

# DENTISTRY, DOCTOR OF DENTAL SURGERY (D.D.S.)

The Doctor of Dental Surgery is a four-year program in general dentistry leading to the D.D.S. degree and emphasizing study in three broad areas: basic sciences, clinical sciences and social sciences. The academic year begins in July and extends through June.

## Student learning outcomes

As a result of successfully completing the pre-doctoral dental curriculum the new dentist will be competent in the following areas:

### A. Diagnosis and treatment planning

#### 1. Diagnosis

Assess and diagnose diseases and abnormalities of the oral cavity and head/neck region in pediatric and adult patients. Obtain, assess and properly utilize information relative to systemic health of patients, initiating consultations and referrals to other health care professionals as appropriate.

#### 2. Treatment planning

Develop a comprehensive evidence-based treatment and/or referral plan(s), based on etiologic factors, current oral disease risk analyses, standards-of-care strategies and biomedical and clinical scientific knowledge. Develop evidence-based treatment plan options to present to patient, parent, and/or caregivers involving them in the health-care decision making process and obtain informed consent.

### B. Oral health management

#### 3. Emergency care

Manage dental emergencies.

#### 4. Anxiety and pain management

Utilize pharmacological therapies and behavioral techniques to prevent or manage pain and anxiety.

#### 5. Oral health education

Educate patients, parents and/or caregivers with individualized instructions for improving and maintaining good oral health, monitoring and re-evaluating as necessary.

#### 6. Oral function

Provide treatment and/or referrals as appropriate with the goal of achieving physiologic form, oral function and health to include the following areas:

- Prevention and management of dental caries
- Restoration of teeth
- Replacement of teeth including fixed, removable and dental implant prosthodontic therapies
- Prevention and management of periodontal diseases

- Prevention and management of pulpal and periradicular diseases
- Prevention and management of oral mucosal, temporomandibular, and osseous disorders
- Management of hard and soft tissue surgery
- Recognition and management of malocclusion and space maintenance needs

#### 7. Outcomes

Self-assess competency and evaluate the outcomes of patient-centered dental health care.

#### 8. Community

Engage in community-based disease prevention and health promotion activities.

### C. Practice and profession

#### 9. Ethics

Apply concepts of professional ethics, health care principles and adhere to the ADA Principles of Ethics and Code of Professional Conduct.

#### 10. Communication and behavioral principles

Utilize appropriate interpersonal skills, communication skills, psychosocial principles and behavioral principles in caring for a diverse population of patients and collaborating with other members of the health care team.

#### 11. Critical thinking

Integrate and synthesize information to advance knowledge and skills through critical evaluation of biomedical literature and the application of new science to patient care.

#### 12. Risk principles

Apply principles of risk management, quality improvement, infection control and radiation safety to patient care.

#### 13. Business and legal/regulatory matters

Apply the business principles and programs used in the administration of a dental practice while complying with all regulations, policies and protocols that relate to health, safety and the law.

## Admission requirements

**Mary T. Pettiette, D.D.S.**

Associate dean, Admissions  
(804) 628-4400

A minimum pre-dental study of 90 semester credit hours (or 145 quarter credit hours) at a U.S.- or Canadian-accredited institution is required to matriculate to the School of Dentistry. A maximum of 60 semester credit hours from an accredited community college may be applied to the 90 credit hour credential. Based on the competitiveness and number of applicants, it is common for the school to seek candidates on track to receive a qualifying bachelor's degree from an accredited four-year degree-granting institution prior to the date of matriculation.

Required courses are general biology, biochemistry, general chemistry, organic chemistry, physics, math and English. Laboratory experiences are required for those courses where applicable. Biology courses should emphasize zoology rather than botany. Courses in general microbiology or bacteriology, animal physiology, human anatomy, immunology, histology, genetics, embryology, the behavioral sciences and courses involving psychomotor skills are strongly recommended. Academic credits presented by an applicant must be acceptable for credit toward a degree at the institution in which the courses are taken. Individuals interested in pursuing a career in dentistry should schedule an appointment with the Office of Admissions for individual guidance.

