Twin Cities Campus
Dental Hygiene M.D.H.
Dentistry Primary Care Administration
School of Dentistry

Link to a list of faculty for this program.

Contact Information:
Division of Dental Hygiene, 9-372 Moos Tower, 515 Delaware Street S.E., Minneapolis, MN 55455 (612-625-9121; fax: 612-625-1605)
Email: jaliv003@umn.edu
Website: http://www.dentistry.umn.edu

- Program Type: Master's
- Requirements for this program are current for Fall 2011
- Length of program in credits: 37
- This program requires summer semesters for timely completion.
- Degree: Master of Dental Hygiene

Along with the program-specific requirements listed below, please read the General Information section of the catalog website for requirements that apply to all major fields.

The Master of Dental Hygiene Program prepares leaders in the profession for practice, research, the healthcare industry, and academia.

The curriculum provides meaningful academic experiences for each graduate student based on his/her career goals and interest. Courses in the management track will provide students with knowledge and skills necessary for careers in the healthcare industry such as sales, marketing and professional relations management, management of large dental clinics, practice management consulting, and entrepreneurship.

Courses in the education track will provide students with the knowledge and skills to teach didactic, clinic, and laboratory courses in the dental hygiene programs; conduct research; and assume administrative positions.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission
The preferred undergraduate GPA for admittance to the program is 3.00.

Baccalaureate or associate degree in dental hygiene from an accredited U.S. institution or foreign equivalent.

The Division of Dental Hygiene is committed to the philosophy that high-level clinical proficiency is essential for dental hygiene educators; knowledge and competency in the art and science of dental hygiene practice is requisite for the graduate of the Master of Dental Hygiene Program.

Special Application Requirements:
Applicants must submit directly to the Admissions Committee a typed essay including short and long term goals and an explanation of why an advanced degree is of interest, a current resume including evidence of leadership and dental hygiene clinic experience, and three letters of reference. Application deadline is February 1.

Applicants must submit their test score(s) from the following:
- GMAT
  - Total score: 500

International applicants must submit score(s) from one of the following tests:
- TOEFL
  - Internet Based - Total Score: 79
  - Internet Based - Writing Score: 21
  - Internet Based - Reading Score: 19
  - Paper Based - Total Score: 550
- IELTS
- Total Score: 6.5
- MELAB
  - Final score: 80

Key to test abbreviations (GMAT, TOEFL, IELTS, MELAB).

For an online application or for more information about graduate education admissions, see the General Information section of the catalog website.

Program Requirements

Plan C: Plan C requires 37 major credits and null credits outside the major. The is no final exam.

This program may not be completed with a minor.

Use of 4xxx courses toward program requirements is permitted under certain conditions with adviser approval.

A minimum GPA of 2.8 is required for students to remain in good standing.

Students in both the management and dental hygiene education tracks will participate in the following four core courses: instructional strategies, research methods in health sciences, administrative leadership and professional development, and biostatistics.

In addition to the core courses, management track students will complete the following courses: managerial accounting, marketing management, operations management, financial management, and electives chosen from the MBA and MILI curricula.

Dental hygiene education track students will participate in the following courses: the discipline of dental hygiene, curriculum and course development, dental hygiene supervised student teaching, dental hygiene clinic administration, web-based teaching/learning strategies, and principles of educational and psychological measurement.

Program Sub-plans

Students are required to complete one of the following sub-plans. Students may not complete the program with more than one sub-plan.

Dental Hygiene Education
Courses in the dental hygiene education track provide students with the knowledge and skills to teach didactic, clinic, and laboratory courses in dental hygiene programs; conduct research; and assume administrative positions.

Management
Courses in the management track provide students with the knowledge and skills necessary for healthcare industry careers such as sales, marketing and professional relations management, management of large dental clinics, practice management consulting, and entrepreneurship.
Twin Cities Campus
Dental Therapy M.D.T.
Dentistry Primary Care Administration
School of Dentistry

Link to a list of faculty for this program.

Contact Information:
Division of Dental Therapy, 9-436 Moos Tower, 515 Delaware Street, S.E., Minneapolis, MN 55455
(612-625-4310; fax: 612-626-6096)
Email: atki0094@umn.edu
Website: http://www.dentistry.umn.edu/programs_admissions/DentalTherapyPrograms/home.html

- Program Type: Master's
- Requirements for this program are current for Fall 2011
- Length of program in credits: 91
- This program requires summer semesters for timely completion.
- Degree: Master of Dental Therapy

Along with the program-specific requirements listed below, please read the General Information section of the catalog website for requirements that apply to all major fields.

