

Course Descriptions

DENTAL HYGIENE COURSES

209. Dental Radiography

This course provides the foundation knowledge and skills needed for the appropriate use of diagnostic imaging in dental practice including radiation physics, principles of image formation, radiographic equipment and technique, radiographic quality evaluation, radiation biology and protection, and basic principles of radiographic interpretation.

210. Clinical Dental Hygiene

This course serves as a foundation for knowledge, concepts, theories, and clinical skills required for competent dental hygiene practice. Students are introduced to basic clinical skills in a simulation laboratory and practice clinical techniques on partners in a pre-clinical setting. Students are taught to perform oral health assessments, identify conditions of health and pathology, and evaluate patients' self-care practices. Emphasis is placed on the development of ethical and professional behaviors, critical thinking skills, problem-solving strategies, and interpersonal communication.

211. Clinical Dental Hygiene

This course is a continuation of DH210 Clinical Dental Hygiene and designed to introduce the beginning student dental hygienist to clinical application through direct patient-care experiences. The seminar will provide didactic material that will supplement and enhance patient care in the clinic. This is a combined seminar and clinical practice course, and a prerequisite for DH312.

220. Survey of Dental Hygiene

This course provides an introduction to the profession of dental hygiene and the professionalism of the dental hygienist. In addition, this course presents the University of Michigan Honor System and the University of Michigan School of Dentistry's *Code of Academic Integrity and Professional Conduct*. Students will acquire a historical perspective on the evolution of this profession. In addition, students will acquire foundation knowledge related to ethics, professionalism, risk assessment, dental hygiene process of care, and evidence-based decision making.

321. Dental Specialties

This course will acquaint dental hygiene students with the scope and function of the various dental specialties as recognized by the American Dental Association (ADA). The lectures will be presented by dental faculty from the University Of Michigan School of Dentistry (SOD) and are designed to increase the ability of dental hygiene students to communicate intelligently with patients and other members of the dental health team regarding current trends and advances in dentistry.

224. Periodontics I

Periodontal diseases are studied by developing an understanding of anatomy, histology, physiology and function of the dentogingival complex and periodontium. The etiology and pathology of inflammatory periodontal diseases are taught. Evaluation of disease status, periodontal diagnoses, management of patients and prevention of disease is discussed relative to the dental hygienists responsibilities in private practice.

234. Special Patients

This course is designed for students in dental hygiene. This special patient's course is designed to introduce the dental hygiene student to patients requiring special consideration in planning and implementing dental hygiene care. The concept of special patient management is further addressed in Dental Hygiene Seminar, Geriatric Dentistry, Dental Specialties, and Internal Medicine courses.

242. Oral Anatomy

This lecture and laboratory course is designed to teach dental hygiene students about the morphology (size and shape), structure, and function of the teeth and surrounding tissue. The knowledge gained in the course provides a foundation for a wide variety of procedures and services involved in dental hygiene care.

243. Head and Neck Anatomy

This course (lecture and lab) is designed for students in dental hygiene. The experience acquired from this course plus the learning gained from the dental hygiene curriculum in total is essential for the dental hygienists' performance in a clinical, teaching or research role. The knowledge of oral, head and neck anatomy and functional occlusion, covered in this course, is requisite to understanding the various aspects of dental hygiene. These aspects of dental hygiene include clinical dental hygiene, oral pathology, and radiography.

252. Behavioral Science I

The overall objective is to make the students aware of the importance of constructive communication between a dental care provider and a patient, provide them with the basic concepts needed to understand and create positive patient-provider interactions, and engage them in hands-on skills training with standardized patient instructors. The foundation knowledge needed to understand human behavior and communication in the dental office will be provided. In addition, the students will engage in skills training concerning taking a medical and dental history and providing tobacco cessation counseling. Lectures and case presentations focus on demonstrating how the knowledge base of the behavioral sciences can be applied to oral health and oral health care. This course is supplemented by reading assignments.

272. Dental Practice Emergencies

This course prepares the Dental Hygienist to prevent and manage life threatening medical emergencies in the dental practice. Specifically goals of the Course are: (1) To reduce the likelihood of life-threatening emergencies occurring in the Dental Clinic by performing a thorough pretreatment Medical and Physical evaluation of all patients. (2) Recognition of early warning signs and symptoms of an impending medical emergency and implementation of appropriate measures for prevention of the development of a full-fledged life-threatening medical emergency. (3) Proper management of medical emergencies, should they occur.

