

Degree Requirements:

A Bachelor Degree of Dental Surgery (BDS) at JUST is awarded according to the statute stated by JUST regulations for B.Sc. awarding issued by the Deans Council based on the 1987 law for awarding scientific degrees and certifications at JUST.

The student should complete a sum of (213) credit hours successfully. These credit hours are distributed according to the following:

| Classification | Credit Hours | | | | |
|---|--------------|----------|-------------|-----------|------------|
| | Compulsory | Elective | Theoretical | Practical | Total |
| University Requirements | 16 | 9 | 25 | - | 25 |
| Basic Science Requirements (from Faculty of Science & Art and Faculty of Computer & IT) | 18 | - | 15 | 3 | 18 |
| Requirements from Faculty of Medicine | 47 | - | 42 | 5 | 47 |
| Requirements from Faculty of Dentistry | 123 | - | 55 | 68 | 123 |
| Total | 204 | 9 | 134 | 76 | 213 |

Curriculum of Bachelor Degree of Dental and Oral Surgery - Study Plan 2006-2011

General Notes:

- 1. Every academic year consists of three semesters:** the first semester consists of 16 weeks (September-January), the second semester consists of 16 weeks (February-June) and the summer semester consists of 8 to 10 weeks (July-August).
- 2. Six and four credit-hours course:** refers to the number of times of lecture/seminars per week. Every lecture/seminar represents 1 hour/day. It may also refer to the number of times of a practical session per week i.e. 2 or 3 practical sessions/week and every practical session lasts 2 to 3 hours/day.
- 3. Three credit-hours course:** refers to the number of times of a lecture/seminar per week. Every lecture/seminar represents one contact hour per day. It may also refer to the number of times of a practical session per week i.e. 2 or 3 practical sessions/week and every practical session lasts 2 to 3 hours/day.
- 4. Two credit-hours course:** refers to the number of times of a lecture/seminar per week. Every lecture/seminar represents 1 hour/day. It may also refer to the number of times of a practical session per week i.e. 2 practical sessions/week and every practical session lasts 2 to 3 hours/day.
- 5. One credit-hour practical course:** refers to the number of times of a practical session/laboratory per week. Every practical or laboratory session represents 2 to 3 contact hours per week.
- 6. The total working hours (contact hours):** for each topic is calculated by adding the weekly theoretical and practical or clinical sessions then multiplying the summation by the number of teaching weeks (16 for the first and second semester and 8 for the summer semester). Please note that minor variations could occur.

First Year

First Semester

| Course Number | Course Title | Credit Hours | Weekly Hours Lectures/Practical | | Total Working Hours |
|---------------|------------------------------------|--------------|------------------------------------|---|---------------------|
| Bio 103 | General Biology | 3 | 3 | - | 48 |
| Bio 107 | General Biology Practical | 1 | - | 3 | 48 |
| Arb 101 | Arabic Language | 3 | 3 | - | 48 |
| Arb 103 | Applied Studies in Arabic Language | 1 | 1 | - | 16 |
| Chem 103 | General Chemistry | 3 | 3 | - | 48 |
| Eng 111 | English Language 1 | 3 | 3 | - | 48 |

Second Semester

| Course Number | Course Title | Credit Hours | Weekly Hours Lectures/Practical | | Total Working Hours |
|---------------|--|--------------|------------------------------------|---|---------------------|
| CS 100* | Introduction to Computer Science (and Lab) | 3 | 3 | 2 | 80 |
| Phy 103 | General Physics | 3 | 3 | - | 48 |
| Chem 217 | Organic Chemistry | 3 | 3 | - | 48 |
| CS 116 | Selected Programming Language | 3 | 2 | 3 | 80 |
| Eng 112 | Communication Skills II | 3 | 3 | - | 48 |
| | (Elective Course) | 3 | 3 | - | 48 |

* For students who did not pass the computers skill initial exam.

Summer Semester

| Course Number | Course Title | Credit Hours | Weekly Hours Lectures/Practical | | Total Working Hours |
|---------------|--------------------------------|--------------|------------------------------------|-----------|---------------------|
| Chem 262 | Biochemistry | 3 | 3 | - | 48 |
| Chem 266 | Biochemistry Laboratory | 1 | - | 3 | 48 |
| Dent 101 | Introduction to Dentistry | 2 | 2 | - | 32 |
| Ms 100 | Military Sciences | 3 | 3 | - | 48 |
| | Total of The First Year | 39 | 34 | 13 | 752 |

Second year

First Semester

| Course Number | Course Title | Credit Hours | Weekly Hours Lectures/Practical | | Total Working Hours |
|---------------|---|--------------|---------------------------------|---|---------------------|
| Med 211A | Molecular Genetics | 3 | 3 | - | 48 |
| Med 215A | General Anatomy and Embryology | 3 | 3 | - | 48 |
| Med 215B | General Anatomy and Embryology Laboratory | 1 | - | 3 | 48 |
| Med 230A | Human Physiology | 3 | 3 | - | 48 |
| Med 230B | Human Physiology Laboratory | 1 | - | 3 | 48 |
| Med 216 | General Histology | 4 | 3 | 3 | 96 |
| Med 231 | General Pathology | 3 | 2 | 3 | 80 |

Second Semester

| Course Number | Course Title | Credit Hours | Weekly Hours Lectures/Practical | | Total Working Hours |
|---------------|----------------------------------|--------------|---------------------------------|---|---------------------|
| Med 217A | Head and Neck Anatomy | 3 | 3 | - | 48 |
| Med 217B | Head and Neck Anatomy Laboratory | 1 | - | 3 | 48 |
| Med 265 | General Microbiology | 3 | 2 | 3 | 80 |
| Med 372 | Pathophysiology | 3 | 3 | - | 48 |
| Dent 202 | Dental Anatomy and Occlusion | 3 | 1 | 4 | 80 |
| Dent 206 | Oral Histology | 3 | 2 | 3 | 80 |
| Dent 207 | Oral Physiology | 1 | 1 | - | 16 |
| Dent 211b | Cariology | 1 | 1 | - | 16 |

