HESP - HEARING AND SPEECH SCIENCES

HESP400 Speech and Language Development in Children (3 Credits)
Analysis of the normal processes of speech and language development in children.
Prerequisite: Minimum grade of C- in HESP300; or permission of BSOS-Hearing & Speech Sciences department.
Recommended: LING200 or HESP120.
Restriction: Must be in Hearing and Speech Sciences program; or permission of BSOS-Hearing & Speech Sciences department.

HESP402 Language and Phonological Disorders in Children (3 Credits)
Etiology, assessment and treatment of language and phonological disorders in children.
Prerequisite: Minimum grade of C- in HESP400; or permission of BSOS-Hearing & Speech Sciences department.
Restriction: Must be in Hearing and Speech Sciences program.

HESP403 Introduction to Phonetic Science (3 Credits)
An introduction to physiological, acoustic and perceptual phonetics; broad and narrow phonetic transcription; current models of speech production and perception.
Prerequisite: Minimum grade of C- in HESP305; or permission of BSOS-Hearing & Speech Sciences department.
Restriction: Must be in Hearing and Speech Sciences program; or permission of BSOS-Hearing & Speech Sciences department.

HESP406 Acquired Neurogenic Communication Disorders in Adults (3 Credits)
Survey of the dysarthrias and aphasias in adults from an interdisciplinary point of view.
Prerequisite: Minimum grade of C- in HESP300 and HESP305; or permission of BSOS-Hearing & Speech Sciences department.
Restriction: Must be in Hearing and Speech Sciences program; or permission of BSOS-Hearing & Speech Sciences department.

HESP407 Bases of Hearing Science (3 Credits)
Fundamentals of hearing, including the physics of sound, anatomy and physiology of peripheral and central auditory nervous system, psychophysical procedures used in measurement of auditory sensation and perception, and topics in psychological acoustics.
Prerequisite: Minimum grade of C- in HESP311; or permission of BSOS-Hearing & Speech Sciences department.
Restriction: Must be in Hearing and Speech Sciences program; or permission of BSOS-Hearing & Speech Sciences department.
Credit Only Granted for: HESP307 or HESP407.

HESP411 Introduction to Audiology (3 Credits)
An introduction to the field of audiology. Evaluation and remediation of hearing handicaps.
Prerequisite: Minimum grade of C- in HESP311; or permission of BSOS-Hearing & Speech Sciences department.
Restriction: Must be in Hearing and Speech Sciences program; or permission of BSOS-Hearing & Speech Sciences department.

HESP413 Aural Rehabilitation/Habilitation (3 Credits)
The fundamental aspects of aural rehabilitation therapy for both adults and children are introduced to students. Class time will consist of lectures, discussions, and hands-on activities.
Prerequisite: HESP411.
Restriction: Sophomore standing or higher.

HESP415 Principles and Methods in Speech-Language Pathology (2 Credits)
The principles and methods required to provide treatment of speech and language disorders to children and adults. Topics include writing goals and objectives, programming,teaching strategies,session design, data collection, behavior modification and counseling.
Prerequisite: HESP400.
Restriction: Must be in Hearing and Speech Sciences program.

HESP416 Principles and Methods in Audiology (2 Credits)
Relate previous knowledge of anatomy/physiology and pathologies of the auditory system and integrate this information into clinical application.
Prerequisite: Minimum grade of C- in HESP411.
Restriction: Must be in Hearing and Speech Sciences program; and permission of BSOS-Hearing & Speech Sciences department.

HESP417 Principles and Methods in Speech-Language Pathology and Audiology (3 Credits)
The principles underlying the treatment of speech, language and hearing disorders in children and adults.
Prerequisite: HESP400 and HESP411; or permission of BSOS-Hearing & Speech Sciences department.
Restriction: Must be in Hearing and Speech Sciences program; or permission of BSOS-Hearing & Speech Sciences department.

HESP418 Clinical Practice in Speech-Language Pathology and Audiology (3 Credits)
Supervised observation with some direct participation in clinical methods for the treatment of disorders of articulation, fluency, child and adult language; evaluation and habilitation/rehabilitation of hearing impaired children and adults.
Prerequisite: Minimum grade of C- in HESP417.
Restriction: Permission of BSOS-Hearing & Speech Sciences department.
Repeatable to: 6 credits.

