**Twin Cities Campus**

**Advanced Dental Therapy Postbaccalaureate Certificate**

*Dentistry Primary Care Administration*

**School of Dentistry**

Link to a list of faculty for this program.

**Contact Information:**

University of MN, School of Dentistry
515 Delaware St SE
9-436 Moos Health Sci
Minneapolis, MN  55455
612-626-5138
Email: heit0058@umn.edu
Website: [http://dentistry.umn.edu/programs-admissions/dental-therapy/index.htm](http://dentistry.umn.edu/programs-admissions/dental-therapy/index.htm)

1. Program Type: Post-baccalaureate credit certificate/licensure/endorsement
2. Requirements for this program are current for Fall 2018
3. Length of program in credits: 15
4. This program does not require summer semesters for timely completion.
5. Degree: Advanced Dental Therapy PBacc Certificate

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 Advanced Dental Therapy certificate is designed for dental therapists who have completed a baccalaureate or master degree in dental therapy from the University of Minnesota, School of Dentistry between the years 2011 and 2014. It focuses on acquiring the knowledge and skills mandated by the Minnesota Board of Dentistry to become eligible for advanced dental therapy certification.

**Program Delivery**

This program is available:

- completely online (all program coursework can be completed online)

**Prerequisites for Admission**

Bachelor Degree of Dental Therapy from the University of Minnesota.

Master Degree of Dental Therapy from the University of Minnesota.

Other requirements to be completed before admission:

Completion of a Bachelor of Science in Dental Therapy degree or Master of Dental Therapy degree at the University of Minnesota, School of Dentistry between 2011 thru 2014. Holds current credentials of Licensed Dental Therapist in the state of Minnesota.

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

**Program Requirements**

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

A minimum GPA of 3.0 is required for students to remain in good standing.

At least 1 semesters must be completed before filing a Degree Program Form.

Students are required to maintain a minimum GPA of 3.00 and to achieve no less than a C grade in each course. Students must enroll in the Advance Dental Therapy Post-baccalaureate Certificate within five years following the completion of their dental therapy degree and must complete the course and clinic requirements within five years of enrollment.

**Required Didactic Coursework (5 Credits)**

Take the following courses for a total of 5 credits:
DT 5162 - Principles of Exodontia and Minor Oral Surgery (1.0 cr)
DT 6321 - Treatment Planning (2.0 cr)
DT 6341 - Advanced Dental Therapy Prep Lecture (2.0 cr)

Required Clinical Coursework (10 Credits)
Take the following for at least 10 credits:
DT 6340 - Advanced Dental Therapy Prep Clinic (10.0 cr)
Twin Cities Campus
Dental Hygiene M.S.D.H.
Dentistry Primary Care Administration
School of Dentistry

Contact Information:
Division of Dental Hygiene, 9-372 Moos Tower, 515 Delaware Street SE, 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 2018
- Length of program in credits: 33 to 40
- This program requires summer semesters for timely completion.
- Degree: Master of Science 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 science in 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 their 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 dental hygiene programs; conduct research; and assume administrative positions.

Program Delivery
This program is available:
- primarily online (at least 80% of the instruction for the program is online with short, intensive periods of face-to-face coursework)

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

Graduate of an accredited US institution or foreign equivalent dental hygiene program.

Other requirements to be completed before admission:
Baccalaureate degree; dental hygiene license; CPR certification; undergraduate statistics course.

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. Deadline May 1.

Applicants pursuing the management track must submit their GMAT score.

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: 94
  - Internet Based - Writing Score: 21
  - Internet Based - Reading Score: 19
  - Paper Based - Total Score: 550

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Information current as of August 31, 2018
IELTS
- Total Score: 6.5
MELAB
- Final score: 80
- Speaking test score: 0

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 A**: Plan A requires 23 major credits, up to null credits outside the major, and 10 thesis credits. The final exam is oral.

**Plan C**: Plan C requires 40 major credits and up to null credits outside the major. There is no final exam. A capstone project is required.

