# **Faculty of Dentistry**

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#### 1 Faculty's Commitment

Starting from AY2018/19, the enrolment to the Faculty of Dentistry four-year undergraduate programme is increased to 60 students per academic year. Didactic and clinical teachings are carried out by about 30 full-time Dentistry staff, staff from the Yong Loo Lin School of Medicine as well as specialists and prominent practitioners from both the public healthcare institutions and private practice.

#### **Short History**

The Faculty of Dentistry had its beginnings in 1929 as a department of the King Edward VII College of Medicine, and was the first dental school established in a British Colony in the East. It became part of the University of Singapore in 1962, achieving faculty status in 1966. The Faculty premises were located on the grounds of the Singapore General Hospital until 1986 when it moved to the National University Hospital.

From 1 October 2011, the NUS Faculty of Dentistry was restructured into a one-department Faculty.

#### **Division of Graduate Dental Studies**

Established in 1970, the Graduate School of Dental Studies (GSDS) was known as the School of Postgraduate Dental Studies (PGDS) until 1997 when its name was changed. This move was initiated to keep in line with the other graduate schools of the university. With effect from AY2002/03, the graduate school was re-named "Division of Graduate Dental Studies (DGDS)".

The objectives of the graduate division are:

- To provide residency training programmes leading to postgraduate qualifications in dentistry
- To promote continuing dental education; and
- To develop research in dentistry.

#### Centre for Advanced Dental Education

The Centre for Advanced Dental Education (CADE) was set up in 2006 as one of the Faculty of Dentistry's strategic initiatives to raise the Faculty's profile through a heightened role in providing continuing dental education and expanding clinical training.

The Centre focuses on providing training for dental practitioners and auxiliaries in the form of:

- Continuing Dental Education lectures
- Hands-on courses
- Graduate diploma courses.

#### **Faculty Vision**

To be a dental institution of international distinction.

#### **Faculty Mission**

To improve oral health through academic excellence, high-impact research and quality clinical service.

Our mission will support the three thrusts of NUS: quality education, high-impact research and entrepreneurship, in service of country and society.

By providing a vibrant and challenging environment, the faculty strives to produce clinically competent, socially, and ethically responsible professionals who will be leaders in the community.

Excellence in our educational programmes and innovative research with high impact is the foundation upon which we will advance knowledge and nurture students to realise their full potential with a passion and commitment to independent life-long learning.

The Faculty's mission is in line with the University's general mission to excel in teaching and research, and to contribute to Singapore's social and economic development.

#### **Faculty Objectives**

The Faculty of Dentistry aims to be the leading dental school in the Asia-Pacific region within the next 10 years, and a top-ranked dental school internationally within 20 years.

Therefore, the NUS FOD is guided by the following eight objectives, the achievement of which will facilitate the attainment of our vision:

- 1. To be the educational hub for dentistry in the region, being a centre where the very best dental students, staff, and faculty interact and learn from one another.
- 2. To establish a vibrant and conducive environment for high impact research, excellent teaching, and professional clinical service.
- 3. To produce clinically competent graduates with a sense of professionalism, ethical and social responsibility.
- 4. To develop peaks of excellence in research.
- 5. To be the regional centre for postgraduate clinical specialty training programmes that are recognised for their excellence, and graduates who are leaders in their clinical specialties.
- 6. To strengthen bonds with students, alumni and other stakeholders, building bridges that transcend the academic experience.
- 7. To provide leadership in the development of the profession.
- 8. To contribute towards life-long learning for the dental profession.

# **2 Key Contact Information**

For up-to-date information, please visit the Faculty's website at:  $\underline{\text{http://www.dentistry.nus.edu.sg}}$ 

# **Deanery**

| TITLE &<br>NAME                  | DESIGNATION/RESPONSIBILITY  | TELEPHONE (677X-XXXX)  | EMAIL<br>(XXXX@NULLNUS.EDU.SG) |
|----------------------------------|-----------------------------|------------------------|--------------------------------|
| Prof Patrick<br>Finbarr<br>ALLEN | Dean                        | 24989                  | dendean                        |
| Assoc Prof<br>WONG Mun<br>Loke   | Vice Dean, Academic Affairs | 26834                  | denvdaa                        |
| Assoc Prof<br>CAO Tong           | Vice Dean, Research         | 26845                  | denvdr                         |
| Assoc Prof LIM Ah Tong Asher     | Vice Dean, Clinical Affairs | 26844                  | denvdca                        |
| Assoc Prof YU Soo Hoon Victoria  | Vice Dean, Graduate Studies | 24962                  | denvdgs                        |
| Assoc Prof Catherine HONG        | Assistant Dean, Education   | 6779 5555<br>ext 11787 | denchhl                        |

# **Discipline Directors / Directors of Division**

| TITLE & NAME           | DESIGNATION/RESPONSIBILITY | TELEPHONE (677X-XXXX) | EMAIL<br>(XXXX@NULLNUS.EDU.SG) |
|------------------------|----------------------------|-----------------------|--------------------------------|
| Assoc Prof<br>CAO Tong | Oral Sciences              | 26845                 | dencaot                        |

| TITLE &                                     | DESIGNATION/RESPONSIBILITY                        | TELEPHONE (677X-XXXX) | EMAIL<br>(XXXX@NULLNUS.EDU.SG) |
|---|---|-----------------------|--------------------------------|
| Assoc Prof LIM Ah Tong Asher                | Oral & Maxillofacial Surgery                      | 26844                 | denalat                        |
| Assoc Prof<br>NEO Chiew<br>Lian<br>Jennifer | Endodontics, Operative Dentistry & Prosthodontics | 26840                 | dennnj                         |
| Assoc Prof LIM Lum Peng                     | Periodontics                                      | 26839                 | denlimlp                       |
| Assoc Prof FOONG Weng Chiong Kelvin         | Orthodontics & Paediatric Dentistry               | 26843                 | denfwc                         |