Summer Semester

| Course Number | Course Title | Credit Hours | Weekly Hours Lectures/Practical | | Total Working Hours |
|---------------|-------------------------------------|--------------|---------------------------------|-----------|---------------------|
| Dent 203 | Dental Materials 1 | 2 | 1 | 2 | 48 |
| Med 232 | Immunology | 3 | 3 | - | 48 |
| | (Elective Course) | 3 | 3 | - | 48 |
| | Total of all The Second Year | 47 | 37 | 27 | 1024 |

Third Year

First Semester

| Course Number | Course Title | Credit Hours | Weekly Hours | | Total Working Hours |
|---------------|----------------------------|--------------|--------------------|---|---------------------|
| | | | Lectures/Practical | | |
| Dent 305 | Dental Materials 2 | 2 | 2 | - | 32 |
| Dent 311 | Oral Epidemiology | 1 | 1 | - | 16 |
| Dent 313 | Research Methodology | 1 | 1 | - | 16 |
| Dent 335 | Conservative Dentistry 1 | 4 | 1 | 6 | 112 |
| Dent 343 | Removable Prosthodontics 1 | 4 | 1 | 6 | 112 |
| Dent 355 | Oral Pathology 1 | 3 | 2 | 2 | 64 |
| Med 351 | General Pharmacology | 3 | 3 | - | 48 |

Second Semester

| Course Number | Course Title | Credit Hours | Weekly Hours | | Total Working Hours |
|---------------|--------------------------------------|--------------|--------------------|---|---------------------|
| | | | Lectures/Practical | | |
| Med 291 | Biostatistics | 2 | 2 | - | 32 |
| Dent 325 | Oral Radiology 1 | 1 | 1 | - | 16 |
| Dent 336 | Conservative Dentistry 2 (and Lab) | 4 | 1 | 6 | 112 |
| Dent 344 | Removable Prosthodontics 2 (and Lab) | 4 | 1 | 6 | 112 |
| Dent 356 | Oral Pathology 2 | 3 | 2 | 2 | 64 |
| Med 373 | General Internal Medicine | 2 | 2 | - | 32 |
| Med 374 | General Surgery and Anesthesia | 2 | 2 | - | 32 |

Summer Semester

| Course Number | Course Title | Credit Hours | Weekly Hours | | Total Working Hours |
|---------------|-----------------------------------|--------------|--------------------|-----------|---------------------|
| | | | Lectures/Practical | | |
| Dent 303 | Dental Ethics and Jurisprudence | 1 | 1 | - | 16 |
| Dent 337 | Conservative Dentistry 3 | 1 | 1 | - | 16 |
| Dent 345 | Removable Prosthodontics 3 | 1 | 1 | - | 16 |
| Dent 361 | Pediatric Dentistry 1 | 1 | 1 | - | 16 |
| Dent 371 | Periodontology 1 | 1 | 1 | - | 16 |
| Dent 381 | Oral Surgery and Local Anesthesia | 1 | 1 | - | 16 |
| | (Elective course) | 3 | 3 | - | 48 |
| | Total of The Third Year | 45 | 31 | 28 | 944 |

Fourth Year

First Semester

| Course Number | Course Title | Credit Hours | Weekly Hours | | | Total Working Hours |
|---------------|----------------------------|--------------|--------------|-----|---------|---------------------|
| | | | Lectures | Lab | Clinics | |
| Dent 423 | Oral Diagnosis 1 | 2 | 1 | - | 2 | 48 |
| Dent 425 | Oral Radiology 2 | 2 | 1 | - | 2 | 48 |
| Dent 437 | Conservative Dentistry 4 | 4 | 1 | - | 6 | 112 |
| Dent 445 | Removable Prosthodontics 4 | 3 | 1 | 3 | 4 | 128 |
| Dent 461 | Pediatric Dentistry 2 | 2 | 1 | - | 2 | 48 |
| Dent 471 | Periodontology 2 | 2 | 1 | - | 2 | 48 |
| Dent 481 | Oral Surgery 1 | 2 | 1 | - | 2 | 48 |
| Dent 491 | Orthodontics 1 | 2 | 1 | 1 | 2 | 64 |

Second Semester

| Course Number | Course Title | Credit Hours | Weekly Hours | | | Total Working Hours |
|---------------|----------------------------|--------------|--------------|-----|---------|---------------------|
| | | | Lectures | Lab | Clinics | |
| Dent 412 | Preventive Dentistry | 2 | 2 | - | - | 32 |
| Dent 424 | Oral Diagnosis 2 | 1 | - | - | 2 | 32 |
| Dent 434 | Crowns and Bridges | 1 | 1 | - | - | 16 |
| Dent 438 | Conservative Dentistry 5 | 2 | - | - | 4 | 64 |
| Dent 446 | Removable Prosthodontics 5 | 3 | - | 3 | 6 | 144 |
| Dent 451 | Oral Medicine 1 | 2 | 1 | - | 2 | 48 |
| Dent 462 | Pediatric Dentistry 3 | 2 | 1 | - | 2 | 48 |
| Dent 472 | Periodontology 3 | 2 | 1 | - | 2 | 48 |
| Dent 482 | Oral Surgery 2 | 2 | 1 | - | 2 | 48 |
| Dent 492 | Orthodontics 2 | 2 | 1 | 1 | 2 | 64 |

