Jordan University of Science and Technology
Faculty of Graduate Studies

Course Curriculum for the Master of Clinical Dentistry Degree /Periodontics

Course Curriculum for the Master of Clinical Dentistry Degree /Periodontics is awarded by the Faculty of Graduate Studies at Jordan University of Science and Technology (JUST) upon the fulfillment of the following requirements:

1. Compliance with the J.U.S.T. Master Degree regulations approved by the Council of Deans (No. 4/2012) dated 24/1/2012.

2. Successful completion of (45) credit hours.

First: Compulsory Requirements (32) hours as follows:

A. Theoretical Requirements (9) credit hours as follows

Course Code	Course Name	Credit Hours
Dent 706	Dental Implantology	2
Dent 709	Research Methodology and Biostatistics	3
Dent 776	Advanced Periodontics 1	2
Dent 777	Advanced Periodontics 2	2

B. Clinical Requirements (23) credit hours as follows:-

Course Code	Course Name	Credit Hours
Dent 771L	Laboratory Training in Periodontics	1
Dent 771A	Clinical Training in Periodontics 1	1
Dent 771B	Clinical Training in Periodontics 2	3
Dent 771C	Clinical Training in Periodontics 3	3
Dent 772A	Clinical Training in Periodontics 4	3
Dent 772B	Clinical Training in Periodontics 5	3
Dent 772C	Clinical Training in Periodontics 6	3
Dent 773A	Clinical Training in Periodontics 7	3
Dent 773B	Clinical Training in Periodontics 8	3
Dent 773C*	Clinical Training in Periodontics 9	0

*** Pass or Fail**

Second:- Elective Requirements (4) credit hours as follows:

Course Code	Course Name	Credit Hours
Dent 702	Advanced Oral and Maxillofacial Radiology	1
Dent 703	Advanced Pharmacology in Dentistry	1
Dent 704	Advanced Microbiology and Immunology	2
Dent 705	Occlusion and Temporomandibular Joint	1
Dent 758	Principles of General Medicine	2
Dent 775	Current Topics in Periodontics	2
Dent 778	Medical Genetics	2
Dent 785	Advanced Oral and Maxillofacial Pathology	1
Dent 788	Medical Problems in Dentistry	2

Third: Master Thesis (Dent 799): Total of 9 credit hours as follows

Course Code	Course Name	Credit Hours
Dent 799 A	Master Thesis	9
Dent 799 B	Master Thesis	6
Dent 799 C	Master Thesis	3
Dent 799 D	Master Thesis	0

Course Description
Periodontics

Dent 702 Advanced Oral and Maxillofacial Radiology: (1 Credit Hour)
This course consists of a series of lectures that deal with the fundamental of the production and interaction of x-rays. This is followed by the basics of radiation biology and radiation protection, production of the radiograph (physics, chemistry and technique), vision and perception. Additionally, the appearance of normal and pathologic tissues and structures on the radiographs will be covered. The various imaging methods of investigation will be also discussed such as Cone Beam CT and MRI, …etc.

Dent 703 Advanced Pharmacology in Dentistry: (1 Credit Hour)
This course provides students with information on pharmaceutical agents used in dentistry and their applications.

Dent 704 Advanced Microbiology and Immunology: (2 Credit Hours)
This course provides in depth information about the microbiology of oral, periodontal and endodontic diseases and the immunological responses associated with these diseases.

Dent 705 Occlusion and Temporomandibular Join: (1 Credit Hour)
This course is designed to provide students with a clear picture of how the masticatory system functions and the role of a harmonious occlusion in maintaining the health of this system. Also it aims to provide students with the basic knowledge of anatomy of the masticatory system, mandibular movement, determinants of occlusion and occlusal schemes. Occlusal diseases and masticatory system dysfunctions will also be covered in this course to help students diagnose and treat patients who suffer from these diseases.

Dent 706 Dental Implantology: (2 Credit Hour)
The course includes lectures on all aspect of dental implantology including surgical and prosthetic aspects. It will cover history of implantology, dental materials included in dental implants, the basic science of osseointegration, the surgical, prosthetic and restorative considerations for the partially and fully edentulous patient, and the occlussal considerations of implant treatment.