HESP420 Deaf Culture and ASL for the CSD Professional (3 Credits)
Studying Deaf Culture and American Sign Language (ASL) is crucial in enhancing the culturally competent practice of allied health/Communication Sciences and Disorders (CSD) professionals. This course explores the politics of (dis)ability through the lens of the experience of d/Deafness and the emergence of the Deaf community as a linguistic and cultural group in the United States, as well as issues that impact the provision of services to this population.
Prerequisite: HESP202 and EDSP220.
Credit Only Granted for: HESP498A or HESP420.
Formerly: HESP498A.

HESP422 Neurological Bases of Human Communication (3 Credits)
Basic neurology as it pertains to anatomy and physiology substrates of speech and language.
Prerequisite: HESP305; or permission of instructor.
Credit Only Granted for: HESP498 or HESP422.

HESP458 Global Perspectives in Communication Sciences and Disorders (3 Credits)
Provides students with a supervised and multidisciplinary international service learning (ISL) opportunity for the reciprocal exchange of cultural perspectives, knowledge, and skills. Through interactions with Ghana health and educational professionals as well as patients/clients and their families, students will gain perspective on broader health issues such as determinants of health, health disparities, and the global burden of disease. Students will have learning opportunities in governmental and non-governmental organizations (NGOs) to gain knowledge of and experience with varied healthcare and educational systems in under-resourced communities. In addition to observing and working with Ghana Speech-Language Therapists (SLT) and other rehabilitative professionals, students will assist faculty in the provision of educational workshops for professionals and/or outreach activities for the community.
Prerequisite: HESP202, HESP300, HESP311, and HESP400; and one course from (HESP406, HESP411, or HESP402).
Jointly offered with: HESP659.
Restriction: Must be a major in Hearing and Speech Sciences .
Repeatable to: 6 credits.
Credit Only Granted for: HESP659 or HESP458.
Additional Information: This course will require students to travel out of the country.

HESP468 Professional Development in Research and Academia (1 Credit)
The purpose of this seminar is to complement your honors project with practical advice on how to navigate successful careers in research and academia. As you progress through your undergraduate years (especially if you work in a lab), you will likely make several unofficial observations about life as a graduate student, postdoc, or professor, and overhear conversations that include new terminology that may be confusing (e.g., research mentorship, grants, conference abstract, tenure). This can create a mysterious aura around what it is like to obtain your PhD and work in academia generally. In this class, we will cover tips and skills that are often passed along informally in the lab; but here, we will discuss these issues overtly from a range of perspectives, experiences, and best practices.
Restriction: Must be in the Hearing and Speech Sciences Honors program; or permission of Hearing and Speech Sciences department.
Repeatable to: 3 credits if content differs.
Additional Information: This course would be taken for three semesters.

HESP469 Honor Thesis Research (1-3 Credits)
Student will develop thesis proposal, conduct research, analyze results, develop and defend final written document.
Prerequisite: Permission of honors thesis advisor required.
Repeatable to: 6 credits if content differs.

HESP489 Undergraduate Research Experience (1-3 Credits)
Undergraduate research experience working under HESP faculty or outside affiliates.
Prerequisite: HESP202.
Restriction: Permission of BSOS-Hearing & Speech Sciences department; and sophomore standing or higher.
Repeatable to: 6 credits.
Formerly: HESP388.

HESP498 Seminar (3 Credits)
Selected topics in human communication and its disorders.
Restriction: Permission of BSOS-Hearing & Speech Sciences department.
Repeatable to: 6 credits if content differs.

HESP499 Independent Study (1-3 Credits)
A directed study of selected topics pertaining to human communication and its disorders.
Restriction: Permission of BSOS-Hearing & Speech Sciences department.
Repeatable to: 6 credits if content differs.

HESP600 Instrumentation in Hearing and Speech Sciences (3 Credits)
Types and principles of operation of electronic equipment used in the hearing and speech sciences.
Restriction: Must be in Clinical Audiology: Au.D. or Ph.D. (Doctoral) program; and permission of BSOS-Hearing & Speech Sciences department. Or permission of instructor.

HESP601 Foundations of Scientific Inquiry (1 Credit)
Overview of methods of empirical research used in Communication Sciences and Disorders. The course will focus on identifying, critically analyzing, and writing about empirical research.
Restriction: Must be in Hearing and Speech Sciences: M.A. (Master's) program; or permission of Instructor.
Additional Information: Course meets over three semesters for the duration of the Masters of Speech-Language Pathology program.

