

REGULATIONS FOR THE DEGREE OF MASTER OF DENTAL SURGERY (MDS)

(See also General Regulations)

Any publication based on work approved for a higher degree should contain a reference to the effect that the work was submitted to The University of Hong Kong for the award of the degree.

The degree of Master of Dental Surgery (MDS) is a postgraduate degree awarded following the satisfactory completion of a prescribed course of study and research/clinical applications related to dental practice.

Admission requirements

D19 To be eligible for admission to the curriculum for the degree of Master of Dental Surgery, a candidate shall

- (a) comply with the General Regulations;
- (b) hold the degree of Bachelor of Dental Surgery from this University, or a degree of other qualification of equivalent standard from another university or comparable institution accepted for this purpose; and
- (c) satisfy the examiners in a qualifying examination if required.

Qualifying examination

- D20** (a) A qualifying examination may be set to test a candidate's formal academic ability or his ability to complete the prescribed courses of study and practice. It shall consist of one or more written papers, or the equivalent, and may include a project report, practical examination and oral examinations.
- (b) A candidate who is required to satisfy the examiners in a qualifying examination shall not be permitted to register until he has satisfied the examiners in the examination.

Award of degree

- D21** To be eligible for the award of the degree of Master of Dental Surgery, a candidate shall
- (a) comply with the General Regulations; and
 - (b) complete the curriculum, complete and present a written dissertation or project report or research paper in publication format, and satisfy the examiners in accordance with the regulations set out below.

Curriculum

D22 The curriculum shall comprise an approved programme of study, practice and research in a field related to the practice of dentistry as prescribed in the syllabuses. It shall extend over not less than twenty-four months of full-time study¹, or the equivalent by part-time study, and shall include all examinations and the submission of a dissertation, project report or research paper in publication format.

¹ Each stream is either 2-year or 3-year. See individual syllabuses.

- D23** To complete the curriculum, a candidate shall
- (a) follow instruction in the courses prescribed and complete satisfactorily all coursework requirements;
 - (b) satisfy the examiners in all examinations as may be required; and
 - (c) complete and submit a dissertation, project report or research paper in publication format which satisfies the examiners.
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Dissertation or project report or research paper

D24 The title of the dissertation or project report or research paper in publication format shall be submitted for approval not later than April 30 in the final academic year of study, and the dissertation or project report or research paper in publication format shall be submitted not later than September 1 in the same year; the candidate shall submit a statement that the dissertation or project report or research paper in publication format represents his own work undertaken after registration as a candidate for the degree. The examiners may prescribe an oral examination on the subject of the dissertation or project report or research paper in publication format.

Examinations or assessments

D25 Examinations or assessments may be held in each year of study and may take the form of written papers; oral, practical, and clinical examinations; assessments of coursework; or a combination of these methods. Any assessment of the candidate's coursework during the course of study, including written assignments, shall be taken into account in determining the candidate's overall result.

D26 A candidate who has failed to satisfy the examiners in any part of the examinations may be permitted to present himself again for examination at a time to be determined by the Board of Examiners; or he may be recommended for discontinuation of studies under the provisions of General Regulation G12.

D27a A candidate who has presented a dissertation or project report or research paper in publication format which has failed to satisfy the examiners may be permitted to revise and re-present the dissertation or project report or research paper in publication format within a period to be determined by the Board of Examiners; or he may be recommended for discontinuation of studies under the provision of General Regulation G12.

D27b Failure to take any examination as scheduled normally shall result in automatic course failure.

D27c A candidate who is unable, through illness, to be present at an examination may apply in writing within 2 weeks of the examination for permission to be examined at some other time to be determined by the Board of Examiners.

Examination or assessment results

D28 At the conclusion of the examinations or assessments, and after presentation of the dissertations or project reports or research paper in publication format, the names of the successful candidates shall be published in alphabetical order. A candidate who has shown exceptional merit may be awarded a mark of distinction, and this mark shall be recorded in the candidate's degree diploma.

SYLLABUSES FOR THE MASTER OF DENTAL SURGERY

A. PREAMBLE

1. The objectives of the MDS curriculum are to enable candidates to achieve an advanced level of knowledge and competence in a branch of dental surgery by means of
 - (a) a prescribed course of study (i.e., lectures, seminars, related written and practical and/or clinical work); and
 - (b) additionally, a supervised research project and the submission of a written project report, dissertation or research paper in publication format.

