



MASTER OF SCIENCE IN PROSTHODONTICS

STUDY PLAN

2019



جامعة محمد بن راشد
للطب والعلوم الصحية
MOHAMMED BIN RASHID UNIVERSITY
OF MEDICINE AND HEALTH SCIENCES

INTRODUCTION

This manual reviews the Hamdan Bin Mohammed College of Dental Medicine Master of Science in Prosthodontics. It includes policies and procedures for the Prosthodontics program. HBMCDM Faculty and staff have prepared this manual as a guide for the students at the Hamdan Bin Mohammed College of Dental Medicine. It is supplemented by the Student Handbook distributed at orientation by the Office of the Dean.

The program demands a high level of responsibility and self-discipline. Taught courses are delivered throughout the three year program by academic staff but self-directed learning is expected during the residency. Effective studying is key to successful completion of the program and attendance at all educational activity is vital in order to achieve this. The clinical component of the program is 60% of the credit value whilst the didactic and research components are 25% and 15% respectively. A total of 120 credits are needed to fulfil the requirement for the award of the Masters degree by MBRU. Courses are run across 2 semesters per year with 20 credits available per semester. Formative assessments are designed to give feedback to the resident on individual progress and identify areas of strength and weakness. Summative assessments are end of course or year exams and are the reflection of resident's understanding of the subject matter. These marks inform the overall GPA and are recorded in the official transcripts. Residents may be required to resit exams or whole courses depending on exam performance. Every resident must keep a logbook or portfolio of patients under their

care. This is a comprehensive record of treatment provided and is important evidence of patient management to inform regulatory and qualifying bodies of clinical experience. The research element is meant to underpin the evidence-based approach to clinical practice and embed critical thinking. Residents will be supervised by a senior member of academic staff and completion of a dissertation is mandatory.

Study plan

Year 1		
Semester 1	21 credits	Course code
DIDACTIC		
Advanced Clinical Science 1	2	CC500
Caries management, diagnosis & treatment planning	1	PR362
Principles of Fixed Prosthodontics	1	PR346
Endodontics for Prosthodontic Specialists	1	PR345
Clinical Governance : Legislation and Ethics	1	CC503
Research Methodology and Biostatistics	2	CC502
Review of the Scientific Literature	1	PR321
CLINICAL:		
Advanced prosthodontics: Simulation Center Clinical Skills	*12	PR331
Semester 2		
DIDACTIC:		
Removable prosthodontics: Complete Dentures	1	PR355
Health Education and promotion and Epidemiology	1	CC505
Scientific Literature	1	PR322
Advanced Clinical Science II	1	CC501
Periodontology for Prosthodontic Specialists	1	PR344
Clinical Imaging	1	CC506
CLINICAL:		
Clinic Specialty Training	*12	PR332
RESEARCH:		

Research Dissertation	1	PR312
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*includes clinical term

Year 2		
Semester 1	20 credits	Course code
RESEARCH:		
Research Dissertation	3	PR313
DIDACTIC:		
Toothwear and esthetics	1	PR363
Scientific Literature	1	PR323
Removable Prosthodontics: Partial dentures	1	PR354
Basic Implant Surgical and Restorative Techniques	1	PR351
Temporomandibular Disorders	1	CC507
CLINICAL:		
Clinic Specialty Training	*12	PR333
Semester 2		
RESEARCH:		
Research Dissertation	4	PR314
DIDACTIC:		
Scientific Literature	1	PR324
Dental Biomaterials	1	PR347
Medical problems relevant to prosthodontics	1	PR361
Molecular Biology	1	CC504
CLINICAL:		
Clinic Specialty Training	*12	PR334