# **Programme Coordinators for Undergraduate Programmes**

# **Oral Sciences**

| TITLE & NAME                   | DESIGNATION/RESPONSIBILITY                  | TELEPHONE (677X-XXXX) | EMAIL<br>(XXXX@NULLNUS.EDU.SG) |
|--------------------------------|---|-----------------------|--------------------------------|
| Assoc Prof<br>TAN Kai<br>Soo   | Oral Biology                                | 28842                 | denkst                         |
| Assoc Prof<br>WONG<br>Mun Loke | Preventive Dentistry & Dental Public Health | 26834                 | denwml                         |

| TITLE & NAME                   | DESIGNATION/RESPONSIBILITY | TELEPHONE (677X-XXXX)  | EMAIL<br>(XXXX@NULLNUS.EDU.SG) |
|--------------------------------|----------------------------|------------------------|--------------------------------|
| Assoc Prof<br>Vinicius<br>ROSA | Dental Materials           | 6779 5555<br>ext 11650 | denvr                          |

# Oral and Maxillofacial Surgery

| TITLE & NAME                    | DESIGNATION/RESPONSIBILITY                            | TELEPHONE (677X-XXXX)  | EMAIL<br>(XXXX@NULLNUS.EDU.SG) |
|---------------------------------|---|------------------------|--------------------------------|
| Dr Raymond<br>WONG              | Oral & Maxillofacial Surgery                          | 6779 5555<br>ext 11612 | denrwcw                        |
| Assoc Prof<br>Catherine<br>HONG | Oral Maxillofacial Medicine, Pathology<br>& Radiology | 6779 5555<br>ext 11787 | denchhl                        |
| Dr Andrew<br>ROBINSON           | Oral Medicine   | -                      | denrna                         |

# ${\bf Endodontics\ /\ Operative\ Dentistry\ /\ Prosthodontics}$

| TITLE & NAME                       | DESIGNATION/RESPONSIBILITY                        | TELEPHONE (677X-XXXX)  | EMAIL<br>(XXXX@NULLNUS.EDU.SG) |
|------------------------------------|---|------------------------|--------------------------------|
| Dr TAN<br>Hee Hon                  | Prosthodontics (Fixed & Removable Prosthodontics) | 6779 5555<br>ext 11793 | dentanh                        |
| Dr Benny<br>GOH                    | Endodontics                                       | -                      | dengkcb                        |
| Assoc Prof NEO Chiew Lian Jennifer | Operative Dentistry                               | 26840                  | dennnj                         |

#### **Periodontics**

| TITLE & NAME     | DESIGNATION/RESPONSIBILITY | TELEPHONE<br>(6779-5555) | EMAIL<br>(XXXX@NULLNUS.EDU.SG) |
|------------------|----------------------------|--------------------------|--------------------------------|
| Dr FU Jia<br>Hui | Periodontics               | ext 11649                | denfjh                         |

# **Orthodontics and Paediatric Dentistry**

| TITLE &                     | DESIGNATION/RESPONSIBILITY | TELEPHONE (677X-XXXX) | EMAIL<br>(XXXX@NULLNUS.EDU.SG) |
|-----------------------------|----------------------------|-----------------------|--------------------------------|
| Dr SOH<br>Shean Han         | Orthodontics               | 26837                 | denssh                         |
| Dr MOK<br>Yuen Yue<br>Betty | Paediatric Dentistry       | 26835                 | denmokyy                       |

# **Dean's Office - Integrated Courses**

| TITLE & NAME                    | DESIGNATION/RESPONSIBILITY  | TELEPHONE (677X-XXXX) | EMAIL<br>(XXXX@NULLNUS.EDU.SG) |
|---------------------------------|-----------------------------|-----------------------|--------------------------------|
| Assoc Prof LIM Lum Peng         | Behavioural Science         | 26839                 | denlimlp                       |
| Assoc Prof<br>WONG Mun<br>Loke  | Cariology                   | 26834                 | denwml                         |
| Assoc Prof<br>WONG Mun<br>Loke  | General Practice Management | 26834                 | denwml                         |
| Assoc Prof TAN Beng Choon Keson | Occlusion                   | 26833                 | dentanbc                       |

| TITLE & NAME | DESIGNATION/RESPONSIBILITY | TELEPHONE (677X-XXXX) | EMAIL<br>(XXXX@NULLNUS.EDU.SG) |
|--------------|----------------------------|-----------------------|--------------------------------|
| Assoc Prof   |                            |                       |                                |
| LIM Lum      | Problem-Based Learning     | 26839                 | denlimlp                       |
| Peng         |                            |                       |                                |

# **Program Directors for Master of Dental Surgery (M.D.S.) Residency Training Programmes**

#### **Endodontics**

| TITLE & NAME | DESIGNATION/RESPONSIBILITY | TELEPHONE (677X-XXXX) | EMAIL<br>(XXXX@NULLNUS.EDU.SG) |
|--------------|----------------------------|-----------------------|--------------------------------|
| Assoc Prof   |                            |                       |                                |
| YU Soo       | Endodontics                | 24962                 | denyshv                        |
| Hoon         | Endodontics                | 24302                 | uonyonv                        |
| Victoria     |                            |                       |                                |

#### **Orthodontics**

| TITLE & NAME                        | DESIGNATION/RESPONSIBILITY | TELEPHONE (677X-XXXX) | EMAIL (XXXX@NULLNUS.EDU.SG) |
|-------------------------------------|----------------------------|-----------------------|-----------------------------|
| Assoc Prof FOONG Weng Chiong Kelvin | Orthodontics               | 26843                 | denfwc                      |

#### **Periodontics**

| TITLE &    | DESIGNATION/RESPONSIBILITY | TELEPHONE (677X-XXXX) | EMAIL<br>(XXXX@NULLNUS.EDU.SG) |
|------------|----------------------------|-----------------------|--------------------------------|
| Assoc Prof |                            |                       |                                |
| LIM Lum    | Periodontics               | 26839                 | denlimlp                       |
| Peng       |                            |                       |                                |