HESP602 Advanced Seminar in Neurological Bases of Communication (2 Credits)
An advanced discussion of the neural bases of human communication and its disorders, neuroimaging, neural plasticity and neurological evaluations, with emphasis on current developments and critical analysis.
Restriction: Permission of BSOS-Hearing & Speech Sciences department.
Additional Information: Students must have completed an undergraduate course in human neuroanatomy.

HESP603 Seminar in Cultural and Linguistic Diversity in Communication Disorders (1 Credit)
Overview of cultural and linguistic diversity (CLD) in general, and the impact of CLD on communication, communication disorders, and the professional practice of Speech-Language Pathology
Restriction: Must be in Hearing and Speech Sciences: M.A. (Master's) program; or permission of Instructor.
Additional Information: Course meets over four semesters for the duration of the Masters of Speech-Language Pathology program.

HESP605 Assessment & Intervention in Bilingual Populations (3 Credits)
Integrates foundational knowledge pertaining to bilingualism in speech-language pathology. This course provides students with a framework for working with individuals from culturally and linguistically diverse backgrounds. This course is designed to educate and train student clinicians to serve as bilingual speech-language pathologists.
Restriction: Must be in Hearing and Speech Sciences: M.A. (Master's) program.

HESP606 Basic Hearing Measurements (3 Credits)
Theoretical principles, methodology, and interpretation of routine audiometric tests, including pure tone, speech, and acoustic immittance measures. Modification of procedures for special populations. Equipment calibration and mass hearing screening programs.
Prerequisite: HESP411; or students who have taken courses with comparable content may contact the department.
Restriction: Must be in Clinical Audiology: Au.D. or Ph.D. (Doctoral) program; and permission of BSOS-Hearing & Speech Sciences department. Or permission of instructor.

HESP610 Language Disorders in Adults (2 Credits)
Etiology, diagnosis and management of language problems of adults associated with aging, brain injury and degenerative conditions.
Restriction: Must be in Hearing and Speech Sciences: M.A. (Master's) program; or permission of instructor.

HESP611 Cognitive Disorders in Adults (2 Credits)
Etiology, diagnosis and management of cognitive problems of adults associated with aging, brain injury and degenerative conditions.
Prerequisite: Must have completed or be concurrently enrolled in HESP610; and must have knowledge of basic human neuroanatomy.
Restriction: Must be in Hearing and Speech Sciences: M.A. (Master's) program; or permission of instructor.

HESP612 Fluency Disorders (2 Credits)
The nature of fluency disorders. Principles, methods and procedures for the clinical management of fluency disorders in children and adults.
Restriction: Must be in Hearing and Speech Sciences: M.A. (Master's) program; and permission of BSOS-Hearing & Speech Sciences department. Or permission of instructor.

HESP613 Autism Spectrum Disorders (2 Credits)
Etiology, diagnosis and management of autism spectrum disorders.
Restriction: Must be in Hearing and Speech Sciences: M.A. (Master's) program; or permission of instructor.
Credit Only Granted for: HESP639A or HESP613.
Formerly: HESP639A.

HESP615 Counseling in Communicative Disorders (3 Credits)
Introduction to the application of counseling principles and methodologies for working with individuals with communication disorders and their families. The role of the audiologist and speech language pathologist as counselors will be explored. Class content will focus on theoretical approaches and techniques to counseling from the fields of psychology, social work, and family the family therapy. The application of counseling in the diagnostic process as well as treatment of a wide variety of communication disorders will be highlighted throughout the course.
Recommended: HESP400 and HESP411.

HESP616 Language Disorders in the Pre-school Age (2 Credits)
Theoretical, empirical and clinical perspectives on language disorders in children from infancy through pre-school age.
Prerequisite: HESP400; or students who have taken courses with comparable content may contact the department.
Restriction: Must be in Hearing and Speech Sciences: M.A. (Master's) program; and permission of BSOS-Hearing & Speech Sciences department. Or permission of instructor.

HESP617 Cultural and Linguistic Diversity in Communication and its Disorders (2 Credits)
An exploration and discussion of cultural and linguistic diversity, its impact on communication and communication disorders, and strategies for assessment and intervention of culturally and linguistically diverse clients
Recommended: HESP417 or equivalent.
Restriction: Must be in one of the following programs (Hearing and Speech Sciences: Ph.D. (Doctoral); Clinical Audiology: Au.D. or Ph.D. (Doctoral); Hearing and Speech Sciences: M.A. (Master's)).