Summer Semester

| Course Number | Course Title | Credit Hours | Weekly Hours | | | Total Working Hours |
|---------------|---------------------------------|--------------|--------------|-----------|-----------|---------------------|
| | | | Lectures | Lab | Clinics | |
| Dent 413 | Research Project | 2 | - | - | 4 | 64 |
| Dent 439 | Conservative Dentistry 6 | 3 | - | - | 6 | 96 |
| Dent 447 | Removable Prosthodontics 6 | 1 | - | 6 | - | 96 |
| Dent 465 | Pediatric Dentistry 4 | 1 | - | - | 2 | 32 |
| Dent 475 | Periodontology 4 | 1 | - | - | 2 | 32 |
| Dent 483 | Oral Surgery 3 | 1 | - | - | 2 | 32 |
| Dent 493 | Orthodontics 3 | 1 | - | - | 2 | 32 |
| | Total of The Fourth Year | 48 | 16 | 14 | 62 | 1472 |

Fifth Year

First Semester

| Course Number | Course Title | Credit Hours | Weekly Hours Lectures/Clinics | | Total Working Hours |
|---------------|----------------------------------|--------------|-------------------------------|---|---------------------|
| | | | | | |
| Dent 517 | Oral Implantology 1 | 1 | 1 | - | 16 |
| Dent 523 | Oral Diagnosis 3 | 1 | - | 2 | 32 |
| Dent 521 | Oral Radiology 3 | 1 | - | 2 | 32 |
| Dent 535 | Conservative Dentistry 7 | 3 | 1 | 4 | 80 |
| Dent 545 | Removable Prosthodontics 7 | 3 | 1 | 4 | 80 |
| Dent 555 | Oral Medicine 2 | 2 | 1 | 2 | 48 |
| Dent 565 | Pediatric Dentistry 5 | 2 | 1 | 2 | 48 |
| Dent 575 | Periodontology 5 | 2 | 1 | 2 | 48 |
| Dent 585 | Oral and Maxillofacial Surgery 1 | 2 | 1 | 2 | 48 |
| Dent 595 | Orthodontics 4 | 1 | - | 2 | 32 |

Second Semester

| Course Number | Course Title | Credit Hours | Weekly Hours Lectures/Clinics | | Total Working Hours |
|---------------|----------------------------------|--------------|-------------------------------|-----------|---------------------|
| | | | | | |
| Dent 518 | Oral Implantology 2 | 1 | 1 | - | 16 |
| Dent 524 | Oral Diagnosis 4 | 1 | - | 2 | 32 |
| Dent 522 | Oral Radiology 4 | 1 | - | 2 | 32 |
| Dent 536 | Conservative Dentistry 8 | 3 | - | 6 | 96 |
| Dent 546 | Prosthodontics 2 | 3 | - | 6 | 96 |
| Dent 556 | Oral Medicine 3 | 1 | - | 2 | 32 |
| Dent 566 | Pediatric Dentistry 6 | 2 | - | 4 | 64 |
| Dent 576 | Periodontology 6 | 2 | - | 4 | 64 |
| Dent 586 | Oral and Maxillofacial Surgery 2 | 2 | 1 | 2 | 48 |
| Dent 596 | Orthodontics 5 | 1 | - | 2 | 32 |
| | Total of The Fifth Year | 35 | 9 | 52 | 976 |

Summary of All Years

| Study Year | Credit Hours | Total Working Hours |
|---------------|--------------|---------------------|
| First Year | 39 | 752 |
| Second Year | 47 | 1024 |
| Third Year | 45 | 944 |
| Fourth Year | 48 | 1472 |
| Fifth Year | 35 | 976 |
| Total* | 214 | 5168 |

*Variations according to the course year of each student

Descriptions of Dental Courses

Notes:

1. The courses described below were the dental courses coded with DENT which were valid for the study plan for all the students registered at the Faculty of Dentistry during the years 2006 - 2013.
2. The description of the courses like Biology, Physics, Chemistry, English and other elective courses could be acquired from the faculty of Science and Arts.

DENT 101 Introduction to Dentistry

This course is designed to introduce students to the profession of dentistry and its relation and interaction with the community. It includes general definitions for the different specialties and fields of dentistry. Students will have brief information about all aspects of dental sciences. Also the students will be introduced to some dental terminology which will help her/him in studying more advanced courses in the next semesters.

DENT 202 Dental Anatomy and Occlusion

This course is designed to cover detailed dental macroscopic anatomy and the basic principles of dental occlusion. The course has two components, lectures and corresponding practical training in laboratories. The lecture topics cover the dental notation systems and chronology of development of teeth, the detailed anatomy of the permanent and deciduous teeth, the anatomy of pulp canals (internal morphology of teeth) and an introduction to the fundamentals of dental occlusion. The practical sessions focus on developing the skills of carving different teeth out of wax blocks, practice on dental notation, age determination from teeth, teeth interaction in occlusion as well as the skills of tooth identification.

DENT 206 Oral Histology

The course has two components, a didactic and a practical part. The lecture topics cover the relevant orofacial embryology, the different stages of odontogenesis, details of tooth structure and its supporting tissues as well as the oral tissues and adjoining structures. During each practical session, students should examine slides of the oral and dental tissues covered in the corresponding lectures.

DENT 207 Oral Physiology

This course is designed to provide the students with the needed knowledge in oral physiology needed to be applied at a later stage during their clinical training. The lecture topics include saliva, mechanisms of taste and olfaction, nociception, mechanosensation, dynamics of mastication and swallowing, mechanism of speech, calcification, dynamics of temporomandibular joint and occlusion and some applied comparative orofacial physiology in addition to sensory physiology and pain, motor neurophysiology and the control of mandibular movement, and healing of oral structures.

