

# Dental Hygiene (DHYG)

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## **DHYG 1005. Introduction to Dental Sciences. 1 Hour.**

Recommended (but not required) for all students interested in entering the dental profession. Introduces fundamental concepts related to dentistry and will provide a basic education of the roles of various dental personnel, dental specialties, dental terminology, concepts, instruments, materials, and procedures. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Explain the roles of various dental personnel. 2. Describe the importance of medical histories and vital signs as it applies to patient care. 3. Identify the elements to proper infection control, disinfection and sterilization. 4. Describe the radiology basics in the dental profession. 5. Identify, recognize and classify the basic anatomy of oral structures. 6. Repeat dental instrument identification and classification. 7. Discuss basic dental materials and their use in dentistry. FA, SP.

## **DHYG 2020. Radiology. 2 Hours.**

Covers the nature and production of X-rays and basic principles and procedures in oral radiology. Emphasizes radiation physics; radiation biology; radiation protection; basic intraoral radiographic techniques; various image processing formats; mounting procedures as well as supplemental intraoral, extraoral, and localization techniques; radiographic interpretation; and patient management topics. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Describe radiation history and fundamentals. 2. Gain basic radiology technical skills. 3. Recognize normal and abnormal anatomy, pathology for proper radiographic interpretation. 4. Gain skills in documentation and communications with patients and healthcare providers. Prerequisite: Admission to the Utah Tech University Dental Hygiene program. FA.

## **DHYG 2025. Radiology Clinic. 1 Hour.**

Clinical portion of DYHG 2020. Students will be required to study and practice the production of digital radiographic images as well as basic principles and procedures in oral radiology. Emphasis is on radiation protection, basic intraoral radiographic techniques, digital manipulation and display procedures. Focus is placed on supplemental intraoral techniques, extraoral techniques, localization techniques, radiographic interpretation, intraoral camera imaging and patient management topics. Students will participate in taking intraoral and extraoral radiographs on mannequins and patients. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Engage in radiologic fundamentals through proper use and maintenance of equipment. 2. Gain basic radiology technical skills. 3. Recognize normal and abnormal anatomy, pathology for proper radiographic interpretation. 4. Gain skills in documentation and communications with patients, caregivers and healthcare providers. Prerequisite: Admission to the Utah Tech University Dental Hygiene program. Corequisite: DHYG 2020. FA.

## **DHYG 2040. Tooth Morphology. 1 Hour.**

The student will be able to identify the structures that make up the roof, floor and lateral borders of the oral cavity proper. Included are the following areas of discussion: oral cavity, tooth functions, terminology, fundamental and preventative curvatures of the oral cavity, the dentition, the development, form, and eruption of the teeth, occlusion, dental anomalies, supporting structures of the teeth, clinical consideration of the dental anatomy, permanent and deciduous tooth identification and morphology. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Discuss elements of tooth morphology with other health professionals using appropriate dental vocabulary. 2. Demonstrate knowledge of tooth characteristics by categorizing individual teeth based on morphology. 3. Discuss the relationship between tooth morphology and scaling and root planning techniques. 4. Discuss the basic principles of occlusion and variables that play important roles in inter- and intra-arch relationships. Prerequisite: Admission to the Utah Tech University Dental Hygiene program. Corequisite: DHYG 2045. FA.

## **DHYG 2045. Tooth Morphology Lab. 1 Hour.**

Laboratory portion of DHYG 2040. The student will be able to identify the individual teeth of the human dentition within and without the surrounding oral structures by evaluating the crown and roots of the teeth. The student will be able to draw to scale individual teeth and have practiced eye hand coordination, paying very careful attention to detail, utilize a digital caliper, carve and wax both a maxillary canine and mandibular molar tooth in wax. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Apply the terminology of the dentition in appropriate clinical discussions. 2. Demonstrate understanding of tooth surfaces and root contours through drawings and carvings. Prerequisite: Admission to the Utah Tech University Dental Hygiene program. Corequisite: DHYG 2040. FA.

