

# Faculty of

# DENTISTRY

## Faculty Administration

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|---|---|
| Dean | Prof. Essam Osman |
| Assistant Dean | Asst. Prof. Roula Abiad |
| Faculty Secretary | Mr. Khaled Najjar |

## Academic Staff

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|---|---|
| Professors | Prof. Lucette Segaan, Prof. Nahed Attia, Prof. Ahmed ElSayed |
| Associate Professors | Dr. Mohamed Atef, Dr. Hala Ragab, Dr. Sherine Badr, Dr. Nayer Abo Elsaad, Dr. Mohammed Rayyan |
| Assistant Professors | Dr. Roula Abiad, Dr. Nagwa Sayed |
| Part-time Lecturers | Dr. Riad Bacha, Dr. Joseph Bou Serhal, Dr. Jihad Abdallah<br>Dr. Rima Abdallah, Dr. Bilal Kalailat |

## History

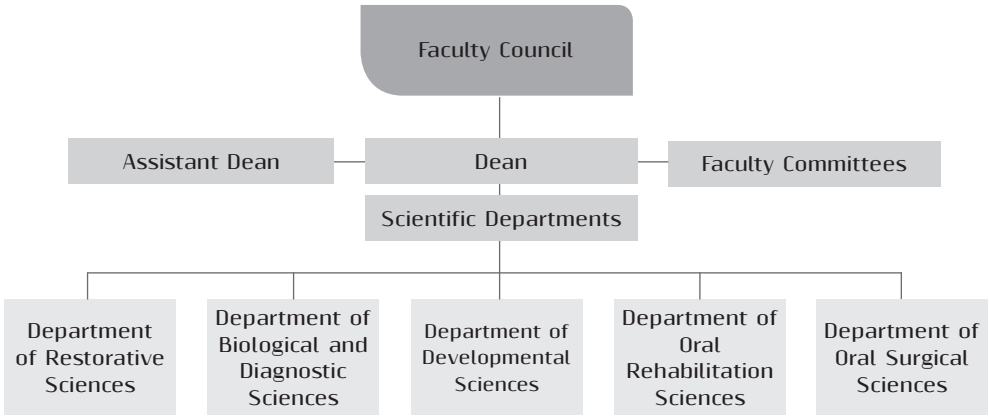
In 1995, Beirut Arab University (BAU) established its Faculty of Dentistry as the 9th faculty, ensuring that the training and education given to future dentists equips them with the skills needed for prevention, diagnosis and treatment of abnormalities related to teeth and associated oral tissues.

## Organizational Structure

The Faculty of Dentistry constitutes the following Departments:

- Developmental Sciences includes Public Health & Behavioural Sciences, Orthodontics, Pediatric Dentistry.
- Biological & Diagnostic Sciences includes Oral Biology, Oral Diagnosis & Radiology, Oral Medicine & Oral Pathology.
- Oral Surgical Sciences includes Periodontology, Oral & Maxillofacial Surgery, Implantology.
- Restorative Sciences includes Dental Anatomy, Operative & Esthetic Dentistry, Endodontics.
- Oral Rehabilitation Sciences includes Dental Biomaterials, Fixed Prosthodontics, Removable Prosthodoontics.

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 and public health services.

## Mission

The Faculty of Dentistry is committed to provide its students with high quality dental education and advanced training through the integration of contemporary science-based knowledge and 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 and 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 and values that satisfy the needs of the national, regional and international job-market through the continuous reform of curricula.
- To provide and promote the delivery of optimal patient-centered oral healthcare and 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 and provide continual professional development.
- To strengthen academic cooperation and relations at the national and international levels.

## Academic Program

- The Faculty of Dentistry offers a 10-semester full-time Bachelor Degree in Oral and 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 and laboratory training in all dental specialties and allied medical sciences.
- A Student fails in a course if he/she obtains a grade less than D.

## 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

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

**a.Knowledge and understanding:**

- Recognize the importance of biomedical sciences and apply them to modern biology.
- Recognize the properties and behavior of the different dental materials that will help in their selection.
- Recognize the mechanism of infection and infection control to maintain a safe working environment.
- Identify and distinguish the different dental terms, instruments and materials used.
- Relate the form and function of teeth and associated structures, to state of health and disease.
- Distinguish human diseases and pathogenic processes, including genetic disorders, and the manifestation of those diseases which are particularly relevant to the practice of dentistry.
- Recognize basis of practice management, oral health promotion, prevention.
- Distinguish ethical, medico-legal aspects and basis of practice management relevant to the practice of dentistry and research for an evidence based approach to dentistry with references to the National Health Service obligation.
- Identify concepts and sequelae of normal and abnormal occlusion.
- Recognize systemic disorders with oral manifestations which are interrelated to oral health.
- Describe diseases and disorders of the oral cavity and associated structures, their causes and sequelae together with the principles of their prevention, diagnosis and management.
- Describe and evaluate concepts of the diagnosis of oral and oral-related disorders.
- Recognize prevention and common signs and symptoms of orofacial pain, anxiety and apprehension, and the management of medical emergencies.

**b.Intellectual Skills:**

- Select the proper material for various situations, and analyze the causes of failure of dental

materials.
- Set a differential diagnosis of similar pathological conditions based on medical evidence, clinical and radiographic findings.
- Assess and evaluate the effects of medication interactions during dental management and manage dental and medical emergencies which may occur in dental practice and perform basic life support measures.
- Integrate medical, clinical and surgical knowledge and therapies relevant to oral health care.
- Analyze, interpret and integrate collected diagnostic data to solve clinical problems based on current evidence.
- Design appropriate treatment plans for different dental problems.
- Select the suitable treatment option and perform the technical steps satisfactorily based on the investigation outcomes and priorities of the potential patient's clinical problems.
- Differentiate between normal and abnormal features that are particularly relevant to dental practice.
- Reason deductively in clinical problem solving.

**c.Professional and Practical Skills:**
- Demonstrate how to perform different types of tooth preparation and restorations directly and indirectly.
- Select and manipulate the proper material in the best possible way.
- Identify and manage problem in the mixed dentition in which interceptive treatment is indicated, including space management.
- Prescribe and monitor the effects of appropriate pharmaceutical agents taking into consideration drug and patient factors.
- Integrate basic biomedical, behavioral and dental sciences with vital signs, symptoms and physical findings of the disease.
- Detect abnormal and pathological conditions, as well as etiological and/or risk factors that may contribute to disease process.
- Manage dental emergencies and promptly refer those situations that are beyond the scope of the general dentist to a specialist.
- Apply preventive procedures.
- Perform simple dento-alveolar problems and recognize when and how to refer a patient with medical and dental problems to a specialist.
- Manage patients with functional disorders involving the occlusion and temporomandibular joint.
- Recognize abnormalities of facial growth and development and realize the appropriate time of intervention in potential orthodontic cases to refer to specialist advise or treatment.
- Manage patients with periodontal diseases and conditions.
- Manage rehabilitation of partially and completely edentulous patients.
- Appraise indications, contraindications, limitations and risks as well as benefits of conscious sedation and general anesthesia.
- Manage the oral health of children as well as adolescents and treat them with consideration for their expected growth, development, psychology and handicapping condition.

- Apply current infection control guidelines to work in a safe environment.

