Audiology

AUD 630L Electroac Char of Amp Sytm Lab 1 cr
This class will take a practical, "hands-on approach" to working with hearing aid amplification and will compliment the written class work presented in AUD 630 - Electroacoustic Characteristics of Amplification Systems. Topics covered will include earmolds and earmold impressions, earmold and tubing modifications, hearing aid components, measurement of electroacoustic characteristics of hearing aids, troubleshooting hearing aid problems, and performing minor repairs on hearing aids. Co-requisite: AUD 630

AUD 631L Sel Fit & Verif of Amp Sys Lab 1 cr
This class will take a practical, "hands-on approach" to working with hearing aid amplification and will compliment the written class work presented in AUD 631 - Selection, Fitting, & Verification of Amplification Systems. Topics covered will include selection of appropriate hearing aids, modifications and adjustment of digital hearing aids, manipulation of hearing aid software, verification of hearing aid performance with real ear measurement, and use of FM systems and other hearing aid accessory devices. Co-requisite: AUD 630

AUD 612 Anatomy-Physio Hearing Mech 4 cr
Study of the anatomy and physiology of the nervous system, the anatomy and physiology of the outer, middle, inner ear, including the vestibular system, and the central auditory nervous system.

AUD 613 Psychoacoustics 3 cr
Study of the principles, procedures and research involved in the field of psychoacoustics and of the relationships between the physical dimensions of auditory stimuli and the resultant perceptual experience as well as the relationships among psychoacoustic testing and both auditory physiology and the audiologic evaluation process. Participation in laboratory assignments will be required.

AUD 614 Instrumentation and Acoustics 3 cr
Study of basic electricity, acoustics and measurement of sound properties, wave analysis, transducers, measuring and calibration systems, speech processing systems, and system interaction and integration.

AUD 616 Resrch Design Hearing Sci 3 cr
Research designs utilized in the hearing sciences; elements of research proposals and studies; how to critique a research study; how to conduct a literature review; APA format; students will be required to write precis of research articles and write a research proposal. Elements of modern statistics including sets and functions, probability theory, hypothesis testing, analysis of variance models, correlation, and regression.

AUD 621 Professional Issues 2 cr
This course will address a variety of professional issues such as organizations, societies, and their histories; codes of ethics; scopes of practice; credentialing and licensure; the development of the Au.D.; guidelines and position statements generated by ASHA, AAA, ADA, and AVI; standards and best practices; methods and models of service delivery; and infection control.

AUD 622 Medical Audiology 3 cr
This course will address acquired and congenital diseases and disorders of the outer, middle, and inner ear and the central auditory nervous system occurring across the lifespan; imaging techniques; non-audiologic medical and surgical interventions for these conditions; and cerumen management techniques.

AUD 623 Pharma & Ototox Monitoring 3 cr
This course will provide the basic science background necessary to understand the effects of medications on the auditory and balance systems. This course will also address drug treatment strategies for hearing loss and balance disorders. Topics will include mechanisms of drug actions, side effects, how age and disease affect these mechanisms, and specific effects of certain drugs on the hearing and balance system. This course will additionally address appropriate methods for identification and monitoring of patients prescribed potentially ototoxic medications.

AUD 630 Electroac Char of Amp Systems 3 cr
This course will address styles and types of earmolds, hearing aids, and assistive listening devices; components common to all amplification systems as well as optional features (such as directional microphones, volume controls, telecoils, etc.) and their electroacoustic properties and functioning; use of ANSI standards; physical, acoustic and electroacoustic modifications of earmolds and amplification systems.

AUD 631 Sel, Fit & Verif of Amp Sys 3 cr
This course will address the principles of selection, fitting, and verification of amplification systems, including hearing aids and assistive listening devices; subjective and objective audiologic assessments used to determine need for, select, and fit appropriate amplification systems for patients of all ages; and techniques used to select and fit amplification systems. The course will also address subjective and objective verification procedures, specifically addressing the importance of including Real-Ear Measures and subjective self-assessment measures in the amplification process.

AUD 632 Hearing Aid Lab 1 cr
This course will address the principles of verification and validation; tools used to verify appropriate fitting of amplification systems (such as real-ear probe-mic equipment) and techniques used to validate fitting (such as software packages, and subjective and objective audiologic measures); cochlear implant remapping.
AUD 633  Advanced Sensory Aids  3 cr
This course will address advanced technologies for individuals with hearing-impairment such as cochlear and brainstem implants, vibrotactile aids, and implantable devices, as well as the selection and fitting of these technologies.

AUD 640  Basic Audiologic Assessment  3 cr
This course will address the principles of cross-check, the test battery approach, differential diagnosis, relevant test equipment, instruments, and transducers, administration and interpretation of the pure-tone testing, clinical masking, case history, otoscopy, and tuning-fork tests, speech audiometry; tests for pseudo-hypoacusis, ototoxicity, site-of-lesion testing and historical assessments; and informal assessment procedures.

AUD 641  Immit & Otoacous Emission Meas  3 cr
This course will address administration and interpretation of acoustic immittance and otoacoustic emission measures across the lifespan. Topics will address standard and multi-frequency tympanometry, acoustic reflex testing, and eustachian tube function testing; spontaneous, transient and distortion-product OAE measurement; and the influence of intrinsic and extrinsic variables, including cochlear and retro-cochlear pathology, on outcomes and differential diagnosis.

AUD 642  Pediatric Audiology  3 cr
This course will address issues associated with providing audiologic services to pediatric and developmentally delayed populations. Issues will include gestational development, test administration and interpretation; genetic transmission of hearing loss, risk factors for hearing loss; principles of screening and the development and construction of a screening program; universal newborn hearing screening and early hearing detection and intervention programs.

