

## **SPECIALIST ACCREDITATION IN ORTHODONTICS**

The candidate applying for accreditation in the specialty of Orthodontics shall fulfil the following criteria:

- Successfully completed a formal basic specialist training (BST) program of at least 36 months<sup>1</sup> and attained a basic specialist qualification, e.g. MDS (Orthodontics)(NUS) or its equivalent, that is recognised by the Dental Specialists Accreditation Board.
- Be in orthodontic practice for a minimum period of five (5) years; this period includes the duration of basic specialist training (BST) mentioned above.
- Fulfil the requisite core component in Continuing Professional Education (CPE) for specialists.
- Completion of a log of cases as specified in Annex B.
- Signed a declaration that all cases used for this accreditation are managed and treated by the candidate.
- Upon successful completion of the above, present for an assessment by the Orthodontic Dental Specialist Accreditation Committee (DSAC). The assessment, lasting one and a half hours, shall consist of three (3) components:
  - (i) Case presentation (Annex A)
  - (ii) Discussion on log book (Annex B)
  - (iii) Exit Interview (Annex C)

Candidates re-supplicating for specialist accreditation in Orthodontics shall use new cases for case presentation (Annex A) and fifty percent (50%- minimum 15 new completed cases and any number of new uncompleted cases to make a total of 30) of cases in the log book (Annex B) shall be new cases completed after the last unsuccessful assessment for specialist accreditation in Orthodontics.

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<sup>1</sup> Candidates whose formal basic specialist training program is less than 36 months may be assessed on a case-by-case basis on the discretion of the DSAC.

### Case Presentation

The candidate shall present documentation for eight (8) completed cases. Cases must be started after the date of conferment of a DSAB recognised basic specialist qualification in Orthodontics.

The spectrum of completed cases shall include **5 essential cases**, comprising of:

- (a) *Class I malocclusion: A malocclusion with either a dento-alveolar protrusion, open bite, deep overbite or a significant arch length deficiency, or eruption problem requiring orthodontic treatment*
- (b) *Class II malocclusion with Angle's Class II molar relationship (at least half unit)*
- (c) *Class III malocclusion with Angle's Class III molar relationship (at least half unit)*
- (d) *# Surgical-orthodontic management of skeletal discrepancies*
- (e) *# Multidisciplinary case (can be "orthodontics-prosthodontics" or "orthodontics-periodontics" or "orthodontic –minor oral surgery")*

**and any 3 best treated cases.**

Case presentations shall be in prescribed format in Appendix 1. One (1) hard copy and five (5) softcopies of case presentations shall be submitted to the DSAC.

The hard copy shall be in either high quality duplicated radiographs or digital printouts of radiographs and any supporting clinical pictures. **Please do not send in the originals.**

The Radiographs in the hard copy should be of good clarity and resolution and they should at least be:

- i. 21cm x 11cm for OPG / Dental Panoramic Tomogram
- ii. 14cm x 19cm for Lateral Cephalogram

Finishing OPG/DPT submitted should not be longer than 6 months prior to the de-band date. Post-deband OPG/DPT should be submitted in such instances.

The Clinical photographs should be standardized to same magnification for both the Extra-Oral and Intra-Oral respectively. They should be properly labelled according to the stage of treatment. Mid treatment photographs may be inserted to demonstrate treatment mechanics and progress. The dimensions of each should measure 5cm x 7cm.█

The soft copies shall contain digitized images or digital radiographs and clinical pictures in high resolution JPEGs of not less than 600KB.

Study models are required for all the above 8 cases in the pre-treatment and post-treatment stages. They should be properly labelled according to the stage of treatment.

Pre-treatment, interim, and post-treatment digital intraoral scans of the actual patients are also accepted. Scans of study models are not accepted. The candidate is responsible for model orientation and accurate occlusal representation. Alteration of tooth or soft tissue anatomy, in any form using any method, is considered record falsification. If there is a significant difference between maximum intercuspation and centric relation, documentation must be provided. When obtaining digital models, the examinee is responsible for using a scanner and software that conforms to the Digital Model submission requirements (Appendix 3).

Post-treatment digital scans are only accepted when accompanied by either plaster models or a 3D printed stereolithic reproduction of the occlusal result.