## **DHYG 2580. Dental Materials. 1 Hour.**

Introduction to various dental products and materials with a comprehensive background in the art and science of dental materials use, including the physical properties, advantages, and disadvantages of metals, hydrocarbons, and other dental materials, as well as evaluation of allergenicity and other complications that may arise as a result of the use of these materials. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Consider the interaction between the oral environment and dental materials. 2. Distinguish the bonding mechanism. 3. Differentiate between composites, glass ionomers and compomers. 4. Explain important elements of preventive and bleaching materials. 5. Differentiate between dental ceramics, dental amalgam, casting metals, solders, and wrought metal alloys. 6. Analyze the different types of dental implants and the advantages and disadvantages of each. 7. Evaluate abrasion, finishing, polishing, dental cements, liners, impression materials, dental waxes and gypsum products. 8. Consider how polymers are used in dentistry. 9. Consider the different types of provisional restorations and their use in dentistry. Prerequisite: Admission to the Utah Tech University Dental Hygiene program. SP.

**DHYG 2585. Dental Materials Lab. 1 Hour.**

Laboratory portion of DYHG 2580. This course is designed to give the student exposure and experience using, handling, and understanding dental materials typically used in the dental office. Information learned will give the student the ability to accurately educate patients as the need arises. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Demonstrate ethical and professional behavior when working with dental materials. 2. Apply principles to safely dispose of dental materials. 3. Discuss the importance of handling dental materials safely. 4. Make usable alginate impressions. 5. Prepare fabrication of bleach trays, semi custom trays, bite registrations and double bite impressions. 6. Judge the effects of abrasion and polishing. 7. Create a provisional restoration. 8. Produce a poured and trimmed study models. 9. Produce a manipulation of composite materials and dental amalgam for restorations. Prerequisite: Admission to the Utah Tech University Dental Hygiene program. Corequisite: DHYG 2580. SP.

**DHYG 3010. Dental Hygiene Theory I. 4 Hours.**

Covers the theoretical foundations of preventative oral health services used in the dental hygiene process. Emphasizes prevention of disease transmission, body mechanics, patient assessment, basic dental hygiene instrumentation, oral healthcare planning, extrinsic stain removal, topical anesthesia, ethical decision making, and the role and responsibilities of the dental hygienist. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Develop a written report based on research topics in dental hygiene care. 2. Validate the importance of infection control to minimize disease transmission. 3. Articulate the caries process and the significance and prevention of dental caries. 4. Explain the assessment process and identify oral health risk factors (Caries, Periodontal, Oral Cancer). 5. Evaluate the characteristics of healthy and unhealthy gingival and periodontal structures and record the findings. 6. Demonstrate the importance of an efficient and effective care plan and practice the steps necessary for proper documentation of informed consent and informed refusal. 7. Employ proper documentation skills and practice abiding of privacy laws associated with HIPAA. 8. Analyze various patient needs and articulate an educational plan to improve oral health. Course fee required. Prerequisites: Admission to the Utah Tech University Dental Hygiene program. FA.

**DHYG 3035. Oral Anatomy and Histology. 4 Hours.**

In this course, the student will study the histology and anatomy of the head and neck. Emphasis is on location, function, nomenclature and clinical considerations of normal anatomy and variations. In addition, the course will include an understanding of embryologic development and development defects with a focus on oral hard and soft tissues. This course requires a Differential Tuition Rate which is an additional fee of \$235 charged per credit hour. This is a Hybrid Course. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Identify and differentiate the function of the bones, muscles and structures, including glands, blood vessels, nerves and lymphatics of the head, neck and oral cavity. 2. Differentiate location and connections of potential spaces of head and neck. 3. Organize and order the development of the hard and soft tissues of the head and neck and oral cavity. 4. Organize the embryological steps of the development of the head and neck. 5. Integrate the knowledge of histology and embryology of the orofacial tissues and the resulting pathology that may occur. Course fee required. Prerequisites: Admission to the Utah Tech University Dental Hygiene program. FA.

**DHYG 3050. Legal & Ethical Issues. 2 Hours.**

Current legal and ethical issues that influence the practice of dental hygiene. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Acquire the ethical standards and legal perspectives that, if implemented, would prevent malpractice and minimize professional liability. 2. Identify the significant factors, values, issues, and special interests that affect healthcare providers, healthcare delivery and healthcare finance. 3. Apply ethical reasoning and reflective thinking to defend a specified course of action in a scenario that contains an ethical dilemma. 4. Know the ethical standards, regulatory requirements, and legal perspectives, which if applied, would manage risks and professional liability. 5. Discuss and relate the Utah Dentist and Dental Hygienists Practice Act and the Practice Act Rules. 6. Discuss legislative activities occurring at state and federal levels affecting dental hygiene. Prerequisite: Admission to the Utah Tech University Dental Hygiene program. FA.