DENT 211 Cariology

This course is designed to bring students to the current knowledge in the following topics: Introduction to dental caries, classification, etiology, microbiology, and epidemiology of dental caries. This course also covers sugar substitutes, saliva and dental caries, dental plaque, and diet nutrition and dental caries.

DENT 203 Dental Materials 1

This course is designed to introduce students to the science of dental materials used in the dental procedures. It provides students with the basics of dental materials science including composition, chemical, physical, mechanical and surface properties, handling characteristics of the materials and their biocompatibility. The specific topics include gypsum products, investments, cements, waxes, and impression materials. The practical part of the course provides direct and practical hands on experience with the materials taught in the theoretical part of the course.

DENT 305 Dental Materials 2

This course is a continuation of the previous course (Dent 203). It offers a perspective on the advancements in newly developed materials or improvements to those currently in use. It provides the necessary tools and principles of dental materials that are currently used in clinical dentistry and covers the underlying principles of their functional properties, bioactivity and biocompatibility. This includes the main dental materials used in conservative dentistry, removable and fixed prosthesis materials and preventive dentistry such as amalgam, composites, glass ionomer, adhesive systems and cements, metals and alloys, ceramics, investment and refractory dies, endodontic and bleaching materials and implant materials.

DENT 311 Oral Epidemiology

This course is designed to provide students with the current knowledge in oral epidemiology. This includes concepts, terms and approaches used in epidemiology, epidemiological measures and indices relevant to oral health, measurements of population health methodological consideration, measurement of dental caries, periodontal disease as well as other dental diseases and conditions. This course will also provide information about distribution of epidemiology of oral and dental diseases such as tooth loss, dental caries, periodontal disease, and oral cancer.

DENT 335 Conservative Dentistry 1

This preclinical course includes a theoretical and practical component.

The theoretical component is designed to give the third year students basic cognitive knowledge of the principals, terminology, instruments, materials and techniques utilized in the practice of Operative Dentistry. The practical component provides the student with the initial experience in the application of restorative procedures for managing the carious process on phantom heads.

The student should perform a series of clinical exercises utilizing current instrumentation, materials and techniques.

DENT 343 Removable Prosthodontics 1

This is a preclinical course -composed of theoretical and practical components- designed to introduce students to rehabilitation of edentulous patients using complete dentures. The didactic part covers the theoretical chairside and laboratory procedures of complete denture production.

The practical component will provide the students with the skill and the understanding of laboratory procedures required for construction of the complete denture prosthesis. A series of exercises are conducted to prepare the student for the clinical phase of managing edentulous patients.

DENT 355 Oral Pathology 1

The course introduces the dental students to basic knowledge of diseases in the oral and maxillofacial region, including diseases of teeth, bone, soft tissue, and salivary gland tissue.

DENT 313 Research Methods

This course is designed to bring students to the current knowledge in research design in dentistry. It will provide knowledge in the basic principles of sampling, statistics and research design, abnormality (clinical measurements, validity, reliability and criteria for abnormality), diagnosis (sensitivity, specificity and predictive values), risk (risk factors and study of risks), frequency (measuring prevalence and incidence and bias) and clinical trials.

DENT 325 Oral Radiology 1

This theoretical course is designed to introduce the students to the fundamentals of X-ray generation and its physics, radiation protection and the different radiological techniques used in dentistry. It should provide the students with the knowledge of the principles and practice of intra-oral radiography and the radiological appearance of normal tissues.

DENT 336 Conservative Dentistry 2

Lectures and laboratory exercises include the basic theory and practice of endodontic therapy. Topics include pulp canal anatomy and the techniques, materials and instruments used to clean, shape, and obturate root-canal spaces.

DENT 344 Removable Prosthodontics 2

This pre-clinical course will introduce the students to theoretical background of managing partially edentulous patients and the laboratory steps for removable partial denture production. It will also introduce the students to the classification of edentulous ridges and partial denture types and designs. It also provides hand on training on the various steps involved in the fabrication of removable partial dentures.

DENT 356 Oral Pathology 2

This course includes two components; a theoretical and a practical one. The theoretical part introduces dental students to basic knowledge in the following subjects: developmental disturbances of the oral region, cysts of the oral region, infections of teeth and bone, bone lesions, odontogenic tumors and epithelial disorders. The practical part will include a full description of histological features of each disease.

DENT 303 Dental Ethics and Jurisprudence

This course focuses on the ethical and legal obligations of the dentists to the community and public they serve.

DENT 337 Conservative Dentistry 3

The course will introduce the students to the clinical aspects related to conservative dentistry. The students should learn patients examination, make diagnoses and design a treatment plan. Students will also receive training on how to operate the dental units and use dental materials in a clinical setting. Dental examinations for the purpose of Endodontic treatment and isolation procedures will also be learnt.

DENT 345 Removable Prosthodontics 3

This course will introduce students to the clinical aspects of Removable prosthodontics. The students will carry out various clinical procedures, including patients examination, diagnosis, treatment planning, impression making, occlusal assessment and all the laboratory steps that are relevant to the associating clinical steps.

DENT 361 Paediatric Dentistry 1

This course is designed to introduce students to the scope of Paediatric dentistry. The lectures cover basic topics in pediatric dentistry including clinical examination, diagnosis and treatment planning of dental problems in children, common oral problems in children and theories of occlusal development.

DENT 371 Periodontology 1

This course is designed to introduce the dental student to the subject of periodontology. It offers a review of the anatomy, histology, and physiology of these tissues, information on etiology and pathogenesis of periodontal disease. Students will be introduced to methods of detection and control charting and data collection.

DENT 381 Oral Surgery and Anesthesia

This Course is designed to introduce the students to the general principles of oral surgery. It provides the basic knowledge and practice of local anesthesia in dentistry. Furthermore the course will thoroughly teach the theoretical and practical aspects exodontias.