HESP620 Speech Production Disorders Across the Lifespan (3 Credits)
Assessment and treatment of phonological, articulatory and resonance disorders arising from various etiologies including developmental conditions, structural abnormalities, and nervous system damage.
Restriction: Must be in Hearing and Speech Sciences: M.A. (Master's) program; or permission of instructor.

HESP621 Bilingualism in Children and Adults (3 Credits)
Provides an overview of topics related to bilingualism in both pediatric and adult populations, with an emphasis on application in the field of communication disorders. This course explores theories of bilingual language acquisition, typical and atypical bilingual development, cognition in bilinguals, and the neurological underpinnings of bilingualism. This course will provide practicing clinicians with foundational knowledge related to bilingualism in both pediatric and adult populations. Currently there are no existing courses that provide this content with a focus on communication disorders.

HESP623 Education, Policy & Advocacy in Bilingual Service Delivery (3 Credits)
Bilingual education and associated policy issues in the US as they relate to the field of speech-language pathology. Topics include bilingual education models, disproportionality, and the legal framework related to bilingual service delivery in education settings.

HESP624 Voice Disorders (2 Credits)
Etiological characteristics, assessment and treatment of phonatory disorders in children and adults.
Restriction: Permission of BSOS-Hearing & Speech Sciences department; or must be in Hearing and Speech Sciences: M.A. (Master's) program.

HESP625 Dysphagia (3 Credits)
Nature and clinical management of dysphagia as it pertains to different clinical settings for adult and pediatric populations.
Restriction: Permission of BSOS-Hearing & Speech Sciences department; or must be in Hearing and Speech Sciences: M.A. (Master's) program.

HESP626 Language disorders in school-aged children and adolescents (2 Credits)
Etiology, assessment and treatment of communication and learning problems in school age children and adolescents

HESP627 Augmentative and Alternative Communication (2 Credits)
Principles, methods, and procedures for categorizing, understanding, and developing augmentative and alternative communication.
Recommended: Prior knowledge of Communication and its Disorders is required.
Restriction: Permission of BSOS-Hearing & Speech Sciences department.
Credit Only Granted for: HESP639R or HESP627.

HESP630 Electrophysiological Measurements (3 Credits)
Principles and techniques of physiological and electrophysiological measures of the audio-vestibular mechanisms.
Prerequisite: HESP606.
Restriction: Must be in Clinical Audiology: Au.D. or Ph.D. (Doctoral) program; and permission of BSOS-Hearing & Speech Sciences department. Or permission of instructor.

HESP632 Medical Audiology (3 Credits)
Overview of auditory pathologies, and their assessment and management in the medical setting.
Prerequisite: HESP311.
Corequisite: HESP606.

HESP634 Anatomy and Physiology of the Auditory and Vestibular Systems (3 Credits)
Comprehensive examination of the anatomy and physiology of the peripheral as well as the central auditory and vestibular systems. Both afferent and efferent pathways will be considered. Applications of basic auditory neuroscience to contemporary clinical audiology practice will be highlighted.
Prerequisite: Must have completed or be concurrently enrolled in HESP311, HESP407, and HESP411; or permission of instructor.
Additional Information: Fills a requirement for the Doctoral Program in Clinical Audiology (CAUD). Open to students in other graduate programs, especially NACS.

HESP635 Aural Rehabilitation/Habilitation (3 Credits)
Principles, methods and procedures for aural rehabilitation/habilitation in children and adults.

HESP636 Geriatric Audiology (3 Credits)
Research findings are presented on the physical effects of aging on the auditory periphery and central nervous system, as well as the consequences of aging on behavioral and electrophysiologic measures of auditory function. Clinical implications in the effects of physiologic and cognitive aging on auditory performance will be discussed.
Prerequisite: HESP606 and HESP700.
Restriction: Must be in one of the following programs (Hearing and Speech Sciences: Ph.D. (Doctoral); Clinical Audiology: Au.D. or Ph.D. (Doctoral); Hearing and Speech Sciences: M.A. (Master's)).

HESP638 Research Practicum (1-3 Credits)
Analysis, synthesis and integration of knowledge related to current research or clinical issues in human communication and its related disorders.
Restriction: Permission of BSOS-Hearing & Speech Sciences department.
Repeatable to: 6 credits if content differs.