**DHYG 3060. Community Oral Health. 2 Hours.**

The dental hygiene student will have an introduction to the principles of dental public health, community oral health education and community program planning. This course will prepare the dental hygiene student for the role of dental public health practitioner, educator, consultant, and resource person in community settings. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Identify effective assessment, planning, implementation and evaluation objectives for dental public health programs. 2. Describe the goals and functions of federal, state, local and voluntary health care agencies and programs. 3. Recognize cultural, demographic and socioeconomic factors, which influence dental health need and demand. 4. Utilize oral health indices, tests, inventories, interviews, scientific literature or other data gathering methods to assess the oral health status and oral health needs of a defined population. 5. Design an oral health proposal utilizing the models, steps and procedures involved in planning an effective community oral health program based on the needs and resources of a defined population. 6. Apply current educational and psychological concepts, learning theories, methods and strategies to dental health education. Prerequisite: Admission to the Utah Tech University Dental Hygiene program. FA.

**DHYG 3062. Care of Medically Complex Patients. 3 Hours.**

Covers psycho-social, physical and oral characteristics of medically complex patients. Also included are the care and clinical management of special needs patients and management of medical emergencies in the clinical setting. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Apply information presented on the patient health history to plan for optimal dental care specific to the patient's medical conditions avoiding harm to the patient and/or operator. 2. Analyze information on the health history to identify both recognized and possible unrecognized conditions for which the patient should be referred for further diagnosis and treatment. 3. Evaluate medical emergency situations, determine the appropriate protocols to follow, personnel to notify, appropriate treatment to perform, emergency equipment needed, drugs to administer, and the necessary documentation to record. Course fee required. Prerequisites: Admission to the Utah Tech University Dental Hygiene program. FA.

**DHYG 3065. Community Oral Health Lab I (ALCS). 1 Hour.**

This is the lab/service learning portion of DHYG 3060. The course provides experiential learning of topics related to community health or service learning experiences. Students will provide clinical and/or educational services in a community or public health setting. Additional experiential opportunities explore professional roles of the dental hygienist in inter-professional healthcare settings and with diverse population groups. This course is designated as an Active Learning Community Service (ALCS) course. Students provide service in areas of public concern in a way that is mutually beneficial for both the student and community. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Apply selected social, educational and behavioral science theories to dentistry, the public and its oral health status. 2. Identify learning strategies for delivering health information to consumer groups by using innovative visual materials and activities and methods of evaluating the effectiveness of strategies. 3. Develop audiovisual materials and integrate their use into an oral health presentation. 4. Develop and implement a lesson plan for varied populations. 5. Observe and discuss the role of a public health dental hygienist in a public health setting. Prerequisite: Admission to the Utah Tech University Dental Hygiene program. FA.

**DHYG 3225. Dental Hygiene Clinic I. 3 Hours.**

The first year dental hygiene student will practice introductory skills, including clinical and laboratory applications of elements taught in DHYG 1010, that are essential to rendering oral health services to patients with emphasis on basic dental hygiene instrumentation. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Develop skills in maintaining Quality Assurance. 2. Develop skills of Dental Hygiene Fundamentals. 3. Simulate the technical skills of dental hygiene instrumentation. 4. Develop and employ continuous improvement in the skills for clinical documentation and communication. Course fee required. Prerequisites: Admission to the Utah Tech University Dental Hygiene program. FA.

**DHYG 3510. Dental Hygiene Theory II. 4 Hours.**

Continuation of the study of the theoretical foundations of preventative and therapeutic oral health services used in the dental hygiene process with emphasis on preparation for individual patient education and care, communication, and nutrition. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Analyze and report on assessment, diagnosis, planning, implementation, education, and evaluation of a high-risk caries patient. 2. Analyze dietary habits and nutrition and evaluate their effects on oral health. 3. Debate the oral health benefits and risks of water fluoridation. 4. Demonstrate effective motivational interviewing techniques with various patient populations. 5. Analyze effective treatment and education for patients in the following populations: geriatric, cancer, adolescence, pediatric, pregnancy, dental hypersensitivity, substance abuse. 6. Evaluate signs of abuse and neglect and explain professional responsibility for reporting to appropriate authorities. Course fee required. Prerequisites: Admission to the Utah Tech University Dental Hygiene program. SP.

