



SCHOOL OF DENTISTRY

BSDH/MDT Dual Degree Course Descriptions

BIOC 2011 - Biochemistry

Survey of organic chemistry and biochemistry outlining structure and metabolism of biomolecules, metabolic regulation, principles of molecular biology.

DT 2121 - Process of Care in Allied Dental Health: Clinical Application I

Dental hygiene/Dental Therapy care process, assessment principles related to medical and oral health status, dental hygiene clinical procedures, and development of instrumentation skills.

DT 2132 - Head and Neck Anatomy

The anatomical structures of head and neck as they relate to the practice of dental hygiene and dental therapy.

DT 2212 - Communications for Oral Health Providers

This course introduces the study of effective communication strategies within the health care team and during patient-provider relationships. There is an emphasis on public speaking basic principles, effective strategies, and ethical approaches. The application of health literacy concepts and behavior change theory as components of evidence-based decision making in a variety of practice settings will be taught.

DT 2221W - Periodontology

This course introduces periodontal diseases; etiology, assessment, and treatment options. It includes clinical experience in debridement, root planning with ultrasonic and hand instruments.

DT 2222 - Process of Care in Allied Dental Health: Clinical Application II

In this class, you will begin to apply your knowledge of the various preventive products, patient education, assessment data, and medical histories to clinical practice. You will develop application skills in fluoride treatments and pit and fissure sealants as well as the evaluation of products used in the treatment of dental caries and periodontal diseases. This class will also give you an introduction to the School of Dentistry's clinical systems, various medical and emergency conditions affecting patient care, and preventive strategies for oral diseases.

DT 2225 - Microbiology, Immunology and Oral Health

Encounters with microorganisms are part of everyday life for humans, both as pathogenic and non-pathogenic entities. During this microbiology course students will learn characteristics of microbial life for bacteria, viruses, parasites, and fungi. An emphasis will be placed on microorganisms that are commonly found in the oral cavity. An introduction to the human immune system and its function in regulating infections will be presented. Students will gain an

understanding of both commensal microbiota and pathogenic microorganisms, and their impact on human health. Additionally, students will begin to convey scientific data and research results to non-scientists as a basis for discussing disease prevention, infection management, and treatment plans in a clinical setting.

DT 2231 - Cariology and Applied Nutrition in Allied Dental Health

The study of dental caries etiology, pathology and prevention, and the applied principles of diet and nutrition to dental hygiene/dental therapy patient care with skills in dental dietary counseling. Course content also includes a comprehensive review of CAMBRA. Cariology and Applied Nutrition in Allied Dental Health is designed to provide the beginner level dental hygiene student with a knowledge base in cariology and nutrition as it applies to the oral cavity. The implementation of this knowledge is Dental Dietary Counseling with a dental hygiene patient. DH 2231/DT 2231 relies on the communication skills developed in DH 2212/DT 2212.

DT 3121 - Local Anesthesia and Pain Management

Concepts in the administration of local anesthesia, nitrous oxide-oxygen sedation, and other methods of pain management. Anatomy, physiology, pharmacology, patient assessment, indications and contraindications, selection of agents, injection techniques, complications, emergency management, and legal/ethical considerations. Lecture, lab, clinic. Clinical sessions include actual experience in administering local anesthesia and other methods of pain management. The administration of local anesthesia will be taught to clinical competency. The didactic component of nitrous oxide-oxygen sedation will be completed in this course with clinical experiences occurring in the Faculty Practice Clinic and in subsequent clinical rotations leading to clinical competency in this method of pain management.

DT 3123 - Process of Care in Allied Dental Health: Clinical Application III

Dental hygiene/Dental Therapy planning for caries prevention and control, non-surgical periodontal therapy and tobacco cessation. Case presentation, ergonomic, and clinical experience in dental hygiene/dental therapy patient care.

DT 3125 - General and Oral Pathology

This course covers topics in pathology related to dentistry and the oral cavity. Oral benign/malignant tumors, infectious, inflammatory, and immunologically mediated lesions/diseases are covered.

DT 3133 - Pharmacology I

Principles of pharmacology, physical/chemical properties of drugs, modes of administration, therapeutic/adverse effects, drug actions/interactions.

DT 3151 - Oral and Maxillofacial Radiology

General principles of radiology, radiation physics, dosimetry, biology, radiation protection, regulations, recent concepts of imaging, and radiographic anatomy.

DT 3224W - Process of Care in Allied Dental Health: Clinical Application IV (6 Cr.)

Knowledge, skills, and attitudes required for providing dental hygiene care for the medically compromised patient, gerodontic patient, and patient with a disability.