DENT 423 Oral Diagnoses 1

This course is part of a long course; it has a theory part (lectures) and a clinical one. The didactic part includes history taking, charting symbols, applied anatomy, intra oral examination, teeth examination, diagnostic tests, guidelines for prescribing radiographs, diagnosis of dental pain, diagnosis of ulcers, diagnosis of white lesions, and diagnosis of head and neck swellings. The clinical part is constructed to teach students the skills of history taking, extra and intra oral examination, charting, radiographic examination and establishment of a diagnosis.

DENT 425 Oral Radiology 2

The course is designed to provide the student a basic and practical account of the extra oral radiography. It focuses on the diagnosis of radiolucent and radiopaque lesions of the jaws, antral disease, trauma to the teeth and facial skeleton, disorders of the salivary glands, oral and perioral cysts, benign tumors, radiology of malignant tumors and dysplastic diseases. The clinical part includes training on paralleling technique, occlusal radiography, panoramic radiography, automatic processing, loading cassettes, troubleshooting and quality assurance.

DENT 437 Conservative Dentistry 4

This course is designated to provide the dental students with the basic knowledge on management of various clinical aspects in operative dentistry and endodontics. The course will also provide the students with fundamental knowledge of occlusion. The students are required to provide dental patients with fillings using different restorative materials and management of simple cases of endodontics.

DENT 445 Removable Prosthodontics 4

The course is designed to provide students with more knowledge of the clinical aspects of prosthodontics. It concentrates on the assessment, diagnosis and treatment planning of patients in need for complete or removable partial dentures, managing complaints and complications, oral pathological conditions related to complete dentures, overdentures, relining, rebasing, and repairs of removable prostheses, copy dentures and immediate complete dentures.

DENT 461 Paediatric Dentistry 2

This course has a theoretical and a clinical component. The theoretical component is in the form of lectures that cover basic topics in pediatric dentistry including preventive measures such as fissure sealants, preventive resin restorations and fluoride application. Additionally, this course covers the chemotherapeutic agents in pediatric dentistry, behavior management, intracoronal and extracoronal restorations, pulp therapy for primary and young permanent teeth, Early Childhood Caries and developmental dental anomalies. The clinical component is in the form of clinical training. The course is designed to provide guidance to begin delivery of competent oral health care for healthy children.

DENT 471 Periodontology 2

This course is designed to provide knowledge in periodontology to the 4th year dental students. This course aims at giving dental students review of the structure and function of periodontium, microbiological consideration and structure treatment plan with periodontal instrumentation. It also provides information on the diagnosis, treatment plan & prognosis of most common forms of periodontal diseases and emergencies, the basic concepts in periodontal disease pathology, the local and systemic predisposing factors, relation of traumatic occlusion and periodontium. The clinical part of this course aims to provide the dental student guidance, experience of different periodontal problems and the associated skills, knowledge which is necessary to practice clinical periodontology. Also understand the periodontal therapy as a part of comprehensive dental care and design a complete treatment plan.

DENT 481 Oral Surgery 1

This course is designed to teach the detailed theoretical and practical aspects of Minor Oral Surgery executed under local anesthesia. The broad topic will include the preoperative management of patients with medical problems of relevance to minor oral surgery, basic surgical principles, the surgical extraction of teeth, the management of difficult extraction, the management of impacted teeth and surgical aids to orthodontics. The clinical part of this course will allow the students to utilize the knowledge obtained from the theoretical part.

DENT 491 Orthodontics 1

This course has two components, theoretical and practical. The theoretical part will introduce the students to the rationale of orthodontic treatment, facial growth, development of normal occlusion, classification of malocclusion, aetiology of malocclusion, cephalometric analysis, extra and intra oral examination, histology and physiology of tooth movement, and interceptive orthodontics. The practical component is in the form of wire bending laboratory work which will provide the dental students with sufficient orthodontic technical experience to make retentive and active components of removable orthodontic appliances.

DENT 412 Preventive Dentistry

This course is designed to bring students to the current knowledge in prevention of dental diseases. It will examine the public health methods for the prevention and control of dental caries, periodontal disease, dental trauma, malocclusion and oral mucosal lesions with an emphasis on the use of fluoride in prevention of dental caries. This course will have a chapter on restricting the use of tobacco as well as evidence based dentistry.

DENT 424 Oral Diagnoses 2

This course is a continuation of Dent 423 course. It is composed of clinical part only which applies the knowledge obtained from the theoretical part of Dent 423.

DENT 434 Crown and bridge

This is a theory course designed to provide students with the essential information about fixed prostheses including treatment planning for crowns and bridges, biomechanics and configurations of fixed partial denture, principles of tooth preparation, preparation of full veneer crowns, restoration of extensively damaged teeth, temporary crowns and bridges, periodontal-restorative interface, impressions for fixed prosthodontics, occlusion and fixed prosthodontics, implant-supported fixed prostheses and resin-bonded bridges.

DENT 438 Conservative Dentistry 5

This is clinical course is a continuation of Dent 437. It provides the student with intensive clinical training in operative dentistry including amalgam, composite and glass-ionomer fillings in addition to root canal therapy for a single-rooted tooth.

DENT 446 Removable Prosthodontics 5

This course is a continuation of Dent 445 course. It is composed of clinical part only in which the students should utilize the knowledge obtained from the theoretical part of Dent 445.

DENT 451 Oral Medicines 1

This course provides the basic knowledge required for building a systematic approach to the management of patients with dental, oral and paraoral conditions. The lecture topics cover the medical management of inflammatory and infectious diseases, oral ulcerations, benign over-growth, and diseases of paraoral structures, mucocutaneous diseases, connective tissue disorders, gastrointestinal diseases, immunodeficiency, hypersensitivity, autoimmunity and oral reactions to drug therapy.