**DHYG 3520. General/Oral Pathology. 3 Hours.**

To acquire functional knowledge base for the clinical diagnosis and understanding of soft and hard tissue lesions, syndromes, diseases and disorders affecting the oral cavity, head and neck. Covers diseases that affect the oral cavity primarily or as a secondary affect. Disease processes, clinical signs and symptoms and treatment of inflammatory, immunologic, neoplastic, infectious, developmental and genetic diseases will be studied. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Identify by illustration, diagram or description normal, variations of normal and common pathologic oral lesions. 2. Differentiate between the pathologic processes associated with systemic disease and local factors in lesions of the head, neck and oral cavity. 3. Differentiate between genetic, developmental, infectious, autoimmune and neoplastic lesions of the head and neck. 4. Evaluate the presentation of head, neck and oral lesions pertaining to symptomatology and potential course of the disease process. 5. Develop a differential diagnosis from diagnostic signs and symptoms of a lesion or pathologic process. 6. Apply the evaluation steps of diagnosis to case presentations to determine a most likely pathologic process and its progression and possible treatment or resolution. Course fee required. Prerequisites: Admission to the Utah Tech University Dental Hygiene program. FA.

**DHYG 3525. Dental Hygiene Clinic II (ALCE). 4 Hours.**

Clinical portion of DHYG 3510. This course is designated as an Active Learning Civic Engagement (ALCE) course. Students will be working to make a difference in the civic life of our community through both political and nonpolitical processes. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Develop expanded skills in maintaining Quality Assurance. 2. Employ improvements in the technical skills of dental hygiene instrumentation. 3. Practice clinical documentation to advance skills. 4. Develop the advancement of skills in communication with patients, caregivers and healthcare providers. Course fee required. Prerequisites: Admission to the Utah Tech University Dental Hygiene program. SP.

**DHYG 3530. Pharmacology. 2 Hours.**

Preparation, chemical formula, effects, and applications of pharmacological and therapeutic agents are analyzed, including medical agents used in the prevention and management of emergencies in the dental field. Emphasis will be placed on prescription and nonprescription drugs commonly used by patients which may require the alteration of treatment procedures and / or medications used in the dental setting. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Describe the role of pharmacology in the dental hygiene process of care. 2. Describe the fundamentals of drug action. 3. Identify both proprietary and generic names and classifications of drugs used to treat different medical conditions. 4. Relate how the oral manifestations and side effects associated with pharmacological therapy may affect patient oral health and dental hygiene treatment planning. 5. Appraise drugs commonly used in dentistry for contraindications and interactions with medications and or supplements a patient may be taking for a diagnosed or self-diagnosed medical conditions. Course fee required. Prerequisites: Admission to the Utah Tech University Dental Hygiene program. SP.

**DHYG 3540. Periodontology. 3 Hours.**

Principles of periodontology involving assessment, etiology, risk factors, and classification of periodontal and peri-implant diseases and conditions and basic treatment planning. \*\*COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to:

1. Compare and contrast histologic and clinical features of the healthy periodontium with diseased periodontium. 2. Explain the etiology of gingivitis and periodontitis including oral biofilms and the host response. 3. Analyze assessment data to classify periodontal disease using the 2017 Classification of Periodontal and Peri-implant Diseases and Conditions. 4. Describe the relationship of systemic risk factors, local contributing risk factors, nutrition, and tobacco with gingivitis and periodontitis and systemic health. 5. Use guidelines when planning periodontal treatment sequencing; determine individualized treatment plans that meet the needs of the patient. 6. Integrate knowledge, skills and values with the clinical practice of dental hygiene. This is a Hybrid course. Course fee required. Prerequisites: Admission to the Utah Tech University Dental Hygiene program. SP.

**DHYG 3590. Oral Microbiology. 2 Hours.**

Provides knowledge of mechanisms and structures of bacteria colonizing the oral cavity. Focus is on those specific bacteria that contribute to the pathogenesis of two major oral diseases specifically, periodontitis and dental caries. The role of biofilm in pathological outcomes and possible involvement oral bacteria have in exacerbation of systemic diseases are also explored. \*\*COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Explain the relationship between the microbiological environment and the pathology of oral diseases. 2. Recognize the basic principles of immunology. 3. Describe microbes and infections of relevance to dental hygiene including bacterial, viral and fungal species. 4. Apply knowledge of oral disease identification, etiology, epidemiology, and pathology, to determine dental hygiene treatment and management. Prerequisite: Admission to the Utah Tech University Dental Hygiene program. SP.

