

PROGRAMME STANDARDS FOR DENTAL SPECIALTIES

This Program Standards was endorsed by the Malaysian Dental Council (MDC) at its 8th Meeting on 3 April 2023 and its 9th Meeting on 24 July 2023

PREFACE

Please note that the Code of Practice for Programme Accreditation (COPPA) for the Postgraduate Programme Committee is currently in the process of developing the COPPA for Postgraduate Program, which will include the Program Standards. The Program Standards document received endorsement from the Malaysian Dental Council (MDC) in two stages: first during its 8th Meeting on 3 April 2023, and then during its 9th Meeting on 24 July 2023. Subsequently, it will undergo further revisions and integration into the COPPA for PG Programme, with final endorsement by the MDC, making it accessible for use by relevant stakeholders. Until further notice, this document and the Programme Standards: Dental Specialties 2019 published by MQA will serve as the reference for PG accreditation submissions.

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**Programme Standards for
Specialist Training:
Foundation for Specialty
Training**

FOUNDATION FOR SPECIALTY TRAINING IN ORAL AND MAXILLOFACIAL SURGERY

By:

Dental Specialty Education Committee
(DentSEdC) Oral and Maxillofacial Surgery

This Program Standards was endorsed by the Malaysian Dental Council
(MDC) at its 9th Meeting on 24 July 2023

FOUNDATION FOR SPECIALTY TRAINING IN ORAL AND MAXILLOFACIAL SURGERY (MASTER PROGRAMME)

Overview

	Module	SLT
1.	Basic Science	800
2.	Research Methodology Biostatistics	
3.	Electives	
4.	Foundation to Specialty (OMFS)	800 – 1000

A. **STUDENT LEARNING TIME**

800 to 1000 hours

B. **SCOPE**

Principles and Primary Core Treatment of Oral and Maxillofacial Surgery

This course provides a thorough practical and theoretical understanding of various aspects of primary care in oral and maxillofacial surgery (OMFS). It will provide the postgraduates with the opportunity to grasp the essential fundamental knowledge, basic surgical skills and hands-on oral surgery cases supervised by a specialist in oral and maxillofacial surgery within the respective HEP. Postgraduates will be guided via comprehensive assessment, treatment planning, diagnosis, surgical procedure and reflective practice. Postgraduates will be exposed to management of basic oral surgery procedures as well as exposure to various academic-based components forming foundation for the subsequent three-year specialty programme in oral and maxillofacial surgery.

C. **OMFS COURSE LEARNING OUTCOMES**

At the end of the course, students should be able to:

- i. Integrate relevant knowledge in basic science to be applied in clinical oral surgery (C5);
- ii. Perform significant history taking and systemic examination to recognize signs and symptoms of patients presented in oral and maxillofacial clinic (P5);
- iii. Decide on appropriate clinical and radiological investigations related to dentoalveolar surgery on the outpatient basis (C6);
- iv. Recognize abnormalities in the mouth, jaws and surrounding structures related to oral and maxillofacial surgery (C3);
- v. Appraise the different outcome measures of surgical treatment and their assessment in implant surgery and other common oral and maxillofacial conditions (C6);
- vi. Perform minor oral surgical procedures and management of their complications (P5);
- vii. Perform oral surgery treatment for patients with different medically compromised complexity by modification of treatment managements (P5);
- viii. Perform basic surgical skills relevant to the field of oral and maxillofacial surgery (P5);
- ix. Show professional judgement to implement clinical solution in response to oral and maxillofacial conditions (A5);

D. COMPONENTS IN ORAL AND MAXILLOFACIAL SURGERY

- i. Dento-alveolar surgery
- ii. Pre-prosthetic surgery & implantology
- iii. Other oral and maxillofacial conditions:
 - Head & Neck Infections
 - Maxillofacial Trauma
 - Oral medicine and oral manifestations of diseases
 - Head and neck benign and malignant tumours
 - TMJ diseases and disorders
 - Orthognathic and OSA
 - Congenital abnormalities: cleft & craniomaxillofacial
 - Regional reconstructive surgery

E. ASSESSMENT

The student assessment may be in the form of:

- i. Applied basic medical science and surgery: competency tests, clinical exams, case reports
- ii. Dentoalveolar surgery: competency test, log books

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FOUNDATION FOR SPECIALTY TRAINING IN DENTAL PUBLIC HEALTH

By:

Dental Specialty Education Committee
(DentSEdC) Dental Public Health

This Program Standards was endorsed by the Malaysian Dental Council
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FOUNDATION FOR SPECIALTY TRAINING IN DENTAL PUBLIC HEALTH
(MASTER PROGRAMME)

1. DEVELOPMENT OF THE STANDARDS

The development of the programme standards for the Foundation Specialty Training in Dental Public Health (DPH) specialist training was initiated by the Dental Specialty Education Committee (DentSEdC) after recent guidance from the Joint Technical Committee for Evaluation of Dental Specialty Programme (JTCEdSP). This document has been developed by a working party from the DentSEdC in Dental Public Health, chaired by Datin Paduka Dato' Dr Nooral Zeila bt Junid. The other members are Professor Dato' Dr Ishak bin Abdul Razak, Professor Dr Roslan bin Saub, Professor Dr Allan Pau Kah Heng, Brigadier General Dr Zulkifli bin Zainal Abidin, Associate Professor Dr Norkhafizah Saddki, Dr Naziah bt Ahmad Azli, Dr Nurul Asyikin binti Yahya, and Dr Salleh bin Zakaria. The final version of the programme standards will be reviewed by the JTCEdSP under the Malaysian Qualifications Agency (MQA).

2. PURPOSE OF THE STANDARDS

The programme standards are designed to serve as a basis for quality assurance and as a national reference for Foundation Specialty Training in Dental Public Health postgraduate programmes. They will be used by the MQA to evaluate and to accredit Foundation Specialty Training in Dental Public Health programmes.

3. REVIEWING AND UPDATING THE STANDARDS

This document shall be regarded as a dynamic document. The DentSEdC (Dental Public Health) will undertake periodic updates, as and when necessary, and a formal review every five (5) years.

4. AIM OF TRAINING FOR FOUNDATION SPECIALITY TRAINING IN DENTAL PUBLIC HEALTH

This training will prepare trainees with fundamental knowledge and skills in Dental Public Health. This foundation programme is a prerequisite to the full specialist training programme in Dental Public Health and can be considered as a qualification in its own right.

5. NOMENCLATURE OF PROGRAMME & MQF LEVEL

The one (1) year foundation programme by coursework will lead to the award of the Foundation Speciality Training in Dental Public Health. Nomenclature of the one (1) year foundation programme will be decided by the HEP.

This programme is equivalent to Level 7 in the Malaysian Qualification Framework (MQF).

6. ENTRY REQUIREMENTS

An applicant for admission to a foundation programme shall have the following:

- i. Bachelor of Dental Surgery (BDS) or equivalent qualification;
- ii. Registration with the Malaysian Dental Council (MDC) and holds a current Annual Practising Certificate (APC) or registered with a dental regulatory body in another country and be eligible to be granted a Temporary Practising Certificate (TPC) by MDC; and
- iii. Fulfill other requirements as stipulated by the HEP.

7. TRAINING PERIOD

The training period shall be one (1) academic year full-time. The total Student Learning Time (SLT) for the programme shall consist of 1600 - 2000 hours or 40 – 50 credits. The recommended components of a programme are as presented in the table below.

No.	Course Component	SLT (hours)
1.	Principles of Public Health	120 - 160
2.	Research:	
	2.1) Research Methodology	120 -160
	2.2) Research Proposal OR Research Report*	200 - 360
3.	Fundamentals of Biostatistics	120 - 160
4.	Electives [#]	80 - 120
5.	Specialty (Dental Public Health)	800 - 1200
	Programme SLT	1600 - 2000

* The HEP can determine whether the output of the course is a research proposal or research report. If research report is the desired output, this component shall not exceed 30% of the total SLT.

[#] Electives may be chosen from **courses** under another programme including General Public Health, Clinical Dentistry (e.g., Periodontology, Orthodontics), or non-Dental (e.g., computer science).

8. THE SCOPE OF A FOUNDATION SPECIALITY TRAINING IN DENTAL PUBLIC HEALTH PROGRAMME

The scope of a Master programme shall encompass the following:

- i. Principles of Public Health
- ii. Research (Research Methodology and Research Proposal/Research Report)
- iii. Fundamentals of Biostatistics
- iv. Electives
- v. Specialty (Dental Public Health)
 - a. Epidemiology of Oral Diseases and Conditions
 - b. Social and Behavioural Sciences in Dentistry
 - c. Oral Health Promotion
 - d. Prevention of Oral Diseases
 - e. Ethics and Jurisprudence in Dental Public Health
 - f. Management of Oral Health Care and Services

9. PROGRAMME LEARNING OUTCOMES (PLO)

At the end of the programme, graduates must be able to:

- i. Demonstrate mastery of knowledge in dental public health.
- ii. Apply functional work skills in dental public health practice.
- iii. Prepare a research proposal and/or conduct research with minimal supervision.
- iv. Apply social behavioral theories to dental public health practice.
- v. Adhere to legal, ethical and professional codes of practice.
- vi. Demonstrate leadership qualities through communicating and working effectively with peers and stakeholders.
- vii. Solve community oral health problems based on the scientific evidence and critical thinking skills.
- viii. Manage information for lifelong learning.

10. MODELS OF LEARNING IN DENTAL PUBLIC HEALTH

The programme must be designed to enable trainees to attain sufficient fundamental knowledge and skills in dental public health for them to pursue a doctorate degree. Multiple teaching methodologies are to be encouraged to ensure maximum learning.

11. ASSESSMENT

Assessment, in general, serves the purposes to:

- i promote learning;
- ii measure performance, by awarding grades which indicate whether and how well a particular trainee has attained the stated PLOs;
- iii determine whether a particular trainee is sufficiently well prepared in a subject area to proceed to the next level of instruction;
- iv provide feedback to trainees which indicates levels of attainment and diagnoses misunderstandings and learning difficulties; and
- v provide feedback to teaching staff to identify and diagnose ineffective teaching methods/techniques.

Three (3) **domains of learning** which include **cognitive** (thinking), **affective** (emotions or feeling) and **psychomotor** (skills) are assessed. Assessment methods shall be both formative and summative. While the formative assessment does not contribute to the total marks, the summative assessment determines the total marks and shall take two forms: Continuous assessment (CA) and Final Examination (FE).

Principles of Public Health and the Specialty courses must be assessed by both CA and FE.

Research (Research Methodology and Research Proposal/Research Report), Fundamentals of Biostatistics and Elective courses can be assessed by 100% CA or both CA and FE. If the assessment includes both CA and FE, the contribution of CA will be determined by the respective HEP.

No.	Course	Assessment Method (%)	
		CA	FE
1.	Principles of Public Health	40-50	60-50
2.	Research: 2.1 Research Methodology 2.2 Research Proposal/Research Report	*30-100	*0-70
3.	Fundamentals of Biostatistics		
4.	Electives		
5.	Specialty (Dental Public Health)	40-50	60-50

*Subject to change depending on HEP

The total summative marks determine pass/fail based on the marking/grading system of the respective HEP.

The trainee must pass all courses independently.

List of Abbreviation

1. DPH : Dental Public Health
2. DentSEdC : Dental Specialty Education Committee
3. JTCEDSP : Joint Technical Committee for Evaluation of Dental Specialty Programme
4. MQA : Malaysian Qualifications Agency
5. MDC : Malaysian Dental Council
6. HEP : Higher Education Provider
7. ICT : Information and Communication Technology
8. PLO : Programme Learning Outcome
9. NCBPDE : National Conjoint Board for Postgraduate Dental Education
10. MQF : Malaysian Qualification Framework
11. DrDPH : Doctor of Dental Public Health
12. SLT : Student Learning Time
13. APC : Annual Practicing Certificate
14. TPC : Temporary Practicing Certificate
15. OBA : One Best Answer
16. MTF : Multiple True/False
17. SRA : Single Response Answer
18. MEQ : Modified Essay Question
19. SEQ : Short Essay Question
20. SAQ : Short Answer Question

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**Dental Specialty Education Committee
(Dental Public Health)**

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FOUNDATION FOR SPECIALTY TRAINING IN ENDODONTICS

By:

Dental Specialty Education Committee
(DentSEdC) Endodontics

This Program Standards was endorsed by the Malaysian Dental Council
(MDC) at its 9th Meeting on 24 July 2023

STANDARDS FOR FOUNDATION ENDODONTICS COURSE (MASTER PROGRAMME)

Introduction

In Malaysia, all clinical dental specialties programmes will be a total of four (4) years, comprising of one (1) year prerequisite foundation coursework programme in the related discipline and three (3) years of specialty training.

The foundation programme shall consist of basic science, research methodology and/or electives courses, consisting of a total Student Learning Time (SLT) ranging from 1600 – 2000 hours. A minimum of 800 – 1000 hours of this degree must include among others a preclinical training component which contribute towards the specialty training.

General structure of foundation programme

No.	Course	Minimum SLT (hours)
1.	Basic Science	800
2.	Research Methodology and Biostatistics	
3.	Electives	
4.	Specialty* Foundation for specialty	800
Total		1600

*The specialty component of the 1-year foundation programme

A. Outcomes and content of learning

The training provided in this component should be designed to enhance the trainee's knowledge and skills related to the field of endodontics. It should cover the foundation topics that include the biological basis of disease management, as well as the clinical and technical aspects of endodontic treatment.

- a) Outcomes of the 1-year foundation programme related to endodontics.

At the end of 1-year training, the trainee will be able to:

Knowledge

1. Integrate relevant knowledge in anatomy and physiology of the oral and peri-oral tissues with particular emphasis on endodontic related tissues (C5);
2. Relate the aetiology of pathobiology of diseases of the oral and peri-oral tissues to its clinical presentation (C5);
3. Justify the use of materials and instrument relevant to endodontics based on its physical, chemical and biological properties (C4);
4. Appraise the treatment procedures and options in non-surgical root canal treatment (C6);
5. Justify the procedures to optimise the working field (restoration removal, caries control, banding, build-up, rubber dam isolation) (C6).

Psychomotor skill

1. Perform all appropriate history taking and clinical examinations proficiently to diagnose the related oral and related medical conditions for all walk-in/general dental practice/primary care patients (P5);
2. Provide appropriate clinical care for patients at the level of a skilled general dental

- practitioner including emergency treatment for the relief of acute pain (P5);
3. Plan and co-ordinate overall treatment and care of patients and appreciate when it is appropriate to refer to the relevant specialist (P5);
 4. Proficient in using variety of hand and automated instruments and materials for endodontic treatment in pre-clinical setting (P5).

Affective skill

1. Show professional judgement to implement clinical solutions in response to problems by developing an evidence-based treatment plan and taking an holistic approach to solving problems and designing treatment plans (A5)
2. Assess critically scientific papers and available evidence relevant to endodontics using a variety of information sources (C6, A4)

b) Suggested detailed content:

1. Patient assessment and medical history
2. Diagnosis of pulp and peri-radicular pathoses and the different diagnosis of other conditions with similar presentations.
3. Assessment of endodontic and restorative case difficulty.
4. Evaluation of previous endodontic treatment.
5. Introduction to medico-legal issues in endodontics.
6. Differential diagnosis of oro-facial pain.
7. Conventional and contemporary techniques for endodontic imaging
8. Embryology and developmental defects affecting the teeth.
9. Local anaesthesia
10. Infection control in dental practice.
11. Applied pharmacology and therapeutics.
12. Physical, chemical and biological properties of endodontic instruments and material
13. Procedures to optimise the working field (restoration removal, caries control, banding, buildup, rubber dam isolation).
14. Management of endodontic emergencies that includes pulp therapy - including: dentine desensitisation and protection, indirect pulp capping, direct pulp capping, partial pulpotomy, pulpotomy, partial pulpectomy, pulpectomy and associated endodontic procedures.
15. Microbiology and immunology of pulp and periapical diseases.
16. Methods of debridement and obturation of root canals.
17. Methods for isolation of teeth during endodontic treatment.
18. The management of traumatic injuries to the teeth and mouth - including crown fractures, crown/root fractures, root fractures, concussion, subluxations, luxations, avulsions, alveolar bone fractures, abrasions, contusions and lacerations.
19. Aetiology and treatment of discoloured teeth.
20. Diagnosis and management of cracks in teeth.
21. The nature of endodontic infections and strategies for their removal/ disruption
22. Indications for root canal surgery including overview of current and historic methods.

B. Minimal Clinical Requirement

The 1-year training must incorporate:

- i) Pre-clinical tasks which include:
 1. Working under magnification
 2. Techniques for non-surgical root canal treatment (manual and automated instrumentation) – at least on 20 extracted teeth (various type of teeth)
 3. Restoration of the endodontically treated tooth – at least one post preparation and placement followed by temporary crown.

ii) Clinical requirements:

The students should treat/manage a minimum of 30 patients (general dental management cases) that includes 10 cases of endodontic-related emergencies.

C. Assessment

There must be a summative formal assessment to ensure the outcomes for this component are achieved.

FOUNDATION FOR SPECIALTY TRAINING IN FORENSIC ODONTOLOGY

By:

Dental Specialty Education Committee
(DentSEdC) Forensic Odontology

This Program Standards was endorsed by the Malaysian Dental Council
(MDC) at its 8th Meeting on 3 April 2023

STANDARDS FOR FOUNDATION FORENSIC ODONTOLOGY COURSE (MASTER PROGRAMME)

1. PURPOSE OF THE STANDARDS

The standards are designed to serve as a basis for quality assurance and as the national reference for Forensic Odontology specialty course in Master 1 year postgraduate programme. It will be used by the evaluation panel to evaluate and recommend the accreditation of the Forensic Odontology specialty programme offered in Malaysia.

2. REVIEWING AND UPDATING THE STANDARDS

Formal review, updating and validation of the content will be undertaken by the DentSEdC in Forensic Odontology every 5 years.

3. SPECIALTY COURSE STUDENT LEARNING TIME (SLT)

The master's programme shall consist of basic science, research methodology and/or electives courses, consisting of a total Student Learning Time (SLT) ranging from 1600 – 2000 hours. A minimum of 800 – 1000 hours of this degree must include Forensic Odontology specialty course.

General structure of master's programme

No.	Course	Minimum SLT (hours)
1.	Basic Science	800
2.	Research Methodology and Biostatistics	
3.	Electives	
4.	*Foundation for Forensic Odontology	800 - 1000
Total		1600-1800

*The specialty component of the 1-year master's programme

4. CONTENT OF LEARNING AND DOMAINS OF COMPETENCIES

The trainee is expected to achieve the following competencies on completion of the course.

DOMAIN 1: KNOWLEDGE

PO1: synthesise knowledge in the field of forensic odontology

The trainee must be able to:

- i. relate relevant biology, anatomy, physiology of normal and abnormal intra- and extra- oral structures and tissues to gender and race (C5);
- ii. relate knowledge of embryology and anatomy of human cranio-facial structures in dental profiling involving skeletons of a baby or toddler (C5);
- iii. relate dental anatomy, histology and embryology with human identification and age assessment for isolated dental or tooth evidence found at the crime scene (C5);
- iv. appraise age changes to teeth and jaws (C5);
- v. appraise history of forensic odontology and forensic medicine (C5);
- vi. appraise medico-legal autopsy and post-mortem changes (C5);
- vii. consider hazards of the mortuary and crime scene (C5);
- viii. relate knowledge of dental materials and prosthetics to the dental profiling and human identification (C5);
- ix. appraise the principles of radiographic quality assurance and the practice of applied quality control (C5);
- x. interpret imaging, photography and radiological evidences (C4);

- xi. appraise the conventional and contemporary techniques for Forensic Odontology imaging (including software) and photography (C5), and its legal implication;
- xii. describe the organisation of police forces (C2);
- xiii. describe the liaison with police and legal profession (C2);
- xiv. discuss the Criminal Procedure Code (CPC) as well as the Dental in relation to the forensic odontology work and cases done (C5)
- xv. relate Malaysian Law regarding forensic odontology cases (C5)
- xvi. summarise the management of crime scene, disaster victim identification and exhumation process (C5);
- xvii. evaluate the authenticity of dental diseases, dental treatments and dental records in fraud case (C5).

DOMAIN 2: PSYCHOMOTOR SKILLS

PLO2: construct proficient case management in the field of forensic odontology based on scientific evidence

The trainee must be able to:

- i. perform medico-legal and dental autopsy (P4);
- ii. perform age estimation of the living and deceased person, either for identification or due to lack of proper legal documentations (P4);
- iii. perform forensic photography on living and deceased person – extraoral, intra-oral and bitemark injuries (P4);
- iv. analyse digital image of radiographs and photographs (P4);
- v. organize a standard set of photographs illustrating progress through a course of cases (P4);
- vi. perform comparative identification process (P4);
- vii. perform reconstructive identification process including gender, ethnic and age estimation (P4);

DOMAIN 3: SOCIAL RESPONSIBILITY

PLO4: provide expert advice to society in the relevant field The trainee must be able to:

- i. display confidence, insight and empathy in formulating and presenting strategies and plans to investigate officer (IO) and family members (A5);
- ii. serve all cases/subjects with dignity and respect (A5);
- iii. recognise the medico-legal importance of patients' records and forensic reports (A3);

DOMAIN 4: ETHICAL & PROFESSIONALISM

PLO5: adhere to legal, ethical and professional codes of practice. The trainee must be able to:

- i. display appropriate attitude and understanding of ethical and societal issues (A5);
- ii. comply to the standards of practice in dentistry as determined by the Malaysian Dental Council (A4);
- iii. practice ethical principles in the preparation of forensic and research reports (A5);
- iv. practice medicolegal principles in relation to patients' records (A5).

DOMAIN 5: LEADERSHIP, COMMUNICATION & TEAMWORK

PLO6: display leadership qualities through communicating and working effectively with peers and stakeholders. The trainee must be able to:

- i. build rapport to work effectively as part of a team and manage members appropriately (A5);
- ii. display appropriate both verbal and non-verbal communication/presentation skills (P4);

DOMAIN 6: PROBLEM SOLVING & CRITICAL THINKING

PLO7: generate solutions to problems using scientific and critical thinking skills. The trainee must be able to:

- i. search a variety of information sources to obtain scientific papers and other evidences such

- as forensic guidelines (P4, A4);
- ii. appraise systematically current evidence and appreciate how research activity can be translated to practice (C5);

DOMAIN 7: LIFELONG LEARNERS

PLO8: exhibit attributes of independent lifelong learners. The trainee must be able to:

- i. display skills of self-reflection and self-appraisal used to identify continuing professional development needs (A5).