The models are to be submitted to the Examination Secretariat 48 hours before the actual exam takes place.

**CASE PRESENTATION**

Case Number: \_\_\_\_\_

Candidate Number: \_\_\_\_\_

Patient's Date of Birth: \_\_\_\_\_

Date Started: \_\_\_\_\_

Patient's Gender: Male/Female \*

Date Finished: \_\_\_\_\_

Case Category: a/b/c/d/e

Date of Recall: \_\_\_\_\_

\*Circle or delete where appropriate

**PRE-TREATMENT ASSESSMENT**

Age at assessment: \_\_\_\_\_ years \_\_\_\_\_ months

**PATIENT'S COMPLAINTS**

**RELEVANT MEDICAL & DENTAL HISTORY**

**CLINICAL EXAMINATION: EXTRA-ORAL FEATURES**

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Soft-tissues:

Oral hygiene:

Erupted teeth present:

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General dental condition:

Case Number: \_\_\_\_\_

Candidate Number: \_\_\_\_\_

**CROWDING / SPACING**

Maxillary arch:

Mandibular arch:

**OCCUSAL FEATURES**

Incisal relationship:

Overjet (mm):

Overbite:

Centrelines:

Left buccal segment relationship:

Right buccal segment relationship:

Crossbites:

Displacements:

Other occlusal features:

**DIAGNOSTIC SUMMARY**

Case Number: \_\_\_\_\_

Candidate Number: \_\_\_\_\_

**PROBLEM LIST**

[Add as few or as many as are appropriate to the case]

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

**AIMS AND OBJECTIVES OF TREATMENT**

[Add as few or as many as are appropriate to the case]

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

**Case Number:** \_\_\_\_\_

**Candidate Number:** \_\_\_\_\_

**TREATMENT PLAN**

Extractions (FDI notation):

Appliances:

Special anchorage requirements:

Minor adjunctive surgery:

Major adjunctive surgery:

Additional dental treatment:

Proposed retention strategy:

Prognosis for stability:

**Case Number:** \_\_\_\_\_

**Candidate Number:** \_\_\_\_\_

**COMPUTER PREDICTIONS**

(Orthognathic surgery cases – surgical planning and predictions shall be included)

Case Number: \_\_\_\_\_

Candidate Number: \_\_\_\_\_

**TREATMENT PROGRESS**

Date at start of active treatment:

Age at start of active treatment:

Date at end of active treatment:

Age at end of active treatment:

Date at retention:

Age at retention:

**KEY STAGES IN TREATMENT PROGRESS**

(Provide a brief summary of approximately 8-10 key stages in the treatment sequence; mid-treatment photographs may be inserted to demonstrate treatment mechanics and progress.)

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	DATE	STAGE
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- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Case Number: \_\_\_\_\_

Candidate Number: \_\_\_\_\_



**POST-TREATMENT ASSESSMENT**

**OCCLUSAL FEATURES**

Incisal relationship:

Overjet (mm):

Overbite:

Centrelines:

Left buccal segment relationship:

Right buccal segment relationship:

Crossbites:

Displacements:

Functional occlusal features

Other occlusal features:

**Case Number:** \_\_\_\_\_

**Candidate Number:** \_\_\_\_\_

**OCCLUSAL INDICES**

INDEX	PARAMETER	VALUE
Index of Treatment Need (IOTN)		
Dental Health Component	Start	
	Finish	
Aesthetic Component	Start	
	Finish	
Peer Assessment Rating (PAR)		
	Start	
	Finish	
	Change	
	% Change	
Other		

**RADIOGRAPHS TAKEN TOWARDS /AT END OF TREATMENT**

Date(s) and type of radiographs taken:

Relevant findings:

Case Number: \_\_\_\_\_

Candidate Number: \_\_\_\_\_

**CEPHALOMETRIC ASSESSMENT** (where appropriate)

VARIABLE	PRE-TREATMENT	POST-TREATMENT	RECALL
SNA			
SNB			
ANB			
SN to maxillary plane			
Wits appraisal			
Upper incisor to maxillary plane angle			
Lower incisor to mandibular plane angle			
Interincisal angle			
MM angle			
Upper anterior face height			
Lower anterior face height			
Face height ratio			
Lower incisor to Apo line			
Lower lip to Ricketts E Plane			