*includes clinical term

Year 3		
Semester 1	20 credits	Course code
RESEARCH:		
Research Dissertation	5	PR315
DIDACTIC:		
Advanced Implant Surgical and Restorative Techniques	2	PR352
Scientific Literature	1	PR325
CLINICAL:		
Clinic Specialty Training	*12	PR335
Semester 2		
RESEARCH:		
Research Dissertation	6	PR316
DIDACTIC:		
Scientific Literature	1	PR326
Examination Preparation	1	PR353
CLINICAL:		
Clinic Specialty Training	*12	PR336

*includes clinical term

Prosthodontics Course Descriptions

Didactic: Advanced Clinical Science 1

This is a general basic science course intended to provide the student with the appropriate level of knowledge in core basic sciences required for the study of the specialty of Prosthodontics. The topics include anatomy, physiology and pharmacology.

This course is comprised of lectures designed to aid the student to expand their knowledge in physiology, anatomy, pharmacology with areas of clinical importance. Knowledge gained by the student will contribute to achieving competency in rendering treatment.

Didactic: Treatment Planning in Prosthodontics

This course comprises a series of lectures on caries diagnosis and management. Modern concepts of cavity design and minimal intervention will be covered. Treatment planning based on an integrated approach and patients' needs will be discussed. Managing patient expectations and communication is important. The current evidence for effectiveness of treatment modalities, the prognostic and risk factors associated with treatment will be discussed.

Didactic:

Clinical Governance and Legislation and Ethics

This course will provide the student with the required knowledge and understanding of Clinical Governance, general approach to ethical conduct and reasoning in the delivery of dental treatment. The course will discuss local and international ethic laws in healthcare delivery. Personal and professional development as part of the delivery of proper dental services will be emphasized.

Didactic: Health Education and promotion and Epidemiology

A series of lectures intended to expose the student to the concepts and information necessary for a Prosthodontic specialist to understand the importance of health promotion and Prevention of diseases, and Infection Control. Topics include: Dental Public Health; Descriptive epidemiology; Experimental studies; Critical review of epidemiologic studies; Accessing and reading dental public health research: evidence based dental practice and dental public health efforts in the UAE.

Clinical: Specialty Clinical Training- Clinical Skill Facility

This course constitutes the foundation to preparing the student to enter the dental treatment center, and perform Prosthodontic procedures on a patient. The student will participate in Prosthodontic procedures performed on extracted and typodont teeth. Lectures and clinical demonstrations by the Prosthodontic faculty cover the range of clinical procedures and techniques to be perfected by students during the clinical phases of training.

Clinical: Specialty Clinical Training- Clinic

This course is the clinical course that encompasses the scope of clinical Prosthodontics. During the first year of the program, students are closely supervised while developing skills in diagnosis, radiographic techniques, and treatment planning.

In the first year students will treat patients for overall restorative dental care especially fixed and removable prosthodontics. Students will be exposed to a broad spectrum of cases including temporomandibular disorders, tooth wear and aesthetic cases.

During the second and third year as individual clinical skills develop, students' will progress to more complex cases including the placement and restoration of dental implants, surgical augmentation and grafting and interdisciplinary cases requiring combination endodontic, periodontal, surgical or orthodontic therapy.

Prosthodontic therapy for operating room patients and patients undergoing conscious sedation procedures will be undertaken.

Students will gain extensive experience in the team management approach to patient care while interacting and coordinating with other medical departments within the hospitals and with outside clinics and practitioners especially in the field of maxillofacial reconstructive prosthodontics.

In addition, there is opportunity to attend hospital general anesthesia rotations. The clinical course will take part in the clinics of the Hamdan Bin Mohammed College of Dental Medicine and the Community Health Centers of the Dubai Health Authority.

This course is the foundation of clinical practice where the students apply their knowledge and skills to treating patients.

Didactic: Research Methodology& Biostatistics

This course is intended to give the students an in-depth knowledge about the research methodology that will afford a good basis for the conduction of a successful Masters project. The course will also provide the student with a clear basic knowledge in biostatistics. Evidence based practice will be introduced as a basic concept for decision making in clinical practice.