DENT 462 Paediatric Dentistry 3

This course consists of two components, theoretical and clinical. The theoretical component covers the aspects of pulp therapy, dental trauma, space management and the basics of dentistry for medically compromised children. The practical component will guide students through more elaborate operative techniques as well as behavior management of children through clinical sessions where students practice dentistry on children.

DENT 472 Periodontology 3

This course is designed to provide knowledge in periodontology to the 4th year dental students. This course provides information about the rationale of periodontal therapy and how recent research considered periodontitis as risk factor for some systemic diseases, chemotherapeutic agents in the treatment of periodontal diseases, periodontal therapy in female patients, interrelationship of periodontal disease with other disciplines in dentistry, and general principles of periodontal surgery. The clinical part of this course will allow the students to utilize the knowledge obtained from the theoretical part.

DENT 482 Oral Surgery 2

This course is a continuation of Dent 481. The broad topic will include cysts of the jaws and surrounding soft tissues, the dental aspects of maxillary antrum, oro-facial infections, surgical aids to prosthetic dentistry, surgical aspects of implant dentistry, surgical aids to endodontics and surgery-pathology interrelationship.

DENT 492 Orthodontics 2

This course is a continuation of Dent 491. This course will provide the students with information about different types of orthodontic appliances, management of different skeletal and orthodontic problems, retention and stability, orthognathic surgery, and cleft lip and palate.

DENT 413 Research Project

This course is designed to prepare students to apply the knowledge and skills they gained from Dent 313: Research methods. The students in this course are required to choose a hypothesis and test it through a small pilot research project. The students are required to present their term paper then submit it for evaluation. The term paper should include all elements of research paper (Abstract, literature review, material and methods, result, discussion and conclusion).

DENT 439 Conservative Dentistry 6

This clinical course is a continuation for the previous courses in conservative dentistry (Dent 437 and Dent 438) in which student will gain more clinical skills in operative dentistry.

DENT 447 Fixed Prosthodontics Laboratory

This course is the practical follow-up for the theoretical crown and bridge course. The course will provide the students with the basic practical experience needed to provide fixed restorations to the patients. This course is designed to provide the student with fundamental clinical skills required for crown and bridgework such as preparation, impression taking, laboratory procedures and cementation. The students will utilize their theoretical knowledge in preparing teeth mounted on simulated heads. Students will also receive training on the laboratory technical procedures used for the crown and bridge construction.

DENT 465 Pediatric Dentistry 4

This course is offered in the summer semester and has only clinical component, where the students treat children suffering from dental caries and apply preventive programs.

DENT 475 Periodontology 4

This clinical course allows the student to gain further clinical practice and experience with different cases of periodontal diseases.

DENT 483 Oral Surgery 3

This course is a continuation of the two previous oral surgery courses (Dent 481, Dent 482) and it is a practical training in oral surgery.

DENT 493 Orthodontics 3

This course introduces the students to the orthodontic clinic. It will focus on diagnosis and treatment planning of the different types of malocclusion as well as the clinical management of removable orthodontic appliances.

DENT 517 Oral Implantology 1

This continuous course is designed to provide the graduating dental students with basic knowledge of the variable aspects of modern dental Implantology including the rationale of dental Implantology, history and development, bone biology, histology and physiology, osseointegration, biomaterials, surface modification of dental implants, biomechanics and variable designs of implants and implant components, surgical anatomy in relation to dental implants, and case selection for implant treatment.

DENT 523 Oral Diagnosis 3

This is a practical course that teaches students skills of gathering, recording and evaluating information that contribute to identifying abnormalities of the head and neck region which relate to the patients total health. The purpose of obtaining this information is to establish a diagnosis from which a rational dental treatment plan can be formulated.

DENT 521 Oral Radiology 3

The emphasis in this course is the clinical application of the skills and knowledge acquired in previous courses. Students make and interpret radiographs of patients attending for diagnostic workups, as well as taking part in clinical radiologic conferences (CRCs).

DENT 535 Conservative Dentistry 7

This extended course spans two semesters and aims to provide the final year dental student with the most updated knowledge in conservative dentistry. The course will cover the most recent concept in operative dentistry, endodontics, and crown- bridge work including endodontic failures, cracked teeth, vertical root fracture and retreatment, surgical endodontics, modern techniques in endodontics, root resorption, patient selection for fixed partial denture treatment, update on postretained crowns and glass fiber-reinforced composite resin posts, all ceramic restorations, management of discolored teeth, and etiology, diagnosis and management of dentine hypersensitivity. The clinical component of this course will include treating advanced operative dental problems, root canal treatment for multi rooted teeth, post-crowns, and crown-bridge work.

DENT 545 Prosthodontics 1

This course concludes the last sequence of fixed and removable prosthodontic courses leading to a professional degree in dentistry. The theoretical component will allow the students to make decisions, plan treatments and choose the proper treatment options for the edentulous and partially edentulous patients. It will also cover a review of important aspects in both fixed and removable prosthodontics. Furthermore, this course will cover advanced topics about esthetic dentistry, fixed-removable prosthodontics and full mouth rehabilitation cases. It will also cover the laboratory procedures involved in fabrication of dental restorations. Clinically, the students should be able to provide sound judgments independent of the instructor and should be able to treat patients in a multidisciplinary approach.

DENT 555 Oral Medicine 2

This course deals with all types of diseases and abnormalities that affect the oral lesion including oral pigmentation, carcinogenesis and precancerous lesions, oral carcinoma and management of oral cancer, teeth and bone disorders, diseases of lip and tongue, taste disturbances and halitosis, blood disorders and nutritional deficiencies, endocrine disturbances and renal diseases, facial pain and neurological disturbances, temporomandibular joint disorders, and psychogenic orofacial problems. In the clinical part, the student will be trained to achieve diagnosis of the diseases through a systematic approach including full examination and special tests, discussing all treatment options for each disease and etiology of these diseases. The manifestation of systemic diseases in the oral cavity will be also included in this course.

