

DENTAL HYGIENE (DHY)

DHY 101. Anatomic Science For The Dental Hygienist I. 3 Credits.

This course will introduce the student to the anatomy and histology of each tooth and all structures of the oral cavity. Learning opportunities will be offered in the form of lecture and demonstration, with the aid of anatomical models and tooth models so that the student will be prepared to identify individual structures of the mouth in preparation of clinical experience. The student will draw extensively on prior learning from principles associated with anatomy and physiology. Additionally, microbiology will be taken either prior to or concurrently and provide a framework for analysis within the scope of oral hygiene, tissues, and structure. Histology and embryology of the oral tissues and face, anatomy of the head and neck, tooth morphology, development and function, and individual tooth identification and morphology of the primary and permanent dentition will be covered. This course gives the dental hygiene student basic anatomical knowledge to utilize in the clinical component of the program. Completion of this course with a final grade of C+ or better must be achieved in order to advance in the DHY program. Prerequisite: Admission to Dental Hygiene program, current CPR certification, BIO 203, BIO 204, BIO 205, ENG 101, MAT 143. Fall.

DHY 102. Dental Hygiene Process Of Care I. 5 Credits.

This course provides an introduction to the clinical experience. The student is expected to develop an understanding of sterilization, aseptic techniques, and infection control. Additionally, the student is introduced to instrumentation and the proper use of dental apparatus. Essential management techniques for dental and medical emergencies are also introduced. The student is provided with initial exposure to the culture and climate of dental hygiene practice and given beginning knowledge of how to function in such an environment. Dental Hygiene Process and Care I (Pre-Clinic) is an introduction to the practice of dental hygiene. Content is heavily focused on assessment of health, safety, risk management, and patient needs. Additionally, time will be spent on identifying instruments and their proper application. Theory and practice are combined in such a way that the student is afforded the opportunity to learn didactic material, practice and manipulate anatomical mannequins, and then synthesize this learning by using peer partners. Additionally, the student is provided with information and practice opportunities in dental and medical emergencies. In this fundamental skill course, students are introduced to the dental hygiene process through lecture and laboratory sessions. The theoretical concepts presented in lecture are expanded upon and applied in the laboratory sessions. Emphasis is placed on patient-client rationale and demonstrates proper techniques for each basic dental hygiene skill. Students must pass both laboratory and theoretical components of the course in order to continue in the program. To aid the student in the successful completion of the course, a progress report will be given to each student at the end of the eighth week of class. If any student obtains an unfavorable progress report, it becomes their responsibility to seek out their clinical instructors and/or course instructors for extra assistance. Completion of this course with a final grade of C+ or better must be achieved in order to advance in the DHY program. Prerequisites: Admission to Dental Hygiene program, current CPR certification, BIO 203, BIO 204, BIO 205, ENG 101, MAT 143. Fall.

DHY 103. Dental Radiology. 3 Credits.

This course is designed to introduce the student to the principles, theory and techniques of dental radiography. The student will become familiar with the history of dental radiographs, radiation physics, radiation safety and protection, use of equipment, mounting and radiographic interpretation of anatomic landmarks, including recognizing disease processes and deviations from normal anatomy. Using ADA guidelines, and ALARA principles, the student will learn to produce the highest quality diagnostic radiographs while exercising all the principles of radiation safety. Quality assurance and alternate and emerging radiographic imaging modalities are discussed. The laboratory component will focus on taking theory into practice for paralleling, bisecting, panoramic, occlusal and supplemental radiographic techniques. Upon completion of this course, the student will be able to expose and mount a diagnostic quality series of intraoral and extraoral radiographs to proficiency on the adult and child patient. Completion of this course with a final grade of C+ or better must be achieved in order to advance in the DHY/DAC programs. Prerequisites: Admission to the Dental Hygiene Program, current CPR Certification, BIO 203, BIO 204, BIO 205, ENG 101, MAT 143.

DHY 105. Anatomic Science For The Dental Hygienist II. 3 Credits.