AUD 643  Audiology and Aging  3 cr
This course will address the issues associated with providing audiologic services to older adults. Issues will include effects of aging on anatomy, physiology, and function, and test administration and interpretation issues specific to older adults.

AUD 645  Evoked Potential Measures  3 cr
This course will address instrumentation (transducers and electrode types); application and interpretation of evoked potential (EP) measures including ENOG, ECoG, ABR, middle and late potentials, across the lifespan; sedation protocols; assessment protocols associated with different EP measures and the populations to which they are applied; population norms; intrinsic and extrinsic variables affecting EP results; differential diagnosis of auditory neuropathy; troubleshooting.

AUD 647  Adult Audio Rehabilitation  3 cr
This course will address the implications of hearing loss in adulthood including the educational, vocational, social and legislative concerns of adults with hearing loss; assessment tools and intervention techniques used to maximize communication skills, including communication strategy training, speechreading, and group therapy approaches.

AUD 648  Counseling Hear Imp-Families  3 cr
This course will address various theories, principles and techniques associated with the social and psychological aspects of disability as well as issues specific to and techniques used when counseling patients with hearing loss and their families.

AUD 649  Ped Habil & Educ Audiology  3 cr
This course will address the speech, language, and communication of children with hearing impairment. Manual and oral modes of communication will be discussed, including American Sign Language, Signing Essential English I and II, Cued Speech, Total Communication, and Auditory-Verbal Therapy. Other issues to be addressed will include the development, management, and utilization of hearing and middle ear system screening programs, classroom acoustics, selection and fitting of classroom-based amplification, and federal law associated with children with special needs. Taught Spring Semester.

AUD 651  Assess-Treatmnt Cent Aud Proc  3 cr
This course will address the development, assessment, and interpretation of an auditory processing test battery across the lifespan, as well as intervention approaches.

AUD 653  Industrial-Forensic Audiology  3 cr
This course will address federal noise standards, effects of noise exposure on the auditory system, sound measurement and instrumentation, development and implementation of a hearing conservation program, hearing protection devices and forensic audiology.

AUD 654  Tinnitus and Hyperacusis  3 cr
This course will address assessment and intervention approaches used in the management of tinnitus and hyperacusis.

AUD 655  Spch-Lang Path for Audiologist  2 cr
This course will address specific topics in speech-language pathology relevant for audiology majors.

AUD 656  Vestibular Assessment  4 cr
This course will include a discussion of the peripheral and central anatomy and physiology of the balance system and the test measures used to assess the function of this complex system. Topics will include case history and screening measures, as well as test protocols and analysis of results on electronystagmography/vidyonystagmography, rotational testing, posturography, and vestibular evoked myogenic potentials. Taught Spring Semester.
AUD 657  Management of Vestibular Disorder  2 cr
This course will focus on peripheral and central disorders of the vestibular system and the interpretation of results on diagnostic tests in disordered patients. Pharmacological and surgical treatments of dizziness will be discussed, as well as rehabilitative techniques to manage the vestibular pathology.

AUD 658  Advanced Neurophys Measures  3 cr
This course will address advanced electrophysiological techniques, including ENOG, ALR, ERPs (i.e. P300, etc), and neuroimaging techniques (fMRI and PET) with an emphasis on auditory and cognitive processing, across the lifespan; source localization techniques; instrumentation; stimulus and acquisition parameters; measurement procedures; analysis and interpretation.

AUD 661  Development-Management Aud Pract  3 cr
This course will address issues associated with audiology practice management including techniques involved in developing a mission statement and a business plan; working with an accountant; determining type, location, and name of practice; regulation, licensure, and hiring a legal advisor; equipment and service delivery decisions; establishing accounts with suppliers, paying bills and budgeting; third-party reimbursement, Medicaid, and Medicare; hiring and supervision; demographics and marketing; use of outcome data; and professional writing.

AUD 670  Clinical Practicum I  1 TO 2 cr
Students will become familiar with and conduct basic audiologic procedures on non-clinic populations. New Course Description: by means of various lab assignments. Students will also be involved in clinical activities in the USA Speech & Hearing Center while under direct supervision. Special Fee.

AUD 671  Clinical Practicum II  3 cr
Students will obtain experience administering a number of audiologic assessments and intervention techniques to clinic populations in the USA Speech and Hearing Center and external practicum sites while under direct supervision.

AUD 672  Clinical Practicum III  3 TO 6 cr
Students will obtain experience administering a number of audiologic assessment and intervention techniques to clinic populations in the USA Speech and Hearing Center and external practicum sites while under direct supervision. Special Fee.

AUD 673  Supervision in Audiology  2 cr
This course includes a description of supervision and supervisors, the development of supervisory behaviors, components of the supervisory process, models for the assessment of supervisees, analyzing the supervisory process, supervision across settings, supervision of non-audiology personnel, and accountability.

AUD 674  Special Projects in Audiology  3 cr
Student will be required to develop a variety of projects during their academic training, some of which will be further developed and completed during this course.

AUD 675  Special Topics in Audiology  1 cr
Student will identify cases or service delivery issues of clinical or professional interest and present these cases or issues to fellow students, clinical supervisors, and faculty via chat room in a grand rounds format.

AUD 676  Externship  3 TO 11 cr
Off-campus opportunity to obtain clinical experience in a full-time setting. In addition, students may be required to identify cases or service delivery issues of clinical or professional interest and present these cases or issues to fellow students, clinical supervisors, and faculty via an online forum in a grand rounds format.