**d.General and Transferable Skills:**

- Communicate effectively at all levels in both the scientific and professional contexts using verbal, non-verbal and written means taking human rights into consideration.
- Utilize information technologies in a scientific approach to enrich and diversify professional experience.
- Provide high quality care to the patient while maintaining confidentiality and obtaining informed consent.
- Self-evaluate professional abilities, performance and progress and evaluate the validity of claims related to products or techniques.
- Acquire moral and ethical responsibilities of care toward the community.
- Recognize the basic concepts of quality assurance and practice management.
- Work effectively as a member of a team and learn how to manage time, set priorities and manage occupational stress, and display appropriate behavior towards all members of the dental team.
- Access different sources to retrieve information relevant to oral health care.
- Acquire, analyze, process and communicate information in a scientific manner to solve problems and to guide clinical decision-making.
- Recognize the value of continuous lifelong learning, self-assessment, problem solving and critical thinking in maintaining competency.

## Career Opportunities

- Working as assistants with established dentists which offers the chance to earn clinical skills.
- Private dental practice either as a solo practitioner or as a partner in a group.
- Governmental, private and 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 and 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 and mentoring the next generation of dentists.
- Working as representatives in companies for dental equipment and materials.

## Graduation Requirements

To receive a Bachelor Degree in Oral and Dental Surgery, a student must satisfactorily complete 180 credit hours with an overall minimum grade point average (GPA) of 2.0 + ICDL (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 Requirements** | |
| * University Mandatory Courses | 5 |
| * University Elective Courses | 9 |
| **II. Faculty Courses** | |
| Basic science courses | 3 |
| Basic medical courses | 20 |
| Basic dental courses | 16 |
| Medical science courses | 4 |
| Preclinical dental courses | 43 |
| Clinical dental courses | 80 |
| 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.) and another 9 credits are selected from the University Elective courses list + ICDL.

## Major Core Courses

| Courses | | | crs. | Pro/Co-requisites |
|---|---|---|---|---|
| CHEM | 113 | Chemistry | 1 | Pre: NONE |
| DANT | 111 | Dental Anatomy | 3 | Pre: NONE |
| ANAT | 111 | Gross Anatomy | 3 | Pre: NONE |
| BIOL | 111 | Medical Botany | 2 | Pre: NONE |
| PHYL | 111 | Physiology | 3 | Pre: NONE |
| BCHM | 112 | Biochemistry | 2 | Pre: CHEM 113 |
| DANT | 112 | Dental Anatomy & Occlusion | 3 | Pre: DANT 111 |
| BIOM | 112 | Dental Biomaterials I | 1 | Pre: NONE |
| ANAT | 112 | Head & Neck Anatomy | 3 | Pre: NONE |
| GHST | 112 | Histology & Genetics | 2 | Pre: NONE |
| MICR | 112 | Microbiology & Immunology | 3 | Pre: NONE |
| BIOM | 211 | Dental Biomaterials II | 2 | Pre: BIOM 112 |
| OHST | 211 | Oral Histology | 3 | Pre: GHST 111 |
| PATH | 213 | Pathology | 2 | Pre: ANAT 111 |
| *PHRM | 211 | Pharmacology | 2 | Pre: BIOL 111 & PHYL 111 |
| FPRO | 211 | Preclinical Fixed Prosthodontics I | 2 | Pre: DANT 112 |
| OPER | 211 | Preclinical Operative Dentistry I | 2 | Pre: DANT 112 |
| RPRO | 211 | Preclinical Removable Prosthodontics I | 2 | Pre: DANT 112 |
| BIOM | 212 | Dental Biomaterials III | 2 | Pre: BIOM 112 |
| OHST | 212 | Oral Histology & Embryology | 3 | Pre: OHST 211 |
| OPTH | 212 | Oral Pathology I | 2 | Pre: OHST 211 |
| ORAD | 212 | Oral Radiology | 1 | Pre: ANAT 112 |
| FPRO | 212 | Preclinical Fixed Prosthodontics II | 2 | Pre: FPRO 211 |
| OPER | 212 | Preclinical Operative Dentistry II | 3 | Pre: OPER 211 |
| RPRO | 212 | Preclinical Removable Prosthodontics II | 2 | Pre: RPRO 211 |
| COMD | 311 | Community Dentistry & Biostatistics | 2 | Pre: NONE |
| OCLS | 311 | Fundamentals of Occlusion | 1 | Pre: DANT 112 |
| GMED | 311 | General Medicine, Dermatology & Forensic Dentistry | 2 | Pre: MICR 112 |
| GSRG | 311 | General Surgery, ENT & Ophtalmology | 2 | Pre: PATH 213 |

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|---|---|---|---|---|
| *ENDO | 313 | Preclinical Endodontics I | 2 | Pre: ORAD 212 & OPER 212 |
| FPRO | 311 | Preclinical Fixed Prosthodontics III | 2 | Pre: FPRO 212 |
| OPER | 311 | Preclinical Operative Dentistry III | 3 | Pre: OPER 212 |
| RPRO | 311 | Preclinical Removable Prosthodontics III | 2 | Pre: RPRO 212 |
| OSRG | 312 | Anesthesia | 1 | Pre: PHRM 211 |
| ETHB | 312 | Dental Ethics & Behavioural Sciences | 1 | Pre: NONE |
| ORTD | 314 | Introduction to Orthodontics | 1 | Pre: OCLS 311 |
| OPTH | 312 | Oral Pathology II | 3 | Pre: OPTH 212 |
| MGMT | 312 | Practice Management | 1 | Pre: NONE |
| ENDO | 314 | Preclinical Endodontics II | 3 | Pre: ENDO 313 |
| FPRO | 312 | Preclinical Fixed Prosthodontics IV | 2 | Pre: FPRO 311 |
| OPER | 312 | Preclinical Operative Dentistry IV | 2 | Pre: OPER 311 |
| RPRO | 312 | Preclinical Removable Prosthodontics IV | 2 | Pre: RPRO 311 |
| ENDO | 411 | Endodontics I | 3 | Pre: All Preclinical Phase Courses |
| FPRO | 411 | Fixed Prosthodontics I | 3 | Pre: All Preclinical Phase Courses |
| OPER | 411 | Operative Dentistry I | 3 | Pre: All Preclinical Phase Courses |
| ODTP | 411 | Oral Diagnosis & Treatment Plan | 1 | Pre: All Preclinical Phase Courses |
| OMED | 411 | Oral Medicine | 1 | Pre: All Preclinical Phase Courses |
| OSRG | 411 | Oral Surgery I | 3 | Pre: All Preclinical Phase Courses |
| ORTD | 411 | Orthodontics I | 1 | Pre: All Preclinical Phase Courses |
| PEDI | 411 | Pediatric Dentistry I | 2 | Pre: All Preclinical Phase Courses |
| RPRO | 411 | Removable Prosthodontics I | 2 | Pre: All Preclinical Phase Courses |
| ENDO | 412 | Endodontics II | 3 | Pre: ENDO 411 |
| FPRO | 412 | Fixed Prosthodontics II | 3 | Pre: FPRO 411 |
| OPER | 412 | Operative Dentistry II | 3 | Pre: OPER 411 |
| OSRG | 412 | Oral surgery II | 3 | Pre: OSRG 411 |

* 2 hours/week free interactive learning activity.