#### **Prosthodontics**

| TITLE & NAME | DESIGNATION/RESPONSIBILITY | TELEPHONE (677X-XXXX) | EMAIL<br>(XXXX@NULLNUS.EDU.SG) |
|--------------|----------------------------|-----------------------|--------------------------------|
| Assoc Prof   |                            |                       |                                |
| TAN Beng     | Prosthodontics             | 26833                 | dentanbc                       |
| Choon        | Trostifodoffices           | 20033                 | dentaribe                      |
| Keson        |                            |                       |                                |

# **Paediatric Dentistry**

| TITLE & NAME            | DESIGNATION/RESPONSIBILITY | TELEPHONE (6779-5555) | EMAIL<br>(XXXX@NULLNUS.EDU.SG) |
|-------------------------|----------------------------|-----------------------|--------------------------------|
| Assoc Prof<br>Catherine | Paediatric Dentistry       | ext 11787             | denchhl                        |
| HONG                    |                            |                       |                                |

# **Oral and Maxillofacial Surgery**

| TITLE & NAME | DESIGNATION/RESPONSIBILITY   | TELEPHONE (677X-XXXX) | EMAIL (XXXX@NULLNUS.EDU.SG) |
|--------------|------------------------------|-----------------------|-----------------------------|
| Assoc Prof   |                              |                       |                             |
| LIM Ah       | Oral & Maxillofacial Surgery | 26844                 | denalat                     |
| Tong         | Oral & Maxillolacial Surgery | 20044                 | delididi                    |
| Asher        |                              |                       |                             |

# **General Enquiry - Dean's Office**

| TITLE & NAME               | DESIGNATION/RESPONSIBILITY  | TELEPHONE (677X-XXXX) | EMAIL<br>(XXXX@NULLNUS.EDU.SG) |
|----------------------------|-----------------------------|-----------------------|--------------------------------|
| Perina CHIANG              | Education (UG)              | 25341                 | dencip                         |
| Lakshmipriya<br>GUNASEELAN | Education (PG - Coursework) | 25343                 | denlg                          |

| TITLE & NAME           | DESIGNATION/RESPONSIBILITY | TELEPHONE (677X-XXXX) | EMAIL<br>(XXXX@NULLNUS.EDU.SG) |
|------------------------|----------------------------|-----------------------|--------------------------------|
| Nurazreen<br>MOHD ZAID | Research (Grants / Admin)  | 24968                 | dennmz                         |
| XU Jing Hong           | Research (Clinical)        | 26842                 | denxjh                         |
| Tiffany HOW            | Giving                     | 26425                 | denhylt                        |
| David LEE              | Communications             | 24955                 | denlwbd                        |

#### 3 Undergraduate Education

The four-year Bachelor of Dental Surgery (B.D.S) Programme is a rigorous programme with comprehensive didactic and clinical components. Graduates are eligible for immediate registration with the Singapore Dental Council upon graduation.

The Faculty of Dentistry adopts an integrated multi-disciplinary student-centred approach in its teaching. The B.D.S programme comprises pre-clinical training in the first two years to prepare the undergraduates for clinical training in the next two years. During the pre-clinical years, undergraduates receive extensive hands-on simulation training and gain knowledge of basic life sciences to prepare them for the clinical management of patients. In the clinical years, undergraduates manage the oral health needs of their patients, under close staff supervision. In the final year, undergraduates attend the "General Practice Management" (GPM) course which prepares them for the demands of clinical practice upon graduation. The final-year undergraduates also visit private dental practices to better understand their role as dental surgeons upon graduation. Problem-based learning was introduced to equip the graduate with process skills necessary for independent, life-long learning. In addition, every student will participate in a compulsory continuing education programme and a research module.

The competency-based curriculum was implemented in 1997. This curriculum focuses on what is important and necessary for the practice of general dentistry.

The objectives of the undergraduate dental education are to produce graduates with:

- 1. A thorough understanding of the biological and physical sciences to enable the integration and correlation of these basic sciences with clinical practice
- 2. Competence in diagnosing of oral and dental diseases, including an understanding of the relationship between general and oral diseases
- 3. The skills to perform the preventive and treatment services commonly required in general practice; and
- 4. Motivation towards continuing education and a sense of professional, ethical and social responsibility.
- 3.1 Degree Offered
- 3.2 Degree Requirements
- 3.3 Special Programmes
- 3.4 Financial Assistance and Awards

# **3.1 Degrees Offered** • Bachelor of Dental Surgery (B.D.S.)

| 3.2 Degree Requirements          |
|----------------------------------|
| 3.2.1 Bachelor of Dental Surgery |
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# 3.2.1 Bachelor of Dental Surgery

In addition to satisfying the general entry requirements set by the University, candidates wishing to make a competitive application for admission to the Faculty of Dentistry should meet the following requirements:

| QUALIFICATIONS PRESENTED                       | SUBJECT PRE-REQUISITES   |
|--|--|
| New 'A' level syllabus<br>(with H1/H2 results) | <ul> <li>Good H2 pass in Chemistry</li> <li>Good H2 pass in either Biology or Physics</li> <li>Good H2 pass in a third subject</li> <li>Good grades in the General Paper or in Knowledge &amp; Inquiry</li> </ul>  |
| International Baccalaureate (IB) Diploma       | <ul> <li>Good Higher Level (HL) pass in Chemistry</li> <li>Good HL pass in either Biology or Physics</li> <li>Good HL pass in a third subject</li> <li>Good grades in English</li> </ul>                           |
| International and Other Students               | <ul> <li>Year 12 or good higher level pass in Chemistry</li> <li>Good higher level pass in either Biology or Physics</li> <li>Good higher level pass in a third subject</li> <li>Good grades in English</li> </ul> |
| NUS High School                                | <ul> <li>Major CAP of at least 2.0 in Chemistry and either Biology or Physics</li> <li>CAP of at least 1.0 in one other major and in English Programme and Research Project</li> </ul>                             |

From Academic Year 2014, polytechnic graduates who wish to apply to Dentistry, may be considered under Discretionary Admission, subject to relevant Diplomas approved by the Faculty/University. Please visit the Office of Admissions website for the list of acceptable polytechnic diplomas for Dentistry –

http://www.nus.edu.sg/oam/apply/local/poly/.