**Capstone Project**: Plan C students complete a capstone project based on internship experiences.

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.

At least 1 semesters must be completed before filing a Degree Program Form.

**Core Curriculum (11 Credits)**
All MSDH students take the following courses for a total of 11 credits:
- DH 5401 - Research Methods in Health Sciences (3.0 cr)
- DH 5407 - Instructional Strategies for Effective Teaching (2.0 cr)
- DH 5411 - Administrative Leadership and Professional Development (2.0 cr)
- DH 5421 - Grant Writing for Health Professionals (1.0 cr)

**Statistics**
- EPSY 5261 - Introductory Statistical Methods (3.0 cr)

**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**
This sub-plan is limited to students completing the program under Plan A.

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.

**Education Track Curriculum (12 Credits)**
In addition to the 11 MSDH core credits, take the following 12 credits to complete the 23 course credits required:
- DH 5403 - The Discipline of Dental Hygiene (2.0 cr)
- DH 5405 - Curriculum and Course Development (2.0 cr)
- DH 5409 - Dental Hygiene Clinic Administration (2.0 cr)
- DH 5413 - Dental Hygiene Supervised Clinic Student Teaching (4.0 cr)
- DH 5415 - Dental Hygiene Supervised Didactic Course Student Teaching (2.0 cr)

**Thesis Credits**
Take 10 masters thesis credits.
- DH 8777 - Thesis Credits: Master's (1.0 - 18.0 cr)

Management
This sub-plan is limited to students completing the program under Plan A or Plan C.

The Management Track coursework can be taken on-line or on campus. 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.

Management Track Curriculum (27 to 29 Credits)
In addition to the 11 MSDH core credits, Plan A students take 27 credits (17 course credits and 10 thesis credits) to complete the 38-credit minimum, and Plan C students take 29 credits to complete the 40-credit minimum.

Management Track Core Courses (9 Credits)
All Management track students take the following courses for a total of 9 credits:
- MBA 6030 - Financial Accounting (3.0 cr)
- MBA 6210 - Marketing Management (3.0 cr)
- MBA 6220 - Supply Chain & Operations (3.0 cr)

MBA Electives (8 to 12 Credits)
Plan A students select at least 8 credits, and Plan C students select at least 12 credits, from the following list in consultation with the advisor. Alternative courses may be taken with advisor approval.
- ENTR 6020 - Business Formation (4.0 cr)
- HRIR 6301 - Staffing, Training, and Development (4.0 cr)
- MBA 6300 - Strategic Management (3.0 cr)
- MILI 6235 - Pharmaceutical Industry: Business and Policy (2.0 cr)
- MILI 6562 - Information Technology in Health Care (2.0 cr)
- MKTG 6051 - Marketing Research (4.0 cr)

Plan A Option (10 Credits)
Plan A students must take 10 masters thesis credits.
- DH 8777 - Thesis Credits: Master's (1.0 - 18.0 cr)