In order to successfully complete the dental curriculum at VCU, students must meet non-academic criteria for motor, sensory and observation, communication, cognitive, and behavioral abilities that are listed in the document Technical Standards for Dental Education Programs for VCU School of Dentistry. Accordingly, applicants may be required to prove their proficiency in American English via standardized tests and interviews. An applicant may consider the option of postponing matriculation until such time as he/she can meet these requirements.

Participation in the Dental Admission Test of the American Dental Association is required. It is recommended that this test be taken the year before the intended matriculation year. If a candidate decides to take the examination more than one time, the best set of scores is used as the official result, taken within three years from the time of application. Information about the Dental Admission Test can be obtained from: a) the applicant's pre-health advising office of the undergraduate institution, b) ADEA.org GoDental (<http://www.adea.org/GoDental/>) or c) the American Dental Association, Department of Testing (<http://www.ada.org/en/education-careers/dental-admission-test/>).

## Selection factors

VCU is a state-supported, public university and gives admission preference to Virginia state residents. All applicants are evaluated by uniform criteria without regard to age, race, color, national origin, gender, religion, sexual orientation, veteran's status, political affiliation or disability. Students are accepted by the admissions committee on the basis of excellence of pre-dental education, DAT scores, recommendations, experiences in dentistry and results of personal interviews with members of the committee. The interview process is standardized and designed to determine motivation, knowledge of and interest in the dental profession and to afford the applicant an opportunity to provide additional information pertaining to his/her application. Selection occurs on a rolling admissions basis, and once the class is complete an alternate list is created. Members of minority groups underrepresented in dentistry are especially encouraged to apply. Each year a certain number of students who are not accepted into the freshman class are invited to take selected courses with this class. Their performance in these courses plays a vital role in their being considered for the following year's admissions process.

## Admission with advanced standing

The VCU School of Dentistry International Dentist Program (<http://www.dentistry.vcu.edu/programs/internationaldentists/>) offers internationally trained dentists an opportunity to enter the D.D.S. program in the second year. The program is open to all foreign-trained dentists. More information can be found on the school's website at the hyperlink above.

## Application procedures

The School of Dentistry participates in the American Association of Dental Schools Application Service. All applicants are required to submit credentials through this service. Reapplicants must also reapply through the application service.

Application to the School of Dentistry can be made through AADSAS on or after June 1. The priority deadline is Sept. 1 of the year preceding intended matriculation. The final deadline to submit applications to VCU through AADSAS ([http://www.adea.org/GoDental/The\\_application\\_to\\_dental\\_school\\_ADEA\\_AADSAS.aspx](http://www.adea.org/GoDental/The_application_to_dental_school_ADEA_AADSAS.aspx)) is Jan. 1.

AADSAS compiles academic records and other pertinent information and forwards these with the application to the School of Dentistry. Qualified applicants are then requested to submit additional information, such as the VCU supplemental application. The VCU application fee is \$80, in addition to the AADSAS application fee.

Applicants will be notified of decisions according to guidelines established by the American Dental Education Association. The first acceptances are sent out on Dec. 1; subsequent acceptances are sent out in early spring. In order to reserve a position in the class, a nonrefundable tuition deposit of \$800 is required.

This offer of acceptance is contingent upon successful completion prior to admission of a qualifying bachelor's degree, if applicable, including completion of all courses in which applicants are enrolled or plan to complete to earn the degree, as well as an approved criminal background check. All required courses must be completed (with a minimum grade of C-). Applicants must submit a final, official transcript indicating the degree, if applicable, and the date it was conferred. The act of matriculation also implies a willingness on the part of the student to comply with university rules and regulations, to take an interest in maintaining the ideals of the institution and to conduct himself/herself in a manner befitting a member of the dental profession.

For more information please visit the School of Dentistry website (<http://www.dentistry.vcu.edu>). Applicants may also contact ADEA AADSAS directly at (617) 612-2045 or via email at [aadsasinfo@aadsasweb.org](mailto:aadsasinfo@aadsasweb.org).

## Curriculum

The curriculum in the dental school is organized into a competency-based, four-year program leading to the Doctor of Dental Surgery (D.D.S.) degree. The academic year begins in July and extends through June. The program emphasizes study in three broad areas: biomedical sciences, clinical sciences and behavioral sciences.

The biomedical sciences include the in-depth study of human anatomy, immunology, material science, microbiology, pathology, pharmacology and physiology.

