

Division of Graduate Dental Studies



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ORTHODONTIC

*Residency Training Programme
leading to the degree of
Master of Dental Surgery (MDS)*

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1 INTRODUCTION

The Residency Training Programme in Orthodontics is a 3-year full-time course leading to the degree of Master of Dental Surgery. The programme is accredited by the Royal College of Surgeons of Edinburgh to enable candidates who successfully complete the course to sit for the Membership in Orthodontics (MOrthRCS Edinburgh). This enables the acquisition, by assessment, of the Fellowship of the College of Surgeons (FDSRCS Edinburgh) after 5 further years of clinical practice as a specialist.

The programme is administered at the Faculty of Dentistry by the Division of Graduate Dental Studies, and at the National Dental Centre by the Department of Orthodontics. There is a planned admission of 3 students each year with applications for admission being invited in October. The course commences in July, and the examinations for each of the 3 years are held in June.

The course consists of clinical and didactic components held at the Faculty of Dentistry and the National Dental Centre.

The fixed appliance techniques taught in the orthodontic programme are a variation of the Straightwire Technique and the Tip-Edge Appliance. A typodont course on the Edgewise/Straight Wire techniques is held annually for new entrants at the National Dental Centre, and another typodont course on the Tip-Edge appliance is conducted at the Faculty of Dentistry. These are supported by continuing wire bending exercises as integral part of the clinical sessions. Diagnosis and treatment planning sessions, together with case progress discussions are held weekly and a journal club assists the candidates with guided journal reading. A combined clinic where orthognathic cases are discussed is regularly held. Research and study time is also part of the schedule.

A thesis is part of the course requirements. The literature survey is completed at the end of the first year, with the draft thesis being presented at the end of the second year. The bound volume is handed in the month of March in the final year.

The selection of 5 clinical cases for final examination will be made from a total of 10 presented cases, and the candidates will assist the clinical teachers in the final selection. The final examination format is enclosed as a document within this booklet.

2 TEACHING STAFF

PROGRAMME DIRECTOR: **Assoc Prof Kelvin Foong Weng Chiong**
BDS, MDS Ortho (Adelaide), MOrthRCS (Edin), FAMS, FDSRCS (Edin)

PROGRAMME CO-DIRECTOR: **Dr Mimi Yow**
BDS, FDSRCS (Edin), MSc (Lond)

FACULTY OF DENTISTRY

Assoc Prof Kelvin Foong Weng Chiong
BDS, MDS Ortho (Adelaide), MOrthRCS (Edin), FAMS, FDSRCS (Edin)

Dr Henry Ho Chee Wai
BDS, MDS Ortho (Adelaide)

Dr Hwang Yee Cheau
BDS (Lond), DOrthRCS, MSc Ortho (Lond), FDSRCPS (Glas), MOrthRCS (Eng)

Dr Kaan Sheung Kin
BDS, MSc (Glas), DDORCPS (Glas), MDORCPS (Glas)

Dr Lim Hong Meng
BDS, MOrthRCS (Edin), MDS Ortho

Dr Tan Hwee Hiang
BDS, MSc Ortho (Lond), D OrthRCS (Eng)

Dr Tan Tzee Jen
BDS, MSc Ortho (Lond), D OrthRCS (Eng), MDORCPS (Glas), FAMS

NATIONAL DENTAL CENTRE

Dr Koh Chay Hui
BDS, MSc Ortho (Lond), DOrthRCS (Eng)

Dr Ivan Lim Kuen Fui
BDS, DOrthRCS (Edin), MDS Ortho, MDORCPS (Glas)

Dr Loh Soo Ann
BDS, FDSRCPS (Glas), DOrthRCS (Eng), FAMS

Dr Rosalind Wong Yoke Cheng
BDS, DOrthRCS (Eng), FDSRCPS (Glas)

Dr Mimi Yow
BDS, FDSRCS (Edin), MSc (Lond)

COMMITTEE FOR ORTHODONTICS

Assoc Prof Kelvin Foong Weng Chiong (Chairman)
Dr Hwang Yee Cheau
Dr Kaan Sheung Kin
Dr Loh Soo Ann
Dr Rosalind Wong Yoke Cheng
Dr Mimi Yow

3 OBJECTIVES OF THE PROGRAMME FOR SPECIALTY EDUCATION IN ORTHODONTICS

The general objective of the programme is to educate dentists to become specialists in orthodontics with a solid and broad academic background and adequate clinical experience in different treatment methods.

The graduate should be able to:

- diagnose anomalies of the dentition, facial structures and functional conditions
- detect deviations of the development of the dentition, of facial growth, and occurrence of functional abnormalities
- formulate a treatment plan and predict its course
- evaluate psychological aspects relevant to orthodontics
- conduct interceptive orthodontic measures
- execute simple and complex treatment procedures
- act as an expert in orthodontics and related matters
- collaborate in multidisciplinary teams for treatment of compromised patients, orthodontic-surgical treatment and care of cleft palate patients
- evaluate need for orthodontic treatment
- practise orthodontics with high professional and ethical standards
- use available opportunities for improving professional skills

In addition, emphasis is placed on:

- biomedical sciences relevant to orthodontics
- development of a scientific attitude in an inquiring mind and stimulation of professional interest
- principles of scientific methodology
- interpretation of literature
- research activities
- oral and written presentation of clinical and research findings

The curriculum is based on the recommendation of the ERASMUS report on postgraduate education in orthodontics. The detailed report is published in European Journal of Orthodontics 1992; 14:85-94.