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|---|---|---|---|---|
| ORTD | 412 | Orthodontics II | 1 | Pre: ORTD 411 |
| PEDI | 412 | Pediatric Dentistry II | 2 | Pre: PEDI 411 |
| PERI | 412 | Periodontology I | 2 | Pre: ODTP 411 |
| RPRO | 412 | Removable Prosthodontics II | 2 | Pre: RPRO 411 |
| ENDO | 511 | Endodontics III | 3 | Pre: ENDO 412 |
| FPRO | 511 | Fixed Prosthodontics III | 3 | Pre: FPRO 412 |
| OPER | 511 | Operative Dentistry III | 3 | Pre: OPER 412 |
| OSRG | 511 | Oral & Maxillofacial Surgery | 2 | Pre: OSRG 412 |
| PEDI | 511 | Pediatric Dentistry III | 3 | Pre: PEDI 412 |
| PERI | 511 | Periodontology II | 3 | Pre: PERI 412 |
| RPRO | 511 | Removable Prosthodontics III | 3 | Pre: RPRO 412 |
| ENDO | 512 | Endodontics IV | 3 | Pre: ENDO 511 |
| FPRO | 512 | Fixed Prosthodontics IV | 3 | Pre: FPRO 511 |
| IPEH | 512 | Interprofessional Education for Health Care Providers | *1 | Co-Req:PEDI 512 |
| OPER | 512 | Operative Dentistry IV | 3 | Pre: OPER 511 |
| OSRG | 512 | Oral Surgery & Implantology | 3 | Pre: OSRG 511 |
| PEDI | 512 | Pediatric Dentistry IV | 2 | Pre: PEDI 511 |
| PERI | 512 | Periodontology III | 2 | Pre: PERI 511 |
| RPRO | 512 | Removable Prosthodontics IV | 3 | Pre: RPRO 511 |

## Description of Major Core Courses

**ANAT 111** GROSS ANATOMY (3Cr.:2Lec,2Prac):
Provides students with knowledge about the normal anatomical structures of the different body systems and organs and their clinical applications. The course also covers the development of the pharyngeal arches, head and neck including face, palate, tongue, salivary, pituitary and thyroid glands as well as nose and development of the skull. Practical study of the human skeleton, heart and its big blood vessels, lungs and their pleurae, abdominal and pelvic viscera and brain.

**ANAT 112** HEAD & NECK ANATOMY (3Cr.: 2Lec,2Prac):
Provides a comprehensive detailed study to the head and neck including: skull, 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 and facial nerve. In addition, it includes cervical vertebrae, hyoid bone, 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, and larynx.

**BCHM 112** BIOCHEMISTRY (2Cr.:2Lec,1Prac):
Develops a basic understanding of carbohydrate structure, digestion, metabolism, lipid structure, digestion, metabolism and fatty liver, protein structure and amino acids, protein digestion, metabolism of individual amino acids, nucleic acids, nucleotides, DNA structure, RNA structure, replication, transcription, translation, DNA repair, DNA recombination. Pre-req.: CHEM 113.

**BIOL 111** MEDICAL BOTANY (2Cr.:2Lec,1Lab):
Presents historical background, definition of drugs, classification of plant kingdom with special emphasis on medicinal plants and their forms. Identification of selected medicinal plants belonging to different families particularly those applied in dental preparations and clinical dentistry practice (Clove), detection of bioactive constituents, medicinal uses, side effects, addiction and misuse of drugs from natural origin (Cathe, Opium, Cannabis). Pre-req.: NONE.

**BIOM 112** DENTAL BIOMATERIALS I (1Cr.:1Lec,0Prac):
Defines and recites an overview for the basic science of physical, chemical and mechanical properties of dental materials used in all branches of the dental field (metals, polymers, ceramics and composites). Their introductory clinical applications are also presented.

**BIOM 211** DENTAL BIOMATERIALS II (2Cr.:2Lec,1Prac):
Provides the students with theoretical and practical information about composition, properties and manipulation of laboratory and prosthetic dental materials. In addition, the student demonstrates and practices the manipulation of these materials in the practical sessions. Pre-req.: BIOM 112.

**BIOM 212** DENTAL BIOMATERIALS III (2Cr.:2Lec,1Prac):
Provides the students with theoretical and practical information regarding the properties and manipulation of restorative dental materials as regards their presentation modes, composition, manipulation, properties and limitations. In addition to working sessions for demonstration and practicing optimal manipulation of the studied materials. Pre-req.: BIOM 112.

**CHEM 113** CHEMISTRY (1Cr.:1Lec,1Prac):
Provides students with theoretical knowledge and practical skills which enable them to carry out independently various types of chemical analysis.
Laboratory work involves students in scientific inquiry that places them in the position of asking questions, proposing solutions, taking observations, and organizing data. Pre-requisite: NONE.

**COMD 311** COMMUNITY DENTISTRY & BIOSTATISTICS (2Cr.:2Lec,0Prac):
Provides the student with the basic knowledge of the dental health educational program, including principles of motivation communication and education. This course also aims to enable the student to understand the basic concepts of the preventive modalities of dental diseases after the prediction of risky factors and methods of health education.
Description of statistics, collection of data in biostatistics, data arrangement and presentation, frequently distribution, graphs, arithmetic mean, median, mode, percentiles, measures of variation, range and standard deviation, graphical method, regression analysis, sampling from a population, sampling distribution, point estimation and confidence interval.
The course also covers the basic epidemiologic aspects of dental caries and periodontal diseases including epidemiology, indices used to measure the condition and the multifactorial aspect of the disease.

**DANT 111** DENTAL ANATOMY (3Cr.:1Lec,4Prac):
Provides intensive knowledge about tooth nomen¬clature and numbering systems of permanent and deciduous teeth. It also deals with the anatomical characteristics and landmarks of permanent anterior and premolar teeth. Practical sessions; enable students to develop manual dexterity wax by carving of anterior teeth and premolars. The course comprises practical sessions; student is provided the opportunity to develop his/her manual skills by carving in wax anterior teeth and premolars.

**DANT 112** DENTAL ANATOMY & OCCLUSION (3Cr.:2Lec,2Prac):
Provides intensive knowledge about the anatomical characteristics and landmarks of permanent molars and deciduous teeth. The course also provides understanding of the basic principles dealing with the prevention of periodontal disease and occlusion. The course comprises practical sessions; student is provided the opportunity to develop his/her manual skills by carving in wax molar teeth. Pre-req.: DANT 111.

**ENDO 313** PRECLINICAL ENDODONTICS I (2Cr.:1Lec,2Prac):
This course orients the students to endodontic science, root canal anatomy and morphology, principles of access cavity preparation. Instruments: descriptions and uses, working length determination and basics of single root canal preparation. Pre-req.: ORAD 212 & OPER 212.

**ENDO 314** PRECLINICAL ENDODONTICS II (3Cr.:1Lec,5Prac):
Presents root canals instrumentation techniques in straight and curved root canals. Obturation materials and different obturation techniques. Classify and describe clinical, radiographic and histological picture of pulp and periapical diseases. Pre-req.: ENDO 313.

**ENDO 411** ENDODONTICS I (3Cr.:1Lec,5Prac):
This course emphasizes on treatment planning, clinical and radiographic examination of pulp and periapical diseases; non traumatic endodontic emergencies: pretreatment, inter-appointment and post obturation emergencies; endodontic microbiology: association of bacteria and periapical disease, indications and techniques for culturing. Drugs used in endodontics.Pre-req.: All Pre-Clinical Phase Courses.

**ENDO 412** ENDODONTICS II (3Cr.:1Lec,5Clinical):
Introduces students to, root resorption; Vital pulp therapy: direct and indirect pulp capping, pulptomy and revascularization; management of open apex: Apexification and apexogenesis in permanent teeth; traumatic injuries: classification and treatment. Pre-req.: ENDO 411.