DOMAIN 8: MANAGEMENT SKILL

PLO9: display skills in forensic governance. The trainee must be able to:

- i. organise and undertake a forensic audit project including implementation of outcomes and re-audit (P3);

5. MODELS OF LEARNING IN FORENSIC ODONTOLOGY SPECIALTY COURSE

Delivery methods shall cover the three main domains *ie* cognitive, psychomotor and affective through a variety of techniques. These may include but are not limited to the following:

- i. A structured theoretical class which encourages understanding of the subject by critical appraisal and synthesis of the classical and contemporary literatures through individual and group activities, involving journal club, seminars, conferences, case-based learning (CBL) and problem-based learning (PBL). Few fundamental lectures shall be conducted in the form of e.g. traditional lectures and flipped-classroom.
- ii. Technical skills development through systematic simulation laboratory exercises.
- iii. Forensic skills development under direct supervision in the mortuary, field case-work and forensic laboratory. Students shall attend the training workshops and web-based resources identified by faculty.
- iv. Candidates shall keep evidence of cases and activities attended including onsite/fieldwork/project-based. The candidates shall report a summary of knowledge and skills development and learning issues and keep up to date in logbook/portfolio.

6. SUPERVISION STRUCTURE

Training will take place in programmes approved by the Ministry of Education. Higher Education Provider (HEP) in which there is training in this discipline will have a Programme Director who coordinates the training.

In the early stages of the training, trainees should be closely assessed to determine their competence base. The level of supervision initially should be close to ensure integrity and accuracy of forensic cases and allow the gauging of ability and potential for independent progression. As supervised record shows development of competence, the level of supervision may be tapered down in proportionate measure, ultimately leading to independent practice within the training period. The trainees should be exposed to a variety of philosophies within the discipline through multiple forensic supervisors.

7. FEEDBACK ON LEARNING

Assessment of competence will be through multiple assessment methods through multiple assessors. Assessment methods may include formal examination, workplace-based assessment which include direct observation of practical skills and case-based discussions, and portfolio of workplace-based assessment and other activities that contribute to their development as forensic odontologists. Satisfactory progress in the assessment process and success in an exit assessment by examination is required before award of the degree. Trainees shall initiate the portfolio that keeps all evidences of scholastic activities, workplace-based assessment, logbook,

reflection on practice, research competence and other professional developments.

8. ASSESSMENTS

Theory and Forensic Coursework Assessment

Trainees shall be assessed of their competencies in the scientific knowledge and basic principles to form a foundation in forensic odontology practice. The assessment shall consist of formative, continuous and summative assessments.

Clinical (Forensic) component

1) Formative assessment

This assessment is aimed to provide feedback to trainees of their progress and to familiarise them with summative assessment expectations.

2) Continuous assessment (40-60%)

3) Final summative assessment (60-40%)

Formal completion of training will be marked by satisfactory summative assessment

Trainees are assessed on a day-to-day basis and that the assessment is integrated into their daily work.

Assessments, if possible by a range of assessors, should cover a broad range of activities and procedures appropriate to the stage of training.

Some of the assessment methods are (but not limited to):

- Direct observation of practical skills (DOPS);
- Work-place based assessment;
- Case-based discussion (CBD);
- Performance at seminars/journal clubs/PBL
- Progress tests
- Assignment such as essays, case reports
- Competency test

A record of all appraisals will be kept in the portfolio which will be used as part of continuous assessment. Keeping the logbook of forensic cases completed and up to date is a trainee's responsibility.

The logbook may include at least the following:

- a) Details of observation
- b) Details of consultation
- c) Details of cases and procedures
- d) Audit

9. MINIMAL CLINICAL (FORENSIC) EXPERIENCE AND COMPETENCY TEST

The programme must provide sufficient forensic experience for the trainee have the basic understanding in managing Forensic Odontology cases. The trainee must complete the following cases:

Scope of Forensic Odontology cases	Minimal Clinical (Forensic) Experience
1. Human identification	● 2 cases/P4
2. Post mortem dental profiling, which include age estimation, gender and ethnic determination of an unknown body	● 2 cases/P4
3. Age assessment for living individuals	● 2 cases/P4
4. The use of dental imaging in forensic cases	● 5 cases/P4
5. Prepare forensic report	● 3 cases/P3

The range of minimal forensic work experience is recorded by maintaining a cumulative record of the number of procedures undertaken within specified categories.

The trainee must be monitored periodically to record how the trainee progresses throughout the training period. Proof of readiness to continue with specialty training must be documented.

Trainee must pass a competency test on the use of dental imaging technique.

10. HUMAN RESOURCE

The Programme Director and at least two (2) of the teaching staff must be recognised forensic odontologists. Other teaching staff must comprise a minimum of two (2) recognised specialists in the related field. There should be at least 60% full-time academic staff.

The number of teaching staff must be sufficient to ensure the conduct of the following:

- i. All guided teaching activities, including case conferences, self-study activities and seminars etc;
- ii. Review of case evaluation, case planning, management, complications and outcomes of all cases;
- iii. Supervision of all forensic activities;
- iv. Research activities;
- v. Assessment activities.

Supervision must be structured and supervisor(s) must be present for teaching and direct supervision of all cases. The suggested optimal ratios for academic staff to trainee are:

- For forensic coursework session - 1:6

11. FORENSIC FACILITIES

The HEP must provide facilities and resources to fulfil the needs of the training programme and to develop and sustain it on a continuing basis. These include;

- i. Physical facilities to permit trainee to operate under circumstances prevailing in the practice of forensic odontology;
- ii. Facilities specifically identified for the advanced education program in forensic odontology; The facility must be fully equipped with dedicated armamentarium and materials to allow the standard of practice at the advanced level;
- iii. Laboratory facilities specifically identified to support the fabrication of dental casts and analyses with contemporary techniques required in the program;
- iv. Laboratory bench spaces to accommodate the number of students/residents enrolled in the program

REFERENCES

Graduate Diploma Forensic Odontology Handbook Programme, University of Adelaide, Australia, 2016

Master of Science in Forensic Dentistry, Handbook University Western Cape South Africa, 2013

Royal College of Pathologists of Australasia, Forensic Odontology Curriculum, 2016. National Specialist Register Paperwork, August 2016

APPENDIX

Minimum course contents

1. Basic medical and dental science subjects
 - a. Pathology and oral pathology
 - b. Anatomy, oral anatomy and comparative anatomy
 - c. Applied Biomaterials
 - d. Biochemistry and Molecular genetics
2. Forensic Odontology training includes
 - a. History of Forensic Odontology
 - b. Human Identification of unknown body;
 - c. Metric and non-metric measurement of dental morphology
 - d. Age estimation;
 - e. Dental profiling in post-mortem
 - f. Sex and race determination of an unknown body
 - g. Imaging and software in Forensic Odontology
 - h. Forensic Radiography in Forensic Odontology
 - i. Forensic Dental Photography
 - j. Imaging in Forensic Odontology (2D and 3D)
3. Research activity
 - a. Literature review/ Critical review
 - b. Clinical audit of dental records

Programme delivery

A variety of recommended programme delivery techniques but not limited to the following:

- i. Face to face delivery, e.g. lecture, seminar, laboratory and clinical.
- ii. Action learning, e.g. forensic practice, forensic teaching, simulation and practical.
- iii. Collaborative Learning, e.g. projects, assignments and report.
- iv. Self-directed learning
- v. Cooperative learning, such as problem-based learning and project based learning
- vi. Technology-based delivery, such as online methods, Tele-conferences, Game-based methods and Mobile systems.
- vii. Experiential method, such as Field work, project-based learning, and On-Site learning or visits
- viii. Work-based learning (WBL) method such as practicum and clinical attachment.

GLOSSARY OF TERMS

The terms used in this document (*ie* must, should, may and could) were selected to indicate the relative weight that the DentSEdC/JTCEDSP attaches to each statement. The definitions of these words used in this document are as follows:

Must/shall: indicates an imperative need and/or duty; an essential or indispensable item; mandatory

Should: indicates a method to achieve the standards.

May or could: indicates freedom or liberty to follow a suggested alternative.

Levels of knowledge:

- In depth: A thorough knowledge of concepts and theories for the purpose of critical analysis and the synthesis of more complete understanding.
- Understanding: Adequate knowledge with the ability to apply.
- Familiarity: A simplified knowledge for the purpose of orientation and recognition of general principles.

Level of skills:

- Proficient: The level of skill beyond competency. It is that level of skill acquired through advanced training or the level of skill attained when a particular activity is accomplished with repeated quality and a more efficient utilization of time.
- Competent: The level of skill displaying special ability or knowledge derived from training and experience.
- Exposed: The level of skill attained by observation of or participation in a particular activity.

FOUNDATION FOR SPECIALTY TRAINING IN ORTHODONTICS

By:

Dental Specialty Education Committee
(DentSEdC) Orthodontics

This Program Standards was endorsed by the Malaysian Dental Council
(MDC) at its 9th Meeting on 24 July 2023

STANDARDS FOR FOUNDATION ORTHODONTICS COURSE (MASTER PROGRAMME)

A. Course Learning Outcomes

At the end of the course, the student should be able to:

- 1) Explain the concept of craniofacial growth and development; and occlusion (C4)
- 2) Demonstrate skill to diagnose patients' malocclusions and dental abnormalities (C3, P4)
- 3) Justify patient management based on investigation and clinical assessment (C4)

B. Student Learning Time (SLT)

- 1) Minimum SLT for specialty in Orthodontics = 800 (clinical SLT = 200)
- 2) Maximum SLT for specialty in Orthodontics = 1000

C. Module of orthodontics

- 1) Growth and development
This module should cover the following areas:
 - Embryology, craniofacial growth and development
 - Development of dentition
 - Biology of tooth movement
 - Occlusion
- 2) Malocclusion
This module should cover the following areas:
 - Aetiology
 - Class I, Class II and Class III malocclusion
- 3) Diagnostic procedures
This module should cover the following the areas:
 - Orthodontic records
 - Growth prediction
 - Orthodontic clinical examination and diagnosis
 - Orthodontic indices

D. Course Requirements

- i. Preclinical requirements
This course must incorporate preclinical tasks which include:
 1. Wire bending exercises
 2. Cephalometry and growth prediction
 3. Orthodontic photography
 4. Construction of orthodontic study model
 5. Straight wire Typodont training
- ii. Clinical requirements:
The students should achieve a minimum of 10 complete diagnostic cases

E. Student Assessment

The assessment should consist of:

- a. Summative Assessment
- b. Formative Assessment

FOUNDATION FOR SPECIALTY TRAINING IN ORAL MAXILLOFACIAL PATHOLOGY AND ORAL MEDICINE

By:

Dental Specialty Education Committee
(DentSEdC) Oral Maxillofacial Pathology and
Oral Medicine

This Program Standards was endorsed by the Malaysian Dental Council
(MDC) at its 8th Meeting on 3 April 2023

STANDARDS FOR FOUNDATION ORAL MAXILLOFACIAL PATHOLOGY AND ORAL MEDICINE COURSE (MASTER PROGRAMME)

A. STUDENT LEARNING TIME

800 to 1000 hours

B. SCOPE

i. Fundamentals in oral maxillofacial pathology

Oral maxillofacial pathology is a specialised field of histopathology concerned with the microscopic examination of tissues, taken either as biopsy samples or resection specimens from the oral and maxillofacial region for the purpose of diagnosis, prognosis and directing appropriate treatment.

ii. Fundamentals in oral medicine

Oral medicine is a specialty concerned with the diagnosis and management of patients with oral and maxillofacial disease including medically related disorders, salivary gland disorders, potentially malignant disorders, orofacial pain, orofacial infectious diseases, and chemosensory disorders, whose primary treatment modality is non-surgical.

C. OUTCOMES AND CONTENT OF LEARNING

Upon completion of the 1-year training, students should be able to:

1. integrate knowledge in the relevant biology, anatomy, pathophysiology, and histopathology of intra- and extra-oral structures and tissues related to oral and maxillofacial diseases (C5);
2. distinguish the various clinical presentations of relevant orofacial diseases and related systemic conditions (C4);
3. demonstrate the principles of laboratory techniques within surgical pathology (tissue fixation, specimen dissection, macroscopic description, and tissue processing) (C3, P4);
4. justify the use of instruments and equipment relevant to diagnostic surgical pathology (C4);
5. appraise the various routine, special and immunohistochemical stains in surgical pathology (C6);
6. demonstrate the ability to recognise normal histology and straightforward pathological entities (C3, P4)
7. perform relevant history taking and examination in the diagnosis of oral and maxillofacial diseases (P5); and
8. justify the selection of relevant investigative procedures to aid the diagnosis of oral and maxillofacial diseases (C6).

D. COMPONENTS IN ORAL MAXILLOFACIAL PATHOLOGY AND ORAL MEDICINE

i. Fundamentals in oral and maxillofacial pathology

- Normal histology
- Basic pathology of diseases
- Diagnostic surgical oral pathology

- ii. General principles of laboratory techniques
 - Specimen fixation
 - Dissection and macroscopic description of tissue specimen
 - Histologic processing, routine, special and immunohistochemical stains in surgical pathology
- iii. Clinical diagnostics
 - Principles of clinical diagnostics
 - Patient examination and diagnostic procedures

E. MINIMAL CLINICAL REQUIREMENT

- i. Grossing of simple tissue biopsy specimen – 5 cases*
 - ii. Examination and diagnosis of common oral lesions – 5 cases*
- * **ONE (1)** case form each of these categories must be assessed in the form of a competency test.

F. ASSESSMENT

The student assessment should consist of:

- i. Formative assessment
- ii. Summative assessment

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Institut Penyelidikan Perubatan

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Universiti Kebangsaan Malaysia

FOUNDATION FOR SPECIALTY TRAINING IN PAEDIATRIC DENTISTRY

By:

Dental Specialty Education Committee
(DentSEdC) Paediatric Dentistry

This Program Standards was endorsed by the Malaysian Dental Council
(MDC) at its 8th Meeting on 3 April 2023

STANDARDS FOR FOUNDATION PAEDIATRIC DENTISTRY COURSE (MASTER PROGRAMME)

Introduction

The 1-year master's programme is a prerequisite for entry into the Doctor of Paediatric Dentistry (DrPaedDent) speciality programme. The general structure of the 1-year master's programme is as outlined below:

The general structure of master's programme

No.	Course	Minimum (hours)	SLT
1.	Basic Sciences	800	
2.	Research Methodology and Biostatistics		
3.	Elective Courses		
4.	*Foundation for Specialty	800	
Total		1600	

*The specialty component of the 1-year master's programme

Foundation for specialty in Paediatric Dentistry course/courses shall include knowledge, psychomotor and affective components in its learning outcomes. The overall total Student Learning Time (SLT) for the foundation for specialty in Paediatric Dentistry range from 800 – 1000 hours.

Foundation for Specialty in Paediatric Dentistry

Foundation for specialty in Paediatric Dentistry should be designed to enhance the trainee's knowledge and skills related to the field of Paediatric Dentistry. It should cover the fundamental topics that include the biological basis of disease management, as well as the clinical and technical aspects of prevention and treatment of orofacial diseases in children and children with special healthcare needs under the age of 16. The course shall also emphasise the importance of continuous enhancement of knowledge, teamwork and engagement with society in general.

Learning Outcomes

At the end of 1-year training, the trainee will be able to:

relate relevant fundamental knowledge of healthy health development and disease processes in children and children with special healthcare needs from infancy to adolescence in the context of Paediatric Dentistry (C5);
integrate knowledge of child psychology in behaviour guidance strategies for children in the context of Paediatric Dentistry (C5);
justify the importance of different dental and medical procedures performed for the care of patients in the context of Paediatric Dentistry (C4);
perform the various dental or medical procedures on typodont teeth or mannequins (P6)
demonstrate ability to cooperate with healthcare professionals to plan, assist or implement programmes that are beneficial to patients and the community (P4, A4);
demonstrate ability to pursue independent study for the professional enhancement of knowledge and clinical competencies using a variety of sources (C6, A4);

Course Content

Preparatory Clinical Skills in Paediatric Dentistry

No.	Procedures	Minimal Preclinical Exposures	Teaching Methods	Assessment
1.	Intra-coronal restoration	Two Class I and Class II restorations on primary typodont molars respectively [Restorative material used can be either amalgam, composite or glass ionomer cement based on the indications specified by the Higher Education Provider (HEP)]	Demonstration of procedures either live or using audio-video aid, discussion and assignment	Completion of the practical requirement and ONE competency test of a class II cavity preparation with restoration
2.	Extra-coronal restoration	Two paediatric strip- crowns on maxillary primary typodont incisors and two stainless steel crowns on primary typodont molars	Demonstration of procedures either live or using audio-video aid, discussion and assignment	Completion of the practical requirement and ONE competency test of the paediatric strip- crown restoration and stainless-steel crown respectively
3.	Endodontic	Two pulpotomies and pulpectomies on extracted primary molars respectively One access-cavity procedure on a maxillary permanent central incisor, a maxillary permanent premolar and a permanent molar either maxillary or mandibular molar respectively One root canal procedure up to the stage of canal obturation on a maxillary permanent incisor and a permanent molar either maxillary or mandibular molar respectively One Regenerative Endodontic procedure on a maxillary permanent incisor One apical plug placement procedure (apexification) on a maxillary permanent incisor	Demonstration of procedures either live or using audio-video aid, discussion and assignment	Completion of the practical requirement
4.	Trauma	A wire-composite splint on the four maxillary	Demonstration of procedures	Completion of the practical

		<p>typodont incisors</p> <p>One restorative procedure on a maxillary incisor tooth with an incisal-proximal fracture (Class IV) – either reattachment of fracture fragment or restoration</p>	either live or using audio-video aid, discussion and assignment	requirement
5.	Interceptive orthodontic	Placement of a band on a primary molar typodont tooth, impression taking and transferring of the band into the impression	Demonstration of procedures either live or using audio-video aid, discussion and assignment	Completion of the practical requirement
6.	Oral Surgery	<p>Basic Suturing techniques</p> <p>Jaw fixation and splinting techniques with arch bar and wires</p> <p>Phlebotomy technique</p> <p>IV-cannula insertion technique</p> <p>IV-fluid set-up and maintenance technique</p>	Demonstration of procedures either live or using audio-video aid, discussion and assignment	Completion of the practical requirement
7.	Behaviour Management	Nitrous oxide-oxygen conscious sedation training exposure	Demonstration of procedures either live or using audio-video aid, discussion and assignment	Completion of the practical requirement and ONE competency test (students can perform the procedure on each other)
8.	Examination and Diagnosis with Treatment Planning	Knowledge exposure and practical training	Lecture or discussion and assessment of a patient	Completion of the requirement and ONE competency test
9.	Cross-infection Control Hand scrub and operation theatre gowning technique	Knowledge exposure and practical training	Lecture or discussion and demonstration of procedures either live or using audio-video aid	Completion of the requirement
10.	Hospital Exposure	Exposure to the hospital environment	Ward and operation theatre participation	Completion of the requirement

* Note: The procedures outlined in this standard are the minimum competencies expected of students at the 1-year Master's programme level and must be reflected in the trainee's training. HEP can set any other additional procedures or requirements deemed necessary for their respective course.

Fundamental Knowledge in Paediatric Dentistry

No.	Modules	Topics (Suggestive Topics)	Teaching Methods (Suggestive Methods)	Assessment Methods (Suggestive Methods)
1.	Children's Growth & Development	<ul style="list-style-type: none"> • General human growth and development • Craniofacial growth and development • Development of human dentition • Developmental milestones from infancy to adolescence 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Assignment / Quiz / Progress Test / Professional Exam
2.	Children's Psychology and Behaviour Management	<ul style="list-style-type: none"> • Child psychology • Assessing children's behaviour • Dental personnel, dental environment, parents and social factors influencing children's behaviour • Non-pharmacological based behaviour management strategies to manage children's behaviour • Conscious sedation and general anaesthesia for children's dental treatment 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Assignment / Quiz / Progress Test / Professional Exam
3.	Clinical Assessment, Diagnosis and Treatment Planning related to Paediatric Dentistry	<ul style="list-style-type: none"> • History taking and treatment planning • Dental radiography in children • Pain and infection control in children • Anxiety, fear and phobia management of children 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Assignment / Quiz / Progress Test / Professional Exam
4.	Pathogenesis, Prevention and Treatment of Oral Diseases (Primarily diseases of teeth and their investing tissues)	<ul style="list-style-type: none"> • Diet and dental caries • Preventive strategies in caries management • Paediatric operative techniques for restorations of teeth • Paediatric endodontics to manage diseased or traumatised teeth 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Assignment / Quiz / Progress Test / Professional Exam

Note: Higher Education Provider (HEP) to decide on the final contents of the respective teaching modules, as well as the methods of teaching and assessment.

FOUNDATION FOR SPECIALTY TRAINING IN PERIODONTOLOGY

By:

Dental Specialty Education Committee
(DentSEdC) Periodontology

This Program Standards was endorsed by the Malaysian Dental Council
(MDC) at its 9th Meeting on 24 July 2023

STANDARDS FOR FOUNDATION PERIODONTOLOGY COURSE (MASTER PROGRAMME)

Introduction

The training of a clinical dental specialist in Malaysia will require a training programme of 4 years. The programme will include a one-year Master programme and a three-year Doctorate programme in each of the dental specialties listed by the Malaysian Dental Council (MDC), including Periodontology. This one-year programme is the prerequisite for entry to the Doctorate in Periodontology (DrPerio) course conducted in Malaysia.

The master's programme shall consist of 2 basic components: 1. The generic components for all the clinical dental specialties programme by the HLP, which includes - basic science, research methodology and/or electives courses, totaling to a minimum of 800 student learning time (SLT); and 2. Foundation in the specific specialty and initial training, which will need a minimum of 800 SLTs. This will make the total SLTs to 1600, and can exceed up to 2000, if needed.

General structure of master's programme

No.	Course	Minimum SLT (hours)
1.	Basic Science	800
2.	Research Methodology and Biostatistics	
3.	Electives	
4.	Specialty*	800
Total		1600

*The specialty component of the 1-year master's programme

A. Outcomes, Competencies and content of learning

The training provided should be designed to enhance the student's knowledge and skills related to the field of periodontics. It should cover the foundation topics that include the biology of the oral tissues with emphasis on the periodontium, basic knowledge of health and disease of the periodontium and its management, as well as the clinical and technical aspects of periodontal treatment.

a) Outcomes of the 1-year master programme related to periodontics.