4 *EXAMINATION FORMAT*

The examination syllabus is based on the ERASMUS recommendations for postgraduate orthodontic curriculum.

- (a) normal growth and development with particular reference to the craniofacial complex, the dentition and soft tissue morphology;
- (b) disorders of growth and development as they affect the above regions in relation to orthodontics; the aetiology of malocclusion and dentofacial deformity;
- (c) psychological development and behaviour relevant to orthodontics;
- (d) genetics relevant to orthodontics;
- (e) variations in the development of occlusion; the recognition of abnormal variation and of the need to take interceptive measures;
- (f) the diagnosis and treatment of oral disease in children and the relationship between orthodontics and paediatric dentistry; the principles of medical and surgical practice related to the treatment of facial deformity; minor oral surgery in children;
- (g) the principles of radiography and radiology relevant to orthodontics;
- (h) assessment of malocclusion and treatment planning in relation to general and dental health;
- (i) the construction, use and management of removable, functional and fixed appliances and their underlying mechanical principles;
- (j) epidemiology, biometry and medical statistics applicable to orthodontics;
- (k) materials used in orthodontics.

Year 1 Examination

WRITTEN PAPER - One 3-hour paper consisting of 3 questions related to any part of the syllabus related to the curriculum taught during Year 1.

DIAGNOSTIC SPOTTER EXAMINATION - The records of 2 previously unknown patient will be selected by the examiners. The candidates will be expected to carry out the diagnosis and treatment planning for the case. The time allowed for each diagnostic spotter case will be 10 minutes plus 10 minutes of examination.

CLINICAL ORAL EXAMINATION - the duration will be 15 minutes.

ORAL EXAMINATION - The oral examination will be of 15 minutes duration and questions may be asked on any aspect of the syllabus taught during Year 1.

Reference may be made to colour transparencies, radiographs, study models and orthodontic appliances by the examinations.

RESEARCH - A short research presentation (8 minutes + 2 minutes questions) on a literature survey of the research topic selected will be presented to the examiners prior to the oral examination.

Year 2 Examination

WRITTEN PAPER - One 3-hour paper consisting of 3 questions related to the curriculum taught during Year 2.

CLINICAL EXAMINATION - 1 previously unknown patient will be selected by the examiners. The candidate will be expected to carry out the diagnosis and treatment planning for the case. The time allowed for the clinical examination will be 15 minutes.

CLINICAL ORAL EXAMINATION - the duration will be 15 minutes.

ORAL EXAMINATION - The oral examination will be of 30 minutes duration and questions may be asked on any aspect of the syllabus taught during Year 1 and Year 2 including the research project carried out by the candidate. Reference may be made to colour transparencies, radiographs, study models and orthodontic appliances by the examiners. The candidate is allowed to bring to the examination the draft thesis for reference if required.

RESEARCH - A short presentation (8 minutes + 2 minutes questions) will be presented showing the draft results of the research project to the examiners prior to the oral examination.

Conjoint Final MDS (Orthodontics) / M Orth RCSEd Examination

WRITTEN PAPER - One 3-hour paper related to any part of the syllabus.

CLINICAL CASE HISTORIES - Candidates to submit 10 presentation cases prior to the examination, out of which examiners will choose 5 cases in discussion with the candidates. The oral examination of the selected cases will last 30 minutes.

THE PRESENTATION OF CLINICAL CASE HISTORIES - The patient's initials should be clearly shown on all the relevant material submitted which should be colour coded using adhesive labels as shown below. Each case history should be presented in a separate semi-stiff binder approximately 30 x 21 cm (A4 size), i.e., large enough to accommodate cephalometric radiographs and tracings but not unnecessarily robust or unduly bulky. The cover should indicate the patient's initials and the type of cases presented as follows:

Case	On Binder Cover	Colour Code
Fixed Appliance Case History 1	(A) Fixed Appliance Case History AB	Green
Fixed Appliance Case History 2 (or Multidisciplinary Cases History)	(B) Fixed Appliance Case History CD	Blue

Condensed Case History 1	(C) Condensed Case History EF	Red
Condensed Case History 2	(D) Condensed Case History GH	Yellow
Condensed Case History 3	(E) Condensed Case History IJ	White

The text relating to each case must be neatly presented with adequate margins and spacing, and checked before submission for mis-spelling and typographical errors. **The candidate's name and clinical centre must not be stated on any of the material submitted, and the patient's address should not be referred to in the personal details.**

The requirements for the individual clinical case histories are as follows:

(A) Fully documented fixed appliance cases

- (i) The clinical case histories should take the form of comprehensive orthodontic assessments based on the clinical examinations of the patients analysis of study models and radiographs and general standard of oral and dental health;