HESP639 Special Topics in Hearing and Speech Sciences (1-3 Credits)
Intensive coverage of selected topics of current interest.
Restriction: Permission of BSOS-Hearing & Speech Sciences department.
Repeatable to: 6 credits if content differs.

HESP645 Pediatric Audiology (3 Credits)
Evaluation and treatement of hearing-impaired children.
Prerequisite: HESP606.
Restriction: Must be in Clinical Audiology: Au.D. or Ph.D. (Doctoral) program; and permission of BSOS-Hearing & Speech Sciences department. Or permission of instructor.

HESP648 Clinical Practice in Speech (1-3 Credits)
Supervised training in the application of clinical methods in the diagnosis and treatment of speech disorders.
Restriction: Permission of instructor.
Repeatable to: 6 credits.

HESP648A Clinical Practice in Speech: Diagnostic Procedures (1-3 Credits)
Supervised training in the application of clinical methods in the diagnosis of speech disorders.
Restriction: Permission of instructor.

HESP648B Clinical Practice in Speech: Therapeutic Procedures (1-3 Credits)
Supervised training in the application of clinical methods in the treatment of speech disorders.
Prerequisite: HESP648A.
Restriction: Permission of instructor.
Repeatable to: 6 credits.

HESP649 Clinical Practice in Audiology (1-3 Credits)
Supervised training in the application of clinical methods in the diagnosis and treatment of hearing disorders.
Restriction: Permission of instructor.
Repeatable to: 6 credits.

HESP649A Clinical Practice in Audiology: Diagnostic Procedures (1-3 Credits)
Supervised training in the application of clinical methods in the diagnosis of hearing disorders.
Restriction: Permission of instructor.
Repeatable to: 6 credits.

HESP649B Clinical Practice in Audiology - Aural Rehabilitation (1 Credit)
A clinical practicum course with individualized instruction, which focuses on the skills necessary to provide intervention and counseling for a wide range of disorders of the auditory system in patients of varying ages and cultural backgrounds. Each student will be various activities across three semesters (Spring YR2, Summer YR2, and Fall YR3). Students may work individually or in pairs to provide hearing loss intervention, auditory training, hearing loss prevention education, and communication strategy training. The student is expected to prepare for each session with a complete clinical plan, educational materials, and counseling strategies. Students must meet with the Audiologist prior to the aural rehabilitation (AR) session to discuss the plan of care. During the visit, the student will perform hearing loss handicap assessments, lead counseling sessions regarding rehabilitative options, make modifications to existing treatment plans/hearing aids, and educate the patient about their hearing. Following the visit, the student will document the encounter according to clinical protocol and ethical standards using the electronic medical records system. All patient-related information will be handled within a secure computer environment which meets HIPAA regulations for protected health information.
Prerequisite: HESP649A.

HESP658 Special Clinical Topics in Hearing and Speech (1-3 Credits)
Comprehensive coverage of selected topics pertinent to clinical issues. Specific content varies each semester, and may include supervision, clinical ethics, etc.
Restriction: Permission of BSOS-Hearing & Speech Sciences department.
Repeatable to: 6 credits if content differs.

HESP659 Global Perspectives in Communication Sciences and Disorders (3 Credits)
Provides students with a supervised and multidisciplinary international service learning (ISL) opportunity for the reciprocal exchange of cultural perspectives, knowledge, and skills. Through interactions with Ghana health and educational professionals as well as patients/clients and their families, students will gain perspective on broader health issues such as determinants of health, health disparities, and the global burden of disease. Students will have learning opportunities in governmental and non-governmental organizations (NGOs) to gain knowledge of and experience with varied healthcare and educational systems in under-resourced communities. In addition to observing and working with Ghana Speech-Language Therapists (SLT) and other rehabilitative professionals, students will assist faculty in the provision of educational workshops for professionals and/or outreach activities for the community.
Recommended: HESP702, three semesters of HESP648B, one semester HESP648A.
Jointly offered with: HESP458.
Restriction: Must be in the M.A. program in Speech Language Pathology or Au.D. program in Audiology.
Repeatable to: 6 credits.
Credit Only Granted for: HESP659 or HESP458.
Additional Information: This course will require students to travel out of the country.

HESP700 Hearing Aids (3 Credits)
Principles, methods and procedures for selection, fitting, calibration and management of amplification systems for hearing-impaired children and adults.