**DHYG 3890. Pain Control Methodology. 2 Hours.**

Designed for the student to gain an understanding of neurophysiology of pain and the methods to manage and control this for patients before, during and after procedures. They will gain a working knowledge of the mechanism of action of local anesthetic agents, how to titrate and deliver them to the patient safely. The patient evaluation of dental anxiety will be addressed and the efficacy and mechanism of action of nitrous oxide/oxygen sedation taught. The management of medical emergencies as related to the pharmacological agents used in the dental hygiene setting will be reviewed and evaluated. \*\*COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Evaluate the need for pain control. 2. Compare and contrast the limitations of local anesthesia and nitrous oxide/oxygen sedation. 3. Review and evaluate the patient medical history in relation to local anesthesia and sedation. 4. Compare pain management techniques to minimize or reduce discomfort. 5. Measure the minimum and maximum safe doses of anesthetic specific for the patient. 6. Recognize and evaluate the possible interactions of local anesthesia with other medications. 7. Evaluate potential medical emergencies and identify the proper response for the safety and well-being of the patient. Prerequisite: Admission to the Utah Tech University Dental Hygiene program. Corequisite: DHYG 3895. SP.

**DHYG 3895. Pain Control Methodology Clinic. 1 Hour.**

Clinical course allows the students to practice the administration of local anesthetic and nitrous oxide/oxygen sedation on patients. Students will learn to handle the armamentarium of local anesthesia and deliver a number of anatomical nerve blocks of the oral structures. Introduction and hands on practice to competency level will be achieved during the clinical sessions. \*\*COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Appraise and annotate the patient medical history and treatment record in relation to local anesthesia and inhalation sedation, including vital signs, informed consent, complications or contraindications and doses delivered. 2. Select and properly use local anesthetic, inhalation sedation and emergency medical equipment in both a laboratory and student clinic setting. 3. Successfully administer local anesthetic agents to multiple areas of the oral cavity on student patients in the student clinic. 4. Successfully administer nitrous oxide/oxygen sedation for patient anxiety control to student patients in the student clinic. 5. Apply pain management techniques to minimize or reduce discomfort. 6. Recognize and analyze potential medical emergencies and respond in a proper manner for the safety and well-being of the patient. Prerequisite: Admission to the Utah Tech University Dental Hygiene program. Corequisite: DHYG 3890. SP.

**DHYG 4010. Biostatistics. 2 Hours.**

Online course covering the introductory principles of biostatistics and the interpretation and use of classical statistical approaches to evaluate statistical conclusions, describe the oral health of populations and influence clinical decision making. \*\*COURSE LEARNING OUTCOMES (CLOs) At the successful conclusion of this course, students will be able to: 1. Differentiate between quantitative and qualitative data and assess quality of data. 2. Identify types of variables, apply methods for determining relationships between. 3. Differentiate between various tests of statistical significance. 4. Design an experiment using the appropriate statistical methodology and sampling methods to reduce bias and ensure statistical significance, reliability and validity. 5. Apply knowledge of biostatistics to determine the appropriate statistical test to be used depending upon the experimental methodology employed. 6. Interpret data using biostatistical principles and evaluate conclusions based on study data in the medical literature for evidence based clinical decision making. Prerequisite: Admission to the Utah Tech University Dental Hygiene program. SU.

**DHYG 4015. Dental Hygiene Clinic IV (ALCS). 5 Hours.**

Service Learning course. Supervised experience in the clinical setting with continued development of clinical proficiency and decision making in rendering comprehensive preventive oral health services using dental hygiene processes. Emphasis on clinical appreciation and development of skills in maintenance, management and evaluation of the periodontal patient; treatment planning; disease control; scaling and root planning for the periodontally involved patient; and increased treatment in the expanded duties of the dental hygienist. This course is designated as an Active Learning Community Service (ALCS) course. Students provide service in areas of public concern in a way that is mutually beneficial for both the student and community. **COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Utilize theory and patient assessment data to develop an individual treatment plan based on assessment data. 2. Provide accurate informed consent. 3. Plan and implement specific individualized patient education plans based on assessment data. 4. Demonstrate detection and removal skills for supragingival and subgingival calculus. 5. Demonstrate technique and interpretation skills with dental radiograph exposures. 6. Provide adequate analgesia as needed for patient comfort during clinical treatment. 7. Demonstrate correct protocols for medical emergencies. 8. Know and carry out proper operation and maintenance of dental equipment. 9. Choose and adhere to proper infection control measures based on the theory of disease transmission. 10. Complete a self-assessment/reflection: identifying areas for improvement and realistic plans for improvement. 11. Conduct oneself professionally in the clinical setting, following written clinical policies and procedures in the Policies and Procedures Manual for the benefit of patients as well as peers. Prerequisites: Admission to the Utah Tech University Dental Hygiene program. FA.