At the end of 1-year training, the student will be able to:

1. Relate knowledge when executing patient treatment in the specialty of Periodontology.
2. Choose relevant investigations for patient management in the specialty of Periodontology.
3. Manage patient effectively in the specialty of Periodontology.

- b) Competencies:
1. Apply relevant knowledge in anatomy and physiology of the oral and peri-oral tissues with particular emphasis on periodontium and related tissues (C4, A3);
 2. Devise solutions/treatment plan, to problems in the periodontics using scientific and critical thinking skills (C3, A4);
 3. Provide appropriate clinical care for patients at the level of a skilled general dental practitioner including emergency treatment for the relief of acute pain (P4);
 4. Assess critically scientific papers and available evidence relevant to periodontics using a variety of information sources (C4, A4)
 5. Conduct research with supervision and adhere to the legal ethical and professional code of practice in the relevant field (A4, P4).
- c) Suggested detailed content:
1. Examination & diagnosis, risk assessment & treatment planning
 2. Periodontal Instrumentation (Basic and surgical) & Root surface debridement
 3. Structure and Function of Periodontium
 4. Classification & Natural History of Periodontal Disease
 5. Epidemiology & Indices
 6. Aetiology & Microbiology of Periodontal Disease
 7. Pathogenesis of Periodontal Disease: Cellular & Molecular Aspects
 8. Disease Assessment
 9. Periodontal Diagnostic Procedures
 10. Prognosis, Treatment Planning and Risk Assessment
 11. Foundation of knowledge, skill, and limitations in other restorative dentistry cases (endodontic, conservative and prosthodontics).

B. Minimal Clinical Requirement

The 1-year training must incorporate:

- i) Pre-clinical tasks which include:
 1. Techniques for non-surgical periodontal procedures.
 2. Overview of Restorative dentistry component: simple endodontics, restorative and prosthodontics of treatment.
- ii) Clinical requirements:

The students should treat and manage a minimum of 4-5 moderate to severe periodontal diseases patients.

C. Assessment

There must be a:

1. Formative assessment including:
 - a. Clinical work at periodontal clinic

- b. coursework assignment
- c. journal club,
- d. seminar,

2. Summative assessment.

Periodontics basic science course must have a final written examination:

- a. Theory paper and
- b. *viva voce*

FOUNDATION FOR SPECIALTY TRAINING IN PROSTHODONTICS

By:

Dental Specialty Education Committee
(DentSEdC) Prosthodontics

This Program Standards was endorsed by the Malaysian Dental Council
(MDC) at its 9th Meeting on 24 July 2023

STANDARDS FOR FOUNDATION PROSTHODONTIC COURSE (MASTER PROGRAMME)

Introduction

The 1-year master's programme is a prerequisite for entry into the Doctor of Prosthodontics three (3) years speciality training. The general framework of the master's program shall consist of basic science, research methodology and biostatistics, elective courses, and foundation for speciality.

The general structure of the master's program

No.	Course	Minimum SLT (hours)
1.	Basic Sciences	800
2.	Research Methodology and Biostatistics	
3.	Elective Courses	
4.	*Foundation for Specialty	800 to 1000
Total		1600 to 2000

*The speciality component of the 1-year master's program

The training provided in this program should be designed to enhance the trainee's knowledge and skills related to the field of prosthodontics and other relevant fields including operative, endodontics, and periodontics.

A. Course Learning Outcomes

At the end of one year training, the trainee will be able to:

1. Relate relevant foundation knowledge and in-depth understanding in basic sciences and clinical dentistry for management of oral rehabilitation in the context of Prosthodontics (C5).
2. Justify the use of dental materials, equipment, and technology for related laboratory procedures and patient management (C5).
3. Perform appropriate preclinical and clinical skills in in the field of Prosthodontic and relevant restorative dentistry (P5).
4. Gather and document appropriate relevant history, clinical examination, diagnose, plan and provide clinical care at the level of a skilled general dental practitioner (P5, C5).
5. Demonstrate appropriate verbal and non-verbal communication, ethics and profesionalisme skills with patients, dental auxiliaries, and relevant individuals during training and clinical practice (A5).

6. Demonstrate the ability to pursue lifelong learning and provide evidence based clinical solutions in response to problem by adopting holistic approach (A4).

B. Student Learning Time (SLT)

The total Student Learning Time (SLT) ranges from 1600 to 2000 hours. The overall total Student Learning Time (SLT) for the foundation for speciality in Prosthodontics specialty will be at the range from 800 – 1000 hours.

C. Suggested content in Prosthodontics programme

The course should be structured to include Fixed and Removable Prosthodontics and other related fields mainly Operative Dentistry, Endodontics, and Periodontics. The method of teaching and learning may consist of seminars, journal club, case presentation, simulation clinics, and clinical management or blended learning (for selected topics or cases).

I. Fundamental Knowledge in Prosthodontics specialty

No.	Modules	Topics (Suggestive Topics)	Teaching Methods (Suggestive Methods)	Assessment Methods (Suggestive Methods)
1.	Prosthodontics (Fixed and Removable Prosthodontics)	<ul style="list-style-type: none"> ● Principles of tooth preparation for intra-coronal and extra-coronal restorations ● Provisional restorations and materials ● Principles of Removable partial denture design ● Planning and preparation for fixed prosthodontics ● Treatment planning in removable prosthodontics ● Treatment options for missing teeth ● Preparation for Endo treated tooth (Post & Core) - - types and techniques. ● Pontic design and edentulous ridge ● Other types of prosthesis ● Update on dental technology 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Formative or summative
2.	Occlusion	<ul style="list-style-type: none"> ● Anatomy of the occlusal system, mandibular movements, and occlusal concepts. ● Occlusal analysis ● Articulator ● Occlusion in removable and fixed prosthodontics 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Formative or summative
3.	Tooth surface loss (TSL)	<ul style="list-style-type: none"> ● Aetiology, diagnosis, and treatment planning ● Techniques for management of TSL 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Formative or summative
4.	Endodontics	<ul style="list-style-type: none"> ● Biology and physiology of the pulp dentin complex. 	Lecture / Tutorial /	Formative or

		<ul style="list-style-type: none"> ● Pulp and periapical pathology ● Endodontics management (including instrumentation, medicaments, and materials) 	Discussion / Seminar / Journal Club	summative
5.	Periodontics	<ul style="list-style-type: none"> ● Pathogenesis of periodontal disease ● Periodontal screening, periodontal examination, diagnosis, and treatment planning ● Classification of periodontal diseases ● Prognosis, Treatment Planning and Risk Assessment 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Formative or summative
6.	Operative dentistry	<ul style="list-style-type: none"> ● Aetiology, pathogenesis, and management of caries ● Management of deep carious lesion ● Pain management in dentistry ● Crack tooth syndrome 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Formative or summative
7.	Dental materials	<ul style="list-style-type: none"> ● Tooth coloured material – Composite, Glass ionomer, compomer ● Amalgam and Alloys ● Ceramic ● Impression Materials ● Acrylic-based Materials ● Endodontic materials ● Adverse effects/controversies of dental materials ● Dental cements 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Formative or summative
8.	Adhesive dentistry	<ul style="list-style-type: none"> ● History and classifications ● Current concept of bonding to dentine and enamel 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Formative or summative

Note: Higher Education Provider (HEP) to decide on the final contents of the respective teaching modules and the methods of teaching and assessment.

II. Preparatory preclinical skills in Prosthodontics specialty

No.	Procedures	Minimal Preclinical Exposures (Suggestive Methods)	Teaching Methods (Suggestive Methods)	Assessment (Suggestive Methods)
1.	Fixed and Removable Prosthodontics	1.FIXED PROSTHODONTICS <ol style="list-style-type: none"> 1. PFM three-unit bridge <ul style="list-style-type: none"> - tooth preparation, provisional bridge 2. all-ceramic crown <ul style="list-style-type: none"> - tooth preparation and provisional crown 3. Onlay/Inlay – tooth preparation 4. Veneer 5. Post and core 2.REMOVABLE PROSTHODONTICS <ul style="list-style-type: none"> - Co-cr denture design 	Demonstration of procedures either live or using audio-video aid, discussion, and practical assignment	Completion of the practical requirement. Competency test: A. Fixed Prosthodontics <ul style="list-style-type: none"> - crown preparation and bridge preparation B. Removable Prosthodontics <ul style="list-style-type: none"> - Surveying & Denture Design
2.	Occlusion	<ol style="list-style-type: none"> 1. Diagnostic wax-up teeth on stone models. 2. Model occlusion analysis 	Demonstration of procedures either live or using audio-video aid and discussion, and practical assignment.	Completion of practical requirement for diagnostic wax-up.
3.	Endodontics	<ol style="list-style-type: none"> 1. Root canal treatment on One (1) anterior and 2(two) posterior extracted teeth using various hand preparation techniques for canal preparation 	Demonstration of procedures either live or using audio-video aid, discussion, and practical	Completion of practical requirement and Preclinical on extracted anterior/premolar/molar tooth (access cavity, canal

		(for example, modified double flare technique, hand protaper technique, or other techniques etc.)	assignment.	preparation, and obturation).
4.	Periodontics	1. Examination & diagnosis, risk assessment & general treatment planning	Case based discussion or using audio-video aid.	Case based scenario
5.	International Caries Detection and Assessment System (ICDAS) and International Caries Classification and Management System (ICCMS)	Knowledge exposure and practical training	Lecture or discussion and demonstration of procedures either live or using audio-video aid.	Completion of the practical requirement.

Note: Higher Education Provider (HEP) to decide on the final contents of the respective teaching modules and the methods of teaching and assessment

III. General Dental Practice Clinic / Prosthodontics Clinic

No.	Procedures	Minimal Preclinical Exposures	Teaching Methods	Assessment
1.	General Dental Practice Clinic / Prosthodontics Clinic	Knowledge exposure and clinical training	Clinical sessions	Clinical Logbook / Minimum 2 (TWO) clinical portfolios/case study write-up.

D. Assessment

1. FORMATIVE ASSESSMENT

- a. Pre-clinical assessment
- b. Clinical Practice: clinical case evaluation (logbook)/ case portfolio/ case presentation/write up
- c. Feedback: pre-clinical exercises evaluation (logbook) / Case-based discussions/seminar/journal club

2. SUMMATIVE ASSESSMENT:

- a) Continuous Assessments –
 - i. Pre-clinical competency tests (Fixed Prosthodontics- crown preparation and bridge preparation, Removable prosthodontics- surveying and denture design)
 - ii. Clinical Practice: clinical case evaluation (logbook)/competency test/ case portfolio/ case presentation/write up
- b) Final Professional Exam
 - Written Examination (Format of theory assessment may include: (Multiple choice question [example; One Best Answer (OBA), True/False, Single Response Answer (SRA)] • Written question [Short Answer Question (SAQ)/ Scenario Essay Question (SEQ), Modified Essay Question (MEQ), or other types of question that show Integrated Essay Question).

Note: Higher Education Provider (HEP) to decide on the final contents of the respective teaching modules and the methods of teaching and assessment.

Members

- i. Prof. Madya Dr. Zaihan Ariffin (Leader)
- ii. Prof. Madya Dr. Norasmatul Akma Ahmad
- iii. Dr. Yanti Johari
- iv. Dr. Kamarul Hisham Kamarudin
- v. Dr. Saridatun Nur Abd Salam
- vi. Lt. Kol (Dr) Marissa Baharom
- vii. Dr. Mohd Muzafar Hamiruddin

FOUNDATION FOR SPECIALTY TRAINING IN RESTORATIVE DENTISTRY

By:

Dental Specialty Education Committee
(DentSEdC) Restorative Dentistry

This Program Standards was endorsed by the Malaysian Dental Council
(MDC) at its 8th Meeting on 3 April 2023

STANDARDS FOR FOUNDATION RESTORATIVE DENTISTRY COURSE (MASTER PROGRAMME)

Introduction

The 1-year master's programme is a prerequisite for entry into the Doctor of Restorative Dentistry three (3) years speciality training. The general framework of the master's program shall consist of basic science, research methodology and biostatistics, elective courses, and foundation for speciality

The general structure of the master's program

No.	Course	Minimum (hours)	SLT
1.	Basic Sciences	800	
2.	Research Methodology and Biostatistics		
3.	Elective Courses		
4.	*Foundation for Specialty	800 to 1000	
Total		1600 to 2000	

*The speciality component of the 1-year master's program

The foundation for The Restorative Dentistry speciality course should be designed to enhance knowledge, understanding, and skills in all three sub-fields, namely prosthodontics, endodontics, and periodontics.

A. Course Learning Outcomes

At the end of 1-year training, the trainee will be able to:

1. Relate relevant fundamental knowledge of biomedical, technological, and clinical sciences to physiological and pathological conditions in the context of Restorative Dentistry (C5).
2. Apply practical preclinical and laboratory skills in the field of Restorative Dentistry (P5).
3. Select dental materials, equipment, and technology for patient management and associated laboratory procedures (C6).
4. Gather and record relevant history, conduct a thorough physical examination, diagnose, plan and deliver clinical care, and appraise various outcome measures at the level of a skilled general dental practitioner (P6, C5).
5. Display appropriate verbal and non-verbal communication skills with patients, dental auxiliaries, and relevant individuals during training and clinical practice (P5,A5).

6. Demonstrate the ability to pursue independent study for the professional enhancement of knowledge and clinical competencies using a variety of sources (C6, A4)

B. Student Learning Time (SLT)

The total Student Learning Time (SLT) ranges from 1600 to 2000 hours. The overall total Student Learning Time (SLT) for the foundation for speciality in Restorative Dentistry range from 800 – 1000 hours.

C. Suggested content in Restorative Dentistry

The course should be structured to include all three sub-fields in Restorative Dentistry, namely Prosthodontics (either Fixed or Removable or both), Endodontics, and Periodontics. The method of teaching and learning may consist of seminars, simulation clinics, and personal treatment clinics.

I. Fundamental Knowledge in Restorative Dentistry

No.	Modules	Topics (Suggestive Topics)	Teaching Methods (Suggestive Methods)	Assessment Methods (Suggestive Methods)
1.	Prosthodontics (Fixed and Removable Prosthodontics)	<ul style="list-style-type: none"> Principles of tooth preparation for intra-coronal and extra-coronal restorations Provisional restorations and materials Principles of Removable partial denture design 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Assignment / Quiz / Progress Test
2.	Occlusion	<ul style="list-style-type: none"> Anatomy of the occlusal system, mandibular movements, and occlusal concepts. Occlusal analysis Bite registration and facebows records. Articulator Diagnostic wax-up Occlusal splints 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Assignment / Quiz / Progress Test
3.	Tooth surface loss (TSL)	<ul style="list-style-type: none"> Aetiology, diagnosis, and treatment planning Techniques for management of TSL 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Assignment / Quiz / Progress Test
4.	Endodontics	<ul style="list-style-type: none"> Biology and physiology of the pulp dentin complex. Microbiology in endodontics. Pulp and periapical pathology Endodontics management (including instrumentation, medicaments, and materials) Restoration of root treated tooth Clinical outcome, prognosis, and retreatment. 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Assignment / Quiz / Progress Test
5.	Periodontics	<ul style="list-style-type: none"> Pathogenesis of periodontal disease Periodontal screening, periodontal examination, diagnosis, and treatment planning 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Assignment / Quiz / Progress Test

		<ul style="list-style-type: none"> ● Systemic diseases and periodontal disease ● Plaque control ● Non-surgical periodontal therapy ● Prognosis of periodontal disease 		
6.	Operative dentistry	<ul style="list-style-type: none"> ● Aetiology, pathogenesis, and management of caries ● Principles of aesthetics in dentistry ● History taking and treatment planning 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Assignment / Quiz / Progress Test
7.	Dental materials	<ul style="list-style-type: none"> ● Tooth coloured material – Composite, Glass ionomer, compomer ● Dental Bonding agents ● Amalgam and Alloys ● Ceramic ● Impression Materials ● Die materials ● Acrylic-based Materials ● Endodontic materials 	Lecture / Tutorial / Discussion / Seminar / Journal Club	Assignment / Quiz / Progress Test

Note: Higher Education Provider (HEP) to decide on the final contents of the respective teaching modules and the methods of teaching and assessment.

II. Preparatory preclinical skills in Restorative Dentistry

No.	Procedures	Minimal Preclinical Exposures	Teaching Methods	Assessment
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1.	Fixed and Removable Prosthodontics	<p>A. FIXED PROSTHODONTICS</p> <p>6. PFM three-unit bridge</p> <ul style="list-style-type: none"> - tooth preparation, provisional bridge <p>7. all-ceramic crown</p> <ul style="list-style-type: none"> - tooth preparation and provisional crown <p>8. Onlay – tooth preparation</p> <p>B. REMOVABLE PROSTHODONTICS</p> <ul style="list-style-type: none"> - Co-cr denture design 	Demonstration of procedures either live or using audio-video aid, discussion, and practical assignment	<p>Completion of the practical requirement. Competency test:</p> <p>C. Fixed Prosthodontics</p> <ul style="list-style-type: none"> - crown preparation and provisional restoration <p>D. Removable Prosthodontics</p> <ul style="list-style-type: none"> - Surveying & Denture Design
2.	Occlusion	<p>3. Diagnostic wax-up teeth on stone models.</p> <p>4. 1(one) hard acrylic occlusal splint.</p>	Demonstration of procedures either live or using audio-video aid and discussion, and practical assignment.	Completion of practical requirement for diagnostic wax-up. Compulsory attendance for construction of mouth guard demonstration.
3.	Endodontics	2. Root canal treatment on 2(two) anterior and 2(two) posterior extracted teeth using various hand preparation techniques for canal preparation (for example, modified double flare technique, hand protaper technique, etc.)	Demonstration of procedures either live or using audio-video aid, discussion, and practical assignment.	Completion of practical requirement and ONE competency test on extracted molar tooth (access cavity, canal preparation, and obturation).

4.	Periodontics	2. Full periodontal charting 3. Root surface debridement 4. Instrument sharpening	Demonstration of procedures either live or using audio-video aid, discussion, and practical assignment	Completion of the practical requirement and ONE competency test on root surface debridement.
5.	International Caries Detection and Assessment System (ICDAS) and International Caries Classification and Management System (ICCMS)	Knowledge exposure and practical training	Lecture or discussion and demonstration of procedures either live or using audio-video aid.	Completion of the requirement.

Note: Higher Education Provider (HEP) to decide on the final contents of the respective teaching modules and the methods of teaching and assessment.

III. General Dental Practice Clinic / Restorative Consultation Clinic

No.	Procedures	Minimal Preclinical Exposures	Teaching Methods	Assessment
1.	General Dental Practice Clinic / Restorative Consultation Clinic	Knowledge exposure and clinical training	Clinical sessions	Clinical Logbook / Minimum 2 (TWO) clinical portfolios/case write-up.

Note: Higher Education Provider (HEP) to decide on the final contents of the respective teaching modules and the methods of teaching and assessment.

E. Assessment

1. FORMATIVE ASSESSMENT:

- a) Pre-clinical competency tests (Fixed Prosthodontics- crown preparation and provisional restoration, Removable prosthodontics- surveying and denture design, Endodontics- access cavity, canal preparation and obturation, Periodontics- Root surface debridement)
- b) Clinical Practice: clinical case evaluation (logbook), case portfolio/ case write up
- c) Feedback: pre-clinical exercises evaluation (logbook) / Case-based discussions

2. SUMMATIVE ASSESSMENT:

- a) Continuous Assessments – Seminar/Journal clubs/ Progress test/ quizzes/ Mini tests
- b) Final Professional Exam
 - Written Examination (Format of theory assessment should include: (Multiple choice question [example; One Best Answer (OBA), True/False, Single Response Answer (SRA)] • Written question [Short Answer Question (SAQ), Modified Essay Question (MEQ)])

FOUNDATION FOR SPECIALTY TRAINING IN SPECIAL CARE DENTISTRY

By:

Dental Specialty Education Committee
(DentSEdC) Special Care Dentistry

This Program Standards was endorsed by the Malaysian Dental Council
(MDC) at its 9th Meeting on 24 July 2023

STANDARDS FOR FOUNDATION SPECIAL CARE DENTISTRY COURSE (MASTER PROGRAMME)

A. STUDENT LEARNING TIME

800 – 1000 hours

B. SCOPE

The scope of Special Care Dentistry encompasses a comprehensive, holistic approach to the care of patients who are categorized as having compromised physical, intellectual, medical, psychiatric conditions, or a combination of these factors that directly or indirectly affect their oral health. It includes the delivery of oral health care, focusing on individuals with special needs aged **16 years and above**. The programme should include multidisciplinary involvement of other dental, medical specialties and other healthcare professionals/providers. Close cooperation with other stakeholders such as government agencies and non-governmental organisations should be encouraged.