Dent 709 Research Methodology and Biostatistics: (3 Credit Hours)
This course describes the scientific methods of conducting research and study design that are applicable in dental sciences. In addition, it helps students in planning clinical and laboratory studies as well as the evaluation of other studies. This course will include collection of data, the use of statistical analysis in the area of the scientific research to achieve sound scientific conclusions.

Dent 758 Principles of General Medicine: (2 Credit Hours)
This course addresses the various aspects of internal medicine and management of patients with underlying medical conditions.

Dent 771L Laboratory training in Periodontics: (1 Credit Hour)
This is a preclinical course designed to introduce the students to all aspects of clinical periodontal procedures as well as examination and treatment planning of the patient with periodontal disease.

Dent 771A Clinical Training in Periodontics 1: (1 Credit Hour)
This course aims at enhancing students' clinical skills in diagnosing, treating and preventing periodontal diseases for a wide range of patients. During this course, students will learn to order laboratory tests the patient may need and they should be able to read the laboratory report. The students in this course will practice conventional periodontal therapy, including dental health education and motivation, instruction for good oral hygiene and correct plaque control. They will provide scaling and root planning, application of antimicrobial agents including antibiotics (systemic or local), diagnosis and treatment of acute periodontal conditions, and diet and nutritional habit analysis.

Dent 771B Clinical Training in Periodontics 2: (3 Credit Hours)
This course is devoted to perfecting the students' surgical and non-surgical periodontal procedures. The students are required to continue the treatment of cases started in the previous semester and performing the same procedures for more patients. The students will learn how to perform different periodontal surgical procedures such as gingival biopsy; gingivectomy, gingivoplasty, crown lengthening, and simple open flaps for debridement.

Dent 771C Clinical Training in Periodontics 3: (3Credit Hours)
This course is a continuation of the students' clinical experience. Students are required to continue the treatment of cases started in the previous semesters and performing the same procedures for more patients. They will continue presenting some of their interesting and difficult cases to their colleagues and staff.

Dent 772 A, B, C Clinical Training in Periodontics 4, 5, 6: (3 Credit Hours each)
These courses will emphasize on the evaluation of patients occlusion and its effect on periodontal health. The students will extend their practice for managing occlusally traumatized teeth which may include designing and delivering of occlusal bite planes. The students should gain the knowledge for the different splinting techniques of periodontally compromised teeth. The students in these courses will learn to perform respective and regenerative periodontal therapies including root preparation, guided tissue and bone regeneration by using different bone graft materials and variable resorbable and non-resorbable membranes). They will also learn how to perform periodontal plastic surgeries for root coverage in gingival recession cases or increasing the width of keratinized gingiva. Also they will be able to treat furcation involvements by different approaches (guided tissue regeneration, root resection and hemisection).

Dent 773 A, B, C Clinical Training in Periodontics 7, 8, 9: (3, 3, 0 Credit Hours, respectively)
In this course students will continue to treat patients with more complicated periodontal problems and perform procedures including periodontal surgery and implant placement. Students will start in this course to place implants in patients with

few number of missing teeth. They will also practice different guided tissue and bone regeneration through special bone graft and membrane materials. The students are expected to finalize the treatment of their patients and to do at least one follow up visit for patient who finished their treatment.

Dent 775 Current Topics in Periodontics: (2 Credit Hours)
Presents the evaluation of current information in periodontics and related disciplines in a journal club format. It includes special emphasis on research methodology and the contribution of current research to advances in periodontics. Through this course the students will also learn how to explore and criticize dental literature from all sources available.

Dent 776 Advanced Periodontics 1: (2 Credit Hours)
This course is designed to provide the students with theoretical and clinical concepts in periodontology. Most lectures in this course will be given in conventional lecture style. Assignments and/or quizzes may be given to them by staff participating in the course. The course aims to providing the incoming students with an introduction to Periodontics, reviewing the embryology, anatomy, histology, and biochemistry of the periodontal structures, covering different theories explaining the pathogenesis of periodontal diseases, enhancing students' knowledge of the role of different etiological and risk factors involved in the development of periodontal diseases to provide students with required theoretical knowledge to enable them to properly conduct examination, diagnosis, and treatment planning of different periodontal diseases.