Didactic: Review of the Scientific Literature

This is a six part course to review the scientific literature in prosthodontics and related fields. Seminars are based on an intensive and comprehensive review of the Prosthodontic literature covering all facets pertaining to the science and practice of Prosthodontics. The topical literature seminar course is the didactic element of the program that introduces the student to the foundation of the science of Prosthodontics. Weekly seminars that comprehensively review both classic and most recent scientific dental literature pertaining to Prosthodontics.

The objectives of the literature seminars are to:

1. Introduce the students to the various journals that have articles pertinent to the specialty of Prosthodontics;
2. Provide awareness for both students and faculty of current advances in the field of Prosthodontics;
3. Provide new articles for updating the Classical Literature seminars;
4. Broaden the student's perspective of Prosthodontics and Prosthodontic related information.

During the seminar session where the class meets with the instructor, critical thinking is encouraged by reviewing in detail and analyzing the study designs, methods and materials along with the discussion and conclusion sections.

Didactic: Advanced Clinical Science II

This foundational course provides students with the opportunity to participate in the evaluation and management of patients. This course is comprised of lectures designed to aid the student to expand their knowledge in the oral physiology and oral histology with areas of clinical importance. Knowledge gained by the student will contribute to achieving competency in rendering dental treatment.

Research: Research Dissertation

The research proposal forms an extremely important component of the course since it will bring together many aspects of the skills and knowledge acquired during the course. All students will undertake an individual project, the topic being concerned with their chosen specialty. Topics investigated may be chosen by the student or suggested by the staff. The area of research will need to be agreed with the supervising staff before commencement of the project.

The research need not be on an original topic but should increase information in the chosen area. It must be conducted according to the accepted methods of scientific investigation, and be presented bound in the agreed HBMCDM format, by the end of the course.

Research Format

The MSc programs are combined clinical and research programs. The MSc degree entails a research project and thesis and is an integral component of the 36-month program. The topics for a thesis will be chosen by the candidate in conjunction with the faculty advisor. Students must initiate and complete a research project using the elements of scientific method, including research design, accurate reporting, critical thinking and the formulation of conclusions based on scientific data rather than opinion. Collaboration with other hospitals, medical institutions and other health-orientated organizations is encouraged to foster collaborative research.

Research formats for thesis may include:

- Clinical study
- Systemic review of literature
- Epidemiological studies
- Laboratory-based studies
- Case series

The research protocol will be developed within the first year of the program. Implementation and data collection will commence after Institutional Review Board approval (where appropriate) and other regulatory approvals. It is anticipated that data collection will be completed by the end of the second year to allow for data analysis, thesis preparation and defense of the thesis.

Guidelines for Thesis Submission are provided in the Student Handbook.

Didactic: Periodontology for Prosthodontic Specialists

A series of lectures intended to expose the student to the concepts and information necessary for a Prosthodontic specialist to understand the importance and implications of the inter-relationship between Prosthodontics and other clinical disciplines, particularly periodontics. This course would enable the Prosthodontic student to assess the periodontal status of teeth relevant to the Prosthodontic status and carry out periodontics at the level of a skilled general dental practitioner. Topics include: relevant biology, anatomy, physiology, pathology and microbiology; mechanisms by which oral microorganisms may be dispersed and cause disease in distant sites; factors which make a tooth unrestorable; pathogenesis, diagnosis and management of periodontal diseases; diagnosis and management of perio-endo lesions; biological rationale and indications for dental implants; procedures for placement, restoration and maintenance of dental implants; and dental materials.