**ENDO 511** ENDODONTICS III (3Cr.:1Lec,5Clinical):
The course aims to train the student to perform the clinical aspects of the endodontic therapy and improve his experience in treating single and multi rooted teeth as well as to train him to manage and treat endodontic emergency cases. Also, enabling the student to recognize the variables present, which may necessitate consultation with other disciplines and referral of some patients to other specialists is a very important part in this course. Pre-req.: ENDO 412.

**ENDO 512** ENDODONTICS IV (3Cr.:1Lec,5Clinical):
Provides students with clinical experiences necessary for restoration of endodontically treated teeth, effect of restoration on success and failure, effect of RCT and loss of tooth structure on strength of endodontically treated teeth, restoration of anterior, posterior and structurally compromised teeth; sonic and ultrasonic instruments in endodontics; bleaching of discolored teeth and surgical endodontics. Pre-req.: ENDO 511.

**ETHB 312** DENTAL ETHICS & BEHAVIORAL SCIENCES (1Cr.:1Lec,0Prac):
Provides the student with the rules of conducts that every health provider should respect in his every day professional and personal life.
The course allows the students to have an understanding of the ethical and legal codes that prevail on practice of dentistry, in the full respect of the general public law. Patient's rights are explained together with the dentist's rights, obligations and behaviour towards his patients, colleagues and the public health authorities.
A rapid insight is provided on the other duties of the Lebanese Dental Association in protecting the interests and progress of the profession and its practicing members: the internal rules, the committees, the mutual and pension funds together with the operating procedures are presented.

**FPRO 211** PRECLINICAL FIXED PROSTHODONTICS I (2Cr.: 1Lec, 2Lab):
Introduces and orients students to fixed prosthodontic science, terminology and classifications, instruments used in fixed prosthodontics, principles of tooth preparation, full veneer metal crown, metal ceramic crown preparation, metal ceramic design, all ceramic crown preparations. Pre-requisite: DANT 112.

**FPRO 212** PRECLINICAL FIXED PROSTHODONTICS II (2Cr.:1Lec,2Lab):
Designed to introduce students to know the partial coverage restoration, working casts and dies fabrication, types and materials, dental waxes types and pattern fabrication, spruing function and techniques. Also investing materials and techniques, alloys for casting and casting defects. Pre-req.: FPRO 211.

**FPRO 311** PRECLINICAL FIXED PROSTHODONTICS III (2Cr.:1Lec,3Lab):
The course aims to introduce to the student different types of post used in treatment of endodontically treated teeth, different pontics design, complete and partial coverage retainers and different types of connectors used in fixed prosthodontics. Also, introducing the methods of clinical diagnosis. Pre-req.: FPRO 212.

**FPRO 312** PRECLINICAL FIXED PROSTHODONTICS IV (2Cr.:1Lec,2Lab):
The aim is to introduce the methods of soft tissue management in relation to the prepared teeth, the various materials and techniques regarding impression bite registration and provisional restorations. Also clarify the try-in step, select the shade of teeth and how to communicate with dental lab. Pre-req.: FPRO 311.

**FPRO 411** FIXED PROSTHODONTICS I (3Cr.:1Lec,5Clinic):
The aim is to provide basic guidelines to fully comprehend the patient's body language. Clarifying the treatment plan options, types of abutments and different design option. To understand the biocompatibility of different materials used in fixed prosthodontics and explaining the soldering materials and techniques.Pre-requisite: All Pre-Clinical Phase Courses.

**FPRO 412** FIXED PROSTHODONTICS II (3Cr.:1Lec,5Clinical):
The aim is to explain the different types of laminate veneer restoration, several options to treat mutilated and periodontally compromised teeth, on the other hand clarifying uses of laser in fixed prosthodontics and recent classifications, materials, techniques for new ceramic systems. Pre-req.: FPRO 411.

**FPRO 511** FIXED PROSTHODONTICS III (3Cr.:1Lec,5Clinical):
The course covers the elements of esthetic in fixed prosthodontics and how to correct the esthetic problems as well as conservative esthetic prosthesis. It recognizes the different types of implants fixture supra structure and mechanism of force distribution and the methods of fixed restoration removal and how to repair the defective restoration. Pre-req.: FPRO 412.

**FPRO 512** FIXED PROSTHODONTICS IV (3Cr.:1Lec,5Clinical):
The aim is to make the student aware with diagnosis and treatment of the clinical cases required complete mouth rehabilitation and different treatment options to cases with single tooth loss. Also, the student should be aware with causes, diagnosis and correction of the different types of failure in fixed prosthodontics. Pre-req.: FPRO 511.

**GHST 112** HISTOLOGY & GENETICS (2Cr.:2Lec,1Prac):
Provides basic knowledge of the microscopic structure of the different types of tissue and organs. Understand how epithelium, connective, muscular and nervous tissues participate in forming different organs. It also provides students with the histological structure of the lymphatic organs, blood vessels and the blood elements in the normal healthy human.
The course presents a basic understanding of the DNA Genetic Material, mechanisms of DNA replication, and Gene Function. It describes the chromosomal basis of inheritance, variation in chromosomal number, and deviations from Mendelian Principles. It acquaints students with knowledge to analyze pedigree and inheritance, and Gene Mapping in Eukaryotes.

**GMED 311** GENERAL MEDICINE, DERMATOLOGY & FORENSIC DENTISTRY (2Cr.:2Lec, 1Prac):
Provides students with the knowledge and skills that allow them to recognize different medical and dermatological diseases related to the dentist and different forensic medical problems. Also provides the students with basic life support and clinical training. Pre-req.: MICR 112.

**GSRG 311** GENERAL SURGERY, ENT & OPHTHALMOLOGY (2Cr.:2Lec,1Prac):
This course provides knowledge and skills to identify, analyze and manage infections, pre or postoperative care, head and neck swellings in order to provide efficient cost effective professional patient care. The students also acquire basic knowledge about ear, nose, throat and neck diseases especially those related to dental medicine and surgery. In addition, eye anatomy, physiology and function of vision, diagnosis and treatment of most common eye diseases. The relationship between dental and ophthalmic infections is highlighted. Pre-req.: PATH 213.

**IPEH 512** INTERPROFESSIONAL EDUCATION FOR HEALTH CARE PROVIDERS (1Cr.: 1*; *2 hours/week free interactive learning activity):
The course aims to foster the skills, knowledge, attitude and behaviour that facilitate effective Interprofessional Education (IPE) 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 and responsibilities. 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 and responsibilities through employ a variety of interactive methods and technologies.Co-req.: PEDI 512.

**MICR 112** MICROBIOLOGY & IMMUNOLOGY (3Cr.:3Lec,1Prac):
Presents the basic concept that are essential for an understanding of microbiology and immunology. Emphasis will be placed on general microbiology as subcellular and cellular life forms of normal flora and pathogenic bacteria related to oral diseases as well as viruses and fungi.
It also covers introduction to basic immunology, non-specific immunity, antigens, immunoglobulins structure and function, antigen recognition, major histocompatibility complex, response to antigen and processing presentation. Also cell-cell interactions in specific immune response, cell-mediated immunity, hypersensitivity and autoimmune diseases. An overview of molecular biology techniques: Isolation and purification of nucleic acids, PCR, restriction endnucleases, ELISA, Immunoelectrophoresis is presented.