This course will provide a theoretical and practical study of the head, neck, face, and oral cavity. Included are the bones and their landmarks, nerves and their landmarks, arterial blood supply, venous drainage, temporomandibular joint, lymphatics, fascia, spaces and the spread of dental infection. Muscles of the head, neck and masticatory system will also be studied. The lymphatic system, its function, and differences in the lymphatic system in health and disease will be covered. The temporomandibular joint, jaw movements with muscle relationships, and joint disorders will be studied. Fascia, spaces, the infectious process and the spread of dental infections will also be studied. This will enable the student to integrate the knowledge of the spread of dental infection into clinical dental practice. Review of landmarks for the administration of local anesthesia will be covered in depth. The student will gain knowledge into. The student will gain knowledge into the supporting structures of the head and neck and will be able to incorporate knowledge previously acquired in Anatomic Science I for the Dental Hygienist. Completion of this course with a final grade of C+ or better must be achieved in order to advance in the DHY program. Prerequisites: BIO 205, DHY 101, DHY 102, DHY 103. Spring.

DHY 106. Dental Materials. 3 Credits.

This course introduces the student to various types of dental materials used in dental practices. It allows the student to begin to understand the properties of the materials and actually manipulate them and provides the foundation for current practice in dental care. These materials include restoration materials (metals/composites), impression materials, sealants, mouth guards, prosthetics, tooth whitening, and temporary restorations. The student will learn to mix and prepare the various materials used. The role of the allied dental personnel in the manipulation and application of these materials is stressed. The classroom component will introduce the student to the properties of the materials and how to mix them proportionately. Emphasis is on the section, manipulation, and clinical management of dental materials particularly from the dental hygiene and dental practice perspective. Focus will be placed on the composition, chemistry, clinical properties, mixing techniques, advantages, disadvantages and setting times of more common materials utilized in the dental setting. The relationship between the oral environment and dental materials is also examined. Lab session are integrated with lectures to provide the student with opportunities to practice various techniques such as sealants, amalgam finishing and theoretical components of the course in order to continue in the program. Students must pass both the laboratory and theoretical components of the course in order to continue in the program. Completion of this course with a final grade of C+ or better must be achieved in order to advance in the DHY/DAC programs. Prerequisites: DHY 105, DHY 107, DHY 108 (corequisites). Spring.

DHY 107. Periodontology. 3 Credits.

This course introduces the student to the healthy periodontium and periodontal diseases. Included are the classifications of periodontal diseases, the oral microbiology and periodontal diseases, local contributory risk factors and systemic risk factors for periodontal diseases, host immune response, and the histopathogenesis of periodontal diseases. The student will become familiar with gingival, periodontal, and radiographic assessment of periodontal diseases. Using an evidence-based approach, along with case studies, treatment modalities will be discussed with emphasis placed on dental hygiene diagnosis, treatment planning, clinical management, and evaluation of periodontal patients. Information in this course will build upon oral anatomy, microbiology, and pre-clinical dental hygiene concepts presented in the fall semester. Completion of this course with a final grade of C+ or better must be achieved in order to advance in the DHY program. Prerequisites: DHY 105, DHY 106, DHY 108 (corequisites). Spring.

DHY 108. Dental Hygiene Process Of Care II. 5 Credits.

This course provides a progression for the student from the content learned in DHY 102 Dental Hygiene Process of Care I. The major transition lies in students beginning to treat patients rather than practicing on mannequins. Content is heavily focused on assessment of health, safety, risk management, medical emergencies, and patient needs, along with treatment planning and beginning implementation. Additional emphasis is focused on patients with special needs, nutrition, and patient education. Theory and practice are combined in such a way that the student is afforded the opportunity to learn didactic material and transfer this knowledge to work with patients in the clinic setting. Clinical experience is included on the child, adolescent and young adult patient. Completion of this course with a final grade of C+ or better must be achieved in order to advance in the DHY program. Prerequisites: DHY 101, DHY 102, DHY 103. Spring.

DHY 201. Oral Pathology. 2 Credits.