**DHYG 4020. Research Methodology. 2 Hours.**

Online course covering fundamental and working knowledge of scientific method employed in oral health research. Students will perform critical analysis of research utilizing scientific method and evidence-based publications. **COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Discuss how dental hygiene research impacts the profession and practice of dental hygiene. 2. Describe the scientific method and research process. 3. Discuss different research designs and when each is appropriate to use. 4. Explain how an Evidence-based Decision Making approach enhances critical thinking and professional decision-making regarding patient care. 5. Conduct an effective literature search using electronic databases, professional journals, government documents, product literature and other "paper" publications. 6. Critically analyze published reports of oral health and apply this information to the practice of dental hygiene. 7. Demonstrate the ability to communicate professional knowledge in writing. Prerequisite: Admission to the Utah Tech University Dental Hygiene program. SU.

**DHYG 4030. Leadership & Group Dynamics. 2 Hours.**

Online course focusing on the theories, concepts, and principles of leadership; emphasizes the development of leadership skills related to personal behavior, communication, organization, and self-examination; and explores the opportunity to develop leadership roles appropriate to the dental hygiene profession. **COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Apply leadership theories, concepts, and principles as leaders in the community, as a student, volunteer, or employee. 2. Demonstrate critical and creative thinking about the role of leadership in today's society. Prerequisite: Admission to the Utah Tech University Dental Hygiene program. SU.

**DHYG 4035. Advanced Theory and Practice I (ALPP). 2 Hours.**

Advanced dental hygiene theory with emphasis on periodontal disease, periodontal treatment planning, maintenance procedures, surgical procedures, related systemic diseases and therapy. This course is designated as an Active Learning Professional Practice (ALPP) course. This course allows students to explore and apply content learned in the course in a professional experience away from the classroom. **COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Use the five-step process for finding and evaluating clinical evidence to make informed decisions for evidence-based practice. 2. Differentiate between non-surgical periodontal therapy and periodontal surgical therapy. 3. Assess and plan for individualized periodontal therapy and maintenance for patients with periodontal diseases and peri-implant diseases/conditions. Apply the dental hygiene process of care in the provision of non-surgical periodontal therapy for a patient with periodontitis. 4. Practice motivational interviewing techniques for improved patient compliance to oral home care recommendations. 5. Assess signs and symptoms of: a) necrotizing periodontal diseases, b) periodontitis as a manifestation of systemic disease, c) other conditions affecting the periodontium, d) peri-implant diseases and conditions; and work with other health care professionals in the provision of care for patients with these diseases through documentation, accurate insurance reporting and collaboration. 6. Describe the role of the dental hygienist in the provision of care for the periodontal surgical patient. 7. Apply self-assessment skills. Course fee required. Prerequisites: Admission to the Utah Tech University Dental Hygiene program. FA.

**DHYG 4050. Restorative Dental Hygiene I. 1 Hour.**

Clinical application of expanded duties for the dental hygienist, including anesthesia, placing and removing rubber dams; matrix and wedge; placing bases and liners; placing, carving, and finishing amalgam restorations; placing and finishing tooth-colored restorations; placing temporary restorations; and four-handed dentistry. **COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Demonstrate appropriate use and care of restorative armamentarium. 2. Explain the necessity of checking the patient's functional occlusion before and after placing and carving a restoration. 3. Demonstrate the basic placement and carving steps for both amalgam and composite restorations. 4. Articulate the most common errors made when placing, carving and manipulating both amalgam and composite materials - and how to both avoid these errors and correct them if they occur. 5. Demonstrate placement of rubber dams on a typodont. Course fee required. Prerequisites: Admission to the Utah Tech University Dental Hygiene program. FA.