**MGMT 312** PRACTICE MANAGEMENT(1Cr.:1Lec,0Prac):
The course introduces students to various aspects and dimension of the Dentistry profession including basic concepts of practice management, communication skills and evidence-based dentistry. Emphasis is placed on management responsibilities, successful teamwork, evidence based decisions, documentation and report writing. Through interactive sessions and case scenarios, students will be able to develop their critical thinking and decision – making skills.

**ODTP 411** ORAL DIAGNOSIS & TREATMENT PLAN (1Cr.:1Lec,1Prac):
The course orients students for a proper oral diagnosis and treatment plan which correlate the findings from the patient's history, clinical examination and other diagnostic investigations to formulate a differential and definitive diagnosis. Students will be able to create preliminary treatment plan according to the patients' needs with referral to the appropriate department. Pre-req.: All Preclinical Phase courses.

**OHST 211** ORAL HISTOLOGY (3Cr.:3Lec,1Prac):
The course aims to provide the students with the basic mechanisms involved in differentiation, growth and development of the tooth and its supporting tissues. Consideration is given to the molecular and cellular regulation of development. This course also deals with the basic chemistry, crystallography and ultra-structure of the enamel, dentin, pulp, cementum, periodontal ligament and bone. The effects of aging upon these oral tissues also are included. Pre-req.: GHST 112.

**OHST 212** ORAL HISTOLOGY & EMBRYOLOGY (3Cr.:3Lec,1Prac):
The course aims to provide the students with the basic knowledge regarding the microanatomy and ultrastructure of the oral mucosa; regional variation and its significance, and relationship of oral mineralized tissues to oral soft tissues. The embryology section gives the student an appreciation of the normal development of the major organ systems and some insight into the bases of craniofacial malformations. This course also deals with the process of shedding and eruption, salivary glands, temporomandibular joint and maxillary sinus. Pre-req.: OHST 211.

**OPER 211** PRECLINICAL OPERATIVE DENTISTRY I (2Cr.:1Lec,2Lab):
The course provides students with the basic knowledge and skills necessary for adequate performance of intra-coronal cavity preparation. Students are introduced to biological, epidemiological, and clinical aspects of dental caries, as well as instruments and equipment used in the clinical setting. Students will be able to apply correct nomenclature to caries classification, identify and name the restorative instruments and equipment, and describe methods of caries assessment and 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. Pre-req.: DANT 112.

**OPER 212** PRECLINICAL OPERATIVE DENTISTRY II (3Cr.:1Lec,4Lab):
The course endorses student's abilities to solve problems relevant to restoration of carious and non-carious lesions including diagnosis and treatment options. Isolation and moisture control techniques will be introduced and methods of caries prevention. Students are expected to master intra-coronal cavity preparation of anterior and posterior teeth. Students will also practice application of pit and fissure sealants.
Pre-req.: OPER 211.

**OPER 311** PRECLINICAL OPERATIVE DENTISTRY III (3Cr.:1Lec,4Lab):
The course focuses on properties, manipulation, and application of dental restorations. Moreover, the course emphasizes on when is it necessary; and 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 and clinical simulation sessions simultaneously to reinforce student's intellectual and practical skills. Pre-req.: OPER 212.

**OPER 312** PRECLINICAL OPERATIVE DENTISTRY IV (2Cr.:1Lec,2Lab):
The course provides in-depth knowledge on adhesive dentistry. Students will be able to describe the composition, the physical, chemical and biological properties of composite resins and indirect esthetic restoration. They will trained to practice successful bonding techniques, matricing, multi-chromatic layering for anterior restoration, bulk-fill and incremental layering for posterior composite resins restoration, finishing and 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 and skills obtained in pre-clinical courses in their clinical practice. Pre-req.: OPER 311.

**OPER 411** OPERATIVE DENTISTRY I (3Cr.:1Lec,5Clinic):
The course provides students with profound knowledge regarding patient assessment, diagnosis, and treatment planning that will be implemented in the clinical setting. They will be able to manage tooth pain and hypersensitivity, deep carious lesions and properly select suitable type of dental restoration. Students will continue developing 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 and apply basic standards of infection control. Pre-req.: All Pre-Clinical Phase Courses.

**OPER 412** OPERATIVE AND ESTHETIC DENTISTRY II (3Cr.:1Lec,5Clinical):
The course provides advance knowledge and skills in the area of adhesive dentistry. Student will be able to master direct and indirect esthetic restorations as well as in-office bleaching. Management of mutilated teeth will be featured and 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 and group discussion. Pre-req.: OPER 411.

**OPER 511** OPERATIVE DENTISTRY III (3Cr.:1Lec,5Clinical):
The course aims to increase the esthetic concept and 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, and esthetic work-up. Students will be able to manage esthetic tooth defects and clinically practice diastema closure, composite build-up, and direct composite veneers. By the end of this course, the student will start from the point view of art and build up the concept of esthetics in patient evaluation and treatment. Pre-req.: OPER 412.

**OPER 512** OPERATIVE DENTISTRY IV (3Cr.:1Lec,5Clinical):
The course offers clinical experience in interdisciplinary approach where students will be able to practice operative and 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 and 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 and treatment offered. Pre-req.: OPER 511.

**OPTH 212** ORAL PATHOLOGY I (2Cr.:2Lec,1Prac):
Aims to provide the students with basic knowledge about different oral diseases, such as dental caries, pulp and periapical diseases. The students will be introduced to different types of oral and para-oral cysts, and common types of odontogenic tumors. Pre-req.: OHST 211.

**OPTH 312** ORAL PATHOLOGY II (3Cr.:3Lec,1Prac):
Provides the student with the ability to diagnose various common oral and dental diseases, interpret different radiographic picture according to their histopathologic picture. The students will also be able to define the different pathological aspects of oral diseases and neoplasms with a close focus on oral cancer. The students are expected to be open-minded, flexible and possess personal skills in presentation, communication and critical thinking. They will possess the ability to pursue further studies and research nationally and internationally in the various pathological conditions to direct them towards improving community health. Pre-req.: PATH 211.

**ORAD 212** ORAL RADIOLOGY (1Cr.:1Lec,1Prac):
The course aims to provide students with the specialist knowledge necessary for practicing different intraoral radiographic techniques, processing and interpreting dental x-ray films. Also, identifying and interpreting normal anatomic landmarks of maxilla and mandible, periodontal disease and caries. In addition, provides the students with latest technologies used for digital imaging as well as cone-beam computed tomography (CBCT) and its application in various dental specialties. Processing of dental radiographs, analysis of unsatisfactory radiographs, normal intraoral radiographic anatomy. Radiographic interpretation of periodontal disease, periapical lesions and caries. Pre-req.: ANAT 112.

**OSRG 312** ANESTHESIA (1Cr.:1Lec,1Prac):
The course aims to provide overview of spectrum of pain and anxiety control in dentistry, The course will be divided into 2 main categories, the first is concerning the local anesthesia in dentistry, which will focus upon innervations of the teeth and surrounding maxillary and mandibular structures, the pharmacology of local anesthetic drugs and vasoconstricting agents and 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 and manage complications that may arise during and after injection of LA. The second category will be concerning the principles of conscious sedation and general anesthesia. Pre-req.: PHRM 211.

**OCLS 311** FUNDAMENTALS OF OCCLUSION (1Cr.:1Lec):
This course covers the definitions of basic terms of occlusion, muscles of mastication and mandibular movements, laws of articulation, anterior and posterior occlusal determinants as well as requirements of ideal occlusion are also described. Anatomy and disorders of TMJ , clinical occlusal analysis, surface tooth loss and its implications in addition to static and dynamic occlusion will be discussed in details. Pre-req.: DANT 112.

