

DENTISTRY, DOCTOR OF DENTAL SURGERY (D.D.S.)/ORAL HEALTH RESEARCH, DOCTOR OF PHILOSOPHY (PH.D.) [DUAL DEGREE]

Dental students with an interest in academic and research careers are afforded the opportunity to undertake advanced degree training while in dental school. The D.D.S./Ph.D. (dual degree) 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.

Students will have both a research and a clinical mentor. Students will complete the first two years (preclinical years) of dental school during which time they will select their Ph.D. dissertation laboratory. Following completion of their second year of the dental curriculum, students will focus on the requirements for their Ph.D. The main undertaking at this phase is laboratory research that leads to the Ph.D. dissertation. Students are exempt from certain didactic courses in the Ph.D. program in recognition of the content in the dental curriculum. This will improve time to degree for the dual degree program. Students will also take part in weekly clinical sessions to maintain their dental knowledge. After completion of doctoral degree requirements, students re-enter the dental curriculum in the third year.

Program goals

The objectives of this dual degree program are to:

- Train clinician scientists to bridge the gap between basic and clinical science in oral and systemic health.

Among the many benefits offered by participation in the dual degree program are the following:

- Students holding these degrees will have the tools to integrate research, practice and education in pursuit of new technologies and treatments for diseases of the head and neck.
- The combined program has a reduced time to degree.

The diplomas for this dual degree program may be awarded simultaneously.

Student learning outcomes

See each degree program page for learning outcomes.

Other information

School of Dentistry program policies

The School of Dentistry provides policies applicable to all programs administratively housed in the school. **Information on the doctoral program** is available elsewhere in this Bulletin. Additional information on dental programs is available on the **School of Dentistry website**.

The requirements for a dual professional/graduate degree in the School of Dentistry are equivalent to those required of students seeking a

graduate degree alone and are determined by the individual program. For additional information, please visit the **program website**.

Admission requirements

The following requirements represent the minimum acceptable standards for admission to the dual degree:

- A minimum GPA of 3.5 on a 4.0 scale
- A personal statement, which should include long-term career goals to assess reasons behind the candidate's application; how a dual degree helps achieve those goals; the factors motivating a career in research; research experience, including dates, places and duration
- A current resume or curriculum vita
- Three letters of recommendation that speak to the scientific competency and experience of the applicant

Application procedure

Prospective students should submit applications to AADAS (https://www.adea.org/GoDental/The_application_to_dental_school_ADEA_AADSAS.aspx) for admission to dental school. At the same time, they should apply directly to the Ph.D. in Oral Health Research program for admission to the Ph.D. program, stating their interest in the dual degree program. Those invited to Richmond for interviews will take part in the standard interview for the School of Dentistry and will spend a second day interviewing with members of the D.D.S./Ph.D. steering committee, as well as touring labs of faculty scientists.

Degree requirements

In addition to the VCU Graduate School graduation requirements, students can earn both the D.D.S. and Ph.D. in Oral Health Research degrees by having eight credit hours counted toward both degrees. This dual degree program allows students to earn both the D.D.S. and the Ph.D. after completion of a minimum of 268 credit hours rather than 276 credits required for both degrees. Students must fulfill all requirements of the 195 credit-hour D.D.S. degree. Eight hours of D.D.S. basic science courses will be applied to the Ph.D. in Oral Health Research degree as electives. Students in the dual degree program may be advised to take additional didactic courses to support their research.

Expected time to degree for the combined program is seven years as opposed to the nine years normally required for the two degrees. This time saving is achieved by students conducting some of their research requirements during the years they are taking the dental curriculum, thus shortening the time to degree for the Ph.D. component. Both diplomas are awarded simultaneously and only after completing all requirements for both degrees.

Curriculum requirements for the D.D.S.

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 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, genetics, 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, 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.

Course	Title	Hours
DEBS 501	Dental Gross Anatomy	6.5
DEBS 502	Dental Neuroanatomy	1
DEBS 503	Infection and Immunology (counts as elective in Ph.D. program)	3.5
DEBS 511	Microscopic Anatomy	5
DEBS 512	Physiology and Pathophysiology (counts as elective in Ph.D. program)	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 511	Dental Anatomy	2.5
GENP 514	Fundamentals of Occlusion	2
GENP 521	Dental Anatomy Lab	1.5
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	3
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	Medical Management of Emergency Care Dental Patients	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
PEDD 622	Introduction to Pediatric Dentistry	2
ORTH 739	Clinical Orthodontics III	1
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
Total Hours		195

Additional contacts

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Curriculum requirements for the Ph.D.

Based on the equivalent knowledge acquired by successfully completing DEBS 503 and DEBS 512 during the D1 and D2 years, the eight elective credits required for the Ph.D. are satisfied.

Course	Title	Hours
Core courses		
OCMB 701	Oral Microbiology and Disease	2
OCMB 702	Infection, Immunology and Oral Cancer	2
OCMB 703	Research Topics in Oral Biology	1
OCMB 704	Oral Biology Seminar Series (one-credit course taken eight semesters)	8
OCMB 706	Proposal Preparation	1
OCMB 707	Research Skills and Career Development	1
Electives		
Satisfied by DEBS 503 and DEBS 512, taken in D1 and D2 years of D.D.S. program		8
Research requirement		
OCMB 705	Oral Biology Directed Research (taken for a minimum of 58 credits)	58
Total Hours		81

The minimum total number of credits required for the dual degree option is 268.

Plan of study

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