

# DEPARTMENT OF COMMUNICATION SCIENCES AND ORAL HEALTH

**Web Site:** <https://twu.edu/communication-sciences-oral-health/>

**Interim Chair:** Cynthia Gill, Professor

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The Department of Communication Sciences and Oral Health is comprised of two main program areas.

The undergraduate program in Communication Sciences prepares students for graduate-level work and related career opportunities in the fields of speech-language pathology and audiology by providing foundational knowledge in the areas of typical communication development, differences and disorders of communication for children and adults, and intervention strategies for helping children and adults become successful communicators.

The undergraduate program in Dental Hygiene prepares students to become registered dental hygienists, while the RDH to BSDH program provides a pathway to a bachelor's degree for students with an associate's degree from an accredited dental hygiene program.

For detailed information about the graduate programs in Speech-Language Pathology or Education of the Deaf, refer to the Graduate Catalog (<https://catalog.twu.edu/graduate/>).

## Undergraduate Degrees Offered

- B.S. in Communication Sciences (<https://catalog.twu.edu/undergraduate/health-sciences/communication-sciences-oral-health/communication-sciences-bs/>)
- B.S. in Dental Hygiene (Professional Entry-Level Program) (<https://catalog.twu.edu/undergraduate/health-sciences/communication-sciences-oral-health/dental-hygiene-bsdh-professional-entry-level-program/>)
- RDH to BSDH Program (online) (<https://catalog.twu.edu/undergraduate/health-sciences/communication-sciences-oral-health/rdh-registered-dental-hygienist-bsdh-program-online/>)

## Admissions

All applicants must meet the general undergraduate admission requirements (<https://catalog.twu.edu/undergraduate/admission-information/>). The following degrees have additional secondary admission criteria:

- B.S. in Communication Sciences (<https://catalog.twu.edu/undergraduate/health-sciences/communication-sciences-oral-health/communication-sciences-bs/#admissionstext>)
- B.S. in Dental Hygiene: Professional Entry-Level Program (<https://catalog.twu.edu/undergraduate/health-sciences/communication-sciences-oral-health/dental-hygiene-bsdh-professional-entry-level-program/#admissionstext>)

- R.D.H. to B.S.D.H. Program (<https://catalog.twu.edu/undergraduate/health-sciences/communication-sciences-oral-health/rdh-registered-dental-hygienist-bsdh-program-online/#admissionstext>)
- Dual-Enrollment Dental Hygiene - Online (<https://twu.edu/communication-sciences-oral-health/dental-hygiene/dental-hygiene-programs/dual-enrollment-dental-hygiene-online/>)

## Clinics

### Speech, Language and Hearing Clinic (<https://twu.edu/speech-language-hearing-clinic/>) - Denton

The Speech, Language, and Hearing Clinic located on TWU's Denton Campus provides assessment and therapeutic services to the University and Denton communities for a minimal fee. Master's level graduate students under the direct supervision of licensed, certified speech-language pathologists and audiologists provide assessments and individual intervention for children and adults in the areas of language, literacy, speech sound disorders, accent modification, voice, stuttering, and feeding. During the summer, camps are offered for children with sensory/motor-based feeding disorders, language and literacy difficulty, fluency disorders, and speech sound disorders. Discount rates are available for students and alumni.

For applications or further information about the Clinic, contact:

Speech, Language and Hearing Clinic  
1314 North Bell Avenue  
Denton, TX 76204  
940-898-2285  
[comsclinic@twu.edu](mailto:comsclinic@twu.edu)

The clinic is located in MCL 601 on the Denton campus.

### The Stroke Center (<http://www.strokecenterdallas.org/>) - Dallas

The Stroke Center - Dallas was established in 1992 to provide treatment and training in neurological rehabilitation specifically for stroke and right hemisphere injuries. A core team of health professionals and graduate students provides outpatient services. Located in the T. Boone Pickens Institute of Health Sciences on the TWU Dallas campus, the Center operates five 6-week sessions each year. Assessment and intervention services include speech and language therapy, physical therapy assessment, and psychosocial counseling. A major focus of The Stroke Center is clinical research. Individuals may be referred by physicians, family, or self.