Plan C Option (8 Credits)
Plan C students must take the following courses for a total of 8 credits:
- DH 5201 - Management Internship (5.0 cr)
- DH 5203 - Capstone Project (3.0 cr)
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 2018
- 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 up to 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 *(Inactive)* (1.0 - 3.0 cr)
DT 5330 *(Inactive)* (3.0 cr)
DT 5429 - Introduction to Psychomotor Skill Development (1.0 cr)
DT 5430 - Oral Anatomy (2.0 cr)
DT 5431 - Oral Anatomy Laboratory (3.0 cr)
DT 5521 [Inactive](1.0 cr)
DT 5212 [Inactive](2.0 cr)
DT 5230 [Inactive](2.0 cr)
DT 5250 [Inactive](2.0 cr)
DT 5331 [Inactive](2.0 cr)
DT 5332 [Inactive](3.0 cr)
DT 5410 - Applied Dental Biomaterials (1.0 cr)
DT 5110 [Inactive](1.0 cr)
DT 5130 - Preclinical Pediatric Dentistry (1.0 cr)
DT 5211 [Inactive](2.0 cr)
DT 5232 [Inactive](0.0 cr)
DT 5251 [Inactive](1.0 cr)
DT 5432 - Operative Dentistry I (1.0 cr)
DT 5433 - Operative Dentistry I Pre-Clinic Laboratory (2.0 cr)
DT 5140 - Preventive Pediatric Dental Clinic (1.0 cr)
DT 5231 [Inactive](1.0 cr)
DT 5333 [Inactive](3.0 cr)
DT 5334W [Inactive][WI] (4.0 cr)
DT 5336 [Inactive](1.0 cr)
DT 5434 - Operative Dentistry II Lecture (1.0 cr)
DT 5471 - Prosthodontic Topics for Dental Therapy (2.0 cr)
DT 5335 [Inactive](2.0 cr)
DT 5337 [Inactive](2.0 cr)
DT 5338W [Inactive][WI] (3.0 cr)
DT 5560 - Essentials of Clinical Care II for the Dental Therapist (5.0 - 10.0 cr)
DT 5460 - Essentials of Clinical Care I For the Dental Therapist (10.0 cr)
DT 5141 - Clinical Pediatric Dentistry III (2.0 cr)
DT 5241 - Oral Radiology Clinic II (1.0 cr)
DT 5320 - Comprehensive Care Clinic (1.0 - 5.0 cr)
DT 5361 - Outreach Experiences II (2.0 cr)
DT 5443 - Operative Clinic III (4.0 cr)
DT 5435 - Operative Dentistry II for the Dental Therapist, Lab (1.0 cr)
Twin Cities Campus
Dentistry M.S.
School of Dentistry - Adm
School of Dentistry

Link to a list of faculty for this program.

Contact Information:
M.S.-Dentistry Program, 15-136 Moos Tower, 515 Delaware Street, S.E., Minneapolis, MN  55455 (612-624-9900; fax: 612-624-0027)
Email: schw008@umn.edu
Website: http://www.dentistry.umn.edu

- Program Type: Master's
- Requirements for this program are current for Fall 2018
- 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 MS 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 University registration requirements. Programs in the School of Dentistry that may enroll students for the MS degree include: General Practice Residency, Endodontics, Geriatrics, Orthodontics, Pediatric dentistry, Periodontics, Prosthodontics and 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.

Other requirements to be completed before admission:
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
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 24 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 must complete training in the responsible conduct of research.

Core Coursework (8-9 Credits)
All students must select at least 8 credits, in consultation with the advisor, from the following list:

**Required Courses**
Three core courses are required.

- GRAD 8200 - Teaching and Learning Topics in Higher Education (1.0 cr)
- OBIO 5001 - Methods in Research and Writing (2.0 cr)
- PUBH 6414 - Biostatistical Literacy (3.0 cr)

**Health Care Administration Course**
At least one course is required.

- PUBH 6751 - Principles of Management in Health Services Organizations (2.0 cr)
- or PUBH 6724 - The Health Care System and Public Health (3.0 cr)

Plan A Thesis Credits
Plan A students must take at least 10 master's thesis credits.

DENT 8777 - Thesis Credits: Master's (1.0 - 18.0 cr)

Topics Areas
Students must complete one topic area.

**Periodontology (12 to 22 Credits)**
Plan A students pursuing the Periodontology topic area must select at least 12 credits, and Plan B students must take at least 22 credits from the following list, in consultation with the advisor:

- ANAT 7999 - Head and Neck Anatomy (3.0 cr)
- OSUR 5277 - Physical Diagnosis for Oral Surgery Residents (2.0 cr)
- DENT 7102 - Conscious Sedation (2.0 cr)
- DENT 8100 - Topics in Advanced Periodontology: Literature Review (2.0 cr)
- DENT 7051 - Advanced Study in the Theory and Principles of Oral Medicine (2.0 cr)
- OBIO 8012 - Basic Concepts in Skeletal Biology (2.0 cr)
- DENT 7061 - Special Oral Pathology I (1.0 cr)
- DENT 7062 - Special Oral Pathology II (1.0 cr)
- DENT 7052 - Oral and Maxillofacial Radiologic Interpretation (2.0 cr)
- DENT 7010 - Management Philosophy for Dental Practices (1.0 cr)
- DENT 8101 - Dental Implantology: A Multidisciplinary Approach (2.0 cr)