The M.D.T. program blends a strong dental therapy education with the study of the biological, behavioral, and social sciences. It provides the didactic, laboratory, and clinical experiences required for the assessment and treatment of specified dental procedures. Dental therapy students learn alongside the dental and dental hygiene students with whom they will work with after graduation.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission
The preferred undergraduate GPA for admittance to the program is 3.00.

Applicants must have a bachelor of science or bachelor of arts degree.

International applicants must submit score(s) from one of the following tests:
- TOEFL
  - Internet Based - Total Score: 92
  - Internet Based - Writing Score: 20
  - Internet Based - Reading Score: 20

Key to test abbreviations (TOEFL).

For an online application or for more information about graduate education admissions, see the General Information section of the catalog website.

Program Requirements
Plan C: Plan C requires 91 major credits and null credits outside the major. The is no final exam.

This program may be completed with a minor.

Use of 4xxx courses towards program requirements is not permitted.

A minimum GPA of 2.80 is required for students to remain in good standing.

Required courses
- DT 5210 - Head and Neck Anatomy (1.0 cr)
- DT 5330 - Clinical Application I (3.0 cr)
- DT 5429 - Introduction to Psychomotor Skill Development (1.0 cr)
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>DT 5430</td>
<td>Oral Anatomy</td>
<td>2.0 cr</td>
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<tr>
<td>DT 5431</td>
<td>Oral Anatomy Laboratory</td>
<td>3.0 cr</td>
</tr>
<tr>
<td>DT 5521</td>
<td>Foundations of Interprofessional Professionalism, Communication, and Collaboration</td>
<td>1.0 cr</td>
</tr>
<tr>
<td>DT 5212</td>
<td>Local Anesthesia and Pain Management</td>
<td>2.0 cr</td>
</tr>
<tr>
<td>DT 5230</td>
<td>Oral and Maxillofacial Radiology</td>
<td>2.0 cr</td>
</tr>
<tr>
<td>DT 5250</td>
<td>Oral Histology and Embryology</td>
<td>2.0 cr</td>
</tr>
<tr>
<td>DT 5331</td>
<td>Provider Patient Relationships</td>
<td>2.0 cr</td>
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<tr>
<td>DT 5332</td>
<td>Cariology and Applied Nutrition in Dental Therapy Care</td>
<td>3.0 cr</td>
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<tr>
<td>DT 5410</td>
<td>Applied Dental Biomaterials</td>
<td>1.0 cr</td>
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<tr>
<td>DT 5110</td>
<td>Periodontology I</td>
<td>1.0 cr</td>
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<tr>
<td>DT 5130</td>
<td>Preclinical Pediatric Dentistry</td>
<td>2.0 cr</td>
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<td>DT 5211</td>
<td>Applied Pharmacology for the Dental Therapist</td>
<td>2.0 cr</td>
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<td>DT 5232</td>
<td>Oral and Maxillofacial Radiology Preclinical Laboratory</td>
<td>0.0 cr</td>
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<tr>
<td>DT 5251</td>
<td>General and Oral Pathology</td>
<td>1.0 cr</td>
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<td>DT 5432</td>
<td>Operative Dentistry I</td>
<td>2.0 cr</td>
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<tr>
<td>DT 5433</td>
<td>Operative Dentistry I Pre-Clinic Laboratory</td>
<td>2.0 cr</td>
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<td>DT 5140</td>
<td>Preventive Pediatric Dental Clinic</td>
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<td>DT 5231</td>
<td>Oral and Maxillofacial Radiology II</td>
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<td>DT 5333</td>
<td>Dental Public Health and Academic Service Learning I</td>
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<td>DT 5334W</td>
<td>Dental Therapy Care Process: Clinical Application II</td>
<td>4.0 cr</td>
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<td>DT 5336</td>
<td>Ethics and Jurisprudence for the Dental Therapist</td>
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<tr>
<td>DT 5434</td>
<td>Operative Dentistry II Lecture</td>
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<td>DT 5471</td>
<td>Prosthodontic Topics for Dental Therapy</td>
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<tr>
<td>DT 5335</td>
<td>Dental Practice Management</td>
<td>2.0 cr</td>
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<td>DT 5337</td>
<td>Dental Public Health and Service Learning II</td>
<td>2.0 cr</td>
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<tr>
<td>DT 5338W</td>
<td>Research Methods in Dental Therapy [WI]</td>
<td>3.0 cr</td>
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<td>DT 5460</td>
<td>Essentials of Clinical Care II for the Dental Therapist</td>
<td>5.0 - 10.0 cr</td>
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<td>DT 5141</td>
<td>Clinical Pediatric Dentistry III</td>
<td>2.0 cr</td>
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<td>DT 5241</td>
<td>Oral Radiology Clinic II</td>
<td>1.0 cr</td>
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<td>DT 5320</td>
<td>Comprehensive Care Clinic</td>
<td>4.0 cr</td>
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<td>DT 5361</td>
<td>Outreach Experiences II</td>
<td>2.0 cr</td>
</tr>
<tr>
<td>DT 5443</td>
<td>Operative Clinic III</td>
<td>4.0 cr</td>
</tr>
<tr>
<td>DT 5435</td>
<td>Operative Dentistry II for the Dental Therapist, Lab</td>
<td>1.0 cr</td>
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Contact Information:
M.S.-Dentistry Program, 15-136 Moos Tower, 515 Delaware Street, S.E., Minneapolis, MN 55455 (612-624-7934; fax: 612-624-0027)
Email: wegne009@umn.edu
Website: http://www.dentistry.umn.edu