#### **Manual Dexterity Test/Interview**

Candidates short-listed for admission will be required to take a manual dexterity test and appear for an interview by the relevant Admissions Selection Committee.

From 2016, the Faculty has introduced a new format for its admission interviews. Instead of the conventional panel interview, Multiple Mini Interviews (MMIs) will be organised for shortlisted applicants. The MMIs comprise a circuit of stations which could include an interview or performance of a specific activity. These stations aim to examine the applicants' interest in Dentistry and if they suitably display attributes oral health care professionals should espouse.

#### **Health Requirements**

In accordance with Ministry of Health requirements, all students seeking admission to local medical, dental, dental hygiene and therapy, nursing and paramedic courses must undergo screening for the Hepatitis B, Hepatitis C and HIV viruses.

Candidates who are Hepatitis B, Hepatitis C or HIV carriers are not eligible for admission to Dentistry. In addition, all candidates are required to demonstrate immunity to Hepatitis B. In the event that they remain non-immune despite repeat vaccinations, it is in their interest to reconsider their career choice as their future career options in healthcare may be limited.

NUS reserves the right to retest any or all of its new dental undergraduates for any or all markers of Hepatitis B, Hepatitis C or HIV viruses, and exclude any candidate tested positive for any of these viruses from the Dentistry course.

Prospective dental students are also required to furnish documentary evidence of immunity to, or immunity for, Varicella Zoster Virus (Chickenpox), Mumps, Measles and Rubella Viruses.

#### **Bond**

Candidates admitted to the dental course at the National University of Singapore, who are not in receipt of Public Service Commission scholarships/bursaries, are required to serve the Government of Singapore upon successful completion of the course according to the scheme in the following table:

| SINGAPOREANS | NON-SINGAPOREANS |
|--------------|------------------|
| 4 years      | 5 years          |

Those awarded Public Service Commission scholarships/bursaries will be bonded according to the terms of their awards.

#### **Career Opportunities**

A dental graduate can choose the following career options:

- A dental private practitioner practicing general or specialised dentistry
- A dental officer in the Government dental service
- An academic engaged mainly in teaching and research

• An officer in the military service

#### **Subjects and Examinations**

Courses include didactic, laboratory and clinical work. Examinations are held annually. At all professional examinations, continuous assessment makes up to 40% of the total marks. A candidate who fails to pass at the main examination may be allowed to take a supplementary examination. Students are normally not allowed to proceed to the next stage of the course until they have passed the annual examination. A candidate who fails both the main and supplementary examinations may be permitted to repeat the year of study, but the 4-year dental course must be completed within 5 years.

In the first year, a student who fails in not more than one subject in the supplementary examination may, at the discretion of the Faculty of Dentistry, after considering the recommendation of the Board of Examiners concerned, be permitted to take the examination again (once only) at the next period of examination. A student who fails the supplementary examination in more than one subject will not be permitted to take the examination again and will be refused re-admission to the Faculty of Dentistry unless, in the opinion of the Faculty, there are extenuating circumstances to account for his failure.

Clinical competencies are skills essential to beginning the practice of dentistry. A student who does not complete the required clinical competencies may not be eligible to sit for the Final Professional examination.

|              | Anatomy  |  |  |
|--------------|--|--|--|
| Biochemistry | Examinable papers in the 1st Professional B.D.S. Examination |  |  |
|              | Oral Biology   | Examinable papers in the 1st Professional B.D.S. Examination |  |
| t Year       | Physiology   |  |  |
|              | Cariology  |  |  |
|              | Occlusion  |  |  |
|              | Pre-clinical Operative Dentistry                             |  |  |
| First P      | First Professional Examination                               |  |  |

|                   | Dental Materials                      |   |
|-------------------|---------------------------------------|---|
|                   | Microbiology                          | Examinable papers in the 2nd Professional |
|                   | Pathology                             | B.D.S. Examination                        |
|                   | Pharmacology                          |   |
|                   | Oral Radiology                        |   |
|                   | Occlusion                             |   |
| Second Year       | Pre-clinical Endodontics              |   |
|                   | Pre-clinical Operative Dentistry      |   |
|                   | Pre-clinical Fixed Prosthodontics     |   |
|                   | Pre-clinical Removable Prosthodontics |   |
|                   | Pre-clinical Periodontology           |   |
|                   | Preventive Dentistry                  |   |
|                   | Behavioural Science                   |   |
| Second Profession | al Examination                        |   |

|                  | Medicine   |   |
|------------------|--|---|
|                  | Oral & Maxillofacial Medicine, Pathology and Radiology | Examinable papers in the 3rd Professional B.D.S.  Examination |
|                  | Surgery  |   |
|                  | Anaesthesia  |   |
|                  | Occlusion  |   |
|                  | Oral Radiology   |   |
|                  | Preventive Dentistry                                   |   |
|                  | Dental Public Health                                   |   |
| Third Year       | Endodontics  |   |
|                  | Operative Dentistry                                    |   |
|                  | Oral & Maxillofacial Surgery                           |   |
|                  | Orthodontics   |   |
|                  | Paediatric Dentistry                                   |   |
|                  | Fixed Prosthodontics                                   |   |
|                  | Removable Prosthodontics                               |   |
|                  | Periodontology   |   |
|                  | Behavioural Science                                    |   |
|                  | Ethics   |   |
| Third Profession | al Examination   |   |

|                  | Oral & Maxillofacial Surgery                |  |
|------------------|---|--|
|                  | Preventive Dentistry & Dental Public Health |  |
|                  | Periodontology                              |  |
|                  | Orthodontics                                |  |
| Fourth Year      | Paediatric Dentistry                        | Examinable papers in the Final Professional B.D.S. Examination |
|                  | Prosthodontics                              |  |
|                  | Operative Dentistry                         |  |
|                  | Endodontics                                 |  |
|                  | Clinical Dentistry                          |  |
|                  | General Practice Management                 |  |
|                  | Behavioural Science                         |  |
| Final Profession | al Examination                              |  |

#### **Maximum Candidature**

Starting from AY2007/08, the maximum candidature for the 4-year Bachelor of Dental Surgery course is 5 years.