For applications or further information about The Stroke Center programs contact:

The Stroke Center - Dallas  
5500 Southwestern Medical Avenue  
Dallas, TX 75235  
214-689-6592  
[strokecenter@twu.edu](mailto:strokecenter@twu.edu)

### Dental Hygiene Clinic (<https://twu.edu/dental-hygiene-clinic/>) - Denton

Services of TWU's Dental Hygiene Clinic are available to faculty, staff, students, and the local community. For a nominal charge, the Clinic provides the following services: Prophylaxis (tooth cleaning), periodontal therapy (deep cleaning), radiographs (x-rays), limited dental examinations

and oral cancer screening, and oral disease prevention education and clinical treatment, including fluoride treatments and sealants. In spring, tooth whitening is offered. The Clinic serves as a laboratory for dental hygiene students, closely supervised by licensed, experienced dentists and dental hygienists. The clinic is located on the third floor of Jones Hall on the Denton campus.

For more information contact:

Mary Gibbs Jones Hall, 3rd floor  
604 Administration Dr.  
Denton, TX 76204-5796  
940-898-2888  
DentalHygieneClinic@twu.edu

## Faculty

\*ARMSTRONG, ERIKA S., Professor of Communication Sciences, Associate Dean for Academic Affairs in the College of Health Sciences, B.A., University of Texas at Dallas; M.S., University of Texas at Dallas; Ph.D., University of Texas at Dallas

\*BHARADWAJ, SNEHA V., Professor of Communication Sciences, B.S., University of Mysore, India; M.S., University of Mysore, India; Ph.D., University of Texas at Dallas

\*BOLINGER, CHRISTOPHER, Associate Professor of Communication Sciences, B.B.A., Texas Tech University-Health Sciences Center; M.S., Texas Tech University-Health Sciences Center; Ph.D., Texas Tech University-Health Sciences Center

\*BROCKETT, ALISON, Assistant Clinical Professor of Communication Sciences, B.S., Baylor University; M.S., Baylor University

\*DICKINSON, CHARLENE B., Associate Clinical Professor of Dental Hygiene, B.S., Texas Woman's University; M.S., Texas Woman's University

\*GILL, CYNTHIA B., Professor of Communication Sciences, Chair of the Department of Communication Sciences and Oral Health, B.S., Southwest Texas State University; M.Ed., Southwest Texas State University; Ed.D., East Texas State University

GRASSI, NEL, Assistant Clinical Professor, B.S., Texas Woman's University; M.S., Texas Woman's University

\*GREEN, LAURA B., Professor of Communication Sciences, B.S., Stephen F. Austin State University; M.A., University of Houston; Ph.D., University of Washington

\*LEVITT, JUNKO (JUNE) S., Professor of Communication Sciences, B.A., Musashino Women's College; M.S., University of Texas at Dallas; Ph.D., University of Texas at Dallas

LITTON, KELLY, Assistant Clinical Professor, B.S., Abilene Christian University; M.S., Vanderbilt University

\*LYNCH, CATHERINE CARRASCO, Associate Clinical Professor of Communication Sciences, B.S., Texas Woman's university; M.S., Texas Woman's University

\*MEHTA, JYUTIKA A., Professor of Communication Sciences, B.S., Bombay University-India; M.S., University of Texas at Dallas; Ph.D., University of Texas-Dallas

\*MORY, KIMBERLY D., Clinical Professor of Communication Sciences, B.A., California State University, Fullerton; M.A., California State University-Fullerton, Ph.D., Texas Woman's University

\*PAYESTEHE, BITA, Associate Professor of Communication Sciences, B.A., The University of Texas at Dallas; M.S., The University of Texas at Dallas; Ph.D., University of Minnesota

\*SMITH, CHAD E., Professor of Communication Sciences, B.A., Lamar University; M.S., Lamar University; Ph.D., Nova Southeastern University

\*SPOONTS, LIZABETH A., Clinical Professor of Dental Hygiene, B.S., Texas Woman's University; M.S., University of North Texas

TEAGUE, AMY L., Clinical Professor of Dental Hygiene, B.S., Texas Woman's University; M.S., Texas Woman's University

TESTERMAN, DEBORAH, Associate Clinical Professor of Dental Hygiene, B.S., Texas Woman's University; M.S., Texas Woman's University

\*WAINSCOTT, SARAH D., Professor of Communication Sciences, B.S., James Madison University; M.Ed., James Madison University; Ph.D., Gallaudet University

\*WOODS, ALISA P., Clinical Professor of Communication Sciences, B.S., University of Oklahoma Health Sciences Center; M.S., Texas Woman's University

*Asterisk (\*) denotes Graduate Faculty status.*

## Courses

*Contact hours identified in the course descriptions are based on a 15-week term. Students who enroll in Summer or mini-terms are expected to meet the same total number of contact hours as a 15-week term.*

**COMS 2113. American Sign Language I.** (TCCN SGNL 1302) An introduction to American Sign Language (ASL). Acquisition of finger spelling, vocabulary, and basic sentence structure. Three lecture hours a week. Credit: Three hours.