**OMED 411** ORAL MEDICINE (1Cr.:1Lec,1Prac):
The course allows the students to recognize, diagnose and treat the oral manifestation of systemic diseases, including infectious diseases, ulcerative and vesiculo bullous lesions, white and red lesions. Recognizing the methods of prevention and management of medical and dental emergencies that could happen in dental office. Modify treatment plans for medically compromised patients with emphasis on dental managements. Pre-req.: All Preclinical Phase courses.

**ORTD 411** ORTHODONTICS I (1Cr.: 1Lec,1Clinical):
The course familiarizes students to the clinical application of orthodontic biomechanics and will be acquainted with the biology of tooth movement and effects od fifferent types of force application on cells and tissues. The students will be capable to devise a treatment planning pertinent to the severity of malooclusion through understanding the principles of orthodontic biomechanics. Differentiate between mild, moderate and severe dentofacial deformities and present to the patient the most suitable treatment mode, and the relation between adaptability of tissues and results of dentofaical orthopedic pressures. .Potential and limitation of various orthodontic appliances. Pre-req.: All Pre-clinical Phase Courses.

**ORTD 412** ORTHODONTICS II (1Cr.:1Lec,1Clinical):
The students must be skilled in the recognition, diagnosis, and management of dentofacial abnormalities in the primary, mixed and permanent dentition. Affords students with a solid basis in the interdisciplinary approach of treating dentofacial deformities , management of cleft lip and palate cases. Able to recommend early and comprehensive orthodontic management that should be carried out at the correct time. Identify the cause of relapse after treatment and how to retain the outcome. The proper seletion of correct material for various orthodontic procedures and the proper handling and application potential and limitations of retention appliances. Pre-req.: ORTD 411.

**ORTD 314** INTRODUCTION TO ORTHODONTICS (1Cr.:1Lec,1Prac):
The course aims to provide students with the basic knowledge of craniofacial growth and development, and the origin of craniofacial deformities, and clinical application of growth and development , identify the characteristics of normal occlusion , etiology of the possible hereditary and environmental factors and the diagnosis of different classes of malocclusion, and become familiar with the clinical implication of developing malocclusion and how to diagnose them at a very early stage. In addition, the course will expose the students to the various orthodontic records and preparing the students to analyze and interpret the findings. Pre-req.: OCLS 311.

**OSRG 411** ORAL SURGERY I (3Cr.:2Lec,2Clinical):
The course aims to educate the students in the basic principles of sterilization, disinfection and antisepsis. Also to train students administrating all techniques of local anesthesia for the different dental and oral surgical procedures and enables them to have intellectual and clinical skills in basic and complicated exodontias and minor oral surgical procedures. Educate the students how to evaluate and manage the medically compromised patients in dental clinic. Pre-req.: All Pre-clinical Phase Courses.

**OSRG 412** ORAL SURGERY II (3Cr.:2Lec,2Clinical):
The course aims to educate the students about basic principles of wound healing, all possible techniques for soft and hard tissues preprosthetic surgeries, differential diagnosis of the head and neck cysts and tumors with description of its different treatment approaches. Also, how to diagnose the different diseases of the salivary glands and its possible treatment modalities. The course enables the students to assess and manage sinus odontogenic disease. Pre-req.: OSRG 411.

**OSRG 511** ORAL & MAXILLOFACIAL SURGERY (2Cr.:1Lec,2Clinical):
The course aims to introduce the students to the scope of maxillofacial surgery and provides them with knowledge about the principles, bacteriology, causes and propagation of odontogenic infection and its different types of presentation either intraoral or extraoral (fascial spaces of infection) and its management. The second part of the course aims to revises the anatomy of temporomandibular joint and educate the students about diseases of temporomandibular joint, their diagnosis and principles of treatment. Pre-req.: OSRG 412.

**OSRG 512** ORAL SURGERY & IMPLANTOLOGY (3Cr.:2Lec,2Clinical):
The course aims to educate the students in the initial management of patients with facial trauma. Also, familiarize them with the reconstruction modalities of the jaw. It will provide a general idea about the different causes of facial pain and its possible treatment. This course will familiarize the students with the diagnosis and techniques of managing facial trauma cases. The principles of correction of dentofacial deformities will be provided, as well as the management of patients with orofacial clefts. Finally, this course will provide an overview of dental implantology, where the students will be able to explore the history and evolution of different dental implant types. This will open the student's mind up to implant dentistry as a treatment modality. There will be a brief introduction to the basics of diagnosis and treatment planning of implant cases. Pre-req.: OSRG 511.

**PATH 213** PATHOLOGY (2Cr.:2Lec,1Prac):
Introduces students to the fundamental mechanisms of disease origin, development, mechanisms of disease prevention as well as compensation of the damaged functions and recovery. Knowledge of these mechanisms is needed for elaboration of principles and methods of therapy and prophylaxis.
Also it provides the students with basic understanding of the mechanisms of development and outcomes of the main systems' diseases as bridge between basic theoretical disciplines and clinical practice. Pre-req.: ANAT 111.

**PHYL 111** PHYSIOLOGY (3Cr.:3Lec,1Lab):
Provides a basic understanding of the functions of the human body organs. Develops an awareness and sense of responsibility regarding the functions of the human body organs and personal, family and community health. Explores and manipulates models, diagrams and other creative representations of the human body.

**PHRM 211** PHARMACOLOGY (2Cr.:2Lec,0Prac):

Provides the student with information about drug pharmacokinetics, pharmacodynamics and pharmacogenetics. It provides the basis for drugs acting on autonomic nervous system and autacoids, cardiovascular and renal systems, eye and GIT, anti-inflammatory and pain management drugs. It covers basic information about antimicrobial agents.

By the end of the course, the student will have the essential background of the pharmacological basis of therapeutics, build up skills and analytical apprehension of drug mechanisms, pharmacological actions, adverse effects and major drug interactions. Pre-req.: BIOL 111 & PHYL 111.

**PEDI 411** PEDIATRIC DENTISTRY I (2Cr.:1Lec,2Clinical):

The course is an introduction to the developmental stages of dentition and occlusion, morphological difference between primary and permanent teeth. It helps the student to understand the mechanism of root resorption and exfoliation and introduces him to common problems associated with the eruption process to help him develop future clinical diagnostic sense. The ways of identification of children with potential occlusal problems, and intercepting them including the use of different habit breaking appliances and different types of space maintainers are also covered. Pre-req.: All Pre-clinical Phase Courses.

**PEDI 412** PEDIATRIC DENTISTRY II (2Cr.:1Lec,2Clinical):

The course is designed to help the student to recognize the morphologic modifications of cavity preparations in primary teeth and develop the clinical judgment concerning the restorative materials used. Principles of pulp therapy, the concepts, etiologic factors, and clinical picture of nursing and rampant caries are also covered. This course also provides practical and relevant information that help the student to provide recommendations to parents regarding nursing habits to prevent the conditions. Early childhood caries (ECC) emphasis on management and prevention dental caries. Pre-req.: PEDI 411.

**PEDI 511** PEDIATRIC DENTISTRY III (3Cr.: 2Lec, 3Clinical):

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. The course is also designed to help the student recognize the behavioural characteristics of the child and implement techniques of behavioural management and pharmacological management of children. It is designed to help the students recognize the management techniques for children with oro-facial traumatic injuries. Pre-req.: PEDI 412.