**DHYG 4225. Public Health Administration. 2 Hours.**

This blended (hybrid) course explores the public health paradigm on the general policies, philosophies and current public/community health issues. Emphasis is placed on assessment of oral health needs, planning and evaluation of oral health promotion and disease prevention programs. Explores complex issues related to the delivery of healthcare both on a national level and individually to populations with unique socialization and clinical needs. Cultural diversity and cultural care is explored for a broad range of populations. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Identify effective assessment, planning, implementation and evaluation objectives for dental public health programs. 2. Administer oral health indices, tests, inventories, interviews or other data gathering methods to assess the oral health status and oral health needs of a defined population. 3. Design an oral health project utilizing the models, steps and procedures involved in planning an effective community oral health program based on the needs and resources of a defined population. 4. Display understanding and sensitivity to the health care needs of the community. 5. Define and describe the term social responsibility and the role of the dental hygiene professional in the context of the greater society. 6. Discuss the responsibility of the dental hygienist with respect to cultural competence and the role in cultural care in public health. 7. Critique, synthesize and apply information from scientific and lay sources to improve the public's oral health. 8. Define health literacy and oral health literacy for the health care provider and dental public health professional and explain strategies to communicate more clearly with patients, the public, or community. 9. Demonstrate the ability to communicate and collaborate with relevant stakeholders to advocate for policies that impact oral and general health for individuals or populations. Course fee required. Prerequisites: Admission to the Utah Tech University Dental Hygiene program. SP.

**DHYG 4230. Community Oral Health Lab II (ALCS). 1 Hour.**

This course emphasizes community oral health field activity with practical experience in assessment, planning, implementation and evaluation of a public oral health program in a variety of community or public health settings. Additional experiential opportunities explore the professional roles of the dental hygienist in inter-professional healthcare settings and with diverse population groups. This course is designated as an Active Learning Community Service (ALCS) course. Students provide service in areas of public concern in a way that is mutually beneficial for both the student and community. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Design, implement and evaluate lesson plans during service-learning rotations. 2. Administer oral health information to a variety of child and adult communities. 3. Administer dental hygiene treatment in a public health setting. 4. Discuss the role of a public health dental hygienist in a public health setting. Course fee required. Prerequisites: Admission to the Utah Tech University Dental Hygiene program. SP.

**DHYG 4515. Dental Hygiene Clinic V (ALCS). 5 Hours.**

Service Learning course. Supervised experience in the clinical setting with continued development of clinical proficiency and decision making in rendering comprehensive preventive oral health services using dental hygiene processes. Emphasis on clinical appreciation and development of skills in maintenance, management and evaluation of the periodontal patient; treatment planning; disease control; scaling and root planning for the periodontally involved patient; and increased treatment in the expanded duties of the dental hygienist. This course is designated as an Active Learning Community Service (ALCS) course. Students provide service in areas of public concern in a way that is mutually beneficial for both the student and community. **\*\*\*COURSE LEARNING OUTCOMES (CLOs)\*\*\*** At the successful conclusion of this course, students will be able to: 1. Develop a dental hygiene diagnosis and individualized treatment plan by applying theory to collected assessment data. 2. Describe individualized treatment plans to instructors and patients and obtain informed consent from the patient. 3. Apply and document all aspects of the individualized dental hygiene treatment plan including patient education and treatment outcomes. 4. Practice motivational interviewing techniques for improved patient compliance with oral home care recommendations. 5. Demonstrate operation and maintenance of dental equipment. 6. Practice infection control measures based on the theory of disease transmission. 7. Demonstrate detection and removal skills for supragingival and subgingival calculus and biofilm. 8. Demonstrate technique and interpretation skills with dental radiograph exposures. 9. Write a self-evaluation: identifying areas for improvement. 9. Apply written clinical policies and procedures as documented in the Utah Tech DH Policies and Procedures Manual. Prerequisites: Admission to the Utah Tech University Dental Hygiene program. SP.