**COMS 2123. American Sign Language II.** (TCCN SGNL 2301) Intermediate American Sign Language (ASL). Expansion of ASL vocabulary, grammar, and conversational skills. Interpreting from signing to voice as well as from voice to signing. Prerequisite: COMS 2113. Three lecture hours a week. Credit: Three hours.

**COMS 2133. American Sign Language III.** (TCCN SGNL 2302) Development of complex linguistic features of American Sign Language (ASL) and of advanced level proficiency in receptive and expressive ASL skills. Prerequisite: COMS 2123. Three lecture hours a week. Credit: Three hours.

**COMS 2223. Introduction to Communication Sciences and Disorders.** Issues in the professions of speech-language pathology and audiology, biological foundations for speech, language and hearing, English sound systems, and basic acoustics and acoustic characteristic of sounds. Overview of the etiology and treatment of disorders of articulation, fluency, voice, swallowing, language, and hearing. Three lecture hours a week. Credit: Three hours.

**COMS 2233. Anatomy and Physiology for Speech and Language.** The relationship of anatomy and physiology of the brain, central nervous system, and the respiratory system with articulation, phonation, and hearing. For COMS majors only. Prerequisite: Biology course. Three lecture hours a week. Credit: Three hours.

**COMS 2313. Global Perspectives in Deafness.** History of Deaf community/culture in the U.S. and the introduction of communities around the world; comparison of world viewpoints on Deaf/Hard of Hearing communities; intersections of cultural identities, access to language, and communication. Satisfies Global Perspectives graduation requirement. Three lecture hours a week. Credit: Three hours.

**COMS 3001. Overview of Communication Disorders.** Issues in the professions of speech-language pathology and audiology. Overview of the etiology and treatment of disorders of articulation, fluency, voice, swallowing, language, and hearing. One lecture hour a week. Credit: One hour.

**COMS 3063. Language Development.** Nature of language, language-learning theories, and milestones of speech and language development. Prerequisite: Admission to a communication sciences program of study or admission to teacher certification DHH programs. Three lecture hours a week. Credit: Three hours.

**COMS 3333. Phonetics.** Classification and phonetics of English phonemes using the International Phonetic Alphabet (IPA), diacritical markings, and phonological processes. Three lecture hours a week. Credit: Three hours.

**COMS 3503. Speech Disorders and Intervention.** Normal speech development; etiology, diagnosis, and treatment for speech sound disorders, voice disorders, and fluency disorders in children and adults. Prerequisite: COMS 3333. Three lecture hours a week. Credit: Three hours.

**COMS 3523. Audiology.** Introduction to anatomy and physiology of the auditory system, assessment of hearing, and the effects of hearing loss on communication across the lifespan from infancy through old age. Prerequisite: Admission to a communication sciences program of study or admission to teacher certification DHH programs. Three lecture hours a week. Credit: Three hours.

**COMS 3553. School-Age Language.** Nature of oral and written language, the relationship of language to academic learning, and language development in the school-age years. Prerequisite or co-requisite: COMS 3063. Three lecture hours a week. Credit: Three hours.

**COMS 3563. Language Disorders and Intervention.** Etiology, diagnosis, and therapy strategies for language disorders across the lifespan with emphasis on evidence based practice for preschool and school aged children. Prerequisite: COMS 3553. Three lecture hours a week. Credit: Three hours.

**COMS 3633. Aural Habilitation.** Effects of hearing differences on communication, current hearing technologies, development of auditory-based skills in individuals who are deaf/hard-of-hearing, and related clinic and classroom-based support strategies. Prerequisite: COMS 3523. Three lecture hours a week. Credit: Three hours.

**COMS 4103. Articulation and Phonological Disorders.** Development of speech, and the etiology, diagnosis, and treatment for articulation and phonological disorders in children and adults. Three lecture hours a week. Credit: Three hours.