This course is an introduction to the study of oral and systemic diseases and disorders. Students will learn the principles of pathology in relation to disease of the head, teeth, soft tissues, and supporting structures of the oral cavity. It will familiarize students with the differential identification of normal oral tissues, oral lesion, and oral lesions due to systemic disease. The basis of instruction is derived from the paradigm of oral health and its juxtaposition to disease. Content will include discussion of inflammatory and immunologic process, development disorders, neoplasias, infections and diseased of the blood, bone, immune and endocrine systems. Other common pathology, such as oral cancer, leukoplakia, and nicotine stomatitis are covered in detail. As a supplement to clinical instruction, this course will provide a greater understanding of disease diagnosis, etiology, and pathogenesis. Diseases of the oral tissues and oral environs are presented with clinical features, some histopathology for explanation, course of disease(s), and treatment modalities. The purpose of this course is to instruct the student in recognition of anomalies and disease through the framework of a healthy patient. The students will be able to utilize the intraoral camera to reinforce their understanding of oral pathology. The parameters for normal dental health are taught in order to provide the basis of identification of illness and dysfunction. Completion of this course with a final grade of C+ or better must be achieved in order to advance in the DHY program. Prerequisites: DHY 202, DHY 203 (corequisites).

DHY 202. Pharmacology For The Dental Hygienist. 3 Credits.

This course will address the interaction of pharmacologic agents on the body systems. This course provides students with the understanding of the pharmacological management of patients, the mechanisms of action of drugs and interactions associated with dental treatment. Drugs commonly used in dentistry and other classes of drugs, their effects on the body in care planning and treatment planning will be addressed. Emphasis is placed on mechanisms of action, common usages, side effects, implications for dental treatment and case studies. Nitrous oxide sedation will also be introduced along with the pharmacological aspects of general anesthesia. Completion of this course with a final grade of C+ or better must be achieved in order to advance in the DHY program. Prerequisites: DHY 201, DHY 203 (corequisites).

DHY 203. Dental Hygiene Process Of Care III. 5 Credits.

This course provides a progression for the student from content learned in DHY 108. The major transition lies in students treating patients with simple care to care of the more complex periodontal patient. Content is heavily focused on advanced instrumentation, health promotion, care planning, and treatment planning using advanced pain control techniques and medicaments for the complex periodontally involved patient. Theory and practice are combined in such a way that the student is afforded the opportunity to learn didactic material, and transfer this knowledge to work with patients in the clinic setting. This theory related practice assists the student in further developing critical thinking skills in the delivery of more complex patient care. There is an emphasis on the treatment of periodontal patients, advance dental caries and dentinal sensitivity. Total care of the patient is also expected at this point in the curriculum, utilizing a case centered approach. Lecture topics will be directed at the management of patients at different stages in the life cycle and methods for individualizing care. Students will be challenged to read, think and problem solve regarding the dental hygiene diagnosis and treatment with degrees of periodontal disease as well as other oral diseases. Completion of this course with a final grade of C+ or better must be achieved in order to advance in the DHY program. Prerequisite: DHY 201, DHY 202 (corequisites).

DHY 205. Pain Control. 3 Credits.

This course provides the student with the fundamentals of pain management used in dentistry. A variety of topical and local anesthetic delivery devices will be discussed and utilized. Neuroanatomy, neurophysiology and pharmacology of local anesthetics, vasoconstrictors and topical anesthetics will be covered. A thorough patient assessment including stress reduction protocol is utilized. Techniques of local anesthesia administration, including infiltration, field, and nerve blocks will be demonstrated and return demonstrations will be performed until competency is achieved. This includes injections for maxillary, mandibular, palatal and supplemental pain control. The expanded role of the dental hygienist to include administration of oral anesthetics for pain control necessitates a thorough exposure to the theory and practice of administration within the scope of dental hygiene education. This course will prepare the student to take the "Permit L" which licenses the student to administer local anesthesia in Massachusetts. Critical thinking skills, whole body patient management, local and systemic complications including emergency response to patient medical emergencies will be an integral part of the course. This course will introduce the student to utilizing pain management options in dentistry and provide basic techniques in choosing and administering anesthetics agents for pain control. Completion of this course with a final grade of C+ or better must be achieved in order to advance in the DHY program. Prerequisites: DHY 105, DHY 106, DHY 107, DHY 108. Summer.