**General Practice Residency (12 to 22 Credits)**
Plan A students pursuing the General Practice Residency topic area must select at least 12 credits from the following, in consultation with the advisor. Plan B students must select at least 22 credits from the following and in consultation with the advisor:

- DENT 7051 - Advanced Study in the Theory and Principles of Oral Medicine (2.0 cr)
- DENT 7102 - Conscious Sedation (2.0 cr)
- DENT 7123 - Temporomandibular Disorders and Orofacial Pain (1.0 cr)
- DENT 7052 - Oral and Maxillofacial Radiologic Interpretation (2.0 cr)
- DENT 7061 - Special Oral Pathology I (1.0 cr)
- DENT 7062 - Special Oral Pathology II (1.0 cr)
DENT 7101 - Management Philosophy for Dental Practices (1.0 cr)
DENT 8121 - Current Literature in TMD and Orofacial Pain (1.0 cr)

-OR-

TMD, Orofacial Pain & Dental Sleep Medicine (12 to 22 Credits)
Plan A students pursuing the TMD, Orofacial Pain & Dental Sleep Medicine topic area must select at least 12 credits, and Plan B students must take at least 22 credits from the following list, in consultation with the advisor:
OSUR 5277 - Physical Diagnosis for Oral Surgery Residents (2.0 cr)
ANAT 7999 - Head and Neck Anatomy (3.0 cr)
DENT 8121 - Current Literature in TMD and Orofacial Pain (1.0 cr)
DENT 7121 - Psychological Issues in Medical and Dental Patient Management (1.0 cr)
DENT 7052 - Oral and Maxillofacial Radiologic Interpretation (2.0 cr)
DENT 8120 - Advanced Principles and Techniques of Orofacial Pain Disorders (2.0 cr)
DENT 7051 - Advanced Study in the Theory and Principles of Oral Medicine (2.0 cr)
DENT 8123 - Advanced Topics in Orofacial Pain (2.0 cr)

-OR-

Endodontics (12 to 22 Credits)
Plan A students pursuing the Endodontics topic area must select at least 12 credits from the following, in consultation with the advisor.
Plan B students must select at least 22 credits from the following and in consultation with the advisor:
DENT 7102 - Conscious Sedation (2.0 cr)
DENT 7051 - Advanced Study in the Theory and Principles of Oral Medicine (2.0 cr)
DENT 7052 - Oral and Maxillofacial Radiologic Interpretation (2.0 cr)
DENT 7021 - Contemporary Diagnosis and Management of Orofacial Pain (1.0 cr)
DENT 7062 - Special Oral Pathology II (1.0 cr)
DENT 7061 - Special Oral Pathology I (1.0 cr)
ANAT 7999 - Head and Neck Anatomy (3.0 cr)
DENT 7101 - Management Philosophy for Dental Practices (1.0 cr)