**COMS 4112. Professional Practices for the Speech-Language Pathology Assistant.** Professional practice topics for the SLPA in healthcare and educational settings including scope of practice, rules and regulations, insurance and billing, professionalism, prevention and advocacy, and cultural competence. Two lecture hours a week. Credit: Two hours.

**COMS 4123. Voice, Fluency, and Social Communication Disorders.** Assessment and treatment for clients with voice disorders, fluency disorders, and social communication disorders. Intervention strategies for individuals using alternative/augmentative communication. Three lecture hours a week. Credit: Three hours.

**COMS 4131. Practicum Strategies for the Speech-Language Pathology Assistant.** Considerations for treatment of individuals with communication disorders, including analysis of effective communication, collaboration, and teaming; supervision; conflict management; and behavioral management. Co-requisite: COMS 4132. One lecture hour a week. Credit: One hour.

**COMS 4132. Speech-Language Pathology Assistant Practicum.** Treatment of individuals with communication disorders under the supervision of a licensed and certified speech-language pathologist. Corequisite: COMS 4131. 75 practicum hours. Credit: Two hours.

**COMS 4133. Clinical Methods for the Speech-Language Pathology Assistant.** Clinical methods for the Speech-Language Pathology Assistant including screening, assessment, treatment procedures, ethics, universal safety precautions, and patient/client confidentiality. Three lecture hours a week. Includes 25 hours of guided observations and 25 supervised practicum hours. Credit: Three hours.

**COMS 4203. Diagnostic Procedures.** Instruction in current evaluative procedures of speech and language, both formal and informal; using test data to plan for intervention strategies. Prerequisites: COMS 3063 and a statistics course. Three lecture hours a week. Credit: Three hours.

**COMS 4303. Introduction to Clinical Processes.** Instruction in clinical processes and observation of speech therapy sessions. Prerequisite: Permission of instructor. Three practicum hours a week. Credit: Three hours.

**COMS 4463. Differentiating Communication for Deaf and Hard of Hearing Students.** Practices that support the use and efficacy of a continuum of communication methods for students who are deaf or hard of hearing. Focus on features of various communication modalities and strategies to match methods to individual students. Prerequisite: Admission to a communication sciences program of study or teacher certification DHH program. Three lecture hours a week. Credit: Three hours.

**COMS 4473. Research Fundamentals in Communication Sciences.** Foundations of basic and applied research. Emphasis on methodology and evaluation of research in the field as well as levels of evidence and ethical practice. Prerequisite: Statistics course. Three lecture hours a week. Credit: Three hours.

**COMS 4623. Neural Foundations of Communication.** An introduction to the neurology of speech and language mechanisms in children and adults. Emphasis on the neural bases of speech and language with focus on clinical syndromes of speech motor systems and central language mechanisms. Prerequisite: COMS 2233. Three lecture hours a week. Credit: Three hours.

**COMS 4633. Speech and Hearing Science.** Scientific basis underlying evaluation and treatment skills in clinical procedures for perception and production of respiration, phonation, articulation, resonance, prosody, and hearing. Prerequisites: COMS 2233 and a course in Physics or Chemistry. Three lecture hours a week. Credit: Three hours.

**COMS 4653. Literacy for Students Who Are Deaf or Hard of Hearing.** Linguistic and literacy development in early childhood through eighth grade; integration of research in reading, writing, speaking, and listening development of students who are deaf or hard of hearing. Practice applications including planning and implementing literacy instruction. Three lecture hours a week. Credit: Three hours.

**COMS 4663. Using ASL to Teach English.** Instructional strategies for using ASL to teach English grammar and syntax to students who are deaf; exploration of the linguistic features of ASL and methods to teach English grammatical structures. Prerequisites: COMS 4553 and COMS 4613. Three lecture hours a week. Credit: Three hours.

**COMS 4693. Undergraduate Practicum Experience.** Instruction in clinical and educational processes with beginning practicum experiences. Requires permission of instructor. Prerequisite or Co-requisite: COMS 4303 or COMS 4223. Six to eight laboratory hours a week. Credit: Three hours.

**COMS 4911. Independent Study.** Individual study of specific problems. Prerequisite: Permission of instructor. Credit: One hour.

**COMS 4913. Independent Study.** Individual study of specific problems. Prerequisite: Permission of instructor. Credit: Three hours.