# **Professional Registration**

The conferment of the degree of Bachelor of Dental Surgery entitles the recipient to immediate registration by the Singapore Dental Council.

#### 3.3 Special Programmes

#### **Overseas Enrichment Programme (OEP)**

The Overseas Enrichment Programme (OEP) broadens our students' experience by exposing them to other cultures and different learning environment. All Year 3 students have the opportunity to spend 1-2 weeks in an overseas university in the United States, United Kingdom, Europe, Canada, Japan or China.

#### **Undergraduate Research Opportunities Programme (UROP)**

Every undergraduate is given the opportunity to participate in a research project through the UROP during year 3 of their course. Students in small groups work on a research project supervised by staff. At the end of the final year, their work is presented to the Faculty on Faculty UROP Day. Students also submit their projects for local, regional and international research competitions. Many of the projects have been published in international publications

#### **Clinical Elective Programme (CEP)**

In view of students' diversity of interests and different learning styles, the Faculty introduced an alternative to the UROP that would cater to the students' clinical inclinations rather than rigidly impose compulsory research training on them. The Clinical Elective Programme (CEP) was introduced in AY2013. This elective programme allows students with interests in dental specialties to gain a deeper understanding in a particular area through structured clinical attachments. Each attachment involves strengthening the students' skills in clinical decision making, problem solving and critical review of literature to better appreciate the specialty.

At this juncture, the clinical electives are offered in the disciplines of Oral Maxillofacial Surgery and Paediatric Dentistry.

#### 3.4 Financial Assistance and Awards

- The Faculty offers various Faculty-Level bursary awards to needy students.
- The list of University-Level awards based on academic performance which are available to dentistry students are as follows:

| YEAR           |    | AWARD  | BASIS OF AWARD  |  |
|----------------|----|--|---|--|
| 2.             | 1. | Singapore Dental Assoc<br>Presidents' Medal & Prize (silver) | Student ranked first in the First Prof B.D.S. examination.                                      |  |
|                | 2. | Singapore Dental Assoc Presidents' Medal & Prize (bronze)    | Student ranked second in the First Prof B.D.S. examination.                                     |  |
| 1st            | 3. | Wrigley Company Book Prize                                   | Second-placed student in Biochemistry in the First Prof B.D.S. examination.                     |  |
| Prof<br>B.D.S. | 4. | Department of Oral &  Maxillofacial Surgery Medal            | Best student with distinction in Oral Biology   |  |
|                | 5. | TP Dental Surgeons Medal                                     | Best student with distinction in Anatomy successfully completing First Prof B.D.S. examination. |  |
|                | 6. | Faculty of Dentistry Diamond Jubilee Medal                   | Best student with distinction in Physiology in the First Prof B.D.S. Examination.               |  |
|                | 7. | NTUC Denticare Medal   | Best student with distinction in Biochemistry in the First Prof B.D.S. Examination.             |  |

| YEAR           |    | AWARD   | BASIS OF AWARD  |  |
|----------------|----|---|---|--|
|                | 1. | Singapore Dental Association Presidents' Medal & Prize (silver) | Student ranked first in the Second Prof B.D.S. examination.                                       |  |
|                | 2. | Singapore Dental Association Presidents' Medal & Prize (bronze) | Student ranked second in the Second Prof B.D.S. examination.                                      |  |
| 2nd<br>Prof    | 3. | Robert Lin Memorial Medal (gold)                                | Best student with distinction in Pharmacology in Second Prof B.D.S. examination.                  |  |
| B.D.S.         | 4. | Robert Lin Memorial Medal (silver)                              | Second-placed student in Pharmacology in Second Prof B.D.S. examination.                          |  |
|                | 5. | Academy of Medicine Medal                                       | Best student with distinction in Pathology and successfully completing second B.D.S. examination. |  |
|                | 6. | Department of Oral &  Maxillofacial Surgery Medal               | Best student with distinction in Dental Materials in the Second Prof B.D.S. examination.          |  |
|                | 7. | Colgate Scientific Medal & Prize                                | Best student with distinction in Microbiology in the Second Prof B.D.S. examination.              |  |
|                | 1. | Edmund Tay Mai Hiong Medal                                      | Best student in Third Prof B.D.S. examination.  |  |
| 3rd            | 2. | SDA Medal (Best student in Medicine)                            | Best student with distinction in Medicine in the Third Prof B.D.S. examination.                   |  |
| Prof<br>B.D.S. | 3. | Vellasamy Medal (silver)  | Best student with distinction in Surgery in the Third Prof B.D.S. examination.                    |  |
|                | 4. | Mummery Medal (silver)  | Best student with distinction in Oral Pathology in the Third Prof B.D.S. examination.             |  |

| YEAR          |    | AWARD                                 | BASIS OF AWARD   |
|---------------|----|---------------------------------------|--|
|               | 1. | University Medal (silver)             | Student ranked first in Final Prof B.D.S. examination.         |
|               | 2. | University Medal (bronze)             | Student ranked second in Final Prof B.D.S. examination.        |
| Final<br>Prof | 3. | Tratman Medal                         | Most distinguished graduate in Dentistry for the year.         |
| B.D.S.        | 4. | Malaysian Dental Association<br>Medal | Best student in Oral & Maxillofacial Surgery.                  |
| 5.            | 5. | Terrell Medal                         | Graduate who has shown greatest proficiency in Prosthodontics. |