**DHYG 4545. Advanced Theory and Practice II (ALPP). 2 Hours.**

Designed to transition students into diverse employment settings. Study of clinical care for the disabled and physically and mentally impaired patient. Students will also learn the principles of practice management, how to work with a team, common employee and employer expectation, how to construct an effective resume and learn the process of a working and standard interview. Future trends in oral health care and their impact on the profession of dental hygiene will also be examined. This course is designated as an Active Learning Professional Practice (ALPP) course. This course allows students to explore and apply content learned in the course in a professional experience away from the classroom. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Analyze aspects of practice management as it relates to dental hygiene practice. 2. Investigate the business of dental hygiene. 3. Apply the steps to seeking a dental hygiene position. 4. Summarize the importance of planning for the future and career longevity. 5. Demonstrate treatment modifications necessary for the mentally and physically impaired patient. Course fee required. Prerequisites: Admission to the Utah Tech University Dental Hygiene program. SP.

**DHYG 4555. Restorative Dental Hygiene II. 1 Hour.**

Continuation and amplification of skills developed in DHYG 4050, emphasizing clinical experience in restorative expanded functions and four-handed dentistry. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Explain the necessity of checking the patient's functional occlusion before and after placing and carving a restoration. 2. Demonstrate the basic placement and carving steps for both amalgam and composite restorations. 3. Demonstrate placement of dental dams on patients. 4. Demonstrate the proper use of a wedge. 5. Demonstrate the placement of the Mylar, Sectional and Toffelmire matrix systems with correct adaptation, contour and contact. 6. Apply the principles of four handed dentistry; patient, operator, and assistant positioning; and four-handed instrument transfer. Course fee required. Prerequisites: Admission to the Utah Tech University Dental Hygiene program. SP.

**DHYG 4570. Senior Project (ALCE). 3 Hours.**

The Community Oral Health Senior Project will provide students with the opportunity to apply knowledge, skills and values attained during the program curriculum to demonstrate competency required for Institutional Learning Outcomes and Program Learning Outcomes. This hybrid course will help students gain knowledge in adult learning and instructional design as they develop a lesson plan that will be presented to an adult population in need of oral health education. Students will apply evaluation techniques to assess the learning of their population as well as their own learning. This course is designated as an Active Learning Civic Engagement (ALCE) course. Students will be working to make a difference in the civic life of our community through both political and nonpolitical processes. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Design a capstone project to address the oral health care needs of a target population. 2. Apply effective communication skills while working with a community partner in the implementation of community oral health project. 3. Discuss how to effectively teach adult learners. 4. Design and develop an instructional module including goals, learning objectives, and outcomes. 5. Analyze measures of central tendency to evaluate the oral health knowledge and behavior of a target population. 6. Demonstrate mastery of the Utah TechDH BS Program Learning Outcomes in conjunction with the Utah Tech Institutional Learning Outcomes. Prerequisite: Admission to the Utah Tech University Dental Hygiene program. SP.

**DHYG 4580R. Advanced Clinical Studies. 3 Hours.**

Opportunity to acquire additional clinical dental hygiene experience as required to remediate, maintain, or improve the clinical skills of dental hygiene students or graduates. Prerequisites can also be met by having an AAS degree in Dental Hygiene; or by permission of the Dental Hygiene Program Director. Repeatable up to 6 credits subject to graduation restrictions. Offered by arrangement. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Demonstrate the ability to select a clinical board patient through calculus detection and periodontal health classification. 2. Demonstrate the ability to detect calculus, classify periodontal disease, and educate patients regarding oral health status. 3. Demonstrate the ability to research and evaluate candidate guides for successful performance on state or regional clinical examinations. 4. Describe compliance with state laws governing the practice of dental hygiene. Course fee required. Prerequisites: DHYG 1015; and DHYG 2517; and DHYG 3015; and DHYG 3515; and instructor permission.

**DHYG 4590. Seminar in Dental Hygiene. 0.5-3 Hours.**

For students wishing instruction that is not available through other regularly scheduled courses in this discipline. Occasionally, either students request some type of non-traditional instruction, or an unanticipated opportunity for instruction presents itself. This seminar course provides a variable-credit context for these purposes. As requirements, this seminar course must first be pre-approved by the department chair; second, it must provide at least nine contact hours of lab or lecture for each credit offered; and third, it must include some academic project or paper (i.e., credit is not given for attendance alone). This course may include standard lectures, travel and field trips, guest speakers, laboratory exercises, or other non-traditional instruction methods. Note that this course is an elective and does not fulfill general education or program requirements. Instructor permission will be optional at the request of the instructor. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Describe the pursuit of life-long learning and professionalism in providing quality evidence-based healthcare. 2. Formulate a comprehensive dental hygiene careplan. 3. Demonstrate competency in dental instrument selection and use for specific patient needs.