-OR-

Prosthodontics (12 to 22 Credits)
Plan A students pursuing the Prosthodontics topic area must select at least 12 credits, and Plan B students must take at least 22 credits from the following list, in consultation with the advisor:
ANAT 7999 - Head and Neck Anatomy (3.0 cr)
DENT 7220 - Prosthetically-Driven Implant Surgery and Treatment Planning (1.0 cr)
DENT 7102 - Conscious Sedation (2.0 cr)
DENT 7112 - Treatment Planning Seminar (2.0 cr)
DENT 7111 - Current Literature Review in Dentistry (2.0 cr)
DENT 7052 - Oral and Maxillofacial Radiologic Interpretation (2.0 cr)
DENT 8101 - Dental Implantology: A Multidisciplinary Approach (2.0 cr)
DENT 7411 - Dental Biomaterials in Prosthodontics (1.0 cr)
DENT 7123 - Temporomandibular Disorders and Orofacial Pain (1.0 cr)
DENT 7061 - Special Oral Pathology I (1.0 cr)
DENT 7062 - Special Oral Pathology II (1.0 cr)
PERO 7321 - Periodontics/Orthodontics Seminar (1.0 cr)
PERO 7322 - Multidisciplinary Treatment Seminar in Dentistry Related to Periodontics (1.0 cr)
DENT 7051 - Advanced Study in the Theory and Principles of Oral Medicine (2.0 cr)
DENT 7101 - Management Philosophy for Dental Practices (1.0 cr)

-OR-

Orthodontics (12 to 22 Credits)
Plan A students pursuing the Orthodontics topic area must select at least 12 credits from the following, in consultation with the advisor.
Plan B students must select at least 22 credits from the following and in consultation with the advisor:
ANAT 7999 - Head and Neck Anatomy (3.0 cr)
DENT 8091 - Interdisciplinary Care of the Cleft Palate Patient (1.0 cr)
DENT 7061 - Special Oral Pathology I (1.0 cr)
PERO 7321 - Periodontics/Orthodontics Seminar (1.0 cr)
DENT 7062 - Special Oral Pathology II (1.0 cr)
DENT 8081 - Clinical Topics in TMD (2.0 cr)
OBIO 8012 - Basic Concepts in Skeletal Biology (2.0 cr)
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 2018
- 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.

Other requirements to be completed before admission:
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.

Applicants must submit their test score(s) from the following:
- GRE
  - General Test - Verbal Reasoning: 153
  - General Test - Quantitative Reasoning: 148
  - General Test - Analytical Writing: 4

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
- IELTS
  - Total Score: 6.5

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

Key to test abbreviations (GRE, TOEFL, IELTS).
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 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 MS 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 to complete. Courses in the major may be taken from other disciplines with the approval of the advisor and the director of graduate studies. Students must also complete a minor in an associated non-clinical discipline (minimum 6 credits).

Program Requirements

Required Coursework (4 Credits)
Select at least 4 credits from the following list, in consultation with the advisor:

- OBIO 8012 - Basic Concepts in Skeletal Biology (2.0 cr)
- OBIO 8018 - Topics in Oral Pathobiology (2.0 cr)
- OBIO 8021 - Oral Microbiology (2.0 cr)
- OBIO 8022 - Oral Neuroscience (2.0 cr)
- OBIO 8023 - Physical Biology of the Oral Cavity (2.0 cr)
- OBIO 8024 - Genetics and Human Disease (1.0 cr)
- OBIO 8025 - Topics in Cariology (2.0 cr)
- OBIO 8026 - Salivary Glands and Secretions (2.0 cr)
- OBIO 8027 - Biomaterials in Regenerative Dentistry (2.0 cr)
- OBIO 8028 - Molecular Basis of Cellular and Microbial Adhesion (2.0 cr)
- OBIO 8371 - Mucosal Immunobiology (3.0 cr)

Oral Biology Seminar (4 Credits)
Registration and participation in the oral biology student seminar series each semester is required. Take OBIO 8030 four times for a total of 4 credits.

- OBIO 8030 - Oral Biology Seminar (1.0 cr)

Electives (6 Credits)
Select at least 6 credits, in consultation with director of graduate studies.

Required Minor (6 Credits)
Students must complete a graduate minor in a complementary, non-clinical discipline. At least 6 minor field credits are required. Confer with the director of graduate studies for the minor field to determine additional requirements.

Thesis Credits (10 Credits)
Take at least 10 master's thesis credits.

- OBIO 8777 - Thesis Credits: Master's (1.0 - 18.0 cr)
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 2018
- 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 their 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)

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

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

Required Coursework (4-8 Credits)
Master's students must select at least 4 credits, and doctoral students must select at least 8 credits, from the following list in consultation with the oral biology director of graduate studies.