Case Number: \_\_\_\_\_

Candidate Number: \_\_\_\_\_

**ADDITIONAL ANALYSIS (OPTIONAL)**

Case Number: \_\_\_\_\_

Candidate Number: \_\_\_\_\_

**CEPHALOMETRIC SUPERIMPOSITIONS** (where appropriate)

Overall superimposition, registered on Sella-Nasion line at Sella

**INTERPRETATION OF CEPHANLOMETRIC CHANGES**

Case Number: \_\_\_\_\_

Candidate Number: \_\_\_\_\_

**CEPHALOMETRIC SUPERIMPOSITIONS** (where appropriate)

Maxillary and mandibular superimpositions (Please state registration landmarks)

**INTERPRETATION OF CEPHALOMETRIC CHANGES**

Case Number: \_\_\_\_\_

Candidate Number: \_\_\_\_\_

**a) RATIONALE FOR TREATMENT**

**b) COMPLICATIONS DURING TREATMENT**

**c) CRITICAL APPRAISAL**

**Case Number:** \_\_\_\_\_

**Candidate Number:** \_\_\_\_\_

**Examination of Log Book**

The candidate shall compile a log book of cases showing the broad spectrum as stated in Annex A. These cases must be carried out by the candidate after the date of conferment of DSAB-recognised basic specialist qualification in Orthodontics.

A minimum of sixty (60) cases, out of which a minimum of 30 must be completed, with recalls where appropriate and any number of uncompleted cases to make a total of 60. Uncompleted cases should be at least into the second stage of comprehensive treatment i.e. correction of molar relationship and space closure. These 60 cases shall be submitted in the prescribed template in Appendix 2.

One (1) hard copy and five (5) soft copies (in spreadsheet format eg Microsoft Excel) on CD-ROM of the log book shall be submitted to the DSAC. The log book shall illustrate the candidate's broad clinical experience relevant to the specialty of Orthodontics and represent a true and accurate record of all the patients seen and treated by the candidate.

Candidate must submit the log book to DSAC earlier and examiners will select 2 cases (out of 60 submitted) for discussion. Study models are not required for these two cases. Candidate will be informed of the two cases selected by the DSAC and is required to produce the patient treatment notes, radiographs and photographs for audit purposes 48 hours prior to the exit interview.



Template for Orthodontic Log Book

Name Reg No. Date of Birth Gender	Dental I II Subdiv. III	Skeletal I II III	Vertical eg: High Low AOB	Others eg: Cleft CFA Syndrome	Extracted permanent teeth (FDI notation)	Type of appliance	Type of retention	Date and age in yrs/mths at the start of treatment	Date and age in yrs/mths at the end of treatment	Date and age in yrs/mths at recall

**Exit Interview**

The candidate shall present for an interview at a date and time determined by the DSAC on any aspect of Orthodontics. Test cases with study casts, radiographs and photographs will be presented to the candidates for examination and assessment in spot diagnosis and treatment planning. The candidate's cases from the log book may be discussed during the interview.

## **Digital Model Submission Requirements and 3D-Printing Stereolithographic Final Models**

### **Digital Model Submission Requirements**

Digital scans will only be accepted from the following intra-oral scanners:

1. Itero (Align Tech)  
Scans are to be downloaded as a .3dm file, to be viewed using the OrthoCAD viewer
2. Trios (3Shape)  
Scans are to be sent via 3Shape communicate to DSAC communicate account
3. Omnicam (Cerec)  
Scans exported as STL files and emailed to DSAC, to be viewed with any viewer software.

Other intraoral scanners will be subject to approval from the committee.

The two arches must show the patient's centric occlusal relationship demonstrating maximum intercuspation when viewed together.

Labial gingival tissue must be demonstrated on all models, including those without digital bases, as outlined below:

- A minimum of 12 mm at the maxillary and mandibular incisor and canine region.
- A minimum of 8mm at the maxillary and mandibular premolar region.
- A minimum of 6 mm distal to the second molar region. If possible, include the tuberosities and hamular notches in the maxilla and the retromolar pads in the mandible.
- The palatal rugae must be included within the maxillary model.