**PEDI 512** PEDIATRIC DENTISTRY IV (2Cr.:1Lec,3Clinical):
The course includes gingival and periodontal diseases affecting the child patient from birth through adolescence to help the students identify the condition, readily diagnose it and manage the child patient. The different pathological conditions that might affect the oral and paraoral tissues in children and 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 dealing with medically compromised patients. The influence of diet and nutrition on the oral conditions of children are also covered. Pre-req.: PEDI 511.

**PERI 412** PERIODONTOLOGY I (2Cr.:1Lec,2Clinical):
Introduces the students to the importance of periodontics. Emphasis will be placed on understanding the basic micro and macro anatomy of periodontium healthy tissue as well as it's physiology and function. The course will focus on the etiology, clinical features and classifications of periodontal diseases. The course will develop the students skills to motivate and deliver oral health instructions to improve the periodontal status of the patient. It also provides the student with the principles of periodontal instrumentation, scaling and root planning as well as periodontal charting. Pre-req.: ODTP 411 and OMED 411.

**PERI 511** PERIODONTOLOGY II (3Cr.:2Lec,2Clinical):
The course covers periodontal response to external forces, periodontal pocket, periodontal abscess, furcation involvement, bone loss and patterns of bone destruction, chronic periodontitis, aggressive periodontitis, periodontitis as a manifestation of systemic diseases, necrotizing ulcerative periodontitis, effect of AIDS on the periodontium. It helps the students to recognize the correlation between periodontal disease and general health of the patient. It also covers prognosis and treatment of different periodontal diseases: Chemotherapeutic agents, surgical phase of periodontal therapy and gingivectomy technique. Pre-req.: PERI 412.

**PERI 512** PERIODONTOLOGY III (2Cr.:1Lec,2Clinical):
The course provides students with surgical periodontal procedures used for treatment treatment of various periodontal problems. It also covers the use of laser periodontal therapy. In addition to introductory part in oral implantology with emphasis on periodontal considerations and maintenance. Pre-req.: PERI 511.

**RPRO 211** PRECLINICAL REMOVABLE PROSTHODONTICS I (2Cr.:1Lec,2Prac):
The course presents introduction and history of removable prosthodontics. It provides the students with the information about the anatomy of the supporting structures and steps of complete denture construction. Handling and pouring impressions, temporary and permanent denture bases, recording maxillo-mandibular relations, mandibular movements considerations and significance are also demonstrated. Pre-req.: DANT 112.

**RPRO 212** PRECLINICAL REMOVABLE PROSTHODONTICS II (2Cr.:1Lec,3Prac):
The course provides information about articulators, functions, advantages, requirements and classification. Value and techniques for mounting casts are explained. Artificial teeth selection, arrangement of artificial teeth are also demonstrated. Complete denture occlusion, waxing-up and festooning complete dentures, processing waxed-up dentures and processing errors are discussed. Posterior palatal seal, relief, denture repair are presented. Retention and stability of complete denture are also covered. Pre-req.: RPRO 211.

**RPRO 311** PRECLINICAL REMOVABLE PROSTHODONTICS III (2Cr.:1Lec,2Prac):
The course provides instructions for the fabrication of removable partial denture prostheses. It starts with the introduction, scope, terminology, objectives and indications. It also discusses the classification of partially edentulous arches, Kennedy's classification and Applegate's rules. Objectives, principles and uses of surveyor are also described. The course is also designed to present various components of RPD which include denture base, occlusal rests and similar components, intracoronal and extracoronal direct retainer as well as basic principles of clasp design. Pre-req.: RPRO 212.

**RPRO 312** PRECLINICAL REMOVABLE PROSTHODONTICS IV (2Cr.:1Lec,3Prac):
This course is a continuation of RPRO 311 which describes indirect retainers as regards forms and functions as well as factors affecting its effectiveness. The major connectors requirements, types including maxillary and mandibular as well as minor connectors are also presented. Stress breakers, types, indications and advantages are described. The course focuses on planning removable partial denture, laboratory procedures for casting and finishing metal framework and the construction of acrylic partial denture.Pre-req.: RPRO 311.

**RPRO 411** REMOVABLE PROSTHODONTICS I (2Cr.:1Lec,3Clinical):
The course deals with the management of the completely edentulous patient. Topics include examination, diagnosis and treatment plan, impressions objectives, preliminary and final impression techniques as well as materials used. The course describes the techniques for recording maxillo-mandibular relationship, selection and arrangement of artificial teeth, principles of occlusion in complete denture, try in, insertion as well as instructions given to the patient. Pre-req.: All Pre-clinical Phase Courses.

**RPRO 412** REMOVABLE PROSTHODONTICS II (2Cr.:1Lec,3Clinical):
The course helps the student to recognize patients' complaints, post-insertion care and changes. Management of residual ridge resorption, problems, surgical and prosthetic management are also discussed. It focuses on complete denture relining, types and uses of different relining materials. Prosthetic management and comprehensive care for geriatric patients are covered. Advanced prosthodontic treatment are introduced as tooth supported overdentures. Phonetics and speech problem of prosthetic origin are discussed. Pre-req.: RPRO 411.

**RPRO 511** REMOVABLE PROSTHODONTICS III (3Cr.:1Lec,5Clinical):
The course deals with the management of the partially edentulous patient. Topics include examination, diagnosis and treatment plan, mouth preparation, primary and final impressions, principles and philosophies of design, maxillo-mandibular relationship, trial fitting of metal framework. Principles of tooth selection, try-in, check occlusion, denture insertion, patient's instructions and complaints are discussed. Pre-req.: RPRO 412.

**RPRO 512** REMOVABLE PROSTHODONTICS IV (3Cr.:1Lec,5Clinical):
The course is designed to provide students with the technique for partial denture relining, rebasing and repair. Other forms of partial dentures, attachments used in prosthodontics, factors affecting their selection are also presented. The course presents an introduction to dental implant, implants supported overdentures, impression techniques and criteria for success and failure. It also covers the role of the prosthodontist in maxillofacial prosthesis. Prosthetic management of jaw fractures, problems and management of temporomandibular dysfunction are also presented. Pre-req.: RPRO 511.

## Study Plan

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

**1- PRECLINICAL PHASE**

| First Semester (12 Credits) | | | Crs. | Pre-/co-requisites |
|---|---|---|---|---|
| CHEM | 113 | Chemistry | 1 | Pre: NONE |
| DANT | 111 | Dental Anatomy | 3 | Pre: NONE |
| ANAT | 111 | Gross Anatomy | 3 | Pre: NONE |
| BIOL | 111 | Medical Botany | 2 | Pre: NONE |
| PHYL | 111 | Physiology | 3 | Pre: NONE |
| | | Elective (General)[1] | maximum 6Cr. | |

| Second Semester (14 Credits) | | | Crs. | Pre-/co-requisites |
|---|---|---|---|---|
| BCHM | 112 | Biochemistry | 2 | Pre: CHEM 113 |
| DANT | 112 | Dental Anatomy & Occlusion | 3 | Pre: DANT 111 |
| BIOM | 112 | Dental Biomaterials I | 1 | Pre: NONE |
| ANAT | 112 | Head & Neck Anatomy | 3 | Pre: NONE |
| MICR | 112 | Microbiology & Immunology | 3 | Pre: NONE |
| GHST | 112 | Histology & Genetics | 2 | Pre: NONE |
| | | Elective (General)[1] | maximum 4Cr. | |