| YEAR              |     | AWARD   | BASIS OF AWARD  |  |
|-------------------|-----|---|---|--|
|                   | 6.  | Dr F A C Oehlers Medal  | Best clinical student completing Final B.D.S. examination.  |  |
|                   | 7.  | Dr Lau Kieng Hiong Medal  | Best graduating student in Periodontology in Final Prof B.D.S. Exam.  |  |
|                   | 8.  | IFDEA Medal for Paediatric Dentistry  | Best student in the subject Paediatric Dentistry in the Final Prof B.D.S. Exam.   |  |
|                   | 9   | Q & M Dental Surgery Medal for<br>Operative Dentistry                           | Best student with distinction in Operative Dentistry in Final B.D.S. Exam.  |  |
| Final Prof B.D.S. | 10. | TP Dental Surgeons Medal  | Awarded to Final-year student who has:  a. An outstanding academic record.  b. A distinguished record in ECA or public service in Singapore.  c. Held positions of leadership or responsibility in the Faculty or the University. |  |
|                   | 11. | L C Lien Dental Clinic<br>Gold Medal in Orthodontics                            | Most outstanding student in Orthodontics in Final B.D.S. Exam.  |  |
|                   | 12. | Lee Kuan Yew Gold Medal   | Best student throughout the course of study.  |  |
|                   | 13. | Loh Fun Chee Medal in Clinical<br>Dentistry                                     | Best student with distinction in Clinical Dentistry in the Final Prof B.D.S. Examination.   |  |
|                   | 14. | SDA Medal (Best student in<br>Preventive Dentistry and Dental<br>Public Health) | Best student in Preventive Dentistry and Dental Public Health.  |  |
|                   | 15. | Southeast Asia Association for<br>Dental Education (SEAADE)<br>Medal            | Best Bachelor of Dentistry Student with distinction in Endodontics in the Final Professional Examinations.  |  |

# **4 Graduate Education**

The Faculty of Dentistry conducts two types of graduate programmes:

- A research based programme leading to the Master of Science (M.Sc.) or Doctor of Philosophy (Ph.D.); and
- A clinical residency training programme leading to the Master of Dental Surgery (M.D.S.).
- 4.1 Research Programmes
- 4.2 <u>Coursework Programmes</u>

# **4.1 Research Programmes**

The Faculty has a vibrant research culture to support the Faculty's mission "Improve oral health through academic excellence, high-impact research and quality clinical service".

In a research programme, research candidates conduct independent research under the guidance of supervisors, attend classes leading to examinations and submit a thesis based on their research findings.

- 4.1.1 <u>Degrees Offered</u>
- 4.1.2 <u>Degree Requirements</u>
- 4.1.3 Financial Assistance and Awards

#### **4.1.1 Degrees Offered**

Surrounded by a wealth of facilities and personnel from related faculties, the Faculty is well poised to provide degrees in Master of Science (M.Sc.) and Doctor of Philosophy (Ph.D.) in the five key areas namely:

- Stem Cells and Regenerative Medicine
- Oral Systemic Health and Diseases
- Bioengineering and Biomaterials
- Craniofacial Imaging and Simulation
- Public Oral Health and Cariology

Being a small Faculty, we are highly selective in admitting candidates with suitable qualifications. The minimum and maximum periods of candidature are as follows:

|                      | MINIMUM | MAXIMUM |
|----------------------|---------|---------|
| Master of Science    | 1 year  | 3 years |
| Doctor of Philosophy | 2 years | 5 years |

Research candidates may be admitted as full-time or part-time students. However, foreign students on student pass must pursue their studies on a full-time basis. The minimum and maximum periods of candidature for both full-time and part-time programme are the same.

#### 4.1.2 Degree Requirements

#### For M.Sc. candidates:

- Good Honors degree (at least Second Class Lower / CAP 3.5 to 3.99) or equivalent in a relevant discipline; or
- Good Bachelor degree in relevant discipline with at least two years of relevant work experience.
- To be eligible for research scholarship, candidates are expected to have at least a Second Class Upper Honors degree or equivalent.

#### For Ph.D. candidates:

- Good Master's degree in relevant discipline.
- Candidates with Second Class Upper Honors degree (CAP 4.0 to 4.49) or equivalent in a relevant discipline may also be admitted directly into a Ph.D. programme at the discretion of the faculty.
- Students with locally or internationally accredited BDS, DDS and MBBS degrees may be admitted directly into the Ph.D. programme at the department's recommendation. They are required to take the Ph.D. Qualifying Exam within 18 months from the registration date.

#### **Other Requirements**

- Interview (at the discretion of Faculty);
- Proficiency in English Language (both verbal and written);
- All applicants except those from universities in Singapore, USA, United Kingdom, Canada, Australia, New Zealand, Philippines are to submit evidence of English language proficiency:-
- TOEFL (Test of English as a Foreign Language) minimum 580 (paper-based score) / minimum 237 (computer-based score) / minimum 85 (internet-based score)

Please quote 9083 (TOEFL Institutional code) for our Faculty/School and 38 (Department code)

• IELTS (International English Language Testing System) - the score should be 6 and above

Please note that the TOEFL/IELTS scores are valid for 2 years from the test date. Candidates need to submit fresh scores if they took the test more than two years ago.

#### **Coursework Requirements**

MSc (+ thesis not exceeding 40,000 words)

- 1 compulsory Statistics module MDG5108 Biostatistics for Basic Research or IE5002 Applied Engineering Statistics
- 1 compulsory DY 5190 Graduate Seminar Module
- Any 2 elective modules (at level > 5000 and > 4MC)

PhD (+ thesis not exceeding 80,000 words)

- 1 compulsory Statistics Module MDG5108 Biostatistics for Basic Research or IE6002 Advance Engineering Statistics
- 1 compulsory DY5190 Graduate Seminar Module

| • Any 4 elective modules (at level > 5000 and > 4MC)  |
|---|
| In addition, it is mandatory for all research students to make Pre-conference Presentations to the Faculty every time they attend conferences for poster/oral presentation. |
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#### 4.1.3 Financial Assistance and Awards

The University offers financial assistance to full-time graduate research students through its Research Scholarships, which are awarded competitively to outstanding graduates for research leading to a higher degree at the University. The scholarships are tenable for one year in the first instance and are renewable annually, subject to satisfactory progress.. The scholarships for MSc and Ph.D. are for a period of two and four years respectively.