**DH 1101. Orientation to Dental Hygiene.** Introduces the student to dentistry, dental hygiene, dental assisting, and dental laboratory technology; outlines the development of the professions, their organizational structures, councils and bureaus; dental terminology, disease control, modes of dental practice, specialties, educational programs, and career options are discussed. One lecture hour a week. Credit: One hour.

**DH 3112. Periodontology I.** Periodontal conditions including the healthy periodontium, immune response, periodontal pathogenesis, diseases of the periodontium, and an overview of clinical periodontal assessment, non-surgical therapy, and maintenance. Two lecture hours a week. Credit: Two hours.

**DH 3221. Risk Assessment and Preventive Dentistry Lab.** Clinical experience in providing disease control counseling, including oral hygiene, nutritional counseling, and tobacco cessation; application of sealants. Co-requisite: DH 3222. Three clinical laboratory hours a week. Credit: One hour.

**DH 3222. Risk Assessment and Preventive Dentistry.** Oral disease risk factors and relationship to individualized oral health education, introduction to preventive dentistry, dental health education, and health promotion, psychology of human behavior, and other factors influencing dental health behavior. Co-requisite: DH 3221. Two lecture hours a week. Credit: Two hours.

**DH 3303. Process of Care for the Registered Dental Hygienist.** Registered dental hygienist exploration of the professional framework within the dental hygiene scope of practice that allows for meeting individualized needs of patients; components including assessment, data analysis, plan of action, implementation, and evaluation along with required documentation. Three lecture hours a week. Credit: Three hours.

**DH 3312. Professionalism and Ethics.** Introduction to leadership, interpersonal communication, and other skills essential for effective management within professional dental hygiene roles. Exploration of evolving topics and/or problems and development of effective speaking skills for resolutions related to the current state of oral healthcare and professional oral healthcare education. Two lecture hours a week. Credit: Two hours.

**DH 3323. Orofacial Biology.** Integrated study of head and neck anatomy, histology, embryology, and tooth morphology with particular emphasis on orofacial structures that by form and/or function are applicable to the clinical practice of dental hygiene. Co-requisite: DH 3341. Three lecture hours a week. Credit: Three hours.

**DH 3341. Orofacial Biology Lab.** Identification and labeling of individual teeth for both deciduous and permanent dentition; emphasis on the traits specific to each tooth. Identification and function of muscles, nerves, and arterial supply related to structures of the head and neck. Co-requisite: DH 3323. Three laboratory hours a week. Credit: One hour.

**DH 3401. Preclinical Dental Hygiene I Theory.** Clinical laboratory designed to prepare entry-level clinicians for initiation of clinical patient care including all aspects of the dental hygiene process of care. Co-requisite: DH 3402. One lecture hour a week. Credit: One hour.

**DH 3402. Preclinical Dental Hygiene I Practice.** Clinical laboratory designed to prepare entry-level clinicians for initiation of clinical patient care including all aspects of the dental hygiene process of care. Co-requisite: DH 3401. Six to nine clinical laboratory hours a week. Credit: Two hours.

**DH 3413. Clinical Dental Hygiene Theory and Practice.** Dental hygiene concepts including oral healthcare, prevention of disease transmission, ergonomics, assessment, diagnosis planning, implementation and evaluation (ADPIE), patient assessment techniques, dental hygiene diagnosis, planning, and implementation for a relatively healthy patient. Three lecture hours a week. Co-requisites: DH 3401 and DH 3402. Credit: Three hours.

**DH 3431. Oral Radiology Lab.** Laboratory and clinical experiences necessary to produce quality radiographs, including communication and documentation, and to provide radiographic interpretation for common landmarks, pathologies, and anomalies. Four laboratory hours a week. Credit: One hour.

**DH 3433. Oral Radiology.** Principles of x-ray production and safety factors; application and theory of proper exposure, processing and mounting radiographs, radiographic interpretation including recognition and identification of normal anatomic landmarks and selected pathologic conditions. Three lecture hours a week. Credit: Three hours.

**DH 3502. Dental Hygiene II.** Dental hygiene process of care for patients with greater treatment needs. Dental hypersensitivity, self-assessment in the clinical environment, periodontal debridement, and medical emergencies. Two lecture hours a week. Credit: Two hours.