C. COURSE LEARNING OUTCOMES

At the end of the course, the graduate must be able to:

- i. demonstrate mastery of knowledge in the field of Special Care Dentistry
- ii. apply practical skills in Special Care Dentistry
- iii. relate ideas to societal issues in Special Care Dentistry
- iv. adhere to legal, ethical and professional codes of practice
- v. solve clinical-related problems based on scientific evidence and critical thinking skills

D. COMPETENCIES

Upon completion of the course, the graduate is expected to be able to:

1. Integrate the knowledge of the biological sciences, pharmacology and therapeutics and understand their relevance to the management of special care patients (C5)
2. Demonstrate a knowledge and understanding of the epidemiology of different impairments and of oral disease in patients with special needs. (C3)
3. Demonstrate and coordinate the knowledge and understanding of the conditions leading to impairment and disability. (C3,P4)
4. Describe, identify and detect the common oral manifestations of systemic disease including the treatment of specific conditions such as gingival hyperplasia in a patient with epilepsy on anticonvulsant medication or periodontal disease in Downs Syndrome patients etc. (C5,P4)
5. Integrate the knowledge of barriers and access to care experienced by people with disabilities with the dental management of such patients. (C5)
6. Demonstrate an understanding of inequalities in health, oral health and health promoting strategies. (C3)
7. Justify the understanding of the implications of consent for examination and treatment and demonstrate an awareness of variations in Malaysia legislation. (C6,C3)
8. Demonstrate knowledge of the management of medical emergencies in practice. (C3,P4)
9. Adapt the understanding of the methods of needs assessment and individuals' priorities in order to promote positive oral health gain. (P4)

E. RECOMMENDED COMPONENTS IN SPECIAL CARE DENTISTRY (MAY BE INTEGRATED IN OTHER COURSES WITHIN THE MASTER PROGRAMME)

Applied Biology and Systemic Disease and Behavioural Sciences

1. Normal and abnormal craniofacial development.

2. Normal and abnormal development of the dento-alveolar region
3. Impact of genetic conditions where there is an orofacial component.
4. Pharmacology and therapeutics
5. Side effects of drug interactions with medications which can be prescribed
6. Common oral complications of medically prescribed medications
7. Pathophysiology of the body systems in relation to special care dentistry e.g respiratory, cardiovascular, endocrine etc
8. Oral implications of infectious diseases
9. Definition of impairment and disability
10. Medically compromising conditions leading to disability
11. Conditions that may lead to medical emergencies in dental setting
12. Theories of behaviour, phobias and anxiety
13. Inequalities in health
14. Barriers to care (definitions, physical and attitude)
15. Quality of life and oral health related impacts
16. Management of challenging behaviour

Ethics, Governance and Public Health Policy in Special Care Dentistry

1. Consent (definition, assessing the competence and capacity to consent, documenting consent)
2. Legislation related to disability
3. Decontamination and infection control in dentistry
4. Basic Life support skills
5. Justification and planning for clinical holding

F. REQUIREMENT

1. Completed and passed the simulation exercise and clinical session recorded in practice log-book:
 - i. Practical training/exposure:
 - a. Non-pharmacological techniques on behavioural guidance
 - b. Pharmacological techniques on behavioural guidance
 - ii. Clinical session (observation) – Total of 15 cases
 - a. Management of patients with physical disability
 - b. Management of patients with intellectual disability
 - c. Management of patients with psychiatric/psychological issues
 - d. Management of medically compromised patients
 - e. Management of frail geriatric patients
 - iii. Medical posting (observation) which may include:
 - a. Rehabilitation Medicine
 - b. Palliative
 - c. Neurology
 - d. Geriatric
 - e. Psychiatric

G. ASSESSMENT

Consists of:

- i. Formative assessment
 - a. Assessment and evaluation of clinical work during practical and clinical
 - b. Assessment of logbook and assignments

- ii. Summative assessment.
 - a. Continuous assessment
 - b. End of course examination

**PROGRAMME
STANDARDS FOR
DENTAL SPECIALTIES**

STANDARDS FOR DOCTOR IN DENTAL PUBLIC HEALTH

By:

Dental Specialty Education Committee
(DentSEdC) Dental Public Health

This Program Standards was endorsed by the Malaysian Dental Council
(MDC) at its 9th Meeting on 24 July 2023

1. DEVELOPMENT OF THE STANDARDS

The development of the programme standards for specialist training in Dental Public Health (DPH) was initiated by the Dental Specialty Education Committee (DentSEdC) after recent guidance from the Joint Technical Committee for Evaluation of Dental Specialty Programme (JTCEDSP). This document has been developed by a working party from the DentSEdC in Dental Public Health, chaired by Datin Paduka Dato' Dr Nooral Zeila bt. Junid and the other members are Professor Dato' Dr Ishak bin Abdul Razak, Professor Dr Roslan bin Saub, Professor Dr Allan Pau Kah Heng, Brigadier General Dr Zulkifli bin Zainal Abidin, Associate Professor Dr Norkhafizah Saddki, Dr Naziah binti Ahmad Azli, Dr Nurul Asyikin binti Yahya, and Dr Salleh bin Zakaria. The final version of the programme standards will be reviewed by the JTCEDSP under the Malaysian Qualifications Agency (MQA).

2. PURPOSE OF THE STANDARDS

The programme standards are designed to serve as a basis for quality assurance and as a national reference for the Dental Public Health postgraduate programme. It will be used by the evaluation panel to evaluate and to accredit the Dental Public Health specialty programme offered in Malaysia.

3. REVIEWING AND UPDATING THE STANDARDS

This document shall be regarded as a dynamic document. The DentSEdC (Dental Public Health) will undertake periodic updates, as and when necessary, and a formal review every five (5) years.

4. AIM OF SPECIALTY TRAINING IN DENTAL PUBLIC HEALTH

This training will produce specialists in Dental Public Health who will be eligible to be registered in the Specialist Division of the Dental Register. It will also provide a basis for the individual to develop into a life-long learner who is capable of self-reflection and self-directed learning which will lead to ongoing development in the field of Dental Public Health.

5. NOMENCLATURE OF PROGRAMME & MQF LEVEL

The three (3) years Dental Public Health specialty training programme will lead to the award of the Doctorate degree, Doctor in Dental Public Health (DrDPH). This programme is equivalent to Level 8 in the Malaysian Qualification Framework (MQF).

6. ENTRY REQUIREMENTS

An applicant for admission to the 3-year programme shall have the following:

- i. Bachelor of Dental Surgery or equivalent qualification;
- ii. Master's degree in dental public health or equivalent qualification as determined by the HEP;
- iii. A minimum of two (2) years clinical experience after the basic degree, excluding the Master's training;
- iv. Registered with the Malaysian Dental Council (MDC) and holds a current Annual Practising Certificate (APC) or registered with the dental regulatory body of another country and eligible to be granted a Temporary Practising Certificate (TPC) by the MDC.

7. SPECIALTY TRAINING PERIOD

The training period shall be three (3) academic years full-time. The total Student Learning Time (SLT) for the programme shall consist of 6400 to 8000 hours. The research component shall comprise 40-50%, because research is one of the core competencies required of the dental public health specialist.

8. SCOPE OF DENTAL PUBLIC HEALTH

The scope of the DrDPH Programme shall encompass the following:

- i. Needs assessment and surveillance of the population's health and well-being

- ii. Planning, implementation, monitoring and evaluation of the public oral health programme, services and other activities
- iii. Promotion and protection of population oral health and well-being
- iv. Exposure to quality improvement initiatives to maintain and improve standards for oral health based on research evidence
- v. Management, analysis and interpretation of health and health-related data using information and communication technology (ICT)
- vi. Policy and strategy development and interpretation
- vii. Community empowerment for improvement of oral health and reduction of social inequalities
- viii. Strategic leadership for oral health and well-being across sectors
- ix. Ethical management of self, people, resources and practice within the Malaysian legal framework
- x. Research and development
- xi. Clinical dental prevention
- xii. Engagement of individuals towards self-care and attainment of oral health and general wellness

9. INTER-RELATIONSHIP WITH OTHER HEALTHCARE DISCIPLINES

The focus of dental public health as a specialty encompasses interaction of oral health and general public health.

Trainees will be exposed to various community health activities in partnership with health and health-related agencies.

A multidisciplinary approach toward holistic management of patients shall be incorporated in the programme with relevant disciplines of dentistry and medicine.

10. PROGRAMME LEARNING OUTCOMES (PLO)

At the end of the programme, graduates must be able to:

- i. synthesise knowledge in the field of dental public health
- ii. adapt evidence-based dental public health skills to formulate innovative plans for community and clinical intervention programmes at individual and community levels
- iii. conduct research independently
- iv. provide expert advice to society in the field of dental public health
- v. adhere to legal, ethical and professional codes of practice
- vi. display leadership qualities by communicating and working effectively with peers and stakeholders
- vii. generate solutions to problems using scientific and critical thinking skills
- viii. exhibit attributes of independent lifelong learners
- ix. display skills in clinical governance

11. CONTENT OF LEARNING AND DOMAIN OF COMPETENCIES

The training programme must be designed to build on the knowledge and skills of the master programme and those gained during practice after graduation. This shall be oriented to the accepted standards of dental public health practice as set out in the specific standards contained in this document.

The programme must have clearly stated goals and objectives appropriate to advanced specialty education, addressing education, patient care, research and service. Planning for, evaluation of, and improvement of educational quality for the programme must be broad-based, systematic and continuous.

The domains of competencies are as follows:

DOMAIN 1: KNOWLEDGE

PLO1: Synthesise knowledge in the field of Dental Public Health

The trainee must be able to:

- i. relate relevant knowledge in the field of Dental Public Health in the planning, implementation, monitoring and evaluation of oral health programmes at the individual and community level (C6)
- ii. consider the role of health determinants in disease initiation and progression, disease prevention, health promoting behaviour, and oral health service organization and delivery (C6)
- iii. select interventions and strategies to prevent and control oral disease based on the comprehensive knowledge on the efficacy, effectiveness and efficiency of the various interventions (C6)
- iv. appraise the role and function of the national, state and district healthcare management system (C6)
- v. evaluate the different processes involved in the formulation of health policies on performance of the health system (C6)
- vi. consider the latest technique and technologies as part of a comprehensive long-term treatment for patients at individual and community level (C6)
- vii. evaluate the different processes involved in health impact assessment related to dentistry at community level (C6)
- viii. appraise the principles of health care economics to appropriate dental issues (C6)
- ix. appraise the context, meaning and implementation of the clinical standards and governance (C6)

DOMAIN 2: PSYCHOMOTOR SKILLS

PLO2: Adapt evidence-based dental public health skills to formulate innovative plans for community and clinical intervention programmes at individual and community levels.

The trainee must be able to:

- i. perform an oral health needs assessment of the population through situational analysis (P5)
- ii. revise adequacy and allocation of resources to optimise execution of oral health programmes for the population (P6)
- iii. design intervention and strategies for the prevention and control of oral diseases and promotion of oral health (P7)
- iv. organise the implementation of oral health programmes (P5)
- v. monitor the effectiveness of oral health programme (P6)
- vi. evaluate outcomes of oral health programmes (P6)
- vii. formulate a health policy (P5)
- viii. evaluate an existing health policy (P5)
- ix. design clinical intervention programmes for high risk individuals or groups (P7)
- x. adapt comprehensive risk-assessment for oral diseases among high risk individuals in the clinical and community settings (P6)
- xi. perform personalized preventive clinical dental intervention and behavioural management in high risk patients (P5)

DOMAIN 2: PSYCHOMOTOR SKILLS

PLO 3 : Conduct research independantly

The trainee must be able to:

- i. design a research project to address important Dental Public Health issues (P7)
- ii. manage research activities based on sound methodological principles (P7)
- iii. display integrity in the design, conduct and criticism of research (P5)
- iv. adapt research findings to inform stakeholders in the formulation of public health policies and practices (P6)

- v. display effective presentation skills in communicating research work at scientific meetings (P5)

DOMAIN 3: SOCIAL RESPONSIBILITY

PLO4 : Provide expert advice to patients and society in the field of Dental Public Health.

The trainee must be able to:

- i. collaborate sensitively and effectively with persons from diverse socio-economic backgrounds and lifestyle preferences enabling empowerment (A5)
- ii. display ability to involve the community in improving their own oral health and wellbeing through shared decision-making process (A5)
- iii. display ability as a resource person for professional and community groups concerning evidence-based oral health preventive and promotive interventions (A5)
- iv. display effective negotiation skills with strategic partners in promoting oral health for the community (P5)
- v. display the ability to improve oral health literacy in the community (P5)

DOMAIN 4: ETHICS & PROFESSIONALISM

PLO5: Adhere to legal, ethical and professional codes of practice

The trainee must be able to:

- i. display ethical behaviour and professional conduct as reflected in the code of professional conduct of the dental professional (A5)
- ii. display good values and attitudes in managing community oral health problems and in conducting research (A5)
- iii. demonstrate an understanding of acts and regulations related to public health and practice of dentistry (P4)

DOMAIN 5: LEADERSHIP, COMMUNICATION & TEAMWORK

PLO6: Display leadership qualities by communicating and working effectively with peers and stakeholders

The trainee must be able to:

- i. display good leadership qualities through strategic communication with colleagues, other healthcare professionals, relevant agencies, patients and the community; and practice effective team work in promoting oral health (A5)
- ii. make decisions aligned with vision, values and evidence (P5)
- iii. perform as an effective team member (P5)
- iv. demonstrate multi-sectoral working ability (P4)

DOMAIN 6: PROBLEM SOLVING AND CRITICAL THINKING

PLO7: Generate solutions to problems using scientific and critical thinking skills

The trainee must be able to:

- i. consider a variety of information sources to obtain scientific papers and other evidences such as guidelines (C6)
- ii. appraise systematically scientific evidence on different approaches in improving oral health (C6)
- iii. formulate guidelines for effective interventions to promote oral health (P5)
- iv. perform an evaluation of performance indicators (P5)
- v. build areas where there is a lack of valid and reliable data to inform the practice of DPH (P5)

DOMAIN 7: LIFELONG LEARNERS

PLO8: Exhibit attributes of independent lifelong learners

The trainee must be able to:

- i. appraise and evaluate dental public health practice and procedures periodically to maintain competencies (C6)
- ii. practice the process of revalidation and the assessment of individual performance (A5)

- iii. display skills of self-reflection and self-appraisal used to identify continuing professional development needs (A5)

DOMAIN 8: MANAGEMENT SKILL

PLO9: Display skills in clinical governance

The trainee must be able to:

- i. organise clinical practice and research based on good governance (C5)
- ii. organise and undertake programme/ clinical audit project(s) including implementation of outcomes and re-audit (P4)
- iii. display ability to adhere to Dental Act, guidelines, standard operating procedures and relevant legislations in the practice of dentistry and public health (P5)
- iv. comprehend the role of the Malaysian Dental Council (MDC) and Dental Specialist Evaluation Committee (DSEC) in the process of professional self-regulation (C2)
- v. provide advice on patient safety and public protection (P5)
- vi. appraise activities violating laws pertaining to practice of dentistry which require enforcement (C6)
- vii. display proficiency in general patient management (P5)

12. MODELS OF LEARNING IN DENTAL PUBLIC HEALTH

The programme must be designed to enable the trainees to attain the skills representative of a specialist proficient in the theoretical and practical aspects of dental public health.

The majority of the curriculum could be undertaken through work-based experiential learning in the following ways;

- i. Guided theoretical learning scheduled accordingly throughout the programme. This process aims to develop understanding of the subject by critical appraisal and synthesis of literature through individual and group activities, and independent learning.
- ii. Community based learning by carrying out supervised projects. Some projects may be of general public health in nature, but the majority will need to be dental public health projects.
- iii. Internship at health or health-related agencies in relation to research, audit and management of activities.
- iv. Research exposure through participation in a research project (clinical, experimental or literature research) which is reported formally in a thesis, or as a manuscript prepared for submission or as a published paper(s).
- v. Clinical skills development through supervised clinical practice.

13. SUPERVISION STRUCTURE

The specialist training will take place in programmes approved by the Ministry of Education. The HEP in which there is training in this discipline will have a Programme Director who coordinates training together with all designated trainers.

It is recommended that formal meetings between the supervisor and trainee should be arranged at regular intervals throughout the year by mutual consent and to an agreed agenda. A confidential record between the supervisor and trainee should be kept. These meetings review the trainee's progress towards agreed learning objectives based on the supervisor's observation of the trainee's performance, feedback by other trainers, the results of formal assessment and review of the trainee's personal development portfolio.

The provision of training must include a variety of approved settings in other institutions, particularly during the later stages of the programme.

14. FEEDBACK ON LEARNING

Feedback may be conceptualised as information provided by the supervisor/ peer/ patient/ community participants/ trainee regarding aspects of the trainee's performance or

understanding in relation to the learning outcomes. This information can be used by the trainee to reflect on his/her performance and re-assess his/her learning needs. The trainer should seek to improve student performance by encouraging reflection and by providing feedback. A record of all appraisals will be kept in the logbook, which will be used as part of continuous assessment. Keeping the logbook and portfolio of projects completed and up to date is a trainee responsibility.

The logbook and portfolio may include the following:

- i. Reflection and receiving feedback (e.g. Training Manual, Certificate of Attendance)
- ii. Portfolio of project work, with evidence of reflection and feedback by trainers
- iii. Sessions/ meetings with mentors and/or supervisors, with evidence of feedback
- iv. Relevant policy and procedures on reflection and feedback (e.g. how often should meetings take place, what should be documented)
- v. Clinical audits

15. ASSESSMENT

The purpose of assessment is to ensure that trainees have achieved the appropriate skills specified in the learning outcomes.

Assessment methods may be both formative and summative. While the formative assessment does not contribute to the total, the summative assessment determines the total marks and may take two forms:

- i. **Continuous Assessment**
The trainees are assessed on work that they are doing on a day-to-day basis, and the assessment is integrated into their daily work;
- ii. **Final Assessment**
Formal completion of training will be marked by satisfactory summative assessment in the final examination.

Assessment must include theory, clinical, work-based and research components. The course assessment is on the application of knowledge and will be based on reports, reflection, case reports, etc.

- i. **Theory**
 - These may include written case-based discussion, critical appraisal of research papers, and oral examination.
- ii. **Clinical**
 - Performance during case-based discussion
 - Performance of clinical work
- iii. **Workplace/Community-based**
 - Workplace-based assessment using a logbook or a portfolio with feedback from multiple sources
 - Regular updates and reflection on a portfolio of DPH practice projects
 - Oral presentation
 - Written assignment
 - Seminar paper

- iv. **Research**

A supervisor must be appointed for each trainee to guide him/her in the research activities. Both the supervisor and the programme head must monitor the trainee's assessment to ensure satisfactory progress. This must be monitored and assessed through:

- Regular consultation (formal and informal)

- Research progress (using appropriate mechanisms)
- Presentation / colloquium / seminar / workshop
- Thesis; and
- Viva voce

Examiners

At least one (1) external examiner must be appointed to assess the theory and research component.

Criteria for graduation

The trainee must pass the clinical and research component independently.

16. MINIMUM REQUIREMENT

No.	Scope of DPH competency	*Minimum requirement
1.	Appraise the role and function of the national, state and district healthcare management system	1
2.	Appraise the principles of health care economics to appropriate dental issues	1
3.	Perform an oral health needs assessment of the population through situational analysis	3
4.	Revise adequacy and allocation of resources to optimise execution of oral health programmes for the population	1
5.	Design intervention and strategies for the prevention and control of oral diseases and promotion of oral health	1
6.	Organise the implementation of oral health programmes	1
7.	Monitor the effectiveness of oral health programme	1
8.	Evaluate outcomes of oral health programmes	3
9.	Formulate a health policy	1
10.	Evaluate an existing health policy	1
11.	Design clinical intervention programmes for high risk individuals or groups	2
12.	Adapt comprehensive risk-assessment for oral diseases among high risk individuals in the clinical and community settings	2
13.	Perform personalized preventive clinical dental intervention and behavioural management in high risk patients	5
14.	Design a research project to address important Dental Public Health issues	1
15.	Manage research activities based on sound methodological principles	1
16.	Display integrity in the design, conduct and criticism of research	1
17.	Adapt research findings to inform stakeholders in the formulation of public health policies and practices	1
18.	Display effective presentation skills in communicating research work at scientific meetings	1

No.	Scope of DPH competency	*Minimum requirement
19.	Display effective negotiation skills with strategic partners in promoting oral health for the community	1
20.	Display the ability to improve oral health literacy in the community	1
21.	Demonstrate an understanding of acts and regulations related to public health and practice of dentistry	1
22.	Make decisions aligned with vision, values and evidence	1
23.	Perform as an effective team member	1
24.	Demonstrate multi-sectoral working ability	1
25.	Consider a variety of information sources to obtain scientific papers and other evidences such as guidelines	3
26.	Appraise systematically scientific evidence on different approaches in improving oral health	3
27.	Formulate guidelines for effective interventions to promote oral health	1
28.	Perform an evaluation of performance indicators	1
29.	Build areas where there is a lack of valid and reliable data to inform the practice of DPH	1
30.	Organise and undertake programme/ clinical audit project(s) including implementation of outcomes and re-audit	1
31.	Display ability to adhere to Dental Act, guidelines, standard operating procedures and relevant legislations in the practice of dentistry and public health	1
32.	Comprehend the role of the Malaysian Dental Council (MDC) and Dental Specialist Evaluation Committee (DSEC) in the process of professional self-regulation	1
33.	Provide advice on patient safety and public protection	1
34.	Appraise activities violating laws pertaining to practice of dentistry which require enforcement	1
35.	Display proficiency in general patient management	5

*Minimum requirement can be fulfilled through simulation/practical/internship/project/discussion etc.

17. DENTAL PUBLIC HEALTH FIELD ATTACHMENT

The programme must provide sufficient experience for the trainee to be exposed to a various range of health activities at the federal, state and district levels. The range of experience is recorded by maintaining a logbook. The trainee must be monitored by field supervisors throughout the attachment.

The trainee must be monitored periodically to record how the trainee progresses throughout the training period.

18. HUMAN RESOURCE

Teaching staff must include at least two (2) academicians recognised as specialists in the field of Dental Public Health. Teaching staff may also include experts in relevant fields that

support the teaching and learning of the programme such as biostatisticians, health economists, and others.

The above mentioned number of teaching staff are to ensure conduct of the following;

- i. Health Promotion
- ii. Preventive Dentistry
- iii. Preventive Health Management
- iv. Healthcare Services
- v. Social Behavioural Science
- vi. Oral Health Financing
- vii. Research Methodology
- viii. Epidemiology
- ix. Biostatistics
- x. Ethics and Jurisprudence

The programme director and at least one (1) of the teaching staff must be recognised Dental Public Health Specialists and are employed full-time.

The number of teaching staff must be sufficient to ensure the following;

- i. All guided teaching activities for e.g. group discussions, seminars
- ii. Supervision of all clinical activities
- iii. Research activities
- iv. Assessment activities

Supervision must be structured and supervisor(s) must be present for teaching and learning activities. The ratios for full-time academic staff to trainee are:

- i. 1 : 6 for supervision of clinical/project session
- ii. 1 : 3 for research supervision

19. TEACHING FACILITIES

The HEP must provide adequate and appropriate physical facilities and resources to support the process of learning and research activities for the programme. These include;

- i. Classrooms in the form of Seminar Room and Discussion Room
- ii. Clinics for dental treatment of patients
- iii. IT Facilities

List of Abbreviation

1. DPH : Dental Public Health
2. DentSEdC : Dental Specialty Education Committee
3. JTCEDSP : Joint Technical Committee for Evaluation of Dental Specialty
i. Programme
4. MQA : Malaysian Qualifications Agency
5. MDC : Malaysian Dental Council
6. HEP : Higher Education Provider
7. ICT : Information and Communication Technology
8. PLO : Programme Learning Outcome
9. NCBPDE : National Conjoint Board for Postgraduate Dental Education
10. MQF : Malaysian Qualification Framework
11. DrDPH : Doctor of Dental Public Health
12. SLT : Student Learning Time
13. APC : Annual Practicing Certificate
14. TPC : Temporary Practicing Certificate
15. OBA : One Best Answer
16. MTF : Multiple True/False
17. SRA : Single Response Answer
18. MEQ : Modified Essay Question
19. SEQ : Short Essay Question
20. SAQ : Short Answer Question

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- vi. Dr Naziah binti Ahmad Azli,
- vii. Dr Nurul Asyikin binti Yahya, and

viii. Dr Salleh bin Zakaria.