Didactic: Endodontics for Prosthodontic Specialists

A series of lectures intended to expose the student to the concepts and information necessary for a Prosthodontic specialist to understand the importance and implications of the inter-relationship between Prosthodontics and other clinical disciplines, particularly endodontics. This course would enable the Prosthodontic student to assess the endodontic status of teeth relevant to the Prosthodontic status and carry out endodontics at the level of a skilled general dental practitioner. Topics include: relevant biology, anatomy, physiology, pathology and microbiology; the patho-physiology of pulpal and peri-radicular disease. Diagnostic procedures for clinical assessment. Radiographic techniques. Periodontal-endodontic inter-relationships and root resorption. Pulp morphology and access preparations. Cleaning, shaping and obturation of the root canal systems. Root canal obturation and surgical treatment methods.

Didactic: Clinical Imaging

A series of lectures and seminars intended to expose the student to the core concepts and current information necessary for a thorough knowledge of clinical imaging. This course will describe the relevant biology and anatomy of the oro-facial region necessary for the interpretation of radiographic images; The principles of radiographic quality assurance and the practice of applied quality control; Interpretation radiographic images with an accurate radiographic report; The relevance of clinical photographs in treatment planning; The medico-legal importance of photographic records; and the relevance of minimizing the radiation dose for each patient when undertaking a radiological examination. The indications for the use of CBCT, the interpretation of CBCT imaging and the medico-legal aspects of CBCT imaging are covered.

Didactic: Toothwear and esthetics

A series of lectures intended to expose the student to the core concepts and current information necessary for a thorough and appropriate assessment and examination of the patient to be able to diagnose tooth wear and tooth surface loss. In addition, a thorough understanding of the methods of restoring the worn dentition, the preparation designs, materials and techniques most suitable for their restoration.

Topics include:

Dental history and oral examination for clinical assessment of tooth wear and tooth surface loss, occlusion in relation to tooth wear, tooth preparation methods for extra coronal and intracoronar restorations and dental materials, equipment and techniques to provide relevant treatment and the response of the dental tissues to this treatment.

A series of lectures intended to expose the student to the core concepts and current information necessary for a thorough and appropriate assessment and examination of the patient to be able to evaluate aesthetics, plan to manage aesthetics, color and form with restorative techniques and materials and have an understanding of the laboratory techniques to produce restorations.

Topics include:

Tooth whitening techniques for vital and non-vital teeth including micro and macro abrasion. Tooth preparation methods for direct and indirect aesthetic restorations. Adhesion, bonding and luting cements, fitting restorations. Dental materials and laboratory techniques for aesthetic restorations.

Didactic: Temporomandibular Disorders

A series of lectures intended to expose the student to the core concepts and current information necessary for a thorough and appropriate assessment and examination of the patient to be able to diagnose oral parafunction and other factors in the development of dysfunction of mandibular movements and the TMJs.

Topics include:

Anatomy, physiology and pathology of the Temporomandibular Joint and associated musculature, Radiographic imaging techniques, intraoral and extra-oral, their interpretation and assessment and occlusal splint designs, repositioning appliances and provisionalisation.

Didactic: Implant Basic Science and Treatment Planning

This course consists of a series of seminars and lectures to provide the prosthodontic specialist trainee with the evidenced based material to be able to treatment plan cases for implant treatment and to understand the biological processes underpinning the science and strategy of implant treatments.

Didactic: Basic Implant Surgical and Restorative Techniques

The course will deliver the information in seminar and lecture style to provide the student with the necessary information to formulate treatment plans at an introductory level for implant retained fixed or removable prosthesis.

Didactic: Advanced Implant Surgical and Restorative Techniques

The course provides a series of lectures and seminars to provide the prosthodontic specialist student with a firm education in the approach to providing patient care of a specialist standard in advanced restorative and surgical implant techniques.

Didactic: Examination Preparation

This course is intended to present a final revision for the students to prepare them to sit for the UK Membership Examination in Prosthodontics. The examination of the Diploma of Membership in Prosthodontics includes Applied Sciences relevant to Prosthodontics and the Principles and Practice of Prosthodontics. The aims of the examination are to test the range of knowledge of Prosthodontics at a level expected of a specialist practitioner and to test the attainment of competence in the planning and execution of Prosthodontics requisite for specialist