The clinical sciences prepare the student for the actual practice of dentistry and provide exposure to the various specialties in dentistry.

The behavioral sciences cover such topics as dental health needs, recognition of health care disparities, patient-centered care, the system of health care delivery, practice management, professional ethics and behavioral factors.

Laboratory and clinical experiences are offered throughout the four years to develop the skills and judgment vital to the practice of general dentistry.

In general, courses offered as part of the curriculum in dentistry are not available to other students in the university. Exceptions may be granted by the dean of the School of Dentistry to students enrolled in graduate degree programs upon written request of the department chair in which the student is seeking a degree.

## Curriculum requirements

| Course   | Title  | Hours |
|----------|--|-------|
| DEBS 501 | Dental Gross Anatomy   | 6.5   |
| DEBS 502 | Dental Neuroanatomy  | 1     |
| DEBS 503 | Infection and Immunology   | 3.5   |
| DEBS 511 | Microscopic Anatomy  | 5     |
| DEBS 512 | Physiology and Pathophysiology   | 5     |
| DEBS 513 | Dental General Pathology   | 6     |
| DEBS 601 | Dental Pharmacology and Pain Control I                                       | 4     |
| DEBS 701 | Dental Pharmacology and Pain Control II                                      | 2     |
| DENS 503 | Introduction to Behavioral Science in Dentistry                              | 1.5   |
| DENS 508 | Dental Materials I   | 1     |
| DENS 513 | Foundations of Effective Interpersonal Skills During Patient Interactions I  | 2     |
| DENS 515 | Clinical Skills I  | 1     |
| DENS 516 | Clinical Skills II   | 3.5   |
| DENS 522 | Preclinical Restorative Lecture I  | 4     |
| DENS 523 | Preclinical Restorative Lab I  | 4.5   |
| DENS 524 | Evidence-based Dentistry and Critical Thinking I                             | 1     |
| DENS 532 | Preclinical Restorative Lecture II   | 1.5   |
| DENS 533 | Preclinical Restorative Lab II   | 1.5   |
| DENS 603 | Foundations of Effective Interpersonal Skills During Patient Interactions II | 2     |
| DENS 607 | D2 Clinical Dentistry I  | 1     |
| DENS 608 | Dental Materials II  | 1     |
| DENS 611 | Introduction to Professionalism, Ethics and Ethical Decision-making          | 1     |
| DENS 617 | D2 Clinical Dentistry II   | 2     |
| DENS 619 | Evidence-based Dentistry and Critical Thinking II                            | 1     |
| DENS 621 | Dental Occlusion   | 1     |
| DENS 622 | Dental Occlusion Lab   | 1.5   |
| DENS 627 | D2 Clinical Dentistry III  | 6.5   |
| DENS 628 | Introduction to Dental Public Health   | 1     |
| DENS 632 | Preclinical Restorative Lecture III  | 1     |
| DENS 633 | Preclinical Restorative Lab III  | 1     |
| DENS 642 | Fundamentals of Treatment Planning   | 1     |
| DENS 662 | Advanced Restorative and Digital Dentistry Lecture                           | 1     |
| DENS 663 | Advanced Restorative and Digital Dentistry Lab                               | 1     |
| DENS 708 | Dental Materials III   | 0.5   |
| DENS 718 | Dental Materials IV  | 0.5   |
| DENS 727 | D3 Clinical Dentistry  | 8     |
| DENS 730 | Dental Practice Management III   | 1     |