Along with the program-specific requirements listed below, please read the General Information section of the catalog website for requirements that apply to all major fields.

The M.S. program in dentistry prepares dentists with clinical expertise for positions of leadership in education, research, and program administration in the oral health field. A multidisciplinary faculty of dental educators, researchers, and clinicians teach the program, which is housed in the School of Dentistry. All students complete core coursework in teaching and evaluation of dentistry, research methods, and health care administration. Additional advanced coursework is offered in these same focus areas, as well as in selected clinical and oral science topics with multidisciplinary impact, including conscious sedation, craniofacial pain, geriatrics, oral biology, oral medicine and radiology, oral pathology, practice administration, and psychology. Students have flexibility in planning individualized programs to accommodate their specific areas of interest, and courses from other disciplines may be included for credit in the major area.

Students enrolled in an advanced clinical dental training program may be admitted to the dentistry graduate program for concurrent study, but must carefully plan their curriculum with their faculty adviser and the director of graduate studies so that their residency and M.S. programs are appropriately integrated and satisfy Graduate School registration requirements. Programs in the School of Dentistry that may enroll students for the M.S. degree include endodontics, orthodontics, pediatric dentistry, periodontics, and prosthodontics and TMJ disorders/orofacial pain.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission
The preferred undergraduate GPA for admittance to the program is 3.00.

DDS/DMD or equivalent from accredited US institution or recognized foreign school. Clinical residency enrollment and 3.0 GPA or rank in top quarter of graduating professional school class preferred.

Applicants must submit three letters of recommendation from individuals familiar with their academic capabilities. Also required is a brief essay (under 500 words) which relates the applicant's career goals to the goals of the program. Applications are received and reviewed throughout the year. Students may enter the program in any semester at the discretion of program faculty.

International applicants must submit score(s) from one of the following tests:
• TOEFL
  - Internet Based - Total Score: 80
  - Paper Based - Total Score: 600
The preferred English language test is Test of English as Foreign Language

Key to test abbreviations (TOEFL).

For an online application or for more information about graduate education admissions, see the General Information section of the catalog website.
Program Requirements

**Plan A:** Plan A requires 14 major credits, 6 credits outside the major, and 10 thesis credits. The final exam is oral.

**Plan B:** Plan B requires 14 major credits and 6 credits outside the major. The final exam is oral.

This program may be completed with a minor.

Use of 4xxx courses toward program requirements is permitted under certain conditions with adviser approval.

A minimum GPA of 3.00 is required for students to remain in good standing.

At least 2 semesters must be completed before filing a Degree Program Form.

Students pursuing either Plan A or Plan B must complete a minimum of 14 credits in the major, including four core courses in teaching and evaluation in dentistry, basic research methodology, introductory biostatistics, and fundamentals of health care administration. Courses from other disciplines may also be taken for credit in the major with the approval of the student’s adviser and the director of graduate studies. All students must complete at least 6 credits outside the major field (either as a minor or related field credits) as well as program requirements for training in the Responsible Conduct of Research.
Twin Cities Campus

Oral Biology M.S.
School of Dentistry - Adm

School of Dentistry

Link to a list of faculty for this program.

Contact Information:
School of Dentistry, 17-164 Moos Tower, 515 Delaware Street, S.E., Minneapolis, MN 55455 (612-625-5984; fax: 612-626-2651)
Email: oralbio@umn.edu
Website: http://www.oralbiology.umn.edu

• Program Type: Master's
• Requirements for this program are current for Fall 2011
• Length of program in credits: 30
• This program requires summer semesters for timely completion.
• Degree: Master of Science

Along with the program-specific requirements listed below, please read the General Information section of the catalog website for requirements that apply to all major fields.