DHY 207. Dental Hygiene Process Of Care IV. 5 Credits.

This capstone course will be offered in-person and is a continuation of Dental Hygiene Process of Care III. The students' progress from a didactic learning environment to a seminar discussion focused on experience. A strong knowledge base has prepared the student for an experience that transitions the role of student into one of practitioner. The student has had a level of preparation to allow for independent thinking and judgment and this is encouraged. Dental hygiene students deliver comprehensive patient care in clinic by integrating preventive education and therapeutic oral health services while completing the competencies listed in the clinical portfolio. The lecture portion explores such topics as case studies on a variety of patients to assist in the licensing board exams. Innovative dental procedures/products and topics in dental specialty practices will also be covered. Students are expected to work independently on an 8–10-page research paper that serves as a culminating experience of the student's program and college competencies. Written communication skills, the use of advanced search techniques and oral presentation approaches will be assessed. Process of Care IV has been identified as the capstone course in the Dental Hygiene curriculum. It is intended to be a culminating experience for soon to graduate students from Mount Wachusett Community College, reinforcing the College's general education competency statements. Completion of this course with a final grade of C+ or better must be achieved to advance in the DHY program. Prerequisites: DHY 208, DHY 209 (corequisites). Spring.

DHY 208. Dental Ethics And Professional Issues. 2 Credits.

This course prepares the student for the philosophical consideration of dental hygiene practice. The student will be exposed to a variety of case studies which exemplify ethical, legal and professional concerns. The history of dental hygiene will also be discussed as well as current practice issues such as the public health dental hygienist, omnibus bills and dental practice ramifications. Additionally, the student is exposed to membership to their professional organization, the CEU process and the State Dental Practice Act. This course also explores the ethical and legal obligations of the Dental Hygiene professional. Content will include the major ethical theories applied in healthcare, the ethical code of the Dental Hygiene profession, and the resolution of ethical dilemma. The student will become familiar with the legal regulation of their profession including practice acts, licensure, risk management, and quality assurance. A component of the course experience is devoted to preparing for Dental Hygiene employment and includes current professional issues, preparation of a resume and cover letter, participating in employment interviews, creating a "personal portfolio" and selecting a career position. The business of Dental Hygiene will be discussed. Career satisfaction, mobility, legal issues and liability/disability insurance will also be examined. Students will work independently and collaboratively in small groups or teams to achieve shared learning outcome goals. The development of teamwork skills will assist the students in future employment. Students will also learn how to evaluate their group productivity. Students will be navigated toward the independent process of their licensing

examinations. Completion of this course with a final grade of C+ or better must be achieved in order to advance in the DHY program. Prerequisites: DHY 201, DHY 202, DHY 203, DHY 205. Spring.

DHY 209. Community Oral Health. 4 Credits.

This course provides the student with the components of dental public health, community dentistry and the theory needed to design and implement sound patient education. This course will be grounded in theories of behavioral sciences and human growth and development. Students are introduced to the concepts associated with preventive community health care along with the skills needed to function within the community as an advocate of oral health and preventive care. Topics include; patient motivation, goal setting, communication skills, developing instructional objectives and sensitivity towards multi-cultural concerns. Public health issues are discussed along with epidemiology, research in education and statistical analysis. This course will examine the role of the dental hygienist as a health educator and as an oral health promoter responsible for working with patients to help them improve or maintain their oral health and wellness and also to understand the relationship between both. Additionally, it is the goal of the course to assist the student in examining their own knowledge, attitudes, values, and behaviors regarding oral health and to assist them in becoming effective health promoters to the dental hygiene patient. Clinical experiences expand to include the community, such as schools, health care agencies, veterans shelters, outreach centers and clinics. A three-hour weekly practicum experience is included. Completion of this course with a final grade of C+ or better must be achieved in order to advance in the DHY program. Prerequisites: DHY 207, DHY 208 (corequisites). Spring.