HESP701 Hearing Aids II (3 Credits)
Advanced issues in amplification technology, prescriptive hearing aid selection, and management of amplification systems for special populations.
Prerequisite: HESP700.
Restriction: Must be in one of the following programs (Hearing and Speech Sciences: Ph.D. (Doctoral); Clinical Audiology: Au.D. or Ph.D. (Doctoral); Hearing and Speech Sciences: M.A. (Master's)) ; and permission of BSOS-Hearing & Speech Sciences department. Or permission of instructor.

HESP702 Diagnostic Procedures in Speech-Language Pathology (2 Credits)
Diagnostic tools and methods in the analysis of speech-language disorders in children and adults.
Restriction: Must be in Hearing and Speech Sciences: M.A. (Master's) program; and permission of BSOS-Hearing & Speech Sciences department. Or permission of instructor.

HESP704 Audiology Practice Management (3 Credits)
Basics of clinical business management both in the context of private practice in Audiology and as a department in a healthcare corporation.
Prerequisite: HESP606, HESP706, HESP700, and HESP701; or permission of instructor.

HESP706 Advanced Clinical Audiology (3 Credits)
Advanced clinical and experimental methods of evaluating the peripheral and central auditory system using acoustic stimuli. Procedural considerations and interpretation of test results.
Prerequisite: HESP606; or students who have taken courses with comparable content may contact the department.

HESP708 Independent Study (1-6 Credits)
Individual research projects under guidance of a faculty member.
Restriction: Permission of instructor.
Repeatable to: 6 credits.

HESP710 Industrial and Environmental Noise Problems (3 Credits)
Evaluation and control of noise hazards. Effects of noise on man. Medico-legal aspects of noise-induced hearing impairment.
Restriction: Permission of instructor.

HESP712 Cochlear Implants and Other Implantable Technologies (3 Credits)
Comprehensive presentation of cochlear implant design and processing, medical/surgical aspects, evaluation, programming, outcomes in children and adults, and post stimulation care. The role of the audiologist as a member of the cochlear implant team will be emphasized. Current and emerging trends in other implantable technologies also will be covered.
Prerequisite: Must have completed or be concurrently enrolled in HESP700, HESP701, and HESP722; or permission of instructor.

HESP722 Psychoacoustics (3 Credits)
Auditory perception and auditory processing in normal and impaired hearing.

HESP724 Research Design (3 Credits)
Evaluations of research designs, critique of published articles and student involvement in designing experiments on assigned topics.
Additional Information: Must have completed a course in basic statistics.

HESP728 Advanced Clinical Practice in Speech (1-8 Credits)
Clinical internship in selected off-campus facilities.
Prerequisite: HESP648.
Restriction: Permission of instructor.
Repeatable to: 8 credits.

HESP729 Advanced Clinical Practice in Audiology (1-8 Credits)
Clinical internship in selected off-campus facilities.
Prerequisite: HESP649.
Restriction: Permission of instructor.
Repeatable to: 8 credits.

HESP730 Vestibular-ocular Assessment and Management (Electrophysiologic Measures II) (3 Credits)
Advanced principles and methods of evaluating vestibular-ocular function using electrophysiologic measures. Includes rehabilitative issues pertaining to balance disorders and advanced electrophysiologic measures of auditory system function.
Prerequisite: HESP630.

HESP731 Seminar in Clinical Supervision (1 Credit)
Supervising students and employees can be a daunting task. Fostering the next generation of doctors of audiology and support staff requires a unique set of knowledge and skills. This course is designed to explore the theoretical concepts in the supervisory paradigm as well as real-world scenarios. Supervision is not a "one-size fits-all" process, therefore the intricacies and strategies of the supervisor-supervisee relationship must be carefully considered.
Prerequisite: In at least the third year in AuD program.

HESP732 Hearing Aids Lab (1 Credit)
Laboratory experience covering clinical procedures of concepts addressed in concurrent academic course, Hearing Aids 1 (HESP700). This laboratory is 1-credit and graded separately from HESP700. Students will be given the opportunity for hands-on practice in the use of amplification devices for the treatment of hearing impairment. As the first lab in the course series, students will be able to describe and apply current best practices required for amplification-based aural (re)habilitation for patients across the lifespan including those that may differ from them in race, ethnicity, gender identity, sexual orientation, and socioeconomic background.
Corequisite: HESP700.