291. Oral Histology and Embryology

Oral Histology and Embryology for Dental Hygienists #291 is a lecture-oriented course consisting of 24, one-hour lectures during the fall semester. The initial lectures contain information regarding general cell biology and histology, followed by lectures on the embryology of the orofacial complex. The remaining lectures discuss the histology of structures within the orofacial region with strong emphasis on structures related to the periodontium. Lecture material is updated with pertinent information from recent journal articles that is integrated into the course material. Lectures are reinforced with applicable clinical examples illustrating basic science concepts.

310. Interpretive Radiology I

This course expands upon knowledge gained in Basic Radiology 506/ DH209. The main goal of this course is to guide you to develop a systematic approach to interpret radiographs, identify lesions and abnormalities, describe their radiographic appearance, classify them based on their pathophysiology, and provide a reasonable differential diagnosis based on the clinical and radiographic findings. In addition, this course provides information about the basic principles, applications, indications, contraindication, and interpretation of advanced imaging modalities such as CT, CBCT, MRI, US, and Nuclear Medicine.

312. Clinical Dental Hygiene

Clinical Dental Hygiene 312 builds upon foundational skills, techniques, and information learned in DH 210 and 211. The seminar component of this course will provide didactic material which will aid the student in developing a greater proficiency at providing complete and individualized patient services and care.

313. Clinical Dental Hygiene

Clinical Dental Hygiene 313 is the fourth course in the series of six clinical courses. Students are expected to utilize information and techniques acquired in previous clinical courses and to correlate this material with clinical experiences. The student is expected to develop proficiency in providing complete and individualized patient care.

324. Periodontics II

This course provides the most current understandings as to the natural history, pathogenesis and microbiology of periodontics from the standpoint of microbial/host defense interactions. Epidemiological and clinical parameters used in

the diagnosis of infectious periodontal diseases, treatment planning and treatment outcomes will be presented. The consequences that systemic conditions have on moderating the pathogenesis of inflammatory periodontal conditions will also be presented. There is also a hands-on practice on applying locally delivery antibiotics after two lectures on the use of localized and systemic antimicrobial agents. A group practice on learning Periodontal Disease Classification will be conducted.

335. Biomaterials

This course is designed to familiarize dental hygiene students with the various materials used in dentistry. There are two parts to this course: lecture and lab. The lecture consists of seminars on the science and properties of materials, the rationale for selecting one material over another, and the current research concepts in Biomaterials. The laboratory section is concerned with the manipulation of these materials in a laboratory and preclinical setting thereby giving the student an opportunity to apply what they have learned in lecture.

338. Health Education Methods

This course will provide students with an introduction to public health and dental public health concepts, including exposure to the foundational principles of health literacy and cultural sensitivity. It is the first in the series of community-based curriculum in the program. This course will also cover the principles and theories of education that will enhance the ability of the dental hygienist in his/her role as a health educator. Various health promotion theories will be discussed with emphasis on motivational interviewing communication style. Students will design, develop and deliver a one session service-learning plan during the course.

344. Community Dentistry

This course is an introduction to principles of dental public health, epidemiology, and the roles of dental hygienists in the promotion of health within their community. Students will understand the basic skills involved in assessing, developing, planning, implementing, and evaluating public health programs. Students will create and participate in a Community Oral Health Education Program. The student will be exposed to the skills necessary to assume a leadership role in their community and serve the public.

345. Research Methods

Research Methods is an introductory course designed to prepare students in developing the basic analytical competency required to understand scientific literature for evidence-based decision making and life-long learning. Research design, data collection, analysis, validity, descriptive and inferential statistics, and ethics in research are covered. Students will complete PEERRS training in preparation for potential research projects in their Scientific Communications course.

362. Gerontological Dental Hygiene

A lecture-based introduction to oral health concerns of the geriatric patient. We provide a framework of knowledge about biological, psychological, sociological, behavioral, medical, and oral health issues of aging for the comprehensive management of the geriatric dental patient.

382. Nutrition

This course emphasizes the importance of good nutrition in dental hygiene. This course is designed for students in dental hygiene. This course provides a foundation in general nutrition and the role of nutrition in health and disease. The relationship of oral health with diet and nutrition and the importance of oral health to sound nutrition are studied. Students develop the skills needed to counsel a dental patient in dietary modification and apply these skills in a clinical setting.

393. General and Oral Pathology

This course describes the basic processes associated with the development and progress of diseases (general pathology), and the occurrence of these processes in various organs and tissues with special emphasis in oral and paraoral tissues (oral pathology). The clinical manifestations of oral pathologic processes are emphasized, along discussions of prevention, pathogenesis, and physiopathology. Diagnosis, prognosis and treatment alternatives are included. In addition, students will acquire foundation knowledge related to professionalism, risk assessment, dental hygiene process of care, and ethical and evidence-based decision making.