DENT 565 Paediatric Dentistry 5

This course has two components, theoretical and clinical. The theoretical component is in the form of lectures that cover more advanced topics in pediatric dentistry including space management and space analysis, relative analgesia and advances in local anesthesia, advances in caries diagnosis and pre-eruptive lesions, dental erosion in children and adolescents, dental attrition and bruxism in children and adolescents, common oral medical problems, management of medical emergencies in the dental clinic, drug use and prescription in pediatric dentistry. The practical component is in the form of clinical sessions that students attend, and are responsible for treating patients according to a set of requirements.

DENT 575 Periodontology 5

This course is offered in the first semester of the fifth year consists of two components; theoretical and clinical. The theoretical part covers advanced methods of periodontal treatment modalities and techniques. It also includes genetic factors associated with periodontal diseases, guided tissue regeneration, smoking and periodontics, and patients education and support. The clinical component includes in addition to treating various forms of periodontal diseases by conventional methods, some applications of more advanced techniques and surgical procedures.

DENT 585 Oral and Maxillofacial Surgery 1

This course is designed to provide students with current theoretical knowledge in the fundamentals and basic principles of maxillofacial surgery including surgical management of facial fractures, maxillofacial deformities, and cleft lip and palate. The clinical part provides hands-on of exodontia and simple oral surgery.

DENT 595 Orthodontics 4

This course has only a clinical component. It is offered on the first and second semester of the fifth year. The students will utilize the theoretical knowledge they gained during the fourth year in this course. The students will learn to do extra and intra oral examination from orthodontic point of view, collect and analyze orthodontic records including dental casts and radiographs, to build a problem list and proper diagnosis for orthodontic patients and finally come up with treatment planning for orthodontic problems. During this course the students will also execute orthodontic treatment for simple problems using removable, growth functional, and partial fixed orthodontic appliances.

DENT 518 Oral Implantology 2

This continuous course is a continuation of Dent 517. It will provide information about surgical and prosthodontic procedures in implant treatment, ridge preservation, immediate implants, management of patients with inadequate bone, implants in the partially and totally edentulous mouth, microbiology of dental implants, complications and failures of dental implants, and implants in immunocompromised patients and other systemic conditions.

DENT 524 Oral Diagnosis 4

This course is a continuation of Dent 523 in which the students should discuss more advanced cases than the previous course.

DENT 522 Oral Radiology 4

This course is a continuation of Dent 521 in which they should discuss more advanced cases than the previous course.

DENT 536 Conservative Dentistry 8

This is a continuous course to Dent 535 that aims to provide the final year dental student with the most updated knowledge in conservative dentistry. The course will cover the most recent concept in operative dentistry, endodontics, and crown- bridge work. Including treating advance operative dentistry, root canal treatment for multi rooted teeth, post-crowns, and crown - bridge work.

DENT 546 Prosthodontics 2

This course is a continuation of DENT 545.

DENT 556 Oral Medicine 3

This course is a continuation of Dent 555 521 in which they should discuss more advanced cases than the previous course.

DENT 566 Paediatric Dentistry 6

These courses offered in the first and second semester of fifth year are entirely practical courses in the form of dental management of children in the clinics with emphasis on full comprehensive care for children including dental trauma cases.

DENT 576 Periodontology 6

This course offered in the second semester of the fifth is a clinical course were graduating students practice the clinical skills they have learned with emphasis on interdisciplinary treatment, it also represent a review of all the subjects covered previously.

DENT 586 Oral and Maxillofacial Surgery 2

This course is a continuation of Dent 585. It is designed to provide the final year dental students with a basic knowledge about surgical management of TMJ, salivary glands and oral tumors. The course will also stress the importance of evaluating oral pathological lesions, especially those of potentially sinister outcome, and determination if a biopsy is needed. The clinical part provides hands-on of exodontia and simple oral surgery.

DENT 596 Orthodontics 5

This course is a continuation of Dent 595 521 in which they should discuss more advanced cases than the previous course.

Descriptions of Medical Courses

Note:

- **(Ear, Nose & Throat), Upper and lower respiratory tract diseases, and Dermatology topics related to dental practice and its relation to oral diseases** is included as a part of Oral Medicine and Oral Pathology lectures/seminars/practical, and the General Internal Medicine, General Surgery courses namely (DENT 355, DENT 356, DENT 451, DENT 555, DENT 556, MED 373 and MED 374).

CHEM 262 Biochemistry

This course deals with structure and properties of biomolecules, such as amino acids, proteins, carbohydrates, lipids, and nucleic acids. The focus of this course will be on the relationship between protein structure and its biological function, generation and storage of metabolic energy, main metabolic pathways and their key steps. In addition, the role of phospholipids in determining the properties of biological membranes and their function will be discussed. The principal objective of the course is for students to acquire knowledge and understanding of current concepts in the subject of the course and to develop critical thinking skills.

CHEM 266 Biochemistry Laboratory

Lab experiments to cover some of the previous subjects in Chem. 362. In the laboratory sessions, students are expected to learn certain biochemical techniques such as the use of pH meter to construct titration curves of weak, strong acids and amino acids. The use of spectrophotometer to determine protein concentration, glucose and cholesterol level in the plasma. Study the enzymatic activity of specific enzymes. In addition, students will be familiarized with chromatography techniques, electrophoresis, and radioimmunoassay.