Each Scholarship carries a monthly stipend ranging from S\$1,500 – S\$2,500 as well as a full tuition fee subsidy and a monthly top-up of S\$500 for Ph.D candidates upon passing the PhD Qualifying Examination. No travel or other allowances are provided. No bond is also required.

Research scholars are required to render a nominal 6 hours of work per week without remuneration. The work rendered will be in the nature of research done by the research scholar for supervisors or other related academic work as designated by the supervisor or Vice Dean Research Office. Please note that the University does not guarantee employment to research scholars upon completion of their candidature.

# **4.2 Coursework Programmes**

The DGDS conducts the full-time three-year structured clinical residency training programme in the following five specialties:

- Endodontics
- Oral & Maxillofacial Surgery
- Orthodontics
- Periodontology
- Prosthodontics
- Paediatric Dentistry NEW

Courses in the above specialties are offered in a variety of pedagogical styles – seminars, tutorials, lectures, journal reviews and clinical practice.

- 4.2.1 Degrees Offered
- 4.2.2 <u>Degree Requirements</u>
- 4.2.3 Special Programmes
- 4.2.4 <u>Awards</u>

# **4.2.1 Degrees Offered**

The DGDS offers full-time clinical residency training programmes in five specialties, leading to the degree of:

- Master of Dental Surgery (Endodontics)
- Master of Dental Surgery (Oral & Maxillofacial Surgery)
- Master of Dental Surgery (Orthodontics)
- Master of Dental Surgery (Periodontology)
- Master of Dental Surgery (Prosthodontics)
- Master of Dental Surgery (Paediatric Dentistry)

http://www.dentistry.nus.edu.sg/DGDS/dgds MDS%20Residency.html

In addition to full-time programmes, the Faculty also conducts a part-time programme leading to:

- Graduate Diploma (Dental Implantology)
- Graduate Diploma (Advanced General Dentistry) NEW

http://www.dentistry.nus.edu.sg/CADE/CADE grad diploma.html

# **4.2.2 Degree Requirements**

| 4.2.2.1 Master of Dental Surgery               |  |  |  |  |  |
|--|--|--|--|--|--|
| 4.2.2.2 Graduate Diploma (Dental Implantology) |  |  |  |  |  |
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#### 4.2.2.1 Master of Dental Surgery

For admission as a candidate to the course leading to the degree of Master of Dental Surgery, the candidate must possess

- A basic dental degree (Bachelor of Dental Surgery or equivalent);
- At least two years full-time clinical experience in general dentistry after graduation (excluding internship);
- International applicants must complete the TOEFL or IELTS. The minimum acceptable scores are: TOEFL score 580 (paper-based), 237 (computer-based), 92 (internet-based) & above or IELTS 7;
- Application for **Oral & Maxillofacial Surgery and Orthodontics**: Have a pass in the Part 1 MDS Examination or equivalent. Candidates without a pass in the Part I MDS Examination may apply for admission and be considered for candidature on the condition of passing the Part 1 MDS Examination or equivalent prior to the commencement of the interview.

The Part I MDS examination is based on aspects of anatomy, dental anatomy and histology, physiology, pathology and microbiology that demonstrate the fundamental principles and processes, and their clinical application. Candidates are required to demonstrate an appreciation of the integration of these subjects. <a href="http://www.dentistry.nus.edu.sg/DGDS/dgds">http://www.dentistry.nus.edu.sg/DGDS/dgds</a> course part1.htm

Short-listed candidates will be interviewed and may be required to take a manual dexterity test.

#### **Health Requirements**

In accordance with Ministry of Health requirements, all students seeking admission to local medical, dental, dental hygiene and therapy, nursing and paramedic courses must undergo screening for the Hepatitis B, Hepatitis C and HIV viruses.

Candidates who are Hepatitis B, Hepatitis C or HIV carriers are not eligible for admission to Dentistry. In addition, all candidates are required to demonstrate immunity to Hepatitis B. In the event that they remain non-immune despite repeat vaccinations, it is in their interest to reconsider their career choice as their future career options in healthcare may be limited.

NUS reserves the right to retest any or all of its new dental undergraduates for any or all markers of Hepatitis B, Hepatitis C or HIV viruses, and exclude any candidate tested positive for any of these viruses from the Dentistry course.

Prospective dental students are also required to furnish documentary evidence of immunity to, or immunity for, Varicella Zoster Virus (Chickenpox), Mumps, Measles and Rubella Viruses.

Candidates who have been admitted to the three-year full-time clinical residency training programme will be conferred the Degree of Master of Dental Surgery upon fulfilment of the following requirements:

- Complete the curriculum for the respective three-year residency training programme;
- Pass the Final M.D.S. Examination in the respective specialised disciplines:
- Undertake a research project and publish a dissertation as a partial fulfilment for the award of a Master of Dental Surgery degree;
- Participate in 20 hours of continuing education per year (i.e., 60 hours within three years of study);
- Read the "SSM1205 The Nation's Health: Lesson from SARS" e-module (for foreign students only)

#### Final M.D.S. Examinations

#### Final M.D.S. Examination in Endodontics

Candidates should have a good knowledge of basic sciences as applied to the principles and practice of endodontics; embryology, histology, physiology and pathophysiology of the pulpal/periradicular complex; pulpal and periapical pathosis; interception and prevention of pulpal disease; radiographic interpretation and microbiology; differential diagnosis of orofacial pain and control of pain of pulpal and periapical origin; pharmacodynamics; dental materials as related to endodontics; bleaching; endodontic surgery and management of problem cases; a good approach in diagnosis and treatment planning; be proficient in providing endodontic treatment and emergency treatment for all teeth; be effectively interfaced with other disciplines like periodontics, prosthodontics and oral and maxillofacial surgery, so as to provide multidisciplinary care and management.