- OBIO 8012 - Basic Concepts in Skeletal Biology (2.0 cr)
- OBIO 8018 - Topics in Oral Pathobiology (2.0 cr)
- OBIO 8021 - Oral Microbiology (2.0 cr)
- OBIO 8022 - Oral Neuroscience (2.0 cr)
- OBIO 8023 - Physical Biology of the Oral Cavity (2.0 cr)
- OBIO 8024 - Genetics and Human Disease (1.0 cr)
- OBIO 8025 - Topics in Cariology (2.0 cr)
- OBIO 8026 - Salivary Glands and Secretions (2.0 cr)
- OBIO 8027 - Biomaterials in Regenerative Dentistry (2.0 cr)
- OBIO 8028 - Molecular Basis of Cellular and Microbial Adhesion (2.0 cr)
- OBIO 8371 - Mucosal Immunobiology (3.0 cr)

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.

Masters
Electives (2 credits)
Select at least 2 credits, in consultation with the oral biology director of graduate studies, to meet the 6-credit minimum for the master’s minor.

Doctoral
Electives (4 credits)
Select at least 4 credits, in consultation with the oral biology director of graduate studies, to meet the 12-credit minimum for the doctoral minor.
Twin Cities Campus
Oral Biology Ph.D.
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: Doctorate
- Requirements for this program are current for Fall 2018
- Length of program in credits: 55 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: 153
  - General Test - Quantitative Reasoning: 148
  - General Test - Analytical Writing: 4

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
- IELTS
  - Total Score: 6.5

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

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Information current as of August 31, 2018
Key to test abbreviations (GRE, TOEFL, IELTS).

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

Program Requirements
19 to 25 credits are required in the major.
12 credits are required outside the major.
24 thesis credits are required.

This program may 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.

Completion of a minor in a complementary, non-clinical discipline is required.

Program Requirements
Courses may be selected from departments and programs outside oral biology with approval of the advisor and director of graduate studies.

Oral Biology Topics Courses (8 Credits)
Select at least 8 credits from the following list:
- OBIO 8012: Basic Concepts in Skeletal Biology (2.0 cr)
- OBIO 8018: Topics in Oral Pathobiology (2.0 cr)
- OBIO 8021: Oral Microbiology (2.0 cr)
- OBIO 8022: Oral Neuroscience (2.0 cr)
- OBIO 8023: Physical Biology of the Oral Cavity (2.0 cr)
- OBIO 8024: Genetics and Human Disease (1.0 cr)
- OBIO 8025: Topics in Cariology (2.0 cr)
- OBIO 8026: Salivary Glands and Secretions (2.0 cr)
- OBIO 8027: Biomaterials in Regenerative Dentistry (2.0 cr)
- OBIO 8028: Molecular Basis of Cellular and Microbial Adhesion (2.0 cr)
- OBIO 8371: Mucosal Immunobiology (3.0 cr)

Oral Biology Seminar (8 Credits)
Take the following seminar eight times for a total of 8 credits:
- OBIO 8030: Oral Biology Seminar (1.0 cr)

Statistics Course (3 Credits)
Take at least one course from the following list:
- STAT 5021: Statistical Analysis (4.0 cr)
- PUBH 6450: Biostatistics I (4.0 cr)
- PUBH 7445: Statistics for Human Genetics and Molecular Biology (3.0 cr)

Required Minor (12 Credits)
Students must complete a non-clinical minor in the basic sciences or public health. At least 12 minor field credits are required. Confer with the director of graduate studies for the minor field to determine additional requirements.

Thesis Credits (24 Credits)
Take at least 24 doctoral thesis credits.
- OBIO 8888: Thesis Credit: Doctoral (1.0 - 24.0 cr)

Joint- or Dual-degree Coursework: Doctor of Dental Surgery DDS/Oral Biology PhD