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- iii. Associate Professor Dr Tuti Ningseh Mohd Dom (Dean of Dental Faculty, Universiti Kebangsaan Malaysia)
- iv. Dr Nurul Salwa Che Abdul Rahim

STANDARDS FOR DOCTOR IN ORAL MEDICINE

By:

Dental Specialty Education Committee
(DentSEdC) Oral Medicine

This Program Standards was endorsed by the Malaysian Dental Council
(MDC) at its 8th Meeting on 3 April 2023

**PROGRAMME STANDARDS FOR SPECIALIST TRAINING
(DOCTOR IN ORAL MEDICINE)**

1. DEVELOPMENT OF THE STANDARDS

The development of the guidelines for specialty training in Oral Medicine was initiated by the Dental Specialty Education Committee (DentSEdC) subsequent to recent guidance from the Joint Technical Committee for Evaluation of Dental Specialty Programme (JTCEDSP). This document has been developed by a working party from the DentSEdC in Oral Maxillofacial Pathology and Oral Medicine, chaired by Dr. Masitah Hayati Harun, with members comprising Dr. Ajura Abdul Jalil, Professor Dr. Khoo Suan Phaik, Associate Professor Dr. Nik Mohd. Mazuan Nik Mohd. Rosdy, Dr. Sumairi Ismail, Associate Professor Dr. Zuraiza Mohamad Zaini, Col. (Dr.) Liana Ma Abdullah, and Dr. Norliwati Ibrahim.

2. PURPOSE OF THE STANDARDS

The standards are designed to serve as a basis for quality assurance and as the national reference for Oral Medicine postgraduate programme. It will be used by the evaluation panel to evaluate and recommend the accreditation of the Oral Medicine specialty programme offered in Malaysia.

3. REVIEWING AND UPDATING THE STANDARDS

Formal review, updating and validation of the content will be undertaken by the DentSEdC in Oral Pathology and Oral Medicine every five (5) years.

4. AIM OF SPECIALIST TRAINING IN ORAL MEDICINE

The training of Doctor in Oral Medicine will produce competent specialists who are able to manage oral and maxillofacial disease and head and neck pain disorders whose primary treatment modality is non-surgical. They will be eligible to apply for registration with the Specialist Division of the Dental Register.

The training will produce specialists who demonstrate high quality knowledge and expertise and also possess integrity and ethical values. It will also provide a basis for the individual to develop into a life-long learner who is capable of self-reflection, self-directed learning and continuous development in the field of oral medicine at the specialist level.

5. NOMENCLATURE OF PROGRAMME & MQF LEVEL

The three (3) year oral medicine specialty training programme will lead to the award of the Doctor in Oral Medicine (DrOrMed). This programme is equivalent to Level 8 in the Malaysian Qualifications Framework (MQF).

6. ENTRY REQUIREMENTS

An applicant for admission to the 3-year specialty programme will have the following:

- i. Bachelor of Dental Surgery or equivalent qualifications; and
- ii. Master's degree in dental sciences or equivalent qualification as required by HEP. This degree must have a total Student Learning Time (SLT) ranging from 1600 – 2000 hours. A minimum of 800 – 1000 hours of this degree must include among others a preclinical training component in oral maxillofacial pathology and oral medicine which contribute towards the specialty training.
- iii. Registered with the Malaysian Dental Council (MDC) and holds current Annual Practising Certificate (APC) or registered with the dental regulatory body in another country and eligible to be granted a Temporary Practising Certificate (TPC) by MDC;
- iv. A minimum of two (2) years clinical practice after basic degree, excluding the Master's training; and
- v. Health status and other requirements as required by HEP.

7. SPECIALTY TRAINING PERIOD

The period of training will be three (3) years full-time. The SLT for the programme shall consist of 6400-8000 hours. The SLT should constitute 60-70% of clinical training.

No	Course	Minimum SLT (hours)
1.	Coursework (including clinical and Hospital-based training)	4480
2.	Research	1920
	TOTAL	6400

8. SCOPE OF SPECIALIST TRAINING IN ORAL MEDICINE

Oral Medicine is a specialty concerned with the diagnosis and management of patients with oral and maxillofacial diseases, and head and neck pain syndromes including temporomandibular disorders whose primary treatment modality is non-surgical. The cases may include, but not limited to oral mucosal diseases, medically-related disorders, salivary gland disorders, potentially malignant disorders, orofacial pain, orofacial infectious diseases, and chemosensory disorders.

9. INTERRELATIONSHIP WITH OTHER DISCIPLINES IN DENTISTRY

The programme could include multidisciplinary involvement with other dental specialties such as oral and maxillofacial surgery, oral and maxillofacial radiology, special care dentistry, paediatric dentistry, periodontology and prosthodontics. There are many opportunities of co-management with the medical specialities including dermatology, rheumatology, internal medicine, and many others. Close cooperation with those relevant fields of specialty should be encouraged.

10. PROGRAMME LEARNING OUTCOMES (PLO)

Upon completion of the programme, graduates must be able to:

- i. synthesise knowledge in oral medicine and related fields;
- ii. adapt evidence-based clinical procedures for proficient patient management in the field of oral maxillofacial oral medicine;
- iii. conduct research independently;
- iv. provide expert advice to society in the field of oral medicine;
- v. adhere to legal, ethical and professional codes of practice;
- vi. display leadership qualities through communicating and working effectively with peers and stakeholders;
- vii. generate solutions to problems using scientific and critical thinking skills;
- viii. exhibit attributes of independent lifelong learners; and
- ix. display skills in clinical governance.

11. CONTENT OF LEARNING & DOMAINS OF COMPETENCIES

The specialist training period will follow as a continuum after the one (1) year Master's programme. The domains of competence and the related learning outcomes for the 3-year oral medicine training are described here. The list however is not exhaustive.

The trainee is expected to achieve the following competencies upon completion of the DrOrMed programme:

DOMAIN 1: KNOWLEDGE

PLO1: synthesise knowledge in the field of oral medicine

Trainee must be able to:

- i. produce evidence of a broad understanding of the relevant biology, anatomy, and pathophysiology of intra- and extra-oral structures and tissues related to presenting

- conditions (C5);
- ii. differentiate various clinical presentations of relevant orofacial conditions (C4);
- iii. appraise information gathered through dental, medical and social history, likely to be relevant to the presenting condition in order to arrive at the diagnosis, prognosis and proposed management (C6);
- iv. evaluate the sensitivity and specificity of relevant diagnostic tests (C6);
- v. recommend current best evidence for diagnostic investigations by the chairside, diagnostic imaging modalities and/or through laboratory examinations (C6);
- vi. select current best evidence for effectiveness of various treatment modalities (C6);
- vii. evaluate the prognostic and risk factors for various management modalities (C6); and
- viii. select the best pharmacological and therapeutic management of diseases or conditions (C6).

DOMAIN 2: PSYCHOMOTOR SKILLS

PLO2: adapt evidence-based clinical procedures for proficient patient management in the field of oral medicine

The trainee must be able to:

- i. perform complete history taking from patients including risk factors for conditions relevant to mode of presentation and complaint (P5);
- ii. perform appropriate clinical examination on patients in relation to pathophysiological and anatomical basis for clinical signs (P5);
- iii. display the ability to select relevant investigations pertinent to patient management (P5);
- iv. perform appropriate investigations within the scope of oral medicine practice (P5);
- v. integrate patient's history, clinical findings and results of investigations (P5);
- vi. formulate appropriate and accurate differential diagnosis with apposite prioritisation after deliberation of common and rare conditions (P5);
- vii. formulate treatment plan based on appropriate diagnoses (P5);
- viii. display patient management skills including advising patients on possible and probable outcomes, as well as the need for future supportive care, prevention and maintenance (P5);
- ix. display skills to manage medically compromised patients/medically related disorders (P5);
- x. revise treatment plan in the face of unfavourable findings or setbacks (P6);
- xi. integrate methods and technologies to prevent infection during treatment procedures, and between patients and staff (P5); and
- xii. construct clinical case reports including evidences to illustrate the case profile and course of treatment (P7).

DOMAIN 2: PSYCHOMOTOR SKILLS

PLO3: conduct research independently

The trainee must be able to:

- i. compose written reports/articles, including preparing and altering manuscripts, where appropriate (P7);
- ii. perform research activities (P5);
- iii. display integrity in the design, conduct and criticism of research (P5); and
- iv. display presentation skill in communicating research work to professional colleagues or at specialists' meetings (P5).

DOMAIN 3: SOCIAL RESPONSIBILITY

PLO4: provide expert advice to society in the field of oral medicine

The trainee must be able to:

- i. practice a caring and patient-centred approach to treatment planning (A5);
- ii. display confidence, insight and empathy in formulating and presenting strategies and plans to patients and colleagues (A5);
- iii. serve all patients with dignity and respect (A5);

- iv. recognise the need for supportive care, prevention and maintenance (A3); and
- v. adhere to limitations of knowledge and practical experience in the assessment and management of interdisciplinary cases (A4).

DOMAIN 4: ETHICAL & PROFESSIONALISM

PLO5: adhere to legal, ethical and professional codes of practice

The trainee must be able to:

- i. display appropriate attitude and understanding of ethical and societal issues (A5);
- ii. comply to the standards of practice in dentistry as determined by the MDC (A4);
- iii. display the attitudes necessary for the achievement and delivery of the highest standards of specialist care (A5);
- iv. recognise own limits and refer patient when necessary (P4, A3);
- v. practice ethical principles in the preparation of clinical and research reports (A5); and
- vi. practice medicolegal principles in relation to patients' records (A5).

DOMAIN 5: LEADERSHIP, COMMUNICATION & TEAMWORK

PLO6: display leadership qualities through communicating and working effectively with peers and stakeholders

The trainee must be able to:

- i. build rapport to work effectively as part of a team and manage members appropriately (P5);
- ii. adapt methods of administration/negotiation in order to achieve an appropriate outcome (P6);
- iii. practice a non-discriminatory approach to patients, carers, colleagues and other members of the workplace team (A5);
- iv. display appropriate verbal and non-verbal communication/presentation skills (P5); and
- v. display empathy, sensitivity and awareness in communicating with patients and colleagues (P5, A5).

DOMAIN 6: PROBLEM SOLVING & CRITICAL THINKING

PLO7: generate solutions to problems using scientific and critical thinking skills

The trainee must be able to:

- i. search a variety of information sources to obtain scientific papers and other evidences such as clinical guidelines (P5, A4);
- ii. display professional judgement to implement clinical solutions in response to problems by developing an evidence based treatment plan and taking a holistic approach (P5);
- iii. evaluate critically the scope and limitations of the various treatment modalities, balancing the risks and benefits of treatments (C6, A5);
- iv. appraise systematically current evidence and appreciate how research activity can inform practice (C6);
- v. demonstrate the ability to sustain a critical argument in writing and through oral presentations (C5, A3); and
- vi. display skills in using and interpreting numerical, visual and graphic data for clinical and research use (P5).

DOMAIN 7: LIFELONG LEARNERS

PLO8: exhibit attributes of independent lifelong learners

The trainee must be able to:

- i. appraise and evaluate clinical practice and procedures to maintain competencies (C6);
- ii. practise the process of revalidation and the assessment of individual clinical performance (A5);
- iii. display skills of self-reflection and self-appraisal to identify continuing professional development needs (A5); and
- iv. display skills in various digital applications involving technology and data for clinical and research (P5, A5).

DOMAIN 8: MANAGEMENT SKILL

PLO9: display skills in clinical governance

The trainee must be able to:

- i. organise oral medicine practice and research based on good governance (C5);
- ii. comprehend the role of the MDC and DSEC in the process of professional self-regulation (C2);
- iii. organise and undertake a clinical audit project including implementation of outcomes and re-audit (P4);
- iv. display proficiency in general patient management (P5); and
- v. organise and manage the working environment and schedule (P4).

12. MODELS OF LEARNING IN ORAL MEDICINE

Delivery methods must cover the three main domains *ie* cognitive, psychomotor and affective through a variety of techniques. These may include but are not limited to the following:

- i. Theoretical learning during formal and timetabled periods. This should be geared towards developing an understanding of the subject by critical appraisal and synthesis of the classical and contemporary literatures through individual and group activities, involving discussion, seminars, project assignments, journal club or clinical meetings and validated self-directed and independent study.
- ii. Clinical skills development through history taking, clinical investigations, diagnosis and treatment of patients with orofacial diseases and related disorders. Clinical skills also include minor oral surgery procedures especially soft tissue biopsies.
- iii. Workplace-based learning methods

Candidates shall be posted to clinical centres under the supervision of experienced honorary consultants with an option of an overseas attachment. Evidence of skills development shall be kept in a portfolio/logbook. These clinical settings include:

- Oral Medicine and other related dental specialty, as listed in item 16. This may include outpatient and inpatient hospital settings.
- Medical Specialty outpatient and inpatient hospital settings, which involves posting in various medical specialties as listed in item 16.
- Research exposure through participation in a research project (clinical, experimental or literature research) which is reported formally in a thesis, or as a manuscript prepared for submission or as published paper(s).

13. SUPERVISION STRUCTURE

Specialist training will take place in programmes approved by the Ministry of Education. Higher Education Provider (HEP) in which there is training in this discipline will have a Programme Director who co-ordinates the training.

In the early stages of the training, trainees should be closely assessed to determine their competence base. The level of supervision should initially be close to allow the gauging of ability and potential for independent progression. As supervised record shows development of competence, the level of supervision may be tapered down in proportionate measure, ultimately leading to independent practice within the training period. The trainees should be exposed to a variety of philosophies within the discipline through multiple supervisors.

Flexibility is encouraged for the provision of training in a variety of approved settings such as other teaching institutions, clinical centres and hospitals, particularly during the later stages of the programme.

It is recommended that formal meetings between the supervisor and trainee be arranged at regular intervals.

14. FEEDBACK ON LEARNING

Feedback on performance in relation to the learning outcomes may be obtained from supervisors, peers, patients or trainees. Feedback of performance must be given to the trainee

regularly.

Evidence on trainee's performance may be obtained from assessment of skills or competence via various objective assessment methods, if possible, through multiple assessors. Assessment methods may include formal examination and by submission of a portfolio which is a record of workplace-based assessment and other achievements during training that contribute to their development in the field of oral medicine. The portfolio records the trainee's progress in developing clinical skills, professional values, and attitudes and behaviours that are not readily assessed by formal examinations. The record is initiated by the trainee and may include scholastic activities, specialty attachment reports, logbook, reflection on practice, research competence, supervisor reports and other professional developments. Satisfactory progress in the assessment process and success in an exit assessment by examination is required before award of the degree.

15. ASSESSMENT

The purpose of assessment is to ensure that trainees have achieved the appropriate knowledge and skills specified in the learning outcomes.

Trainees shall be assessed on their competencies in both clinical and research components as defined in the programme learning outcomes. The assessment shall consist of formative and summative assessments. The summative includes continuous and final assessments.

Clinical Component

i. Formative assessment

This assessment aims to provide trainees with feedback of their progress and to familiarise them with summative assessment expectations.

ii. Continuous assessment

Trainees are assessed on a day-to-day basis and the assessment is integrated into their daily work. The assessment if possible, by multiple assessors, should cover a broad range of activities and procedures appropriate to the stage of training.

The assessment methods may include (but not limited to):

- Direct observation of practical skills
- Work-place based assessment
- Case-based discussion
- Performance at seminars/journal clubs
- Progress tests including any online assessment
- Assignment such as essays, case reports
- Multi-source feedback from supervisors, support staff, peer and patients
- Clinical audits

A record of all appraisals will be kept in the portfolio which will be used as part of continuous assessment. Keeping the logbook of clinical cases completed and up to date is the trainee's responsibility.

iii. Final Assessment

Formal completion of training will be marked by satisfactory summative assessment in the final examination, which must include theory and clinical assessment.

Research Component

A supervisor must be appointed for each trainee to guide in the research activities. Both the supervisor and the programme head must monitor the trainee's assessment to ensure satisfactory progress. This must be monitored through:

i. Regular consultation (formal and informal)

- ii. Research progress (using appropriate mechanism)
- iii. Presentation/colloquium/seminar/workshop

Assessment of research must include:

- i. Formative assessment:
 - Monitoring of research progress periodically (for example, through a progress report, or a proposal defence). This will assess the knowledge, critical thinking, critical appraisal skill, practical, technical, professional, scientific and problem-solving skills of the trainee.
 - Research presentation/colloquium/seminar/workshop. This will enhance the trainee's communication skills, teamwork, leadership, organisational skills, lifelong learning and professionalism.
- ii. Summative assessment:
 - thesis; and
 - viva voce.

Examiners

At least one (1) external examiner must be appointed for each clinical and research component.

Minimum criteria for graduation

The trainee must pass the clinical and research component independently.

16. MINIMAL CLINICAL EXPERIENCE

The programme must provide sufficient clinical experience for the trainee to be proficient in the comprehensive treatment of a wide range of oral medicine cases. The trainee must complete the following requirements:

- i. Experience in examination and diagnosis of a minimum of 400 new cases* comprising the following categories:
 - oral mucosal disorders
 - medically complex patients
 - salivary gland disorders
 - orofacial pain and temporomandibular disorders, and
 - orofacial neurosensory disorders/genetic disorders

* Cases refer to any specific disease/condition. One patient may present with multiple presentations, and these can be regarded as different cases for examination and diagnosis.
- ii. Experience managing at least five patients in each of these categories with a total of 40 patients*:
 - oral mucosal disorders
 - medically complex patients
 - salivary gland disorders, and
 - orofacial pain and temporomandibular disorders

*These 40 cases are mutually inclusive of the minimum 400 new cases stipulated.

Clinical experience in the specific dental field itself is highly recommended to ensure the trainee appreciate the multidisciplinary approach and considerations in the patient management:

- i. Oral and maxillofacial surgery
- ii. Oral and maxillofacial radiology
- iii. Special care dentistry

Clinical experience **MUST** also include at least **TWO** of these selected medical attachments with a minimum duration of **ONE (1)** month for each posting:

- i. Rheumatology

- ii. Dermatology
- iii. Radiology
- iv. Oncology
- v. Otorhinolaryngology
- vi. Internal medicine
- vii. Psychiatry
- viii. Neurology or pain clinic
- ix. Infectious diseases
- x. Nutrition/Dietetics

The range of clinical experience is recorded by maintaining a cumulative record of the number of treatment procedures undertaken within specified categories.

The trainee must be monitored periodically to record how the trainee progresses throughout the training period. Proof of readiness to practice independently as a specialist must be documented.

17. HUMAN RESOURCE

The Programme Director and at least TWO (2) of the teaching staff must be recognised as a specialist in the field of Oral Maxillofacial Pathology and Oral Medicine, or Oral Medicine. Other teaching staff must comprise a minimum of TWO (2) recognised specialists in the related field. There should be at least 60% full-time teaching staff.

The number of teaching staff must be sufficient to ensure conduct of the following:

- i. all guided teaching activities, including case conferences, seminars, and others;
- ii. review of patient evaluation, treatment planning, management, complications and outcomes of cases;
- iii. supervision of all clinical activities;
- iv. research activities; and
- v. assessment activities.

Supervision must be structured and supervisor(s) must be present for teaching and direct supervision of all patient care. The suggested optimal ratio for academic staff to trainee is:

- i. For supervision of clinical session - 1 : 6
- ii. For research supervision - 1 : 4

18. CLINICAL AND HOSPITAL/HEALTH CENTRE FACILITIES

The HEP must provide facilities and resources to fulfil the needs of the training programme and to develop and sustain it on a continuing basis. These include;

- i. physical facilities to permit trainee to operate under circumstances prevailing in the practice of oral medicine;
- ii. facilities specifically identified for the advanced education program in oral medicine; The facility must be fully equipped with dedicated armamentarium and materials to allow the standard of practice at the advanced level;
- iii. hospital or health centres which contains outpatient medical specialities services; and
- iv. laboratory facilities specifically identified to support research activities.

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GLOSSARY OF TERMS

The terms used in this document (*i.e.* must, should, may and could) were selected to indicate the relative weight that the DentSEdC/JTCEdSP attaches to each statement. The definitions of these words used in this document are as follows:

- i. **Must:** Indicates an imperative need and/or duty; an essential or indispensable item; mandatory
- ii. **Should:** Indicates a method to achieve the standards
- iii. **May or Could:** Indicates freedom or liberty to follow a suggested alternative

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STANDARDS FOR DOCTOR IN ORAL MAXILLOFACIAL PATHOLOGY AND ORAL MEDICINE

By:

Dental Specialty Education Committee
(DentSEdC) Oral Maxillofacial Pathology and
Oral Medicine

This Program Standards was endorsed by the Malaysian Dental Council
(MDC) at its 9th Meeting on 24 July 2023

**PROGRAMME STANDARDS FOR SPECIALIST TRAINING
(DOCTOR IN ORAL MAXILLOFACIAL PATHOLOGY AND ORAL MEDICINE)**

1. DEVELOPMENT OF THE STANDARDS

The development of the guidelines for specialty training in Oral Maxillofacial Pathology and Oral Medicine was initiated by the Dental Specialty Education Committee (DentSEdC) subsequent to recent guidance from the Joint Technical Committee for Evaluation of Dental Specialty Programme (JTCEdSP). This document has been developed by a working party from the DentSEdC in Oral Pathology and Oral Medicine, chaired by Dr. Masitah Hayati Harun, with members comprising Dr. Ajura Abdul Jalil, Professor Dr. Khoo Suan Phaik, Dr. Nik Mohd. Mazuan Nik Mohd. Rosdy, Dr. Sumairi Ismail, Dr. Zuraiza Mohamad Zaini, Col. (Dr.) Liana Ma Abdullah, and Dr. Norliwati Ibrahim.

2. PURPOSE OF THE STANDARDS

The standards are designed to serve as a basis for quality assurance and as the national reference for Oral Maxillofacial Pathology and Oral Medicine postgraduate programme. It will be used by the evaluation panel to evaluate and recommend the accreditation of the Oral Maxillofacial Pathology and Oral Medicine specialty programme offered in Malaysia.

3. REVIEWING AND UPDATING THE STANDARDS

Formal review, updating and validation of the content will be undertaken by the DentSEdC in Oral Pathology and Oral Medicine every five (5) years.