| Third Semester (15 Credits) | | | Crs. | Pre-/co-requisites |
|---|---|---|---|---|
| BIOM | 211 | Dental Biomaterials II | 2 | Pre: BIOM 112 |
| PATH | 213 | Pathology | 2 | Pre: ANAT 111 |
| OHST | 211 | Oral Histology | 3 | Pre: GHST 111 |
| PHRM | 211 | Pharmacology | 2 | Pre: BIOL 111 & PHYL 111 |
| FPRO | 211 | Preclinical Fixed Prosthodontics I | 2 | Pre: DANT 112 |
| OPER | 211 | Preclinical Operative Dentistry I | 2 | Pre: DANT 112 |
| RPRO | 211 | Preclinical Removable Prosthodontics I | 2 | Pre: DANT 112 |
| | | Elective (General)[1] | maximum 3Cr. | |

| Fourth Semester (15 Credits) | | | Crs. | Pre-/co-requisites |
|---|---|---|---|---|
| BIOM | 212 | Dental Biomaterials | 2 | Pre: BIOM 112 |
| OHST | 212 | Oral Histology & Embryology | 3 | Pre: OHST 211 |
| OPTH | 212 | Oral Pathology I | 2 | Pre: OHST 211 |
| ORAD | 212 | Oral Radiology | 1 | Pre: ANAT 112 |
| FPRO | 212 | Preclinical Fixed Prosthodontics II | 2 | Pre: FPRO 211 |
| OPER | 212 | Preclinical Operative Dentistry II | 3 | Pre: OPER 211 |
| RPRO | 212 | Preclinical Removable Prosthodontics II | 2 | Pre: RPRO 211 |
| | | Elective (General)[1] | maximum 3Cr. | |

| Fifth Semester (16 Credits) | | | Crs. | Pre-/co-requisites |
|---|---|---|---|---|
| COMD | 311 | Community Dentistry & Biostatistics | 2 | Pre: NONE |
| GSRG | 311 | General Surgery, ENT & Ophthalmology | 2 | Pre: PATH 213 |
| GMED | 311 | General Medicine, Dermatology & Forensic Dentistry | 2 | Pre: MICR 112 |
| OCLS | 311 | Fundamentals of Occlusion | 1 | Pre: DANT 112 |
| FPRO | 311 | Preclinical Fixed Prosthodontics III | 2 | Pre: FPRO 212 |
| OPER | 311 | Preclinical Operative & Esthetic Dentistry III | 3 | Pre: DANT 212 |
| RPRO | 311 | Preclinical Removable Prosthodontics III | 2 | Pre: RPRO 212 |
| ENDO | 313 | Preclinical Endodontics I | 2 | Pre: ORAD 212 & OPER 212 |
| | | Elective (General)[1] | maximum 2Cr. | |

| Sixth Semester (16 Credits) | | | Crs. | Pre-/co-requisites |
|---|---|---|---|---|
| OSRG | 312 | Anesthesia | 1 | Pre: PHRM 211 |
| ETHB | 312 | Dental Ethics & Behavioral Sciences | 1 | Pre: NONE |
| OPTH | 312 | Oral Pathology II | 3 | Pre: OPTH 212 |
| MGMT | 312 | Practice Management | 1 | Pre: NONE |
| FPRO | 312 | Preclinical Fixed Prosthodontics IV | 2 | Pre: FPRO 311 |
| OPER | 312 | Preclinical Operative & Esthetic Dentistry IV | 2 | Pre: OPER 311 |
| RPRO | 312 | Preclinical Removable Prosthodontics IV | 2 | Pre: RPRO 311 |
| ENDO | 314 | Preclinical Endodontics II | 3 | Pre: ENDO 313 |
| ORTD | 314 | Introduction to Orthodontics | 1 | Pre: OCLS 311 |
| | | Elective (General)[1] | maximum 2Cr. | |

**• All Courses in the preclinical phase are Pre-requisite to the courses in the clinical phase**

**2- CLINICAL PHASE**

| Seventh Semester (19 Credits) | | | Crs. | Pre-/co-requisites |
|---|---|---|---|---|
| ENDO | 411 | Endodontics I | 3 | Pre: *APPC |
| FPRO | 411 | Fixed Prosthodontics I | 3 | Pre: *APPC |
| OPER | 411 | Operative & Esthetic Dentistry I | 3 | Pre: *APPC |
| ODTP | 411 | Oral Diagnosis & Treatment Plan | 1 | Pre: *APPC |
| OMED | 411 | Oral Medicine | 1 | Pre: *APPC |
| OSRG | 411 | Oral Surgery I | 3 | Pre: *APPC |
| ORTD | 411 | Orthodontics I | 1 | Pre: *APPC |
| PEDI | 411 | Pediatric Dentistry I | 2 | Pre: *APPC |
| RPRO | 411 | Removable Prosthodontics I | 2 | Pre: *APPC |

*** All Pre-Clinical Phase Courses**

| Eighth Semester (19 Credits) | | | Crs. | Pre-/co-requisites |
|---|---|---|---|---|
| ENDO | 412 | Endodontics II | 3 | Pre: ENDO 411 |
| FPRO | 412 | Fixed Prosthodontics II | 3 | Pre: FPRO 411 |
| OPER | 412 | Operative & Esthetic Dentistry II | 3 | Pre: OPER 411 |
| OSRG | 412 | Oral Surgery II | 3 | Pre: OSRG 411 |
| ORTD | 412 | Orthodontics II | 1 | Pre: ORTD 411 |
| PEDI | 412 | Pediatric Dentistry II | 2 | Pre: PEDI 411 |
| PERI | 412 | Periodontology I | 2 | Pre: ODPT 411 |
| RPRO | 412 | Removable Prosthodontics II | 2 | Pre: RPRO 411 |

| Ninth Semester (20 Credits) | | | Crs. | Pre-/co-requisites |
|---|---|---|---|---|
| ENDO | 511 | Endodontics III | 3 | Pre: ENDO 412 |
| FPRO | 511 | Fixed Prosthodontics III | 3 | Pre: FPRO 412 |
| OPER | 511 | Operative & Esthetic Dentistry III | 3 | Pre: OPER 412 |
| OSRG | 511 | Oral & Maxillofacial Surgery | 2 | Pre: OSRG 412 |
| PEDI | 511 | Pediatric Dentistry III | 3 | Pre: PEDI 412 |
| PERI | 511 | Periodontology II | 3 | Pre: PERI 412 |
| RPRO | 511 | Removable Prosthodontics III | 3 | Pre: RPRO 412 |

| Tenth Semester (20 Credits) | | | Crs. | Pre-/co-requisites |
|---|---|---|---|---|
| ENDO | 512 | Endodontics IV | 3 | Pre: ENDO 511 |
| FPRO | 512 | Fixed Prosthodontics IV | 3 | Pre: FPRO 511 |
| OPER | 512 | Operative & Esthetic Dentistry IV | 3 | Pre: OPER 511 |
| OSRG | 512 | Oral Surgery & Implantology | 3 | Pre: OSRG 511 |
| PEDI | 512 | Pediatric Dentistry IV | 2 | Pre: PEDI 511 |
| PERI | 512 | Periodontology III | 2 | Pre: PERI 511 |
| RPRO | 512 | Removable Prosthodontics IV | 3 | Pre: RPRO 511 |
| IPEH | 512 | Interprofessional Education for Health Care Providers | 1 | Co-req: PEDI 512 |

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.) and another 9 credits are selected from the University Elective courses list + ICDL.

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