HESP733 Hearing Aids II Lab (1 Credit)
Laboratory experience covering clinical procedures addressed in concurrent academic course, Hearing Aids 2 (HESP701). This laboratory is 1-credit and graded separately from HESP701. Students will be given the opportunity for hands-on practice in the use of amplification devices for the treatment of hearing impairment. As the second lab in the course series, students will be able to perform the assessment, selection, fitting, verification, validation, adjustment, modification, counselling, and troubleshooting activities required for amplification-based aural (re)habilitation independently.
Prerequisite: HESP700 and HESP732.
Corequisite: HESP701.

HESP734 Basic Hearing Measurement Laboratory (1 Credit)
Supplemental lab experience that coincides with HESP606: Basic Hearing Measurement. Students will complete hands-on learning activities to reinforce theoretical concepts from the didactic learning in HESP606. The goal of this lab is to facilitate the transfer of learning from the classroom to clinical practicum.
Prerequisite: HESP416.
Corequisite: HESP606.

HESP735 Hearing, Aging, and Public Health (3 Credits)
Public health promotes and protects the health of all people and their communities. This course introduces public health concepts and demonstrates how they might be applied or are integral to the practice of Audiology when interacting with older adults. Topics discussed include foundational aspects of epidemiology, aging, chronic conditions common with age and association with hearing, social determinants and accessibility, and health care utilization and policy. Students will be challenged to consider a focus on hearing as it relates to broader and interdisciplinary health services and how this consideration may be incorporated into their clinical practice and experiences. This course is designed for CAUD students who have at least some clinical experience to provide perspective to the topics discussed.
Prerequisite: HESP606.
Credit Only Granted for: HESP735 or HESP636.

HESP736 Electrophysiological Measurements Lab (1 Credit)
This course is a supplemental lab experience that coincides with HESP630: Electrophysiological Measurements. Students will complete hands-on learning activities to reinforce theoretical concepts from the didactic learning in HESP630. The goal of this lab is to facilitate the transfer of learning from the classroom to clinical practicum.
Prerequisite: HESP606.
Corequisite: HESP630.

HESP737 Quantitative Methods for Hearing, Speech, and Language Sciences (3 Credits)
Quantitative methods related to Hearing, Speech, and Language Science research. This includes data representation and visualization, calculation of descriptive statistics, estimation and hypothesis testing. Learning to use data analysis in Excel and statistical computer packages like SPSS is emphasized as a core competency of the course.
Credit Only Granted for: HESP639E or HESP737.
Formerly: HESP639E.

HESP788 Graduate Research Externship (1-3 Credits)
Off-campus research internship with departmental affiliates at National Institutes of Health and other regional universities. Contact department chairman for available placements, requirements and openings.
Recommended: HESP724.

HESP799 Master's Thesis Research (1-6 Credits)

HESP808 Current Research in Hearing, Speech and Language Services (1-3 Credits)
Current research in speech, language and hearing sciences and disorders.
Restriction: Must be in one of the following programs (Hearing and Speech Sciences: Ph.D. (Doctoral); Clinical Audiology: Au.D. or Ph.D. (Doctoral); Hearing and Speech Sciences: M.A. (Master's)) ; and permission of BSOS-Hearing & Speech Sciences department.
Repeatable to: 6 credits if content differs.

HESP818 Seminar in Language Processing (3 Credits)
Information processing models of language, relationships among language, memory and cognition.
Restriction: Must be in one of the following programs (Hearing and Speech Sciences: Ph.D. (Doctoral); Clinical Audiology: Au.D. or Ph.D. (Doctoral); Hearing and Speech Sciences: M.A. (Master's)) ; and permission of instructor.
Repeatable to: 6 credits if content differs.

HESP828 Seminar in Hearing Science (3 Credits)
Recent developments in auditory psychophysics, and/or anatomy and physiology of the periperal and central auditory mechanisms.
Restriction: Must be in one of the following programs (Hearing and Speech Sciences: Ph.D. (Doctoral); Clinical Audiology: Au.D. or Ph.D. (Doctoral); Hearing and Speech Sciences: M.A. (Master's)) ; and permission of BSOS-Hearing & Speech Sciences department.
Repeatable to: 6 credits if content differs.

HESP829 Clinical Internship Residency (1-9 Credits)
Off-Campus, full-time (30-40 hours/week) clinical externship in Audiology at regional and national institutions.
Prerequisite: Must have completed HESP729 for two semesters; and must have completed the comprehensive exams successfully.
Restriction: Permission of BSOS-Hearing & Speech Sciences department.
Repeatable to: 18 credits if content differs.