4. AIM OF SPECIALIST TRAINING IN ORAL MAXILLOFACIAL PATHOLOGY AND ORAL MEDICINE

The training of Doctor in Oral Maxillofacial Pathology and Oral Medicine will produce competent specialists who are able to manage oral and maxillofacial diseases and head and neck pain disorders whose primary treatment modality is non-surgical, and produce oral histopathology reports. They will be eligible to apply for registration with the Specialist Division of the Dental Register.

The training will produce specialists who demonstrate high quality knowledge and expertise and also possess integrity and ethical values. It will also provide a basis for the individual to develop into a life-long learner who is capable of self-reflection, self-directed learning and continuous development in the field of oral maxillofacial pathology and oral medicine at the specialist level.

5. NOMENCLATURE OF PROGRAMME AND MQF LEVEL

The three (3) year oral maxillofacial pathology and oral medicine specialty training programme will lead to the award of the Doctor in Oral Maxillofacial Pathology and Oral Medicine (DrOMPPathMed). This programme is equivalent to Level 8 in the Malaysian Qualifications Framework (MQF).

6. ENTRY REQUIREMENTS

An applicant for admission to the 3-year specialty programme will have the following:

- i. Bachelor of Dental Surgery or equivalent qualifications; and
- ii. Master's degree in dental sciences or equivalent qualification as required by HEP. This

degree must have a total Student Learning Time (SLT) ranging from 1600 – 2000 hours. A minimum of 800 – 1000 hours of this degree must include among others a preclinical training component in oral maxillofacial pathology and oral medicine which contribute towards the specialty training.

- iii. Registered with the Malaysian Dental Council (MDC) and holds current Annual Practicing Certificate (APC) or registered with the dental regulatory body in another country and eligible to be granted a Temporary Practicing Certificate (TPC) by MDC;
- iv. A minimum of two (2) years clinical practice after basic degree, excluding the Master's training; and
- v. Health and other requirements as required by HEP.

7. SPECIALTY TRAINING PERIOD

The period of training will be three (3) years full-time. The SLT for the programme shall consist of 6400-8000 hours. The SLT should constitute 60-70% of clinical and laboratory training.

No	Course	Minimum SLT (hours)
1.	Coursework (including clinical and laboratory training)	4480
2.	Research	1920
	TOTAL	6400

8. SCOPE OF SPECIALIST TRAINING IN ORAL MAXILLOFACIAL PATHOLOGY AND ORAL MEDICINE

Oral maxillofacial pathology is a specialized field of histopathology concerned with the microscopic examination of tissues, taken either as biopsy samples or resection specimens from the oral and maxillofacial region for the purpose of diagnosis, prognosis and directing appropriate treatment.

Oral medicine is a specialty concerned with the diagnosis and management of patients with oral and maxillofacial disease, and head and neck pain syndromes whose primary treatment modality is non-surgical. The cases may include, but not limited to oral mucosal diseases, medically-related disorders, salivary gland disorders, potentially malignant disorders, temporomandibular disorders, orofacial pain, and orofacial infectious diseases.

9. INTERRELATIONSHIP WITH OTHER DISCIPLINES IN DENTISTRY

The programme should include multidisciplinary involvement with other dental specialties such as oral and maxillofacial surgery, oral and maxillofacial imaging and special care dentistry. Close cooperation with other relevant specialties such as paediatric dentistry, periodontology and prosthodontics is encouraged.

10. PROGRAMME LEARNING OUTCOMES (PLO)

Upon completion of the programme, graduates must be able to:

- i. synthesise knowledge in oral maxillofacial pathology and oral medicine and related fields;
- ii. adapt evidence-based clinical and laboratory procedures for proficient patient management in the field of oral maxillofacial pathology and oral medicine;
- iii. conduct research independently;
- iv. provide expert advice to society in the field of oral maxillofacial pathology and oral

- medicine;
- v. adhere to legal, ethical and professional codes of practice;
 - vi. display leadership qualities through communicating and working effectively with peers and stakeholders;
 - vii. generate solutions to problems using scientific and critical thinking skills;
 - viii. exhibit attributes of independent lifelong learners; and
 - ix. display skills in clinical and laboratory governance.

11. CONTENT OF LEARNING AND DOMAINS OF COMPETENCIES

The specialist training period will follow as a continuum after the one (1) year Master's programme. The domains of competence and the related learning outcomes for the 3-year oral maxillofacial pathology and oral medicine training are described here. The list however is not exhaustive.

The trainee is expected to achieve the following competencies upon completion of the DrOMPPathMed programme:

DOMAIN 1: KNOWLEDGE

PLO1: synthesise knowledge in the field of oral maxillofacial pathology and oral medicine

Trainee must be able to:

- i. produce evidence of a broad understanding of the relevant biology, anatomy, pathophysiology and histopathology of intra- and extra-oral structures and tissues related to presenting conditions (C5);
- ii. differentiate various clinical presentations of relevant orofacial conditions (C4);
- iii. appraise information gathered through dental, medical and social history, likely to be relevant to the presenting condition in order to arrive at the diagnosis, prognosis and proposed management (C6);
- iv. evaluate the sensitivity and specificity of relevant diagnostic tests (C6);
- v. recommend current best evidence for diagnostic investigations both at the chairside and/or through microscopic examination (C6);
- vi. select current best evidence for effectiveness of various treatment modalities (C6);
- vii. evaluate the prognostic and risk factors for various management modalities (C6); and
- viii. select the best pharmacological and therapeutic management of diseases or conditions (C6).

DOMAIN 2: PSYCHOMOTOR SKILLS

PLO2: adapt evidence-based clinical and laboratory procedures for proficient patient management in the field of oral maxillofacial pathology and oral medicine

The trainee must be able to:

- i. perform thorough history-taking to identify the associated systemic and non-systemic aetiological factors for the patients' concerns (P5);
- ii. perform thorough intraoral and extraoral head and neck examination (P5);
- iii. perform appropriate investigations relevant to the practise of oral maxillofacial pathology and oral medicine (P5);
- iv. integrate clinical findings and results of investigations (P5);
- v. construct the appropriate diagnosis(ses) based on the examination and investigation (P5);
- vi. formulate treatment plan based on appropriate diagnoses (P5);
- vii. display patient management skills including advising patients on possible and probable

- outcomes, as well as the need for future supportive care, prevention and maintenance (P5);
- viii. display skills to manage medically compromised patients/medically related disorders (P5);
 - ix. display skills to manage multidisciplinary cases (P5);
 - x. modify treatment plan in the face of unfavourable findings or setbacks (P6);
 - xi. integrate methods and technologies to prevent infection during treatment procedures, between patients and staff, and during the transport of specimens (P5);
 - xii. construct clear and concise written histopathological reports containing all the appropriate information and interpretation (P7); and
 - xiii. construct clinical case reports including evidences to illustrate the course of treatment (P7).

DOMAIN 2: PSYCHOMOTOR SKILLS

PLO3: conduct research independently

The trainee must be able to:

- i. compose written reports/articles, including preparing and altering manuscripts, where appropriate (P7);
- ii. perform research activities (P5);
- iii. display integrity in the design, conduct and criticism of research (P5); and
- iv. display presentation skill in communicating research work to professional colleagues or at specialists' meetings (P5).

DOMAIN 3: SOCIAL RESPONSIBILITY

PLO4: provide expert advice to society in the field of oral maxillofacial pathology and oral medicine

The trainee must be able to:

- i. practice a caring and patient-centred approach to treatment planning (A5);
- ii. display confidence, insight and empathy in formulating and presenting strategies and plans to patients and colleagues (A5);
- iii. serve all patients with dignity and respect (A5);
- iv. recognise the need for supportive care, prevention and maintenance (A3); and
- v. adhere to limitations of knowledge and practical experience in the assessment and management of interdisciplinary cases (A4).

DOMAIN 4: ETHICAL & PROFESSIONALISM

PLO5: adhere to legal, ethical and professional codes of practice

The trainee must be able to:

- i. display appropriate attitude and understanding of ethical and societal issues (A5);
- ii. comply to the standards of practice in dentistry as determined by the MDC (A4);
- iii. display the attitudes necessary for the achievement and delivery of the highest standards of specialist care (A5);
- iv. recognise own limits and refer patient when necessary (P4, A3);
- v. practice ethical principles in the preparation of clinical, histopathology and research reports (A5); and
- vi. practice medicolegal principles in relation to patients' records (A5).

DOMAIN 5: LEADERSHIP, COMMUNICATION & TEAMWORK

PLO6: display leadership qualities through communicating and working effectively with peers and stakeholders

The trainee must be able to:

- i. build rapport to work effectively as part of a team and manage members appropriately (P5);
- ii. adapt methods of administration/negotiation in order to achieve an appropriate outcome (P6);
- iii. practice a non-discriminatory approach to patients, carers, colleagues and other members of the workplace team (A5);
- iv. display appropriate verbal and non-verbal communication/presentation skills (P5);
- v. display empathy, sensitivity and awareness in communicating with patients and colleagues (P5, A5);
- vi. demonstrate leadership as a professional team to facilitate the delivery of dental care (P4); and
- vii. demonstrate networking abilities with various relevant authorities to facilitate specialist care management and advancement in the field (P5).

DOMAIN 6: PROBLEM SOLVING & CRITICAL THINKING

PLO7: generate solutions to problems using scientific and critical thinking skills

The trainee must be able to:

- i. search a variety of information sources to obtain scientific papers and other evidences such as clinical guidelines (P5, A4);
- ii. display professional judgement to implement clinical solutions in response to problems by developing an evidence based treatment plan and taking a holistic approach (P5);
- iii. evaluate critically the scope and limitations of the various treatment modalities, balancing the risks and benefits of treatments (C6, A5);
- iv. appraise systematically current evidence and appreciate how research activity can inform practice (C6); and
- v. demonstrate the ability to sustain a critical argument in writing and through oral presentations (C5, A3).

DOMAIN 7: LIFELONG LEARNERS

PLO8: exhibit attributes of independent lifelong learners

The trainee must be able to:

- i. appraise and evaluate clinical and laboratory practice and procedures to maintain competencies (C6);
- ii. practise the process of revalidation and the assessment of individual clinical and laboratory performance (A5); and
- iii. display skills of self-reflection and self-appraisal to identify continuing professional development needs (A5).

DOMAIN 8: MANAGEMENT SKILL

PLO9: display skills in clinical governance

The trainee must be able to:

- i. organise oral maxillofacial pathology and oral medicine practice and research based on good governance (C5);
- ii. comprehend the role of the MDC and DSEC in the process of professional self-

- regulation (C2);
- iii. organise and undertake a clinical audit project including implementation of outcomes and re-audit (P4);
- iv. display proficiency in general patient management (P5); and
- v. organise and manage the working environment and schedule (P4).

12. MODELS OF LEARNING IN ORAL MAXILLOFACIAL PATHOLOGY AND ORAL MEDICINE

Delivery methods must cover the three main domains *ie* cognitive, psychomotor and affective through a variety of techniques. These may include but are not limited to the following:

- i. Theoretical learning during formal and timetabled periods. This should be geared towards developing an understanding of the subject by critical appraisal and synthesis of the classical and contemporary literature through individual and group activities, involving discussion, debate, seminars, project assignments and validated self-directed and independent study.
- ii. Technical and analytical skills development in the grossing of tissue specimen to aid histopathological diagnosis and report writing.
- iii. Clinical skills development through diagnosis and management of patients with oral diseases and case discussions.
- iv. Workplace-based learning methods
 - o Candidates shall be posted to accredited laboratory and clinical centres under the supervision of experienced honorary consultants with an option of an overseas attachment. Evidence of skills development shall be kept in a portfolio/logbook.
- v. Research exposure through participation in a research project (clinical, experimental or literature research) which is reported formally in a thesis, or as a manuscript prepared for submission or as published paper(s).

13. SUPERVISION STRUCTURE

Specialist training will take place in programmes approved by the Ministry of Education. Higher Education Provider (HEP) in which there is training in this discipline will have a Programme Director who co-ordinates the training.

In the early stages of the training, trainees should be closely assessed to determine their competence base. The level of supervision should initially be close to allow the gauging of ability and potential for independent progression. As supervised record shows development of competence, the level of supervision may be tapered down in proportionate measure, ultimately leading to independent practice within the training period. The trainees should be exposed to a variety of philosophies within the discipline through multiple supervisors.

Flexibility is encouraged for the provision of training in a variety of approved settings such as other teaching institutions, clinical centres and laboratories, particularly during the later stages of the programme.

It is recommended that formal meetings between the supervisor and trainee be arranged at regular intervals.

14. FEEDBACK ON LEARNING

Feedback on performance in relation to the learning outcomes may be obtained from supervisors, peers, patients or trainees. Feedback of performance must be given to the trainee regularly.

Evidence on trainee's performance may be obtained from assessment of skills or competence via various objective assessment methods, if possible, through multiple assessors. Assessment methods may include formal examination and by submission of a portfolio which is a record of workplace-based assessment and other achievements during training that contribute to their development in the field of oral maxillofacial pathology and oral medicine. The portfolio records the trainee's progress in developing clinical and laboratory skills, professional values, and attitudes and behaviours that are not readily assessed by formal examinations. The record is initiated by the trainee and may include scholastic activities, specialty attachment reports, logbook, reflection on practice, research competence, supervisor reports and other professional developments. Satisfactory progress in the assessment process and success in an exit assessment by examination is required before award of the degree.

15. ASSESSMENT

The purpose of assessment is to ensure that trainees have achieved the appropriate knowledge and skills specified in the learning outcomes.

Trainees shall be assessed on their competencies in both clinical and research components as defined in the programme learning outcomes. The assessment shall consist of formative and summative assessments. The summative includes continuous and final assessments.

Clinical Component

i. Formative assessment

This assessment aims to provide trainees with feedback of their progress and to familiarise them with summative assessment expectations.

ii. Continuous assessment

Trainees are assessed on a day-to-day basis and the assessment is integrated into their daily work. The assessment if possible, by multiple assessors, should cover a broad range of activities and procedures appropriate to the stage of training.

The assessment methods may include (but not limited to):

- Direct observation of practical skills
- Work-place based assessment
- Case-based discussion
- Performance at seminars/journal clubs
- Progress tests
- Assignment such as essays, case reports
- Multi-source feedback from supervisors, support staff, peer and patients
- Clinical audits

A record of all appraisals will be kept in the portfolio which will be used as part of continuous assessment. Keeping the logbook of clinical cases completed and up to date

is the trainee's responsibility.

iii. Final Assessment

Formal completion of training will be marked by satisfactory summative assessment in the final examination, which must include theory and clinical assessment.

Research Component

A supervisor must be appointed for each trainee to guide in the research activities. Both the supervisor and the programme head must monitor the trainee's assessment to ensure satisfactory progress. This must be monitored through:

- i. Regular consultation (formal and informal)
- ii. Research progress (using appropriate mechanism)
- iii. Presentation/colloquium/seminar/workshop

Assessment of research must include:

- i. Formative assessment:
 - Monitoring of research progress periodically (for example, through a progress report, or a proposal defence). This will assess the knowledge, critical thinking, critical appraisal skill, practical, technical, professional, scientific and problem-solving skills of the trainee.
 - Research presentation/colloquium/seminar/workshop. This will enhance the trainee's communication skills, teamwork, leadership, organisational skills, lifelong learning and professionalism.
- ii. Summative assessment:
 - thesis; and
 - viva voce.

Examiners

At least one (1) external examiner must be appointed for each clinical and research component.

Minimum criteria for graduation

The trainee must pass the clinical and research component independently.

16. MINIMAL CLINICAL AND LABORATORY EXPERIENCE

The programme must provide sufficient clinical experience for the trainee to be proficient in the comprehensive treatment of a wide range of oral medicine cases and producing oral histopathology reports. The trainee must complete the following requirements:

Scope of Oral Maxillofacial Pathology and Oral Medicine	Minimal Requirements
1. Oral maxillofacial pathology cases Reporting of surgical pathology cases, including smears	1000 cases
2. Oral medicine cases May include, but not limited to: <ul style="list-style-type: none"> ▪ oral mucosal diseases ▪ potentially malignant disorders ▪ orofacial pain and temporomandibular disorders ▪ salivary gland diseases ▪ medically-related disorders ▪ orofacial infectious diseases 	200 cases

Clinical experience **MUST** also include each of these selected medical attachments with a minimum duration of **ONE (1)** month:

- i. Anatomic pathology
- ii. Dermatology

The medical attachments **MAY** also be extended to the following disciplines:

- i. Otolaryngology
- ii. Medical radiology
- iii. Oncology
- iv. Internal medicine
- v. Infectious diseases
- vi. Neurology

The range of clinical experience is recorded by maintaining a cumulative record of the number of treatment procedures undertaken within specified categories.

Although a minimum number of cases has been prescribed, a satisfactory level of competence may differ according to individual trainees, their learning environment and diversity in the type of cases seen. The trainee must be monitored periodically to record how the trainee progresses throughout the training period. Proof of readiness to practice independently as a specialist must be documented as evidence of satisfactory progress.

17. HUMAN RESOURCE

The Programme Director and at least two (2) of the teaching staff must be recognised as a specialist in the field of Oral Maxillofacial Pathology and Oral Medicine. Other teaching staff must comprise a minimum of two (2) recognised specialists in the related field. There should be at least 60% full-time teaching staff.

The number of teaching staff must be sufficient to ensure conduct of the following:

- i. all guided teaching activities, including case conferences, seminars etc;
- ii. review of patient evaluation, treatment planning, management, complications and outcomes of cases;
- iii. supervision of all clinical and laboratory activities;
- iv. research activities; and
- v. assessment activities.

Supervision must be structured and supervisor(s) must be present for teaching and direct supervision of all patient care. The suggested optimal ratio for academic staff to trainee is:

- i. For supervision of clinical and laboratory session - 1 : 6
- ii. For research supervision - 1 : 4

18. CLINICAL AND DIAGNOSTIC LABORATORY FACILITIES

The HEP must provide facilities and resources to fulfil the needs of the training programme and to develop and sustain it on a continuing basis. These include;

- i. physical facilities to permit trainee to operate under circumstances prevailing in the practice of oral maxillofacial pathology and oral medicine;
- ii. facilities specifically identified for the advanced education program in oral maxillofacial pathology and oral medicine; The facility must be fully equipped with dedicated armamentarium and materials to allow the standard of practice at the advanced level;
- iii. laboratory facilities specifically identified to support diagnostic histopathology and research activities; and
- iv. work station spaces to accommodate the number of students/residents enrolled in the program.

GLOSSARY OF TERMS

The terms used in this document (*i.e.* must, should, may and could) were selected to indicate the relative weight that the DentSEdC/JTCEDSP attaches to each statement. The definitions of these words used in this document are as follows:

- i. **Must:** Indicates an imperative need and/or duty; an essential or indispensable item; mandatory
- ii. **Should:** Indicates a method to achieve the standards
- iii. **May or Could:** Indicates freedom or liberty to follow a suggested alternative

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STANDARDS FOR DOCTOR IN ORAL AND MAXILLOFACIAL SURGERY

By:

Dental Specialty Education Committee
(DentSEdC) Oral and Maxillofacial Surgery

This Program Standards was endorsed by the Malaysian Dental Council
(MDC) at its 9th Meeting on 24 July 2023

PROGRAMME STANDARDS FOR SPECIALIST TRAINING (DOCTOR IN ORAL & MAXILLOFACIAL SURGERY)

1. DEVELOPMENT OF THE STANDARDS

The development of the guidelines for specialty training in Oral and Maxillofacial Surgery (OMFS) was initiated by the Dental Specialty Education Committee (DentSEdC) subsequent to recent guidance from the Joint Technical Committee for Evaluation of Dental Specialty Programme (JTCEdSP). This document has been developed by a working party from the DentSEdC in Oral and Maxillofacial Surgery, chaired by Associate Professor Dr. Firdaus Hariri with other specialty members comprising of Associate Professor Dr. Noor Hayati Abdul Razak, Associate Professor Dr. Roszalina Ramli, Dr. Ong Siew Tin, Dr. Sharifah Tahirah Aljunid, Dr. Khairulzaman Adnan and Dr. Azmeel Mazlee Anuar.

2. PURPOSE OF THE STANDARDS

The standards are designed to serve as a basis for quality assurance and as the national reference for Oral and Maxillofacial Surgery postgraduate programme. It will be used by the evaluation panel to evaluate and recommend the accreditation of the Oral and Maxillofacial Surgery specialty programme offered in Malaysia.

3. REVIEWING AND UPDATING THE STANDARDS

Formal review, updating and validation of the content will be undertaken by the DentSEdC in Oral and Maxillofacial Surgery every 5 years.

4. AIM OF SPECIALIST TRAINING IN ORAL AND MAXILLOFACIAL SURGERY

This training will produce specialists in Oral and Maxillofacial Surgery and be eligible to register in the Specialist Division of the Dental Register. The training will provide a basis for the individual to develop into a life-long learner who is capable of self- reflection and self-directed learning. It will provide the basis of further ongoing development in the field of Oral and Maxillofacial Surgery at Specialist level.

5. NOMENCLATURE OF PROGRAMME AND MQF LEVEL

The 3 years doctorate degree Oral and Maxillofacial Surgery specialty training programme will lead to the award of the Doctor in Oral and Maxillofacial Surgery (DrOMFS). This programme is equivalent to Level 8 in the Malaysian Qualifications Framework (MQF).

6. ENTRY REQUIREMENTS

An applicant for admission to the 3 year specialty program will have the following:

- i. Bachelor of Dental Surgery or equivalent qualification; and
- ii. Master's degree in dental sciences or equivalent qualification as required by HEP. This degree must have a total Student Learning Time (SLT) ranging from 1600 – 2000 hours. A minimum of 800 – 1000 hours of this degree must include among others a preclinical training component which contribute towards the specialty training.
- iii. Registered with the MDC and holds current Annual Practising Certificate (APC) or registered with the dental regulatory body in another country and eligible to be granted a Temporary Practising Certificate (TPC) by MDC;

- iv. A minimum of two (2) years clinical practice after basic degree excluding the Master's training; and
- v. Health and other requirements as required by HEP.

7. SPECIALTY TRAINING PERIOD

The training period will be three (3) years full time. The SLT for the programme shall consist of 6400 – 8000 hours. The SLT should constitute 60-70% of clinical training.

8. SCOPE OF ORAL AND MAXILLOFACIAL SURGERY

Oral and maxillofacial surgery is the surgical specialty concerned with the diagnosis, treatment and prevention of diseases affecting the region of mouth, jaws, face and neck.