The interdisciplinary Oral Biology Program is offered by the School of Dentistry with cooperating faculty in the Medical School, College of Pharmacy, and Veterinary Medicine. It gives students research skills and a broad understanding of the development, structure, function, and pathology of the orofacial region. Students are encouraged to focus in one of five areas of emphasis: biomaterials and biomechanics; epithelial biology and carcinogenesis; microbiology and immunology; sensory neuroscience; and bone biology, craniofacial development, and tissue engineering. An exceptional student can create his/her own area of emphasis or specialize in topics not listed here; students should discuss their interests with the director of graduate studies before applying. Curricula are designed to allow considerable flexibility in planning individual programs to accommodate specific areas of interest; courses from other disciplines may be included as part of the major.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission
The preferred undergraduate GPA for admittance to the program is 3.00.

Applicants must submit their test score(s) from the following:
• GRE
  - General Test - Verbal Reasoning: 500
  - General Test - Quantitative Reasoning: 600
  - General Test - Analytical Writing: 5

International applicants must submit score(s) from one of the following tests:
• TOEFL
  - Internet Based - Total Score: 90
  - Internet Based - Writing Score: 25
  - Internet Based - Reading Score: 25
  - Paper Based - Total Score: 550
• IELTS
  - Total Score: 6.5
• MELAB
  - Final score: 80

The preferred English language test is Test of English as Foreign Language

Key to test abbreviations (GRE, TOEFL, IELTS, MELAB).

For an online application or for more information about graduate education admissions, see the General Information section of the catalog website.
Program Requirements

Plan A: Plan A requires 14 major credits, 6 credits outside the major, and 10 thesis credits. The final exam is oral.

This program may not be completed with a minor.

Use of 4xxx courses towards program requirements is not permitted.

A minimum GPA of 3.00 is required for students to remain in good standing.

At least 2 semesters must be completed before filing a Degree Program Form.

The M.S. in oral biology is intended for individuals who are currently involved in a research laboratory or program and are seeking to increase their scientific perspectives. This program generally requires a minimum of two years and a total of 30 credits. Students must complete the Plan A (with thesis) program, which requires a minimum of 14 credits in the major, including 4 credits of oral biology topics courses (8021-8028). Courses in the major may be taken from other disciplines with the approval of the adviser and the director of graduate studies. Registration and participation in the oral biology student seminar series (8030) is required each semester. Students must also complete a minor or related field program in an associated nonclinical discipline (minimum 6 cr) and 10 thesis credits. Students must conform to the Graduate School's GPA requirements for master's degree students.
Twin Cities Campus

Oral Biology Minor
School of Dentistry - Adm

School of Dentistry

Link to a list of faculty for this program.

Contact Information:
School of Dentistry, 17-164 Moos Tower, 515 Delaware Street, S.E., Minneapolis, MN 55455 (612-625-5984; fax 612-626-2651)
Email: oralbio@umn.edu
Website: http://www.oralbiology.umn.edu

• Program Type: Graduate minor related to major
• Requirements for this program are current for Fall 2011
• Length of program in credits (Masters): 6
• Length of program in credits (Doctorate): 12
• This program does not require summer semesters for timely completion.

Along with the program-specific requirements listed below, please read the General Information section of the catalog website for requirements that apply to all major fields.

The interdisciplinary Oral Biology program is offered by the School of Dentistry with cooperating faculty in the Medical School, College of Pharmacy, and Veterinary Medicine. It gives students research skills and a broad understanding of the development, structure, function, and pathology of the orofacial region. Students are encouraged to focus in one of five areas of emphasis: biomaterials and biomechanics; epithelial biology and carcinogenesis; microbiology and immunology; sensory neuroscience; and bone biology, craniofacial development, and tissue engineering. An exceptional student can create his/her own area of emphasis or specialize in topics not listed here; students should discuss their interests with the director of graduate studies before applying. Curricula are designed to allow considerable flexibility in planning individual programs to accommodate specific areas of interest.

Program Delivery
This program is available:
• via classroom (the majority of instruction is face-to-face)

Program Requirements
Use of 4xxx courses towards program requirements is not permitted.

A master's minor in oral biology consists of 6 credits, at least two advanced courses in oral biology, and other coursework determined in consultation with the director of graduate studies.