The prescribed course of study will include certain core subjects to be taken by all candidates, but otherwise it will be designed, in accordance with the syllabuses specified by the Dental Programme Areas, to take account of the needs of individual candidates. The supervised research projects will also be related to each candidate's prescribed course of study.

2. Candidates must attend the practice of the Prince Philip Dental Hospital (or another approved hospital) for at least four sessions a week in such programme area or areas as are prescribed.
 3. The methods and pattern of assessment and examination of each candidate will be determined by the Postgraduate Programme Directors concerned, having regard in each case to the nature and particular emphases of the candidate's programme of work.
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B. SYLLABUSES

MDS in Paediatric Dentistry (MDS Paediatr Dent)

The curriculum extends over not less than twenty-four months of full-time study, or the equivalent by part-time study. The prescribed course of study has a minimum of 600 hours of coursework.

DENT6001 Paediatric dentistry

A course of advanced study, supervised clinical practice and research related to prevention and correction of oral and dental disorders in children consisting of lectures, tutorials, assignments, clinical and laboratory demonstrations, practical work and training in research methodology.

The course will be based on the concept of providing dental care as part of the promotion of general health for the child and will cover growth and development, patient management, the prevention of dental disease, overall treatment planning, restorative treatment, care of patients with special needs, and the interceptive treatment of dento-facial abnormalities. Course members will gain an understanding of paediatric dentistry in its public health aspects, appreciating also its relation to other branches of dentistry and medicine.

MDS in Conservative Dentistry (MDS Cons Dent)

The curriculum extends over not less than twenty-four months of full-time study, or the equivalent by part-time study. The prescribed course of study has a minimum of 600 hours of coursework.

DENT6002 Conservative dentistry

A course of advanced study in conservative dentistry consisting of lectures, tutorials, clinical and para-clinical assignments, written work and training in research methods. This course is designed to provide students with a detailed knowledge of the principles and practice of conservative dentistry (cariology, operative dentistry including indirect restorations for individual teeth, and endodontics) and will include study of the materials and technology commonly employed. Students will be encouraged to extend their knowledge in allied and relevant basic science and clinical subjects. It may also include courses of study in other related disciplines.

MDS in Public Health Dentistry (MDS Pub Health Dent)

The curriculum extends over not less than twenty-four months of full-time study, or the equivalent by part-time study. The prescribed course of study has a minimum of 600 hours of coursework.

DENT6003 Public health dentistry

A course of advanced study and research into the theory and practice of oral epidemiology, preventive dentistry, related behavioural sciences and systems for the provision of dental health care. The course will include lectures, tutorials, clinical and laboratory work, together with project assignments and training in research method.

MDS in Periodontology (MDS Perio)

The curriculum extends over not less than twenty-four months of full-time study, or the equivalent by part-time study. The prescribed course of study has a minimum of 600 hours of coursework.

DENT6004 Periodontology

A course of advanced study and research into the histopathogenesis of periodontal diseases, their aetiology, prevention and treatment, including the role of advanced forms of periodontal therapy in comprehensive oral health care. Implant placement and supportive care for dental implants in the periodontally susceptible is also covered. The course includes lectures, tutorials, case conferences, clinical and laboratory work together with project assignments, training in research method and the conduct of a research project along with the preparation of a dissertation on this project.

MDS in Prosthodontics (MDS Prostho)

The curriculum extends over not less than twenty-four months of full-time study, or the equivalent by part-time study. The prescribed course of study has a minimum of 600 hours of coursework.

DENT6005 Prosthodontics

A course of advanced study in prosthodontics consisting of lectures, tutorials, clinical and para-clinical assignments, written work and training in research method. This course is designed to provide the student with a detailed knowledge of principles and practice of prosthodontics (fixed and removable prosthodontics, maxillofacial prosthodontics and implantology), including study of the materials and technology commonly employed. It also includes courses of study in related disciplines.

MDS in Oral and Maxillofacial Surgery (MDS Oral Max Fac Sur)

The curriculum extends over not less than thirty-six months of full-time study. The prescribed course of study has a minimum of 900 hours of coursework.

DENT6006 Oral and maxillofacial surgery

A course of advanced study in a clinical aspect of oral and maxillofacial surgery will be planned for each candidate in consultation with his supervisor.

It is intended that the course of study will consist primarily of coursework and include training in research method. Whenever it is practicable candidates will be encouraged to extend their knowledge in one or more allied basic or clinical sciences relevant to the practice of oral and maxillofacial surgery.