**DH 3511. Clinical Dental Hygiene II Theory.** Utilization of evidence-based decision making and critical thinking; integration of the dental hygiene process of care and oral health education for patients with emphasis on the pediatric and healthy patient and patients exhibiting gingivitis and slight periodontitis. Skills for working in interprofessional teams to enhance communication and collaboration with other members of the healthcare team to support comprehensive patient care. Guided practice sessions, adjunct clinical procedures, and quality assurance measures. Co-requisite: DH 3512. One lecture hour a week. Credit: One hour.

**DH 3512. Clinical Dental Hygiene II Practice.** Utilization of evidence-based decision making and critical thinking; integration of the dental hygiene process of care and oral health education for patients with emphasis on the pediatric and healthy patient and patients exhibiting gingivitis and slight periodontitis. Skills for working in interprofessional teams to enhance communication and collaboration with other members of the healthcare team to support comprehensive patient care. Guided practice sessions, adjunct clinical procedures, and quality assurance measures. Co-requisite: DH 3511. Eight to twelve clinical laboratory hours a week. Credit: Two hours.



**DH 3542. Pharmacology for the Dental Hygienist.** Overview of concepts of drug therapy and specific mechanisms of action, including pharmacology, pharmacokinetics, and pharmacodynamics for drugs commonly prescribed in dentistry or for medical conditions that may alter dental hygiene treatment; includes general and local anesthetic agents. Two lecture hours a week. Credit: Two hours.

**DH 3843. Introduction to Process of Care for Early Entry RDH to BSDH.** Early entry RDH to BSDH student exploration of the professional framework within the dental hygiene scope of practice that allows for meeting individualized needs of patients; components including assessment, data analysis, plan of action, implementation, evaluation, and required documentation. Three lecture hours a week. Credit: Three hours.

**DH 4301. Clinical Dental Hygiene III Theory.** Utilization of evidence-based decision making and critical thinking; integration of the dental hygiene process of care and oral health education for patients with emphasis on the adolescent and geriatric patient and the adult patient exhibiting moderate periodontal disease, providing appropriate adjunct procedures and continued provision of competent care for patients with less complicated needs. Skills for working in interprofessional teams to enhance communication and collaboration with other members of the healthcare team to support comprehensive patient care. Guided practice sessions, adjunct clinical procedures, and quality assurance measures. Co-requisite: DH 4303. One lecture hour a week. Credit: Four hours.

**DH 4303. Clinical Dental Hygiene III Practice.** Utilization of evidence-based decision making and critical thinking; integration of the dental hygiene process of care and oral health education for patients with emphasis on the adolescent and geriatric patient and the adult patient exhibiting moderate periodontal disease, providing appropriate adjunct procedures and continued provision of competent care for patients with less complicated needs. Skills for working in interprofessional teams to enhance communication and collaboration with other members of the healthcare team to support comprehensive patient care. Guided practice sessions, adjunct clinical procedures, and quality assurance measures. Co-requisite: DH 4301. 12 to 16 clinical laboratory hours a week. Credit: Four hours.

**DH 4313. Community Oral Health.** Principles, practices, and methods of dental public health, including oral health education; emphasis on the role of the dental hygienist in community oral and interdisciplinary health programs. Three lecture hours a week. Credit: Three hours.

**DH 4341. Advanced Periodontology Lab.** Application, evaluation, and effective use of a variety of techniques and procedures currently used in oral healthcare for the treatment of moderate to severe periodontal disease, including pain management. Four laboratory hours a week. Credit: One hour.

**DH 4342. Periodontal Disease II.** Comprehensive study of periodontal diseases including risk factors, causative factors, treatment, and prognosis for advanced periodontal disease; case studies to promote critical thinking and evidence-based decision-making. Two lecture hours a week. Credit: Two hours.

**DH 4412. Dental Hygiene III.** Dental hygiene process of care for patients who present with complex needs including slight to moderate periodontitis. Focus on adolescent and geriatric populations. Two lecture hours a week. Credit: Two hours.

**DH 4431. Community Oral Health Practicum.** Experiences in assessing, planning, implementation, and evaluation for the purpose of community oral health programming with diverse populations in a variety of settings. Three practicum hours a week. Credit: One hour.

**DH 4443. Dental Hygiene Care for Special Needs.** Systems approach to commonly encountered medical conditions applied in delivery of the dental hygiene process of care guided by evidence-based compassionate patient care and collaboration with other health care providers as indicated. Three lecture hours a week. Credit: Three hours.

**DH 4451. Dental Materials.** Physical and chemical properties, indications for use, and use of dental materials commonly utilized in dental hygiene and selected materials used in dentistry. One lecture hour a week. Credit: One hour.