A Ph.D. minor in oral biology consists of 12 credits, at least two advanced courses in oral biology, and other coursework in consultation with the director of graduate studies.
Twin Cities Campus
Oral Biology Ph.D.
School of Dentistry - Adm
School of Dentistry

Contact Information:
School of Dentistry, 17-164 Moos Tower, 515 Delaware Street, S.E., Minneapolis, MN 55455 (612-625-5984; fax:612-626-2651)
Email: oralbio@umn.edu
Website: http://www.oralbiology.umn.edu

- Program Type: Doctorate
- Requirements for this program are current for Fall 2011
- Length of program in credits: 59 to 61
- This program requires summer semesters for timely completion.
- Degree: Doctor of Philosophy

Along with the program-specific requirements listed below, please read the General Information section of the catalog website for requirements that apply to all major fields.

The interdisciplinary Graduate Program in Oral Biology is offered by the School of Dentistry with cooperating faculty in the Medical School, College of Pharmacy, and Veterinary Medicine. It gives students research skills and a broad understanding of the development, structure, function, and pathology of the orofacial region. Students are encouraged to focus in one of five areas of emphasis: biomaterials and biomechanics; epithelial biology and carcinogenesis; microbiology and immunology; sensory neuroscience; and bone biology, craniofacial development, and tissue engineering. An exceptional student can create his/her own area of emphasis or specialize in topics not listed here; students should discuss their interests with the director of graduate studies before applying. Curricula are designed to allow considerable flexibility in planning individual programs to accommodate specific areas of interest; courses from other disciplines may be included as part of the major.

Program Delivery
This program is available:
- via classroom (the majority of instruction is face-to-face)

Prerequisites for Admission
The preferred undergraduate GPA for admittance to the program is 3.00.

Special Application Requirements:
Applicants must submit 1) scores from the General Test of the GRE, 2) three letters of recommendation from persons who can comment authoritatively about the applicant's potential for a research and academic career, 3) a clearly written personal statement (one to two pages) describing career goals, 4) an essay describing research aspirations (one to two pages), and 5) a résumé highlighting research experience and accomplishments. For D.D.S./Ph.D. applicants who are U.S. citizens, resident aliens, or Canadian citizens, U.S. or Canadian Dental Admission Test (DAT) scores at or above the national average will be accepted in lieu of the GRE. Applicants who have graduated from U.S. or Canadian dental or medical schools within three years of their application to the Ph.D. program may request that previous U.S. or Canadian DAT or MCAT scores be considered in lieu of the GRE.

Applicants must submit their test score(s) from the following:
- GRE
  - General Test - Verbal Reasoning: 500
  - General Test - Quantitative Reasoning: 600
  - General Test - Analytical Writing: 5

International applicants must submit score(s) from one of the following tests:
- TOEFL
  - Internet Based - Total Score: 90
  - Internet Based - Writing Score: 25
  - Internet Based - Reading Score: 25
  - Paper Based - Total Score: 550
- IELTS
  - Total Score: 6.5
- MELAB
Program Requirements
23 to 25 credits are required in the major.
12 credits are required outside the major.
24 thesis credits are required.

This program may not be completed with a minor.

Use of 4xxx courses towards program requirements is not permitted.

A minimum GPA of 3.00 is required for students to remain in good standing.

The Ph.D. in oral biology is a four-year program. The first year consists primarily of a core curriculum specifically chosen for each student. The curriculum provides students with a working knowledge of the major concepts and research paradigms in their scientific area, a working vocabulary, and the basis for continued learning. During months 13-15, the student writes a major research thesis proposal, which is defended orally by month 16. The oral exam must capture the student's ability to think critically about the field and the application of logical experimental designs to test hypotheses and answer questions. Months 17-45 will focus on thesis research. Months 45-48 are used for dissertation writing. Students must also present a public seminar describing their thesis research (which is attended by the final oral exam committee) no later than 6 months before defense of the thesis. The dissertation is defended in month 48. Students are expected to complete a core curriculum of 23-25 credits including 8 credits of oral biology topics courses (8021-8028) and continued participation in the oral biology student seminar series (8030). Courses may be selected from departments and programs outside the oral biology program with the approval of the adviser and director of graduate studies. A minor (minimum 12 cr) in a nonclinical discipline and 24 thesis credits are also required. A cumulative GPA of at least 3.00 in both the major and minor is required. Only grades of A or B are acceptable in the core courses.

Joint- or Dual-degree Coursework: D.D.S./Ph.D. students typically complete all requirements for the Ph.D. program, except for the thesis defense, before entering the D.D.S. program. The Ph.D. and D.D.S. degrees may be awarded concurrently or separately.