MED 211A Molecular Genetics

Objectives of this course are designed to understand the basic principles of molecular genetics. Emphasis will be given to those principles that have application in medical practice. The structure of DNA and RNA as genetic material, DNA organization and its replication, mutation and repair in both prokaryotes and eukaryotes will be covered. Furthermore, gene expression will also be discussed. Finally, the course will cover some aspects of cancer genetics, cytogenetic and molecular biology techniques.

MED 215A General Anatomy & Embryology

This is an introductory course in gross anatomy, which provides medical students with knowledge of the anatomy of human body. The course also provides an overview of the very early development of human starting from gametogenesis going through the different embryonic stages. This course covers major birth defects in relation to human embryology.

MED 215B General Anatomy & Embryology Laboratory

By the end of this course, the student will be able to identify types of bones and Muscles, All bones and Muscles of the body, Most of the joints in the body and all systems and organs of the body.

MED 230A Human Physiology

This course is designed to provide allied health and medical technology students with the basic knowledge in cellular and systemic physiology and presents an introduction to fundamentals of physiological principles required for their further education. The functions of the nervous, endocrine, digestive, muscle, circulatory respiratory and urinary system are discussed.

MED 230B Human Physiology Laboratory

This course is intended to help students to understand the theory of the physiology course M 230A. The students carry several experiments about blood cell counting, hemoglobin determination, and other blood parameters. Also the students learn how to measure blood pressure and how to record ECG. Lung volumes are determined by digital spirometer and urine chemical tests to examine the presence of any traces of blood, proteins or any crystals.

MED 216 Histology and Molecular Biology

This course provides fundamental basic knowledge of histology and cell biology. The course provide students with basic knowledge of different aspects of cellular and tissue parts (membrane, cytoskeleton, and matrix). It explores the histology and properties of the basic human tissues (Epithelium, connective tissue, Bone, Muscle and nervous tissues).

MED 231 General Pathology

The course allows students to learn basic concept of the various disease processes in the body as well the basic molecular, cellular and reactions to various injurious agents. Cell injury including adaptations, necrosis & apoptosis. Pathology of Inflammation including causes and manifestations and hemodynamic are also discussed. The course also emphasizes neoplasia including classification, epidemiology, and characteristics of benign and malignant tumors. The major grading and staging systems of neoplasms will be covered in detail. Knowledge of etiology of tumors and its consequences on health are also covered.

MED 217A Head and Neck Anatomy

The course covers the gross Anatomy of the head and neck including bones, muscles, nerves and blood vessels etc. This course is designed to help the Dental students to understand the normal structure of the different parts of the head and neck and the relationship between these parts.

MED 265 Microbiology

This is an introductory course in medical microbiology for medical, dental, pharm D, and pharmacy students, designed mainly to prepare the students to understand the systemic microbiology of the modules, it covers basic principles of bacteriology, virology, mycology, immunology and parasitology, also it covers basic concepts of infection control in hospitals, sterilization and disinfection, and specimen collection for the clinical microbiology laboratory. The laboratory part covers basic techniques in microbiology.

MED 372 Pathophysiology

This course is focusing on the characteristics and manifestations of disease caused by alteration to functions of the body.

It includes basic mechanisms of diseases and selected common disorders of the following systems: endocrine, hematology, cardiovascular, respiratory, urinary, digestive and nervous system. This pathophysiology course is arranged to explain and demonstrate to students the compensatory adjustments of the different system in the body during different types of diseases.

MED 232 Immunology

This course is to study human immunology & its applications in disease, diagnosis and treatment.

MED 315 General Pharmacology

This course is designed to provide the student with essential and basic knowledge of pharmacology most relevant to dentistry. The major objectives of this course include:

1. The study of the general principles of pharmacology with a focus on dental practice.
2. Principles of drug action on the body and the therapeutic effects of drugs commonly employed in dental practice.
3. A review of antimicrobial agents commonly employed in dentistry.
4. Coverage of various analgesic agents, anti-inflammatory drugs, local anesthetics, and commonly employed in dental practice.
5. A classification of drugs used for various systemic diseases with some emphasis on prototype drugs.

MED 373 General Internal Medicine

This course introduce general internal medicine principles to the dental students. At the end of the course the student should be competent in the basic assessment and management of important, common problems in internal medicine (Bleeding Tendency, Chronic Obstructive Pulmonary Disease, Bronchial Asthma, sleep Apnea Syndrome, Infective Endocarditis, Ischemic Heart Disease, Acute Rheumatic Fever, Community Acquired Pneumonia, Renal Diseases, Live Cirrhosis, Viral Hepatitis, Hypertension, Diabetes and Oral Manifestation of Systemic Disease...etc.) and its relation to dentistry.

MED 374 General Surgery and Anesthesia

The course provides students with basic principles of general surgery and anesthesia. Students learn pre-, peri- and post-operative evaluation and management of surgical diseases and complications. And basic principles of anesthesia including types of anesthesia, General & Local Anesthetic Agents, Inhalation Anesthesia, Airway management, Fluid management, Induction and maintenance of anesthesia, Patient's Monitoring, and recovery.

MED 391 Biostatistics

The course focuses on descriptive and inferential statistics as applied to medical practice.

The course starts with descriptive measures and probability concepts. Conditional probability and Bayes theory are given due emphasis to compute validity indicators for clinical and laboratory tests, i.e. sensitivity, specificity and predictive values for single and multiple tests.

The students are trained to draw statistical inferences by two main methods these are: Estimation and Hypothesis testing.

Chi-square variants are discussed with relevant clinical examples.

Statistical design of experiments is dealt with concentrating on ANOVA and regression analysis.

Students are trained to use computer software as Excel and SPSS in solving assigned exercises.

The students are provided with necessary software's at the beginning of the course to be used during the course in solving practical exercises and in data analysis.