The scope of the specialty of oral and maxillofacial surgery includes, but is not necessarily confined to:

- i. craniomaxillofacial trauma,
- ii. cancers of the head and neck,
- iii. diseases of the salivary glands,
- iv. surgical treatment of facial disproportion – both congenital and acquired,
- v. cleft lip and palate,
- vi. aesthetic facial surgery,
- vii. facial pain,
- viii. disorders of the temporomandibular joint (TMJ),
- ix. surgical removal of impacted and buried teeth, cysts and benign tumours of the jaws,
- x. pre-prosthetic surgery including the placement of osseointegrated implants,
- xi. management of infections of the head and neck including life-threatening fascial space infection,
- xii. conditions of the oral mucosa such as mouth ulcers and dentoalveolar infection.

9. INTERRELATIONSHIP WITH OTHER DISCIPLINES IN DENTISTRY AND MEDICINE

Multidisciplinary interrelationship with various relevant field of specialty in both dentistry and medicine are required for the fulfillment of this programme.

9.1 Dentistry

Other specialties in dentistry should receive time allocation during the training programme. Close cooperation with the relevant fields or specialties such as Oral Pathology and Oral Medicine, Oral and Maxillofacial Imaging, Orthodontics, Restorative Dentistry and Special Care Dentistry are encouraged.

9.2 Medicine

Trainee must undergo medical and surgical attachment for a minimal duration of six (6) months. This training MUST be under responsibility and coordination of the respective Oral and Maxillofacial Surgery Department.

The minimum requirement in the selected fields include general medical postings, surgical

postings, accident and emergency and anaesthesiology.

The trainee MUST show log book proof of these attachments. The log book requirement will be stipulated in section 16.2.

10. PROGRAMME LEARNING OUTCOMES (PLO)

At the end of the programme, graduates must be able to:

- i. synthesise knowledge in the field of oral and maxillofacial surgery;
- ii. adapt evidence based clinical procedures for proficient patient management in the field of oral and maxillofacial surgery;
- iii. conduct research independently;
- iv. provide expert advice to society in the field of oral and maxillofacial surgery;
- v. adhere to legal, ethical and professional codes of practice;
- vi. display leadership qualities through communicating and working effectively with peers and stakeholders;
- vii. generate solutions to problems using scientific and critical thinking skills;
- viii. exhibit attributes of independent lifelong learners; and
- ix. display skills in clinical governance

11. CONTENT OF LEARNING AND DOMAINS OF COMPETENCIES

The training programme must be designed to build on the knowledge and skills of the undergraduate programme. This should be oriented to the accepted standards of oral and maxillofacial surgery practice as set forth in the specific standards contained in this document.

The programme must have clearly stated goals and objectives appropriate to advanced specialty education, addressing education, patient care, research and service. Planning for, evaluation of and improvement of educational quality for the program must be broad-based, systematic and continuous.

The domains of competencies are as follows;

DOMAIN 1: KNOWLEDGE

PLO1: synthesise knowledge in the field of oral and maxillofacial surgery.

The trainee must be able to:

- i. integrate relevant knowledge in biology, anatomy, physiology of normal and abnormal intra- and extra-oral structures and tissues in pain management, including prevention and control (C5);
- ii. evaluate the primary and supplementary techniques for anaesthesia (general and local) for the management of the oral and maxillofacial region (C6);
- iii. select dental materials, equipment and technology to achieve each treatment goal (C6);
- iv. choose current best evidence for effectiveness of various treatment modalities (C6);
- v. evaluate prognostic and risk factors for various modalities (C6);
- vi. justify the use of appropriate pharmaceutical agents where necessary (C4);

- vii. evaluate the factors which make oral and maxillofacial structures salvageable (C6);
- viii. appraise the principles and practice of restoring and rehabilitating structures of the oral and maxillofacial region (C6);
- ix. relate the principles of occlusion and its influence on clinical practice (C6);
- x. consider the multidisciplinary of clinical cases which may require varied treatment modalities (C6);
- xi. relate technical requirements of treatment in oral and maxillofacial surgery diseases to biology, anatomy, physiology, pathology and microbiology (C6);
- xii. synthesize the management of medically compromised patients in oral and maxillofacial cases (C6);
- xiii. appraise tissue regeneration/engineering in clinical practice (C6);
- xiv. evaluate the physical, chemical and biological properties of clinical instruments and materials (C6);
- xv. appraise conventional and contemporary imaging techniques (C6);
- xvi. appraise the different outcome measures of treatment and their assessment (C6);
- xvii. consider risks and limitations associated with non-surgical and surgical procedures (C6);
- xviii. select the procedures for the emergency management in acute oral and maxillofacial conditions and its associated medical emergencies (C6).
- xix. synthesize solution to medico-legal issues related to oral and maxillofacial conditions (C6)

DOMAIN 2: PSYCHOMOTOR SKILLS

PLO2: adapt evidence based clinical procedures for proficient patient management in oral and maxillofacial surgery.

The trainee must be able to:

- i. take a thorough history to identify the aetiological factors for the patients' concerns of oral and maxillofacial related problems (P5);
- ii. execute a thorough examination of the patient's general, extra oral and intra oral condition (P5);
- iii. perform appropriate investigations (e.g. imaging, biopsy, haematological and microbial tests, dental-related tests, as well as other relevant test specific to the condition) (P5);
- iv. evaluate existing tissue structures and its surrounding region as well as radiographic interpretation (P5);
- v. construct the appropriate diagnosis(es) based on the examination and investigation (P5);
- vi. derive the likely prognosis and outcomes of the various treatment options and relating this to the prognosis without treatment (P5);
- vii. formulate treatment plan based on appropriate diagnoses (P5);
- viii. display skills to manage medically compromised patients (P5);
- ix. advise patients on the possible and probable outcomes of the treatment options, as well as the need for future supportive care, prevention and maintenance (P5);
- x. delineate strategies and plans according to the skills of other clinicians involved in the care of the patient (P5);
- xi. integrate methods and technologies to prevent infection during treatment procedures, between patients and staff and during transport of materials and prostheses between the laboratory and the clinic (P5);

- xii. display skills to manage multidisciplinary cases (P5);
- xiii. perform comprehensive oral and maxillofacial surgery treatment (non-surgical and surgical; which include initial, primary, secondary and re-treatment) of moderate to high complexity cases using a range of techniques (P5);
- xiv. display proficiency in the application of relevant materials (therapeutic and non-therapeutic), instruments and techniques for managing post-treatment complications (P5);
- xv. alter treatment plan in the face of unfavourable findings or setbacks, including the decision to abort treatment (P6);
- xvi. construct case reports including a standard set of photographs to illustrate the course of treatment (P7).
- xvii. display ability to write a comprehensive medical report for legal, insurance claims and other purposes (P5).

DOMAIN 2: PSYCHOMOTOR SKILLS

PLO3: conduct research independently.

The trainee must be able to:

- i. compose written reports/articles, including preparing and altering manuscripts, where appropriate (P7);
- ii. perform research activities (P5);
- iii. display presentation skill in communicating research work to professional colleagues or at specialists' meetings (P5).

DOMAIN 3: SOCIAL RESPONSIBILITY

PLO4: provide expert advice to society in the field of oral and maxillofacial surgery.

The trainee must be able to:

- i. display a caring and patient-centred approach to treatment planning (A5);
- ii. display confidence, insight and empathy in formulating and presenting strategies and plans to patients and colleagues (A5);
- iii. serve all patients with dignity and respect (A5);
- iv. recognise the impact of the patient's oral and general health status and the proposed advice on their quality of life (A3);
- v. recognise the need for supportive care, prevention and maintenance (A3);
- vi. adhere to the limitations of knowledge and practical experience in the assessment and management of interdisciplinary cases (A4).

DOMAIN 4: ETHICAL AND PROFESSIONALISM

PLO5: adhere to legal, ethical and professional codes of practice.

The trainee must be able to:

- i. display appropriate attitude and understanding of ethical and societal issues and the place of their specialty in the overall healthcare spectrum (A5);
- ii. adhere to the standards of practice in dentistry as determined by the Malaysian Dental Council (A4);

- iii. display the attitudes necessary for the achievement and delivery of the highest standards of specialist care, in relation to the oral health needs of populations, the needs of patients under treatment (A5);
- iv. practice ethical principles in the preparation of clinical and research reports (A5);
- v. practice medico-legal principles in relation to patients' records (A5).

DOMAIN 5: LEADERSHIP, COMMUNICATION AND TEAMWORK

PLO6: display leadership qualities through communicating and working effectively with peers and stakeholders.

The trainee must be able to:

- i. build a rapport to work effectively as part of a team and manage members appropriately (A5);
- ii. adapt methods of administration/negotiation in order to achieve an appropriate outcome (P6);
- iii. practice a non-discriminatory approach to patients, carers, colleagues and other members of the workplace team (A5);
- iv. display appropriate both verbal and non-verbal communication /presentation skills (P5);
- v. display empathy, sensitivity and awareness in communicating with patients and colleagues (P5, A5).

DOMAIN 6: PROBLEM SOLVING AND CRITICAL THINKING

PLO7: generate solutions to problems using scientific and critical thinking skills.

The trainee must be able to:

- i. consider a variety of information sources to obtain scientific papers and other evidences such as guidelines (C6, A4);
- ii. display professional judgement to implement clinical solutions in response to problems by developing an evidence based treatment plan and taking a holistic approach (P5);
- iii. evaluate critically the scope and limitations of the various techniques, balancing the risks and cost benefits of treatment demonstrating self-direction and autonomy (C6, A5);
- iv. appraise systematically current evidence and appreciate how research activity can inform practice (C6);
- v. perform and sustain a critical argument in writing and through oral presentations (P5).

DOMAIN 7: LIFELONG LEARNERS

PLO8: exhibit attributes of independent lifelong learners.

The trainee must be able to:

- i. appraise and evaluate clinical practice and procedures periodically to maintain competencies (C6);
- ii. practice the process of revalidation and the assessment of individual clinical performance (A5);
- iii. display skills of self-reflection and self-appraisal used to identify continuing professional development needs e.g. becoming a member of a professional society (A5).

DOMAIN 8: MANAGEMENT SKILL

PLO9: display skills in clinical governance.

The trainee must be able to:

- i. organise clinical practice and research based on good governance (C5);
- ii. comprehend the role of the Malaysian Dental Council (MDC) and Dental Specialty Board (DSB) in the process of professional self-regulation (C2);
- iii. organise and undertake a clinical audit project including implementation of outcomes and re-audit (P4);
- iv. display proficiency in general patient management (P5);
- v. organise and manage the working environment and schedule (P4).

12. MODELS OF LEARNING IN ORAL AND MAXILLOFACIAL SURGERY

The programme must be designed to enable the trainees to attain the skills representative of a specialist proficient in the theoretical and practical aspects of oral and maxillofacial surgery.

Training could be undertaken in the following ways;

- i. Guided theoretical learning scheduled accordingly throughout the programme. This process aims to develop an understanding of the subject by critical appraisal and synthesis of literatures through individual and group activities, and independent learning;
- ii. Technical skills development through relevant simulation of laboratory and hands-on exercises;
- iii. Clinical skills development through supervised clinical practice (clinics, wards, on-calls, operation theatres). This learning process may include;
 - a) Pre-management case discussions may be used to facilitate development of independent decision-making in diagnosis, treatment planning, planning of treatment and treatment execution.
 - b) Post-treatment case discussions may be used to facilitate group reflection and integration with theoretical knowledge.
 - c) Medico-legal implications
- iv. Research exposure through participation in a research project (clinical, experimental or literature research) which is reported formally in a thesis, or as a manuscript prepared for submission or as published paper(s).

13. SUPERVISION STRUCTURE

Specialist training will take place in programmes approved by the Ministry of Education. Higher Education Provider (HEP) in which there is training in this discipline will have a Programme Director who co-ordinates the training together with all designated teaching staff.

In the early stages of the training, trainees should be closely assessed to determine their competence base. The level of supervision initially should be close to ensure patient safety and allow the gauging of ability and potential for independent progression. As supervised tracking shows development of competence, the level of supervision may be tapered down in proportionate measure, ultimately leading to independent practice within the training period.

The trainees should be exposed to a variety of philosophies within the discipline through multiple clinical supervisors.

Flexibility is encouraged for the provision of training in a variety of approved settings such as other teaching institutions, public hospitals or international clinical attachments, particularly during the later stages of the programme.

14. FEEDBACK ON LEARNING

Assessment of competence will be through multiple assessment methods through multiple assessors. Assessment methods may include clinical examination, direct observation of procedural skills in daily clinical session, case-based discussion, logbook records, multi-source feedback and reflective summaries. Satisfactory progress in the assessment process and success in an exit assessment by examination is required before award of degree.

A record of all appraisals will be kept in the logbook, which will be used as part of continuous assessment. Keeping the logbook and portfolio of cases completed and up to date is a trainee responsibility.

15. ASSESSMENT

In general, the format of assessment is as follow:

i. Coursework

The purpose of clinical assessment is to ensure that trainees have achieved the appropriate skills specified in the learning outcomes.

Coursework assessment of trainees will be in the forms of:

a. Formative

- i. log book
- ii. others: case reports, assignments

b. Summative

i. Continuous

The principal form of continuous assessment will be based on patients' treatment during clinical sessions throughout the entire duration of training. Trainees are assessed on work that they are doing on a day-to-day basis and that the assessment is integrated into their daily work.

ii. Final

Formal completion of training will be marked by satisfactory summative assessment in the final examination as stipulated by the respective institutions.

ii. Research

A supervisor must be appointed for each trainee to guide him/her in the research activities. Both the supervisor and the programme head must monitor the trainee's assessment to ensure satisfactory progress. The assessment will also be through formative and summative:

a. Formative

i. Research progress

Monitoring of research progress periodically (for example, through a progress report, presentation or a proposal defence). This will assess the knowledge, critical thinking,

practical, technical, professional, scientific and problem-solving skills of the trainee.

- ii. Research Presentation / Colloquium / Seminar / Workshop. This will enhance the trainee's communication skills, teamwork, leadership, organisational skills, lifelong learning and professionalism.

b. Summative: Final

- i. Thesis and
- ii. Viva voce.

15.1. Examiners

At least one (1) external examiner must be appointed for the final assessment of clinical and research component.

15.2. Criteria for graduation

The trainee must pass the coursework and research component independently.

Research Assessment

A supervisor must be appointed for each trainee to guide him/her in the research activities. Both the supervisor and the programme head must monitor the trainee's assessment to ensure satisfactory progress. This must be monitored through:

- i. Regular consultation (formal and informal)
- ii. Research progress (using appropriate mechanisms)
- iii. Presentation / colloquium / seminar / workshop

16. MINIMAL CLINICAL EXPERIENCE

The programme must provide sufficient clinical experience for the trainee to be proficient in the comprehensive and holistic management of oral and maxillofacial conditions. The procedures are as listed below.

16.1 Requirement in oral and maxillofacial surgery

The trainee **MUST** acquire minimum competency in core oral and maxillofacial surgery procedure as listed below:

Scope of OMFS	Minimal Clinical Requirements
i. Dentoalveolar surgery: <ul style="list-style-type: none"> • Impacted and retained teeth surgery • Minor soft and hard tissue surgery 	50

ii. Maxillofacial trauma: <ul style="list-style-type: none"> • Reduction and fixation of bone fractures <ul style="list-style-type: none"> ➤ Open reduction ➤ Close reduction • Soft tissue injuries • Case completion (peri-operative management which may include the above) 	5 5 20 10
iii. Management of craniofacial anomalies, TMJ and orthognathic surgery	5 cases
iv. Management of benign oral and maxillofacial tumors	5 cases
v. Management of oral and maxillofacial malignancies	5 cases
vi. Advanced management of dental implant patients (e.g. sinus lift, bone augmentation) *Beginning from year 1 master program	5 cases
vii. Oral and maxillofacial infections	10 cases
viii. Harvesting of autogenous bone graft (which should include extraoral donor site)	5 cases
ix. Management of oro-facial pain and oral medicine	20 cases
x. Multidisciplinary management of medically compromised patients	30 cases

The range of clinical experience is recorded by maintaining a cumulative record of the number of treatment procedures undertaken within specified categories. The above listings are not considered to be totally prescriptive, if further detail to an entry is considered appropriate this can be added.

The trainee must be monitored periodically to record how the trainee progresses throughout the training period. Proof of readiness to practice independently as a specialist must be documented.

16.2 Requirement in medicine and surgery

The trainee **MUST** show evidence of postings which include the following components:

- General medicine
 - Management of endocrine diseases
 - Management of haematological disorders

- Management of cardiology and respiratory diseases
- Peri-operative management of paediatric patients
- General surgery
 - Homeostasis and fluid management
 - Management of head injury
 - Neurosurgical management
 - Wound management
 - Management of definitive airway
 - Eye assessment related to OMF injuries
 - Management of head and neck injuries and pathologies
- Accident and Emergency (A&E)
 - Early management of head injuries
 - Early management of trauma
 - Early management of maxillofacial trauma
 - Early management of airway
 - Acute homeostasis and fluid management
 - Haemostasis
 - Advanced Trauma Life Support (ATLS)/ACLS/equivalent
- Anaesthesiology
 - Management of airway and intubation
 - Sedation and its peri-operative care
 - General anaesthesia and its peri-operative care
 - Intensive care management
 - Management of acute pain

17. HUMAN RESOURCE

The Programme Director and at least two (2) of the teaching staff who are recognised oral and maxillofacial surgery specialists. Other teaching staff must comprise of a minimum of two (2) recognised specialists in related field. There should be at least 60% full time teaching staff.

The number of teaching staff must be sufficient to ensure conduct of the following;

- i. All guided teaching activities, including case conferences, seminars and others,
- ii. Review of patient evaluation, treatment planning, management, complications and outcomes of cases,
- iii. Supervision of all clinical activities,
- iv. Research activities,
- v. Assessment activities.

Supervision must be structured and supervisor(s) must be present for teaching and direct supervision of all patient care. The suggested optimal ratios for academic staff to trainee are;

- Operating theatre cases – 1 : 1 (for complex cases)
- For clinical session - 1 : 4
- For research - 1 : 3

18. CLINICAL FACILITIES

Oral and maxillofacial surgery is a specialty of dentistry. The higher education provider (HEP) of this programme MUST be under the purview of a school/faculty of dentistry of an institute of higher learning.

The HEP must provide facilities and resources to fulfill the needs of the training programme and to develop and sustain it on a continuing basis. These include:

- i. Oral and Maxillofacial Surgery Clinic/Department
 - Human resource as stipulated in main document
 - OMFS clinic must be within the training hospital compound/premises
 - Resuscitation and emergency facilities
 - Must have dental/oral maxillofacial laboratory facilities
 - Dental radiology

- ii. The training hospital
 - Dedicated beds for OMFS patients
 - Core medical and surgical department should exist in training hospital
 - Medical
 - a) General medicine - (resident physician)
 - b) Paediatric medicine
 - Surgical
 - a) General surgery - (resident general surgeon)
 - b) Neurosurgery - capability for neurosurgical care
 - c) Otorhinolaryngology (ENT) – resident ENT
 - d) Ophthalmology – resident/visiting
 - Accident and Emergency (A&E) department
 - Radiology department
 - a) Resident radiologist
 - Anaesthesiology and intensive care
 - a) Fully functional operating theatre
 - b) Dedicated OMFS operating time/slot
 - c) Resident anaesthetist
 - d) Intensive care unit (ICU) facilities
 - e) Acute pain services

GLOSSARY OF TERMS

The terms used in this document (i.e. must, should, may and could) were selected to indicate the relative weight that the DentSEdC/JTCEdSP attaches to each statement. The definitions of these words used in this document are as follows:

1. **Must:** Indicates an imperative need and/or duty; an essential or indispensable item; mandatory.
2. **Should:** Indicates a method to achieve the standards.
3. **May or Could:** Indicates freedom or liberty to follow a suggested alternative.
4. **Levels of Skills:**
 - a) Proficient: The level of skill beyond competency. It is that level of skill acquired through advanced training or the level of skill attained when a particular activity is accomplished with repeated quality and a more efficient utilization of time.
 - b) Competent: The level of skill displaying special ability or knowledge derived from training and experience.
 - c) Exposed: The level of skill attained by observation of or participation in a particular activity.
5. **Clinical training** is defined as training with theoretical, practical and skill- oriented instruction under the supervision, other than research.
6. **Levels of Oral and Maxillofacial Surgery Case Difficulty (Based on procedural complexity level):**

Level 1

- Dento-alveolar trauma
- Soft and hard tissue biopsy
- Facial pain
- Surgical removal of impacted and buried teeth, cysts and benign tumours of the jaws
- Pre-prosthetic surgery including the placement of osseointegrated implants
- Conditions of the oral mucosa such as mouth ulcers and dentoalveolar infection

Level 2

- Maxillofacial trauma: mandibular, isolated maxillary region, Le Fort I, Le Fort II
- Diseases of the minor salivary glands
- Single jaw orthognathic surgery
- Aesthetic facial surgery
- Conservative management for disorders of the temporomandibular joint (TMJ)
- Management of minor to moderate infections of the head and neck

Level 3

- Craniomaxillofacial trauma: Le Fort III, pan facial
- Cancers of the head and neck
- Diseases of the major salivary glands
- Complex facial disproportion: bimaxillary orthognathic, distraction osteogenesis
- Cleft lip and palate, craniofacial syndromes
- Surgical management of disorders of the temporomandibular joint (TMJ)
- Management of serious infections of the head and neck including life- threatening fascial space infection

DENTAL SPECIALTY EDUCATION COMMITTEE MEMBERS

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Associate Professor Dr Roszalina Ramli Universiti Kebangsaan Malaysia

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Standards: Masters and Doctoral Degree by Research. MQA. 2012 2st draft: 29th April 2019
3rd draft: 22nd August 2019 (after JTCEDS)

STANDARDS FOR DOCTOR IN PAEDIATRIC DENTISTRY

By:

Dental Specialty Education Committee
(DentSEdC) Paediatric Dentistry

This Program Standards was endorsed by the Malaysian Dental Council
(MDC) at its 9th Meeting on 24 July 2023

PROGRAMME STANDARDS FOR SPECIALIST TRAINING [DOCTOR IN PAEDIATRIC DENTISTRY] IN MALAYSIA

1. DEVELOPMENT OF THE STANDARDS

The development of the standards for specialty training in Paediatric Dentistry was initiated by the Dental Specialty Education Committee (DentSEdC) subsequent to the recent guidance from the Joint Technical Committee for Evaluation of Dental Specialty Programme (JTCEdSP). This document has been developed by a working party from the DentSEdC in Paediatric Dentistry chaired by Associate Professor Dr S. Nagarajan M.P. Sockalingam and its members are Professor Dr Sabri Musa, Professor Dr Noraini Nun Nahar Yunus, Dr Ganasalingam Sockalingam, Dr Laila Abdul Jalil, Dr Annapurny Venkiteswaran and Dr Zahani Mohamed Yusoff.