#### Final M.D.S. Examination in Oral and Maxillofacial Surgery

Candidates should have a detailed knowledge of the principles and practice of oral and maxillofacial surgery and surgical pathology; the diagnosis and treatment of aberrations of development and growth affecting the teeth and jaws; orofacial infection; cysts, neoplasms, bone dysplasias and other general diseases affecting the jaws, disorders of the temporomandibular joints; diseases of the maxillary sinus related to oral surgery; infections of the salivary glands; and maxillofacial injuries.

Candidates should also have a general knowledge of the principles and practice of general surgery and medicine related to the practice of oral and maxillofacial surgery.

#### Final M.D.S. Examination in Orthodontics

Candidates should be familiar with the basic sciences as applied to all aspects of the theory and practice of orthodontics; growth and development of the face, jaws and dentition including the longitudinal management of developing dental and occlusal anomalies in the growing child; aetiology and malocclusion including the principles and practice of orthodontics and dentofacial orthopaedic treatment; principles of cephalometry (including computer processing) and other biometric methods in orthodontics; principles of surgical techniques in the management of dentoalveolar anomalies and the correction of dentofacial deformity; cleft lip/palate development and management, material science as applied to orthodontics, concepts of occlusion and temporomandibular joint dysfunction as related to orthodontics; technical aspects related to laboratory work, principles of biostatistics; and orthodontic interrelationships in periodontology, prosthodontics and restorative dentistry.

#### Final M.D.S. Examination in Prosthodontics

Candidates should have had basic science education as a foundation for clinical and technical skills; be competent in diagnosis, planning and treatment of patients with exceptional prosthodontics problems; be proficient in laboratory technical skills sufficient to evaluate technical work, communicate effectively with technicians and be able to train others in these skills; be effectively interfaced with other specialties and disciplines in the care of patients requiring interdisciplinary therapy.

#### Final M.D.S. Examination in Periodontology

Candidates should have a good working knowledge in the various areas of the biological sciences that relate to the theory and practice of Periodontology including implant dentistry. These would include: basic sciences of the anatomy and physiology of the periodontium, periodontal wound healing, microbiology, immunology and pathogenesis of periodontal disease; competence in diagnosis, treatment planning, surgical and non-surgical management of patients with a range of periodontal disease problems; maintenance and control of periodontal disease including medically compromised patients and patients with special needs; sound concepts on the periodontal interrelationships with restorative dentistry, endodontics, orthodontics, oral surgery/oral medicine, medical sciences and be able to interface effectively with colleagues in these clinical disciplines as an integral component of comprehensive patient care; understand the basic principles of research methodology and be able to carry out a research project independently.

#### Final M.D.S. Examination in Paediatric Dentistry

Candidates should have an in-depth knowledge and understanding of the basic and clinical science foundation for paediatric dental treatment and to use this to perform evidence-based clinical care; be proficient in all aspects of dentistry for children and adolescents including those with special health care needs (i.e., medically, mentally, physically, socially or behaviourally disadvantaged; diagnosis and management of paediatric orofacial trauma; diagnosis of mucosal, soft and hard tissue pathology occurring in and around the mouth from birth through adolescence; diagnosis and management of the oral manifestations of systemic diseases in the child patient; recognition and diagnosis of orthodontic problems in the developing occlusion; should be proficient to plan and deliver interceptive orthodontic intervention in the primary and mixed dentition using removable or simple fixed appliances including space maintainers; the design and conduct of research studies.

# 4.2.2.2 Graduate Diploma (Dental Implantology)

For admission to the part-time two-year Graduate Diploma (Advanced General Dentistry) programme, the candidate must have:

- A recognised basic dental degree
- Minimum five years of postgraduate clinical experience (candidate must be able to demonstrate appropriate baseline knowledge and skills in oral surgery and restorative dentistry and preferably have access to direct patient care)

Short-listed applicants will be required to attend an interview, which will be conducted at the Faculty of Dentistry.

\* Admission is offered only to dentists practicing in Singapore.

Candidates who have been admitted to the programme will be conferred the Graduate Diploma (Dental Implantology) upon fulfilment of the following requirements:

- complete all didactic and clinical requirements of the programme, including the presentation and completion of ten cases;
- pass all the necessary prescribed assessments and the Final Examination

# **4.2.3 Special Programmes**

#### **Basic Medical Science Course**

This intensive two-week long course is a preparatory course for candidates who will be sitting for the Part I M.D.S. Examination conducted by the DGDS. It covers basic science subjects that are applicable for the practice of clinical dentistry.

# **4.2.4** Awards

The awards available to postgraduate dental students in the residency training programmes are:

| EXAMINATION                                 | NAME OF AWARD                                    | BASIS OF AWARD   |
|---|--|--|
| Final M.D.S. (Periodontology)               | IADR Medal                                       | Best student with an 'A' grade in Periodontology in the final MDS Examination                |
| Final M.D.S. (Prosthodontics)               | Prosthodontic Society Singapore Medal            | Best student in Prosthodontics in the final MDS Examination                                  |
| Final M.D.S. (Endodontics)                  | Society of Endodontists, Singapore Medal         | Best student with an 'A' grade in Endodontics in the final MDS Examination                   |
| Final M.D.S. (Oral & Maxillofacial Surgery) | Henry Lee T L Medal & Prize                      | Best student with distinction in Oral &  Maxillofacial Surgery in the final MDS  Examination |
| Final M.D.S. (Orthodontics)                 | Invisalign Foundation Medal<br>& Prize           | Best student with distinction in Orthodontics in the final MDS Examination                   |
| Final M.D.S. (Paediatric Dentistry)         | Rashid Tahir The Kids<br>Dentist Medal and Prize | Best student in Paediatric Dentistry in the final Masters of Dental Surgery Examination      |

# **5 Other Administrative Information**

| For more information, | please visit the Facul | ty's website at: http:// | /www.dentistry.nus.ed | lu.sg |
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