HESP838 Seminar in Language Acquisition (3 Credits)
Models of normal and disordered first language acquisition, second language acquisition and bilingualism.
Restriction: Must be in one of the following programs (Hearing and Speech Sciences: Ph.D. (Doctoral); Clinical Audiology: Au.D. or Ph.D. (Doctoral); Hearing and Speech Sciences: M.A. (Master's)) ; and permission of instructor.
Repeatable to: 6 credits if content differs.

HESP848 Seminar in Audiology (3 Credits)
Research tipics realted to hearing assissment, amplification, and audiologic rehabilitation.
Restriction: Must be in one of the following programs (Hearing and Speech Sciences: Ph.D. (Doctoral); Clinical Audiology: Au.D. or Ph.D. (Doctoral); Hearing and Speech Sciences: M.A. (Master's)) ; and permission of instructor.
Repeatable to: 6 credits if content differs.

HESP849 Capstone Research Project I (2 Credits)
First of two-course sequence leading to the final research requirement for the Doctor of Audiology (Au.D.) degree; involves individual study and/or supervised lab work with mentor, preparation of research proposal (including IRB protocol if required), and attendance at Capstone Research Project Workshop.
Prerequisite: HESP724.
Restriction: Must not be in Clinical Audiology: Au.D. or Ph.D. (Doctoral) program.

HESP858 Seminar in Speech Pathology (3 Credits)
Problems in disordered articulation, voice, fluency and dysphagia.
Restriction: Must be in one of the following programs (Hearing and Speech Sciences: Ph.D. (Doctoral); Clinical Audiology: Au.D. or Ph.D. (Doctoral); Hearing and Speech Sciences: M.A. (Master's)) ; and permission of instructor.
Repeatable to: 6 credits if content differs.

HESP859 Capstone Research Project II (1-4 Credits)
Second of two-course sequence leading to the final research requirement for the Doctor of Audiology (Au.D.) degree; involves final data collection, analysis and presentation of results or completion of scholarly paper under the direction of the faculty mentor.
Prerequisite: Must have completed or be concurrently enrolled in HESP849.
Restriction: Must be in Clinical Audiology: Au.D. or Ph.D. (Doctoral) program.
Repeatable to: 6 credits if content differs.

HESP868 Seminar in Speech Science (3 Credits)
Problems in speech acoustics and physiology.
Restriction: Permission of instructor.
Repeatable to: 6 credits.

HESP878 Seminar in Language Disorders (3 Credits)
Congenital and acquired language disorders of children and adults.
Restriction: Permission of instructor.
Repeatable to: 6 credits.

HESP879 Academic Research Seminar (1 Credit)
An overview of issues relevent to the research process will be provided.Topics rotate on a semester basis and include ethics, grantsmanship, professional presentations, research publications, and peer review of journal articles. A formal product (e.g., poster presentation, platform presentation, peer review, IRB application) will be required each semester.
Restriction: Must be in Hearing and Speech Sciences: Ph.D. (Doctoral) program.
Repeatable to: 3 credits if content differs.

HESP887 Academic Research Seminar (2 Credits)
This course has a focused, rotating set of topics each semester to cover professional and academic issues, including ethics, grantsmanship, professional presentations, professional publications, and peer review of journal articles.
Prerequisite: HESP724.
Restriction: Must be in one of the following programs (Hearing and Speech Sciences: Ph.D. (Doctoral); Clinical Audiology: Au.D. or Ph.D. (Doctoral)).

HESP888 Seminar in Neurological Bases of Language (3 Credits)
Neural ststrates of language function, brain image of normal and disordered language function, and neural plasticity for language.
Restriction: Must be in one of the following programs (Hearing and Speech Sciences: Ph.D. (Doctoral); Clinical Audiology: Au.D. or Ph.D. (Doctoral); Hearing and Speech Sciences: M.A. (Master's)) ; and permission of instructor.
Repeatable to: 6 credits if content differs.

HESP889 Doctoral Candidacy Research (1-3 Credits)
Doctoral candidacy paper research
Restriction: Must be in one of the following programs (Hearing and Speech Sciences: Ph.D. (Doctoral); Clinical Audiology: Au.D. or Ph.D. (Doctoral)) ; and permission of instructor.
Repeatable to: 6 credits if content differs.

HESP898 Pre-Candidacy Research (1-8 Credits)

HESP899 Doctoral Dissertation Research (1-8 Credits)