Dent 777 Advanced Periodontics 2: (2 Credit Hours)
This course is designed for students in periodontology. It covers conventional periodontal therapy, chemotherapeutic agents used in periodontal practice, principles of periodontal surgery, resective osseous surgery, regenerative periodontal therapy and mucogingival (plastic) surgery. In addition, this course emphasizes the importance and principles of interdisciplinary cooperation for patient management. This course comes after students have built up knowledge in previous courses regarding the structure, function, biochemistry and molecular biology of periodontal tissues, as well as knowledge of the etiology and pathogenesis of periodontal diseases, diagnosis and treatment planning as well as basics of periodontal surgery.

Dent 778 Medical Genetics: (2 Credit Hours)
Medical genetics is concerned with the study of human biological variation and its relationship to health and disease. It encompasses mechanisms of inheritance, cytogenetics, molecular genetics and biochemical genetics as well as formal, statistical and population genetics. Students taking this course will understand the structure and function of chromosomes and genes, the patterns of inheritance, the causes and consequences of mutation, genetic variation and polymorphism, and the relationship between genotype and phenotype. Students will also be able to recognize individuals at an increased risk of having or developing a genetic disorder, or being a possible carrier of a genetic disorder, and be able to discuss these risks with their patients.

Dent 785 Advanced Oral and Maxillofacial Pathology: (1 Credit Hour)
In this course, the student is expected to have a reasonable review of the differential diagnosis of multiple clinical conditions, learned about the significance of the histology in arriving to the final diagnosis and treatment of many disease processes. In addition, students are exposed to a realistic view of the clinical world with its limitations ranging from patient handling to ordering additional tests. the course is designed to expand on the second year Oral Pathology course.

Dent 788 Medical Problems in Dentistry: (2 Credit Hours)
This course is designed to bring the student to the current knowledge on the general diseases that might dental patient suffer from and their signs in the oral and maxillofacial region and their effect on dental and oral treatment.

Dent 799 Master Thesis: (9 Credit Hours)
A topic for the thesis will be chosen for the student where he is expected to work under the supervision of one or more academic staff. The student is expected to conduct and write up the thesis and defenses his work at the end of his study.

Study Plan
Periodontics

First Year

First semester

Course Code	Course Name	Credit Hours
Dent 709	Research Methodology and Biostatistics	3
Dent 771A	Clinical Training in Periodontics 1	1
Dent 771L	Laboratory Training in Periodontics	1
Dent 776	Advanced Periodontics 1	2
	Total	**7**

Second semester

Course Code	Course Name	Credit Hours
Dent	Elective	2
Dent 771B	Clinical Training in Periodontics 2	3
Dent 777	Advanced Periodontics 2	2
	Total	**7**

Third semester

Course Code	Course Name	Credit Hours
Dent 771C	Clinical Training in Periodontics 3	3
	Total	**3**

Second Year

First semester

Course Code	Course Name	Credit Hours
Dent 706	Dental Implantology	2
Dent 772A	Clinical Training in Periodontics 4	3
Dent	Elective	2
	Total	**7**

Second semester

Course Code	Course Name	Credit Hours
Dent 772B	Clinical Training in Periodontics 5	3
Dent 799C	Master Thesis	3
	Total	**6**

Third semester

Course Code	Course Name	Credit Hours
Dent 772C	Clinical Training in Periodontics 6	3
Dent 799C	Master Thesis	3
	Total	**6**

Third Year

First semester

Course Code	Course Name	Credit Hours
Dent 773A	Clinical Training in Periodontics 7	3
Dent 799C	Master Thesis	3
	Total	**6**

Second semester

Course Code	Course Name	Credit Hours
Dent 773B	Clinical Training in Periodontics 8	3
Dent 799D	Master Thesis	0
	Total	**3**

Third semester

Course Code	Course Name	Credit Hours
Dent 773C	Clinical Training in Periodontics 9	0
Dent 799D	Master Thesis	0
	Total	**0**