DT 3228 - Ethics and Jurisprudence in Allied Dental Health

Studying dental hygiene/dental ethics is intended to provide the tools and skills required for ethical analysis and reflection – critical thinking. The healthcare professional-patient relationship provides a complex array of problems and dental hygiene is, as are practicing dental hygienists, faced with making important decisions about right and wrong and balancing harm and benefits in the clinical setting. Therefore, the primary goal of this course is to help the student dental hygienist understand how to make critical decisions and how to take appropriate actions when dealing with patients, peers, the institution, and society.

DT 3234 - Oral and Maxillofacial Radiology: Theory, Principles and Radiographic Analysis

Intraoral and extraoral radiographic anatomy. Principles of radiographic interpretation, evaluation of radiographs to identify variation of normal, and dental and maxillofacial diseases.

DT 3238 - Dental Public Health and Academic Service Learning I

This course provides an overview of the discipline of public health including epidemiological methods of investigation with an emphasis on patterns of oral diseases. Course content emphasizes designing, implementing, and evaluating oral health promotion and health education programs. Students prepare for community service learning programs.

DT 4105 - Dental Professional Development

This course will introduce dental hygiene and dental therapy students to the various systems impacting a successful dental practice and equip them with the business skills necessary for successful practice management with an emphasis on the roles of a collaborative dental team. Students will also prepare for their professional career by learning employment search strategies and skills

DT 4125W - Process of Care in Allied Dental Health: Clinical Application V

Social justice of health/oral health care in the U.S. How race/class/gender impact resources. Dental hygiene/dental therapy treatment in a diverse patient population.

DT 4135W - Research Methods in Allied Dental Health

Develop skills in the scientific method and critiquing scientific literature. Emphasis is placed on evidence-based decision-making, types of research and research design, problem identification and hypothesis development, analyzing individual components of journal articles in relation to research principles, and writing the literature review. Fulfills writing intensive requirement.

DH 4136 - Periodontology III

This course will provide information regarding the surgical phase of periodontal therapy, including select topics in implantology. The course also emphasizes the evaluation of periodontal treatment, periodontal maintenance care, and the relationship between

periodontics and other disciplines in dentistry. Use of pharmacological agents, periodontal medicine, clinical research and integrating periodontics into the general practice also are covered.

DT 4139 - Dental Public Health and Academic Service Learning II

Academic service learning in various community healthcare settings. The student will apply information from Dental Public Health & Service Learning I and II to assess, plan, implement, and evaluate a dental public health program designed to meet the oral health needs of a priority population.

DT 4226 - Process of Care in Allied Dental Health: Clinical Application VI

Advanced dental hygiene/dental therapy care process in Comprehensive Care Clinics and Service Learning Outreach sites. Development and presentation of the Senior Capstone experiences. The Capstone is a comprehensive oral case presentation and written case report based on a unique patient experience and treatment.

DT 4234 - Leadership and Professional Development

Explore the dental hygienist/dental therapist as leader and manager in healthcare delivery organizations or public health organizations and programs. A study of current issues that influence the practice of dental hygiene/therapy including healthcare delivery systems, workforce needs, practice models, regulation, professional associations, state practice acts, and the legislation process. Emphasis on leadership and professional development.

DT 4415 - Essentials of Clinical Care I

This course will introduce DT4 dental therapy students to the dental therapy clinically related scope of patient care under the direction and supervision of experienced clinical faculty. This course will monitor and grade progression in clinics each semester. Evaluation will be based on feedback from dental therapy faculty, group leaders and the Competency Review Board.

DT 4465 - Essentials of Clinical Care II

This course will begin to prepare DT4 dental therapy students in the dental therapy clinically related scope of patient care under the direction and supervision of experienced clinical faculty. This course will monitor and grade progression in clinics each semester. Evaluation will be based on feedback from dental therapy faculty, group leaders, and the Competency Review Board.

DT 4965 - Essentials of Clinical Care III

This course will continue to prepare DT4 dental therapy students in the dental therapy clinically related scope of patient care under the direction and supervision of experienced clinical faculty. This course will monitor and grade progression in clinics each semester. Evaluation will be based on feedback from dental therapy faculty, group leaders, and the Competency Review Board.

DT 5001 - Introduction to Capstone

Introduction to capstone research and training for the DT4 dental therapy student. Upon completion of this course students will be able to demonstrate familiarity with the tools of research and scholarship in the field of oral health, identify proper research methods and types of scientific research studies, plan a systematic investigation related to an oral health issue, and review guidelines for conducting research.