(Refer to the figures below as a guide)

Frontal View

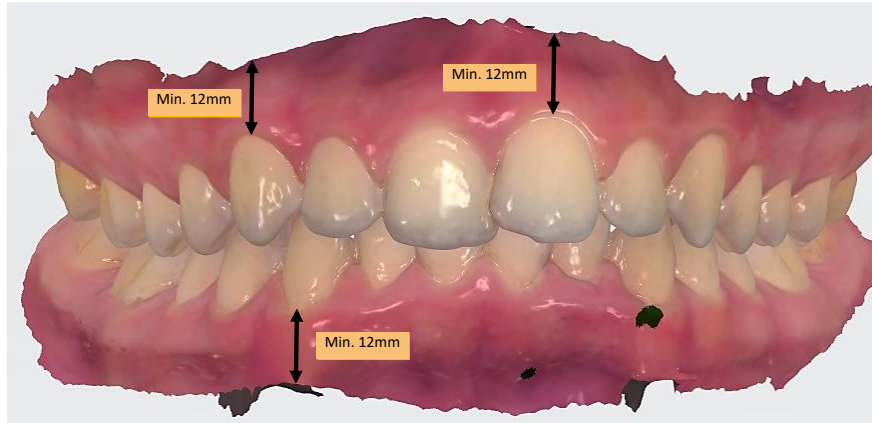


Fig. 1

Lateral View

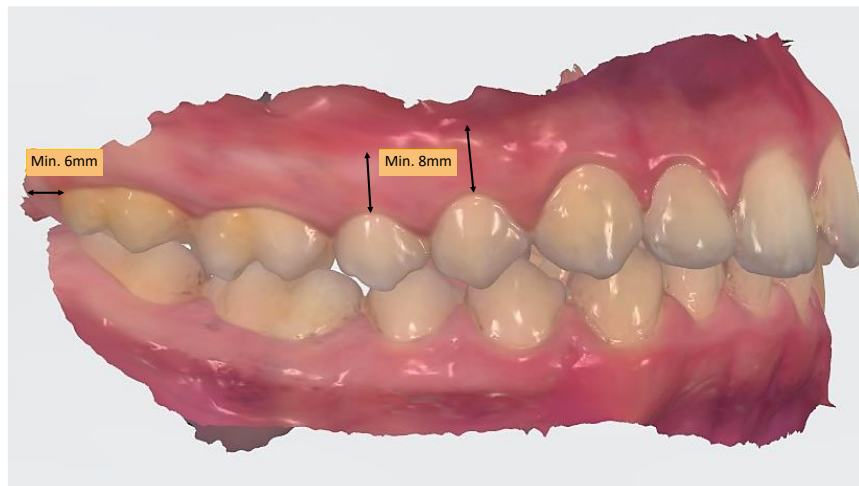


Fig. 2

Scan resolution must be at 0.10 millimeters or better. Scan accuracy must be at 0.20 millimeters or better.

Digital models with bases that are added using software will not be accepted.

Digital models date must match the records date (within a one-week period).

### **3D-Printing Stereolithic Final Models**

Final digital models submitted must be accompanied by either a plaster model or a corresponding 3D-printed stereolithic model.

All stereolithic models submitted for clinical examination are to be 3D printed from the following appointed laboratories:

- 1) Orthodontic Master
- 2) National Dental Centre
- 3) Singapore Dental CAD/CAM Laboratory Pte Ltd

The material used to print the 3D-printed stereolithic models must be non-toxic and comprised of a non-Volatile Organic Carbon (VOC) material.

Models should be printed with a non-translucent / non-transparent material (e.g., a plastic polymer) that, when fully cured (e.g., by UV light or otherwise), is of a limited colour palette. The resulting model should not possess significant reflective qualities nor be highly glossy in appearance.

The resulting colour of the 3D-printed model must be of a limited colour palette in order to provide the best representation for observation of anatomical detail. Off-white, cream, beige, or peach colours are acceptable for submission.

Other colours, such as standard white, bright white, or any variation of “milky” white are not acceptable for submission due to the reflective properties of these colours. Stereolithic models with these colour attributes will not be accepted for submission.

Printing resolution of the 3D printer should be at least 50 microns.