|                 |   |            |
|-----------------|---|------------|
| DENS 735        | Patient Management and Professional Conduct I   | 5          |
| DENS 740        | Dental Practice Management IV   | 1          |
| DENS 745        | Patient Management and Professional Conduct II  | 5          |
| DENS 752        | Clinical General Practice Dentistry   | 13         |
| DENS 753        | D4 Treatment Planning Seminar   | 1          |
| DENS 762        | Clinical Service-learning   | 4          |
| ENDO 622        | Principles of Endodontics   | 1          |
| ENDO 623        | Principles of Endodontics Lab   | 1.5        |
| ENDO 731        | Endodontic Therapy  | 1          |
| ENDO 739        | Clinical Endodontics III  | 1.5        |
| ENDO 749        | Clinical Endodontics IV   | 1.5        |
| GENP 519        | Dental Anatomy and Occlusion Lecture  | 2          |
| GENP 520        | Dental Anatomy and Occlusion Lab  | 2          |
| GENP 620        | Cariology   | 2          |
| GENP 739        | Clinical Operative III  | 5          |
| GENP 742        | Treatment Planning Seminar  | 2          |
| IPEC 501        | Foundations of Interprofessional Practice   | 1          |
| ORPT 620        | Oral Radiology I  | 1          |
| ORPT 621        | Dental Radiology  | 1          |
| ORPT 622        | Oral Pathology  | 4          |
| ORPT 623        | Temporomandibular Disorders and Orofacial Pain  | 1          |
| ORPT 732        | Clinical Oral Pathology and Oral Medicine   | 1          |
| ORPT 737        | D3 Radiology Rotation   | 1          |
| ORSG 622        | Introduction to Oral Surgery  | 1          |
| ORSG 731        | Management of the Medically Compromised Dental Patient and Medical Emergencies in the Dental Office | 2          |
| ORSG 733        | Principles of Oral and Maxillofacial Surgery  | 1.5        |
| ORSG 739        | Clinical Oral Surgery III   | 2.5        |
| ORSG 749        | Clinical Oral Surgery IV  | 2          |
| ORTH 623        | Orthodontics Lecture  | 2          |
| ORTH 733        | Orthodontic Therapy   | 1          |
| ORTH 739        | Clinical Orthodontics III   | 1          |
| <b>PEDD 622</b> | <b>Introduction to Pediatric Dentistry</b>  | <b>2.5</b> |
| PEDD 730        | Special Care Dentistry  | 1          |
| PEDD 733        | Advanced Pediatric Dentistry  | 1          |
| PEDD 739        | Clinical Pediatric Dentistry III  | .5         |
| PEDD 749        | Clinical Pediatric Dentistry IV   | 1          |
| PERI 525        | Diagnosis of Periodontal Diseases   | 1          |
| PERI 526        | Etiology and Pathogenesis of Periodontal Diseases   | 1.5        |
| PERI 627        | Non-Surgical Periodontal Therapy  | 1.5        |
| PERI 733        | Surgical Periodontal Therapy  | 1          |
| PERI 739        | Clinical Periodontics III   | 5          |
| PERI 749        | Clinical Periodontics IV  | 1          |
| PROS 624        | Preclinical Removable Prosthodontics  | 2          |

|                    |  |              |
|--------------------|--|--------------|
| PROS 625           | Preclinical Removable Prosthodontics Lab           | 4            |
| PROS 626           | Clinical Principles of Dental Implantology Lecture | 1            |
| PROS 628           | Clinical Principles of Implantology Lab            | 1            |
| PROS 731           | Complete Denture Prosthodontics                    | 1.5          |
| PROS 735           | Removable Prosthodontics Diagnosis and Treatment   | 1.5          |
| PROS 739           | Clinical Fixed Prosthodontics III                  | 2            |
| PROS 740           | Clinical Removable Prosthodontics                  | 3.5          |
| PROS 749           | Clinical Prosthodontics IV                         | 2            |
| <b>Total Hours</b> |  | <b>194.5</b> |

**The minimum number of credit hours required for this degree is 194.5**

Students who complete the requirements for this degree will receive a Doctor of Dental Surgery.

#### **Academic performance evaluation**

The faculty of the VCU School of Dentistry has the responsibility for evaluating the student's academic performance. It is incumbent on the course directors or their designees to specify, at the time that courses first convene, the criteria to be used in student assessment and the standards by which they will be judged.

The VCU School of Dentistry Guidelines for the Evaluation of Student Performance and Academic Status are distributed to all students at the beginning of their study. They are available upon request from the Office of Academic Affairs, School of Dentistry.

### **D.D.S.-Ph.D. opportunity**

Students with an interest in academic and research careers are afforded the opportunity to undertake advanced degree training while in dental school by combining doctoral study in oral health research with a professional degree in dentistry. The program seeks to train students interested in translating oral research to the clinic. These clinician-scientists will help bridge the gap between basic and clinical science in the field of dentistry. For more information, see the dual degree program page (<https://bulletin.vcu.edu/graduate/dual-degree-opps/dds-ohr-phd/>).