DT 5005 - DT Capstone Project I

The main purpose of the Capstone courses is to provide a culminating, integrative scholarly experience for students enrolled in the Dual Degree BSDH/MDT program. As such, in addition to utilizing knowledge gained throughout the 8-semester program, the course draws specifically on students' prior training in Research and Dental Public Health. The course allows students to pursue an independent, project-based topic from one of their interests in the field of oral health. The course is intended to be an intensive, active-learning project, requiring significant effort in the planning and implementation, as well as preparation of a substantial final written product and oral presentation. A Capstone is a systematic investigation of a subject including library and/or original research. Projects are intended to assimilate knowledge gained in courses in order to create a comprehensive, original project. While Capstone projects provide invaluable preparation for professional careers, students report that the primary rewards are intrinsic: the opportunity to follow one's curiosity, to take ownership of a project and see it through to a successful conclusion, the intellectual and creative pleasure of independent learning, and the mentorship by one's advisor. Because the written portion of the project is generally quite long, it is essential to devote substantial time to the research and writing of the paper. However, learning to be concise is a valuable skill to master.

DT 5105 - DT Capstone Project II

The main purpose of the Capstone courses is to provide a culminating, integrative scholarly experience for students enrolled in the Dual Degree BSDH/MDT program. As such, in addition to utilizing knowledge gained throughout the 8-semester program, the course draws specifically on students' prior training in Research and Dental Public Health. The course allows students to pursue an independent, project-based topic from one of their in the field of oral health. The course is intended to be an intensive, active-learning project, requiring significant effort in the planning and implementation, as well as preparation of a substantial final written product and oral presentation. A Capstone is a systematic investigation of a subject including library and/or original research. Projects are intended to assimilate knowledge gained in courses in order to create a comprehensive, original project. While Capstone projects provide invaluable preparation for professional careers, students report that the primary rewards are intrinsic: the opportunity to follow one's curiosity, to take ownership of a project and see it through to a successful conclusion, the intellectual and creative pleasure of independent learning, and the mentorship by one's advisor. Because the written portion of the project is generally quite long, it is essential to devote substantial time to the research and writing of the paper. However, learning to be concise is a valuable skill to master.

DT 5135 - Preclinical Pediatric Dentistry

Childhood development and care of children. Restorative dentistry for children/adolescents. Behavior management techniques. Issues that arise in dental health care settings. Lab.

DT 5141 - Clinical Pediatric Dentistry

Early childhood development, dental care for children. prereq: Must be in the dental therapy program, passed basic foundation competencies.

DT 5162 - Exodontia and Minor Oral Surgery

Develop knowledge/skill for exodontia/minor oral surgery.

DT 5320 - Comprehensive Care Clinic

Assessment, treatment, and management of patients. Concepts/principles of evidence-based dentistry as applied to clinical practice.

DT 5321 - Treatment Planning for the ADT

Formal lecture presentations regarding fundamentals of assessment/treatment planning of dental cases. Prepare students to understand University of Minnesota School of Dentistry protocol in development of optimal, alternative, emergency treatment plans.

DT 5360 - Outreach Experiences I

Students work in clinics outside of U of M with underserved patients.

DT 5361 - Outreach Experiences II

Experiences that reinforce principles of delivering dental health care/services to patients, including underserved patient populations, in contemporary off-site clinical settings.

DT 5410 - Biomaterials

Application of scientific principles to selection/utilization of dental materials.

DT 5430 - Oral Anatomy Lecture

Morphological characteristics of human dentition, associated contiguous structures. Foundational knowledge applied to situations encountered in general dental clinical practice.

DT 5431 - Oral Anatomy Lab

Manual dexterity skills, anatomy of human dentition.

DT 5432 - Operative I Lecture

How to treat dental caries. Therapeutic treatment of underlying pathology. Surgical treatment of early caries lesions.

DT 5433 - Operative I Lab

How to treat dental caries. Therapeutic treatment of underlying pathology. Surgical treatment of early caries lesions. Hands-on projects working with models simulating teeth and surrounding structures.

DT 5434 - Operative II Lecture

How to surgically manage more advanced caries lesions. Transition from pre-clinic lab to clinic setting.

DT 5435 - Operative II Lab

More advanced caries lesions: diagnosis, structural preparation, decay removal and restoration.

DT 5443 - Operative Clinic III

How to place restorations. Students place single-tooth restorations on patients.

DT 5465 - Essentials of Clinical Care IV

This course will continue to prepare MDT dental therapy students in the dental therapy clinically related scope of patient care under the direction and supervision of experienced clinical faculty. This course will monitor and grade progression in clinics each semester. Evaluation will be based on feedback from dental therapy faculty, group leaders, and the Competency Review Board.

DT 5471 - Pros. Topics

Lectures, lab projects of selected prosthodontic techniques to enable the dental therapist to provide/cement quality pre-fabricated metal or resin provisional crowns and other prosthodontic procedures in the scope of DT practice.

DT 5565 - Essentials of Clinical Care V

This course will continue to prepare MDT students in the dental therapy clinically related scope of patient care under the direction and supervision of experienced clinical faculty. This course will monitor and grade progression in clinics each semester. Evaluation will be based on feedback from dental therapy faculty, group leaders, and the Competency Review Board.