The coursework may consist of lectures, tutorials, assignments and practicals or clinical work. Reading lists will be produced in consultation with each candidate's supervisor. Clinical training in a wide variety of oral and maxillofacial surgery is provided.

MDS in Endodontics (MDS Endo)

The curriculum extends over not less than twenty-four months of full-time study, or the equivalent by part-time study. The prescribed course of study has a minimum of 600 hours of coursework.

DENT6013 Endodontics

A course of advanced study, supervised clinical practice and research into the theory and practice of endodontics, which include the biology of the normal pulp, root and periradicular tissues and the aetiology, prevention, diagnosis and treatment of diseases and injuries that affect these tissues. The course may consist of lectures, tutorials, written assignments, clinical and laboratory work and training in research method. It may also include courses in other related disciplines.

MDS in Family Dentistry (MDS Family Dent)

The curriculum extends over not less than forty-eight months of part-time study. The prescribed course of study has a minimum of 600 hours of coursework.

DENT6021 Family dentistry

The objectives of this MDS curriculum are to enable practising dentists to achieve an advanced level of knowledge and competence in general dental practice. Candidates must attend the Prince Philip Dental Hospital (or another approved hospital) for at least 2 sessions a week.

The course will include lectures, tutorials, case conferences, clinical and laboratory work together with project assignments and training in research method. It is composed of modules relevant to the practice of modern dentistry in the general practice setting. The nature and scope of the modules offered will be updated from time to time. The modules include:

A. Applied Basic Sciences

1. Applied Dental Materials and Dental Technology
2. Pharmacology in relation to dentistry
3. Research methodology and statistical methods
4. Dental Public Health / Health Care Economics
5. Evidence-based Dentistry

B. Clinical Skills

1. Sedation, pain and anxiety control
2. Dento-alveolar surgery
3. Oral Medicine and Oral Pathology
4. Paediatric Dentistry
5. Periodontology
6. Endodontics
7. Prosthodontics including implantology
8. Geriatric Dentistry
9. Special Needs Dentistry
10. Hospital Dentistry

C. Practice Management and Operations

1. Infection Control
2. Medical Informatics and Information Technology in relation to the practice of dentistry
3. Practice Management and Business Administration
4. Dental Ethics
5. Service Quality Assurance
6. Clinical Audit and Governance

D. Patient Management and Family Practice

1. Holistic approach in patient care
2. Medical emergencies and management of medically-compromised patients
3. Patient education and preventive programmes
4. Patient communications
5. Medico-legal considerations and Risk Management

The course allows some flexibility to enable the practising dentist to complete the requirements according to the individual's private practice pattern. Students can also seek greater depth of knowledge in certain areas according to their clinical interests. They are encouraged to consult the Programme Director concerning special arrangements to accommodate their needs.

MDS in Implant Dentistry (MDS Implant Dent)

The curriculum extends over not less than thirty-two months of full-time study, has a minimum of 1800 hours of study and clinical practice related to the practice of Implant Dentistry.

DENT6026 Implant dentistry

The Master of Dental Surgery (MDS) in Implant Dentistry is a course of study that is designed to enable practising dentists to acquire clinical training in implant dentistry as a contemporary component of comprehensive dental care. Students must attend the Prince Philip Dental Hospital (or another approved hospital) as prescribed by the Programme Director.

The course includes lectures, tutorials, case conferences, clinical and laboratory work together with project assignments, training in research method and the conduct of a research project along with the preparation of a dissertation on this project.

Course Modules

This programme is aimed at comprehensive advanced implant training. All the components of the course are compulsory. Emphasis is placed on the academic aspects of implant dentistry as well as the practical training in diagnosis and treatment planning to allow safe and proper incorporation of implants into comprehensive dental care.

The course includes the following components:

(A) Didactic and Clinical Components

1. Basic Sciences in Relation to Implant Dentistry

This component of the course introduces the discovery of titanium oral implants. It elaborates on the design and surface characteristics of implant devices. Students will gain detailed knowledge of the wound healing processes, implant/bone interfaces, mucosal healing sequences and biomechanical aspects of oral implants. Evidence-based dentistry principles will be emphasised in relation to the longevity of implants and implant-supported prostheses.