414. Advanced Clinical Practice

Dental Hygiene 414 Clinic is the fifth in a series of six clinical courses. This course will focus on strengthening dental hygiene comprehensive care skills through the application of evidence-based knowledge, ethical decision-making skills, caries risk assessment/management, and best practices. Advanced instrumentation skills are introduced for their application on more complicated periodontal NSPT cases. Students are expected to utilize information and techniques acquired in previous courses to correlate into clinical experiences, to build more advanced skills upon, and develop greater proficiency in providing individualized, holistic oral health care to patients.

415. Advanced Clinical Practice

Dental Hygiene 415 Clinic is the sixth and final course in the series of clinical courses. This course will focus on strengthening dental hygiene comprehensive care skills through the application of evidence-based knowledge, ethical decision-making skills, caries risk assessment/management, and best practices. Critical thinking skills are stressed in this course to prepare students for board examinations and licensed practice. Therefore, students are expected to utilize information and techniques acquired in previous courses to correlate into clinical experiences, to build more advanced skills upon, and to develop greater proficiency in providing individualized, holistic oral health care to patients.

416. Intraprofessional Education

Develop an understanding of intra-professional patient care through services provided by hygienists and dentists. The awareness building component of this course would extend to academic and clinical training of both professions. Students will work in small groups to develop intra-professional care plans for patients.

422. Pain Control

This course will present various modalities of pain control available to the dental hygienist. Included will be a discussion of psychological factors, local anesthesia, and nitrous oxide/oxygen sedation. Students will study both the theory and the practical application of pain control.

425. Periodontics III

This course is intended to provide the advanced rational and basis for periodontal therapeutics by integrating the basic concepts learned in Periodontics 224 and 324. Components to be presented include: Periodontal Health, Pathogenesis of Periodontal Disease, Periodontal Therapy and Periodontal Medicine. The function of the dental hygienist as an integral member in health care delivery will be presented.

429. Dental Pharmacology

This course provides a study of drugs, including their pharmacologic effects, adverse reactions, indications and contraindications as they relate to a patient's medical history and dental hygiene treatment. Students also develop knowledge of drugs by researching patient medications prior to beginning treatment in a clinical setting.

430. Practice Management

This course explores career planning, legal practice, and practice management. It helps transition the student from the academic practice setting to private practice. Career plan development and employment seeking skills are applied. Dental hygiene regulation and risk management strategies are explored as well as the roles and responsibilities of the dental hygienist as a member of an oral health care delivery team member. This course also focuses on professional development through investigation of leadership skills and management of workplace interpersonal relationships.

440. Internal Medicine

This course provides an introduction to the medical aspects involved in comprehensive care of the dental hygiene patient. Students will acquire important perspective regarding management of the compromised patient in all areas of care, including initial assessment, treatment planning, prevention, education and recall.

446. Scientific Communication

This course focuses on the components of scientific inquiry with application to oral health research. Students will learn how to access information electronically, evaluate the professional literature, and use this information for evidence-based decision making in dental hygiene practice. This course will also introduce the student to the

fundamentals of writing literature reviews. In addition, students will develop skills for scientific presentations.

Each week, information will be shared on accessing, evaluating, synthesizing scientific literature as well as strengthening basic research methodology skills. Students will be divided into small groups for which a research question, literature review and creation of poster presentation will be developed.

450. Dental Hygiene Practicum

Community involvement is an essential aspect of a professional career. Within a community setting, utilizing program planning and evaluation skills, students will implement a community-based program related to the objectives stated in *Healthy People 2020*. The student's activities will focus on the mission of the ADHA "to advance the art and science of dental hygiene by ensuring access to quality oral health care: increasing awareness of the cost-effective benefits of prevention: promoting the highest standards of dental hygiene education, licensure, practice and research: and promoting the interests of dental hygienists." Your completed Program Plan may be eligible for nomination for the American Association of Dental Public Health Dentistry or other Public Health Awards.

UNIVERSITY COURSES

250. Introduction to Statistical Reasoning

A one term course in applied statistical methodology from an analysis-of-data viewpoint: Frequency distributions; measures of location; mean, median, mode; measures of dispersion; variance; graphic presentation; elementary probability; populations and samples; sampling distributions; one sample univariate inference problems, and two sample problems; categorical data; regression and correlation; and analysis of variance. Use of computers in data analysis.

503. Skills for Patient & Family Centered Care

Foundation Topics in Social Work --- This course is taught by various members of the program faculty. Each version of the course has its own subtitle, some being offered one time only while others are repeated and may evolve into regular courses with their own course number and title. This is an appropriate selection for upper-level undergraduate students.