Original radiographs or duplicated radiographs relevant to the cases must be included in a separate soft plastic pocket from which they may be removed for mounting and presentation on an ex-ray viewing screen. A clear understanding of the cephalometric analysis used should be evident from the text and the radiographs should be so arranged that they illustrate progress from one stage of treatment to the next;

- (ii) the aims and objectives of treatment should be clearly stated together with the reasons for adopting the methods used;
- (iii) candidates must fully describe the features of the appliance components and give details relating to archwires used;
- (iv) the treatment progress should be evident from the records presented, and the text should adequately explain the reasons for appliance adjustments and the sequence of treatment changes;
- (v) problems encountered during treatment must be discussed and an objective commentary given on the results, including, if necessary, how these results might have differed by adopting alternative treatment plans;
- (vi) the cases should be adequately illustrated with colour prints, showing intra-oral (preferably anterior, lateral and occlusal), full face and profile views of the patients, before and after treatment and also by additional intra-oral illustrations during interim stages of treatment;
- (vii) pre- and post- treatment study models must also be submitted.

(B) If a Multidisciplinary case history is used

The presentation of the clinical case history should broadly follow that described for the fully documented fixed appliance case, but this will depend on the nature of the clinical problem and whether or not the patient is being treated or kept

under observation. Nonetheless, the candidate must clearly demonstrate his close involvement with the clinical management of the patient as well as a satisfactory understanding of the aetiology, diagnosis and possible methods of treatment. The text must incorporate a commentary relevant to all aspects of the patient's problems, including difficulties encountered in earlier management and those anticipated in the future. The candidate should also report on any of the original clinical records and/or specific investigations referred to in the case history. It should also be evident that the candidate has actively monitored the patient's oral and dental health during treatment and prescribed appropriate remedial action where necessary.

(C,D,E) Condensed clinical case histories

The condensed clinical case histories offer an opportunity for candidates to demonstrate the range of both the types of malocclusion which they have treated and the techniques at their disposal. Each condensed clinical case history should be brief and concise and in the form of a condensed summary of the case notes. The material presented should be related to different types of malocclusion in order to demonstrate types of orthodontic treatment which the candidate has provided, other than those described in (A) and (B) above. Original radiographs are not required but a comprehensive radiological report should be given, together with tracings of the original and later cephalometric radiographs illustrating changes associated with treatment and further craniofacial growth and development.

The typescript relating to each condensed clinical case history should preferably not exceed three pages and should incorporate details of the cephalometric analysis as well as giving the reasons for adopting the methods of treatment described. An objective assessment of the prognosis and progress should also be included in the case history.

Each condensed clinical case history should also contain intra-oral (anterior, lateral and occlusal views where possible), full face and profile illustrations (black and white or colour prints) of the patient, before treatment, together with subsequent relevant photographs. Record models are also required demonstrating the original malocclusion and the progress achieved whilst under the care of the candidate. The candidate should also demonstrate responsibility for monitoring the general oral and dental health of each patient whilst undergoing orthodontic treatment.

CLINICAL EXAMINATION - 2 previously unknown patients will be selected by the examiners. The candidate will be expected to carry out the diagnosis and treatment planning for 1 long case and 1 short case. The time allowed for the clinical examination will be 30 minutes.

CLINICAL ORAL EXAMINATION - the duration will be 30 minutes.

DIAGNOSTIC SPOTTER EXAMINATION – This will be a one-hour examination on three patient histories and related diagnostic records. Candidates will be given 10 minutes to study each patient history, followed by a 10-minute oral examination on each history. Candidates are expected to demonstrate an understanding of the principal features of the case and discuss an appropriate treatment plan.

FINAL ORAL EXAMINATION - The oral examination will be of 30 minutes duration and questions may be asked on any aspect of the syllabus including the research project carried out by the candidate. Reference may be made to colour transparencies, radiographs, study models and orthodontic appliances by examiners. The candidate is allowed to bring to the examination the bound thesis for reference if required.

RESEARCH

- (i) Submission of thesis:
Three bound copies of the thesis should be delivered to the Graduate School of Dental Studies at least three months before the date of the Final Examination.
- (ii) Presentation of results:
A short presentation (10 minutes + 2 minutes for questions) on the individual research project will be presented at the end of the final examination.

APPENDIX

ANNUAL ASSESSMENT OF CLINICAL PERFORMANCE (for all years)

Diagnostic skill
Clinical skill
Communication skill
Practical ability
Overall quality of patient care
Depth of knowledge and application
Overall commitment

YEAR-END ASSESSMENT FOR YEARS 1 AND 2

Major Essays
Written Paper
Clinical or Diagnostic Spotter Examination
Oral Examination
Overall Clinical Performance

FINAL EXAMINATION FOR YEAR 3

Continual Assessment (30% of marks obtained for clinical and didactic performance)
Written Paper
Clinical Examination
Diagnostic Spotter Examination
Case History Presentation
Case History Oral Examination
Oral Examination
Research Project