**DH 4461. Dental Materials Lab.** Manipulation, application, use, evaluation, and safe use of a variety of dental materials currently used in oral healthcare. Three laboratory hours a week. Credit: One hour.

**DH 4513. Alternative Dental Hygiene Practice.** Exploration of roles of the dental hygienist as they relate to alternative practice settings and opportunities with the goal of establishing short-term and long-term personal professional goals, followed by creating and completing an in-depth experience or project aligned with goals. Two lecture and two laboratory hours a week. Credit: Three hours.

**DH 4533. Oral Health Worldview.** Synthesis and utilization of existing knowledge of the political system, stakeholders, and events related to oral healthcare in the United States to increase understanding of other cultures and the global issues of oral health and oral healthcare. Satisfies Global Perspectives graduation requirement. Prerequisite: POLS 2013. Three lecture hours a week. Credit: Three hours.

**DH 4551. Senior Seminar.** Exploration of advanced clinical issues and principles for patients with severe periodontal disease. Introduction of dental hygiene practice management and professional development skills for entry into the dental hygiene profession. One lecture hour a week. Credit: One hour.

**DH 4561. Clinical Dental Hygiene IV Theory.** Utilization of evidence-based decision making and critical thinking; integration of the dental hygiene process of care and oral health education for the adult patient exhibiting severe periodontal disease. Continuation of care with patients with less complicated needs and continued recognition of various oral conditions. Incorporation of selected dental materials into patient care experiences. Skills for working in interprofessional teams to enhance communication and collaboration to support comprehensive patient care. Guided practice sessions, adjunct clinical procedures, and quality assurance measures. Final preparation for clinical board exams and entry into the profession. Co-requisite: DH 4563. One lecture hour a week. Credit: One hour.

**DH 4563. Clinical Dental Hygiene IV Practice.** Utilization of evidence-based decision making and critical thinking; integration of the dental hygiene process of care and oral health education for the adult patient exhibiting severe periodontal disease. Continuation of care with patients with less complicated needs and continued recognition of various oral conditions. Incorporation of selected dental materials into patient care experiences. Skills for working in interprofessional teams to enhance communication and collaboration to support comprehensive patient care. Guided practice sessions, adjunct clinical procedures, and quality assurance measures. Final preparation for clinical board exams and entry into the profession. Co-requisite: DH 4561. 12 to 16 clinical laboratory hours a week. Credit: Three hours.

**DH 4713. Applied Evidence-based Research.** Application of evidence-based research to dental hygiene practice, includes finding, accessing, interpreting, and applying scientific information. Three lecture hours a week. Credit: Three hours.

**DH 4723. General and Oral Pathology.** General principles related to pathology with emphasis on abnormal conditions of the head, neck, and oral cavity including clinical appearance, etiology, and treatment options; common oral lesions and interrelationships between oral and systemic conditions. Three lecture hours a week. Credit: Three hours.

**DH 4823. Dental Hygiene Clinical Case Study Development.** Examination and application of critical thinking and evidence-based decision-making to increase those skills in clinical practice, clinical education, or other areas of dental hygiene practice; use of prepared and student-developed case studies. Three lecture hours a week. Credit: Three hours.

**DH 4833. Professional Development for the Registered Dental Hygienist.** Leadership, personal professional goalsetting and planning, and other essential professional skills; exploration of and response to evolving topics and/or problems and potential resolutions related to the current state of oral healthcare and professional oral healthcare education. Three lecture hours a week. Credit: Three hours.

**DH 4901. Special Topics.** Organized course with each section's title and content varying with specific subject matter and topic offered. One lecture hour a week. Credit: One hour.

**DH 4902. Special Topics.** Study of current selected topics related to dental hygiene practice for dental hygiene degree completion. May be repeated for additional credit when topic varies. Prerequisite: Admission to degree completion program or special permission. Two lecture hours a week. Credit: Two hours.

**DH 4903. Special Topics.** Study of current selected topics related to dental hygiene practice for dental hygiene degree completion. May be repeated for additional credit when topic varies. Prerequisite: Admission to degree completion program or special permission. Three lecture hours a week. Credit: Three hours.

**DH 4911. Independent Study.** Independent study in selected topics. Credit: One hour.

**DH 4913. Independent Study.** Independent study in selected topics. Credit: Three hours.