The final version of the STANDARDS will be reviewed by the JTCEdSP.

2. PURPOSE OF THE STANDARDS

The standards are designed to serve as a basis for quality assurance and as the national reference for Paediatric Dentistry postgraduate programme. It will be used by the evaluation panel to evaluate and recommend the accreditation of the Paediatric Dentistry specialty programme offered in Malaysia.

3. REVIEWING AND UPDATING THE STANDARDS

This document should be regarded as a dynamic document. The DentSEdC (Paediatric Dentistry) will undertake formal review and updating of the standards every five (5) years.

4. AIM OF SPECIALIST TRAINING IN PAEDIATRIC DENTISTRY

This training will produce dentists who will become specialists in Paediatric Dentistry and be eligible to register in the Specialist Division of the Dental Register. The training will provide a basis for the individual to develop into a life-long learner who is capable of self-reflection and self-directed learning. It will provide the basis for further ongoing development in the field of Paediatric Dentistry at the specialist level.

5. NOMENCLATURE OF PROGRAMME & MQF LEVEL

The three (3) years Paediatric Dentistry specialty-training programme will lead to the award of the Doctorate degree, Doctor in Paediatric Dentistry (DrPaedsDent). This programme is equivalent to a Level 8 (doctorate) in the Malaysian Qualification Framework (MQF).

6. ENTRY REQUIREMENTS

An applicant for admission to the programme will have the following:

- i. Bachelor of Dental Surgery or equivalent qualifications;
- ii. Master's degree in dental sciences or equivalent qualification as required by HEP. This degree must have a total student learning time (SLT) ranging from 1600 – 2000 hours. A minimum of 800 – 1000 hours of this degree must include among others a preclinical training component in Paediatric Dentistry which contributes towards the speciality training.
- iii. Registered with the Malaysian Dental Council (MDC) and holds current Annual Practicing Certificate or registered with the dental regulatory body in another country and eligible to be granted a Temporary Practicing Certificate by MDC;

- iv. A minimum of two (2) years of clinical practice after the basic degree, excluding the Master's training;
- v. Health requirements as required by the HEP.

7. SPECIALITY TRAINING PERIOD

The training period will be three (3) years full-time. The SLT for the programme shall consist of 6500 – 8000 hours. The clinical training, which comprises theoretical, practical and skill-oriented instruction under supervision other than research, should constitute 60-70% of the total SLT.

8. SCOPE OF PAEDIATRIC DENTISTRY

The scope of Paediatric Dentistry training encompasses:

- i. Provision of comprehensive preventive and therapeutic oral health diagnosis, care and consultative expertise for infants, children, and adolescents under 16 years of age including children with special care needs;
- ii. Treatment and care that can be undertaken wholly by the paediatric dentists or managed as part of multi-disciplinary care with other health disciplines or in selected instances; appropriate referral made to the relevant health disciplines based on the complexity of cases;
- iii. Hospital based work for paediatric patients such as on-call duty, admission, pre, peri and post operative care and discharge;
- iv. Continuous enhancement of knowledge and relevant clinical skills throughout their careers;
- v. Engagement and teaching of dental care for children within the speciality as well as for general dentists and other healthcare workers.

9. INTERRELATIONSHIP WITH OTHER DISCIPLINES IN DENTISTRY

The curriculum of the training programme provides trainees with the necessary exposure in the areas of Preventive Dentistry, Orthodontics, Endodontics, Oral Maxillofacial Surgery, Special Needs Dentistry and relevant medical disciplines that relate to the practice of Paediatric Dentistry.

10. PROGRAMME LEARNING OUTCOMES (PLO)

At the end of the programme, the speciality trainee must be able to:

- i. synthesise knowledge in the field of Paediatric Dentistry
- ii. adapt evidence-based clinical procedures for proficient patient management in the field of Paediatric Dentistry
- iii. conduct research independently with minimal supervision
- iv. provide expert advice to society in the field of Paediatric Dentistry
- v. adhere to legal, ethical and professional codes of practice
- vi. display leadership qualities through communicating and working effectively with peers and stakeholders
- vii. generate solutions to problems using scientific and critical thinking skills
- viii. exhibit attributes of independent lifelong learners
- ix. display skills in clinical governance

11. CONTENT OF LEARNING AND DOMAINS OF COMPETENCES

The training programme must be designed to build on the knowledge and skills of the undergraduate programme. This should be oriented towards the accepted standards of Paediatric Dentistry practice as set forth in the specific standards contained in this document.

The programme must have clearly stated goals and objectives appropriate to advanced specialty education, addressing education, patient care, research and service. Planning for, evaluation of and improvement of educational quality for the programme must be broad-based, systematic, continuous and designed to promote achievement of programme goals related to education, patient care, research and service.

The domains of competences are as follow:

DOMAIN 1: KNOWLEDGE

PLO 1: synthesise knowledge in the field of Paediatric Dentistry

At the end of the training, the trainee must be able to:

- i. relate the relevant knowledge in biology, anatomy, physiology of normal and abnormal dental and maxillofacial structures in health and disease (C6);
- ii. relate the impact of various medical diseases on dental and maxillofacial structures (C6)
- iii. evaluate the impact of various medical diseases on the delivery of oral health care for children and adolescents (C6);
- iv. evaluate tools to facilitate communication with both children and adolescents who are normal and with special health care needs (C6);
- v. evaluate the various health educational and promotional activities that can be implemented for the prevention of oral and dental diseases in children and adolescents (C6);
- vi. evaluate the impact of the physical, behavioural, emotional and cognitive development of children from infancy to adolescence on the delivery of oral health care (C6);
- vii. evaluate the non-pharmacological and pharmacological behaviour management techniques used in Paediatric Dentistry to facilitate delivery of oral health care (C6);
- viii. evaluate the epidemiology, assessment, investigation, diagnosis and management of:
 - a. dental caries in the primary and permanent dentitions based on currently available evidence (C6);
 - b. non-carious tooth surface loss in children and adolescents based on currently available evidence (C6);
 - c. developmental dental anomalies in children and adolescents based on currently available evidence (C6);
 - d. common periodontal disease in children and adolescents based on currently available evidence (C6);
 - e. various oral mucosal and jaw lesions and their related pathologies in children and adolescents based on currently available evidence (C6);
 - f. malocclusion in children and adolescents based on currently available evidence (C6);
 - g. dental and dentoalveolar trauma in children and adolescents based on currently available evidence (C6);
 - h. oral and maxillofacial injuries in children and adolescents based on currently available evidence (C5);
- ix. relate the role of the paediatric dentist in multidisciplinary diagnostic and management

- teams managing children and adolescents with complex dental, maxillofacial and craniofacial related problems (C6);
- x. apply the signs and symptoms suggestive of child abuse and neglect, and management of such children in relation to child protection and welfare (C3);
 - xi. use the principles of Paediatric Basic Life Support and its application in medical emergencies (C3);
 - xii. apply the various guides that can be given to children and adolescents related to smoking, drugs, alcohol and substance abuse (C3);
 - xiii. use the relevant forensic odontological principles applicable in the practice of paediatric dentistry (C3)

DOMAIN 2: PSYCHOMOTOR SKILLS

PLO 2: adapt evidence-based clinical procedures for proficient patient management in Paediatric Dentistry

At the end of the training, the trainee must be able to:

- i. diagnose normal and abnormal orofacial structures in both healthy and diseased children and adolescents (P5);
- ii. Integrate the various domains on child psychology in understanding the needs, behavioural patterns and anxiety concerns related to oral health care of children and adolescents (P5);
- iii. perform the non-pharmacological and/or pharmacological behaviour management interventions such as conscious sedation to manage undesirable behaviours and anxiety related concerns in patients for safe and effective delivery of oral health care in general dental settings (P5);
- iv. display ability to recognise complications and emergencies which may arise during the administration of oral and inhalation sedation (P5);
- v. display ability to recognise the undesirable behaviours and anxiety related concerns that are not manageable either with non-pharmacological or pharmacological interventions in general dental settings and refer such cases to hospitals/institutions that provide such oral health care under general anaesthesia (P5);
- vi. display ability to recognise patients with underlying medical diseases/conditions that may be at risk of developing medical emergencies in general dental settings and refer such cases to hospitals/institutions that provide such oral health care (P5);
- vii. perform comprehensive dental care which includes preventive, restorative and endodontic treatment on infants, children and adolescents and those with special care needs who require such treatment either in isolation or as part of multi-disciplinary management in a general dental setting or under general anaesthesia (P5);
- viii. perform preventive, interceptive and surgical treatment in managing malocclusion in the primary and mixed dentition stages (P5);
- ix. perform treatment for traumatic dental injuries to the primary and young permanent teeth (P5);
- x. perform dental treatment for non-carious tooth surface loss conditions such as abrasion, attrition and erosion in children and adolescents (P5);
- xi. perform dental rehabilitative treatment for hereditary and acquired dental developmental disorders (P5);
- xii. perform minor oral surgical procedures for either diagnosis or treatment of common dental, mucosal or dentoalveolar lesions seen in children and adolescents (P5);

- xiii. perform treatment of dentoalveolar trauma and peri-oral trauma in children and adolescents either through surgical or nonsurgical intervention (P5);
- xiv. construct appropriate advice and guidance to children and adolescents who are subject to smoking, drugs, alcohol and substance abuse (P4);
- xv. display ability to recognise possible child abuse and neglect cases in the clinic and refer appropriately to relevant authorities for further actions (P4);
- xvi. display ability to recognise oral maxillofacial injuries which require prompt referral (P4);
- xvii. perform various oral health disease risk assessments for identification of patients at risk of disease (P5);
- xviii. organise comprehensive oral health-related preventive advice to patients and parents to either prevent or halt the progression of suspected oral health-related diseases (P5);

DOMAIN 2: PSYCHOMOTOR SKILLS

PLO 3: conduct research independently with minimal supervision

At the end of the training, the trainee must be able to:

- i. compose written reports/articles, including preparing and altering manuscripts, where appropriate (P7);
- ii. perform research activities with minimal supervision (P5);
- iii. display integrity in the design, conduct, and criticism of research (P5);
- iv. display presentation skill in communicating research work to professional colleagues or at specialists' meetings (P5).

DOMAIN 3: SOCIAL RESPONSIBILITY

PLO 4: provide expert advice to society in the relevant field

At the end of the training, the trainee must be able to:

- i. display a caring and patient-centred approach to treatment planning (A5);
- ii. display confidence, insight, and empathy in formulating and presenting strategies and plans to patients, patients' families/carers and colleagues (A5);
- iii. serve all patients with dignity and respect (A5);
- iv. recognise the impact of the patient's oral and general health status and the proposed advice on their quality of life (A3);
- v. recognise the need for supportive care, prevention, and maintenance (A3);
- vi. adhere to the limitations of knowledge and practical experience in the assessment and management of interdisciplinary cases (A4).

DOMAIN 4: ETHICAL & PROFESSIONALISM

PLO 5: adhere to legal, ethical and professional codes of practice

At the end of the training, the trainee must be able to:

- i. display appropriate attitude and understanding of ethical and societal issues and the place of their speciality in the overall healthcare spectrum (A5);
- ii. adhere to the standards of practice in dentistry as determined by the Malaysian Dental Council (A4);
- iii. display the attitudes necessary for the achievement and delivery of the highest standards of specialist care, about the oral health needs of populations, the needs of patients under treatment (A5);

- iv. practice ethical principles in the preparation of clinical and research reports (A5);
- v. practice medico-legal principles about patients' records (A5).

DOMAIN 5: LEADERSHIP, COMMUNICATION & TEAMWORK

PLO 6: display leadership qualities through communicating and working effectively with peers and stakeholders

At the end of the training, the trainee must be able to:

- i. build rapport to work effectively as part of a team and manage members appropriately (A5);
- ii. adapt methods of administration/negotiation to achieve an appropriate outcome (P6);
- iii. practice a non-discriminatory approach to patients, carers, colleagues and other members of the workplace team (A5);
- iv. display appropriate both verbal and non-verbal communication /presentation skills (P5);
- v. display empathy, sensitivity, and awareness in communicating with patients, patients' families/carers and colleagues (P5, A5).

DOMAIN 6: PROBLEM-SOLVING & CRITICAL THINKING

PLO 7: generate solutions to problems using scientific and critical thinking skills

At the end of the training, the trainee must be able to:

- i. consider a variety of information sources to obtain scientific papers and other evidence such as guidelines (C6, A4);
- ii. display professional judgment to implement clinical solutions in response to problems by developing an evidence-based treatment plan and taking a holistic approach (P5);
- iii. evaluate the scope and limitations of the various techniques critically, balancing the risks and cost benefits of treatment demonstrating self-direction and autonomy (C6, A5);
- iv. appraise systematically current evidence and appreciate how research activity is carried out (C6);
- v. Perform and sustain a critical argument in writing and through oral presentations (P5).

DOMAIN 7: LIFELONG LEARNERS

PLO 8: exhibit attributes of independent lifelong learners

At the end of the training, the trainee must be able to:

- i. appraise and evaluate clinical practice and procedures periodically to maintain competencies (C6);
- ii. practice the process of revalidation and the assessment of individual clinical performance (A5);
- iii. display skills of self-reflection and self-appraisal used to identify continuing professional development need, e.g., becoming a member of a professional society (A5).

DOMAIN 8: MANAGEMENT SKILL

PLO 9: display skills in clinical governance

At the end of the training, the trainee must be able to:

- i. organise clinical practice and research based on good governance (C5);
- ii. comprehend the role of the MDC and DentSEdC in the process of professional self-

- regulation (C2);
- iii. organise and undertake a clinical audit project including implementation of outcomes and re-audit (P4);
- iv. display proficiency in general patient management (P5);
- v. organise and manage the working environment and schedule (P4).

12. MODELS OF LEARNING IN PAEDIATRIC DENTISTRY

The programme design enables the trainees to attain relevant skills representative of a specialist proficient in both the theoretical and practical aspects of Paediatric Dentistry.

Training could be undertaken in the following ways:

- i. Guided theoretical learning scheduled accordingly throughout the programme. This process aims to develop an understanding of the relevant subjects by critical appraisal and synthesis of literature through individual and group activities, and independent learning,
- ii. Technical skills development through simulation laboratory exercises and Continuous Professional Development workshops.
- iii. Clinical skills development through supervised clinical practice. This learning process may include;
 - a. Pre-treatment case discussions used to facilitate the development of independent decision-making in diagnosis, treatment planning, planning of treatment and treatment execution.
 - b. Post-treatment case discussion used to facilitate group reflection and integration with theoretical knowledge.
- iv. Research exposure through participation in a research project (clinical, experimental or literature research) which is reported formally in a thesis, or as a manuscript prepared for submission or as published paper(s).

13. SUPERVISION STRUCTURE

Specialist training will take place in programmes approved by the Ministry of Higher Education. Higher Education Provider (HEP) in which the training in this discipline is undertaken must have a Head of Programme (HOP) who coordinates training together with all designated teaching staff.

In the early stages of the training, close supervision and assessment of the trainees work are necessary to determine their competency level. As the training progresses, trainees need to perform the expected tasks independently. The trainees should be exposed to a variety of treatment philosophies within the discipline through the presence of multiple clinical supervisors.

The provision of training must include a variety of approved settings in other institutions, particularly during the later stages of the programme.

14. FEEDBACK ON LEARNING

Assessment of competences will be through multiple assessment methods, which involve various assessors. Assessment methods may include clinical examination, direct observation of procedural skills in daily clinical session, case-based discussion, logbook records, multi-source feedbacks and reflective summaries. Satisfactory progress in the assessment process and success in an exit assessment by examination is required before award of the degree.

A record of all appraisals will be kept in the logbook, which will be used as part of continuous assessment. Keeping up to date of the logbook and portfolio of completed cases is a trainee's responsibility.

The logbook may include the following:

- i. Details of consultation clinics
- ii. Details of patients case portfolio
- iii. Details of teaching and learning experiences
- iv. Journal Club activities
- v. Clinical case presentation and discussion
- vi. Professional courses attended
- vii. Audit activities carried out

15. ASSESSMENT

15.1 Theory and Clinical Assessment

The purpose of clinical assessment is to ensure that trainees have achieved the appropriate skills specified in the learning outcomes. Clinical assessment of trainees will take two forms:

i. Continuous Assessment

The continuous assessment will be based on various activities that the trainees perform on a day to day basis. The continuous assessment takes into account both the clinical and didactic elements of the training.

Some of the assessment methods available are:

- a. Preclinical competency tests
- b. Clinical competency tests
- c. Performance during the clinical case-based discussion
- d. Multi-source feedbacks from supervisors, support staff, peer and patients
- e. Performance at seminars/journal clubs
- f. Progress tests
- g. Performance of clinical work

These assessment methods may be either formative or summative.

ii. Examination

Formal completion of training will be marked by a satisfactory summative assessment in the final examination. The examination should conform to the standards spelled out in the Postgraduate Standards Guidelines. The summative assessment(s) should include elements of a written paper(s), clinical case reports and viva-voce related the

speciality or unseen clinical case(s).

15.2 Research Assessment

A supervisor must be appointed for each trainee to guide him/her in the research activities. Both the supervisor and the head of the programme must monitor the trainee's assessment to ensure satisfactory progress. The trainees must be monitored through:

- i. Regular consultation (formal and informal)
- ii. Research progress (using appropriate mechanisms)
- iii. Presentation / colloquium / seminar / workshop

Assessment of research must include:

- i. Formative assessment:
 - a. Monitoring of research progress periodically (for example, through a progress report, or a proposal defence). This monitoring will assess the knowledge, critical thinking, practical, technical, professional, scientific and problem-solving skills of the trainee.
 - b. Research Presentation / Colloquium / Seminar / Workshop. These activities will enhance the trainee's communication skills, teamwork, leadership, organisational skills, lifelong learning, and professionalism.
- ii. Summative assessment:
 - a. Thesis; and
 - b. Viva-voce.

15.3 Examiners

At least one (1) external examiner must be appointed for each clinical and research component.

15.4 Criteria for Graduation

The trainee must pass both the clinical and research component independently.

16. MINIMAL CLINICAL EXPERIENCE

The programme must provide sufficient clinical experience for the trainees to be proficient in the comprehensive treatment of a wide range of dental and orofacial diseases or conditions in infants, children, and adolescents under 16 years of age including children with special care needs. Trainees must show evidence of cases treated throughout their three years of clinical training in the form of clinical logbooks. The clinical cases should be written as reflective case summary portfolio. Each trainee needs to produce a logbook that consists of a minimum of 100 portfolios of patients (new and recall) which the trainee have treated. The cases recorded in the logbook must exhibit evidence of different scopes of treatment provided to the patients.

A trainee must be monitored periodically to record how the trainee progresses throughout the training period. Proof of readiness of the trainee to practice independently as a specialist must be documented.

Each trainee must achieve a minimal number of a set of clinical procedures outlined in the expected Minimal Clinical Experience as shown in the table below before the trainee is allowed

to sit for the Final Professional Examination:

The Minimal Clinical Experience expected of the trainee must include the followings:

No	Scope of Treatment Procedures	No. of expected (cases/ patients/ experiences) [Minimal Clinical Experience]
1.	Examination and Diagnosis with complete treatment planning	Thirty (30) new cases of healthy patients Five (5) new cases of medically compromised patients or special needs patients
2.	Comprehensive Dental Care (CDC)	Ten (10) cases of CDC carried out on healthy patients Five (5) cases of CDC carried out on medically compromised or special needs patients
3.	Non-pharmacological behaviour management	Twenty (20) clinical experiences as part of the integrated clinical management of patients
4.	Pharmacological behaviour management (conscious sedation)	Five (5) clinical experiences as part of the integrated clinical management of patients
5.	Dental treatment under general anaesthesia	Ten (10) cases [In five (5) of the cases, the trainee has to be the main operator]
6.	Traumatic dental injury	Five (5) cases
7.	Pulp therapy on either primary or young permanent dentition	Five (5) cases
8.	Oral lesions (other than dental caries and gingivitis)	Five (5) cases
9.	Interceptive orthodontics in developing dentition	Four (4) cases of interceptive orthodontics
10	Dento-alveolar surgery	Three (3) cases
11	Non-surgical management of jaw bone fractures/ Management of oral and perioral soft tissue trauma	Ten (10) cases
12	Dental developmental disorders or anomalies	Three (3) cases
13	Admission, consenting and discharge of patients	Twenty (20) cases

17. HUMAN RESOURCE

The Programme Director and at least two (2) of the teaching staff must be a recognised specialist in Paediatric Dentistry. Other teaching staff must comprise of a minimum of two (2) recognised specialists in the related field relevant to the practice of Paediatric Dentistry. There

should be at least 60% full-time teaching staff.

The number of teaching staff must be sufficient to ensure the conduct of the following:

- i. All guided teaching activities, including case conferences, seminars, etc.,
- ii. Review of patient evaluation, treatment planning, management, complications and outcomes of cases,
- iii. Supervise all clinical activities,
- iv. Research activities,
- v. Assessment activities.

Supervision must be structured, and the supervisor(s) must be present for teaching and direct supervision of all patient care. The suggested optimal ratios for academic staff to trainee are:

- For clinical session - 1: 6,
- For research supervision - 1: 4

18. CLINICAL FACILITIES

The HEP must provide facilities and resources to fulfil the needs of the training programme and to develop and sustain it on a continuing basis. These include:

- i. Physical facilities within the HEP Institution to permit the trainee to operate under the circumstances prevailing in the practice of Paediatric Dentistry.
- ii. External clinical facilities specifically identified for the advanced clinical training in Paediatric Dentistry.
- iii. Laboratory facilities specifically identified to support the needs of the programme.

GLOSSARY OF TERMS

The terms used in this document (i.e. must, should, may and could) were selected to indicate the relative weight that the DentSEdC /NCBBPDE attaches to each statement. The definitions of these words used in this document are as follows:

1. **Must:** Indicates an imperative need and/or duty; an essential or indispensable item; mandatory.
2. **Should:** Indicates a method to achieve the standards.
3. **May or Could:** Indicates freedom or liberty to follow a suggested alternative.

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