2. Diagnosis and Treatment Planning

Correct and accurate diagnostic processes and proper treatment planning adequately considering the patients' needs for rehabilitation of the dentition are paramount in the incorporation of implants during therapy. The use of implants as a treatment for the replacement of missing teeth and the restoration of oral health, function, and aesthetics will be extensively explored. Treatment planning conferences will regularly be held both involving the patients being treated within the MDS programme and standard cases prepared for such exercises.

3. Imaging

The use of imaging is important for the evaluation of implant sites and the planning of the implantation procedures including the selection of implants. The application of panoramic radiographs and conventional plain films for screening will be supplemented by the teaching of new tomographic techniques that include Scanora and CT. The use of specialised computer software for treatment planning and fabrication of precision surgical templates will also be demonstrated.

4. Patient Selection

Assessment of clinical cases in relation to patients' needs and expectations, as well as evaluation of risk factors for implant therapy will ensure a favourable outcome of treatment. Clinicians must be familiar with indications and contraindications of such therapy. The risk of implant treatment in diabetic patients, immunologically compromised patients, and smokers will be discussed.

5. Presurgical Patient Preparation

Students will be instructed how to formulate a treatment protocol, to discuss and liaise with colleagues, dental nurses, and laboratory technicians. They will be guided to plan meticulously for the cases under their care and discuss the rationale for the treatment proposal with their supervisors.

6. Surgical Aspects of Implantology

Sound surgical principles and aseptic techniques will be discussed. Hands-on surgical techniques will be taught in the Simulation Laboratory on the sixth floor of the Prince Philip Dental Hospital. Live surgeries will be carried out and demonstrated by experienced surgeons in the field of implant dentistry with the aid of modern audio-visual equipment. Students will have the opportunity to assist during the installation of implants.

7. Restorative Aspects of Implantology

Students will gain in-depth knowledge in the selection of abutments, the choice of screw-retained or cemented prostheses, and the various impression techniques. This component of the course will focus on the scientific and practical aspects of selection of metal alloys, polymeric resins, and ceramics for the construction super-structures. The importance of occlusion in relation to loading of prostheses will be highlighted.

8. Maintenance of Peri-implant Health

Emphasis will be placed on the regular monitoring and maintenance of health of host tissues. The importance of minimising microbiological burden through proper hygiene measures and adjunct chemotherapeutic agents will also be stressed.

9. Maintenance of Implant-supported Prostheses

This course deals with the regular review and maintenance of prostheses, particularly in relation to biological and technical complications. Chairside and laboratory techniques will be performed in the maintaining peri-implant health through proper supportive therapy and servicing of the prostheses.

10. Diagnosis and Management of Peri-implant Biological Complications

The importance of regular follow-up visits will be emphasised for the early detection of pathology and prompt treatment. Students will understand the pathogenesis and the management of soft-tissue inflammatory reactions, bone loss, infections, and other complications. The Cumulative Interceptive Supportive Therapy concept (CIST) will be implemented.

11. Laboratory Techniques and CAD/CAM Technology

Students will be instructed in the analyses of mounted casts, the construction of surgical templates, fabrications of provisional fixed and removable prostheses, and design of definitive prostheses. Advances in computer-aided design/computer-aided manufacturing in producing a milled framework, abutments, and ceramics will be demonstrated.

12. Research Methods in Implantology

This course introduces the general methodologies in the research of implantology. It includes project design, basic principles of statistics, and data analysis. This will be illustrated by selected articles from the literature. The use of the dental literature and library facilities will be demonstrated.

Under the guidance of supervisors, students are also required to submit a dissertation, project report or research paper in publication format following the successful completion of a research project (see also (B) below).

13. Oral Health Science Seminars

The students are required to attend weekly Oral Health and Science Seminars to broaden their knowledge and be informed of the latest developments in other areas of dentistry.

(B) Directed Self-study and Literature Seminar

In addition to close teacher-student contact hours, students are required to study the literature and relevant books as directed and recommended by their teachers and supervisors. The relevant and assigned literature will be discussed and evaluated for its scientific content and quality in seminars.

(C) Research in Implant Dentistry

This component examines trends in the research and development of dental Implant therapy. It is based upon the principle of hypothesis testing and the choice of the appropriate research methodology. The research protocol should be established and approved by the programme director and appropriate committees (Human Ethics, Animal Research) at the end of the first year of study.

(D) Dissertation or Project Report or Research Paper

A dissertation or project report or research paper shall result from the candidate's own research work. Efforts should be made to achieve publication in an international and peer-refereed journal of high impact factor.