

**Department of Speech & Hearing Sciences**  
**Course Descriptions**

**SPHR 262 Voice and Diction (4)** Study and practice of principles of voice production and articulation of speech sound, with attention to elementary speech physiology and phonetics. Intended for students who desire to develop more effective speech and for meeting special needs of teachers, radio and television speakers, public speakers, and others who require special competence in speaking. Emphasis on both theory and practice. Two hours per week of laboratory work required.

**SPHR 365 Survey of Speech, Language, and Hearing Disorders (4)** Designed as an overview of speech, language, and hearing in children and adults. Topics to include: cleft palate, stuttering, hearing impairment, and multi-cultural differences. Recommended for general speech students.

**SPHR 370 Phonetics and Acoustics (4)** A study of sounds used in speech, their acoustic properties, and their transcription utilizing the IPA; description of sounds, their symbolic nature, their production, and physical and psychological problems involved in their perception. The acoustical bases of speech and hearing will also be addressed.

**SPHR 371 Anatomy and Physiology of Speech and Swallowing (4)** A study of the anatomical structures and physiology of the respiratory, phonatory, and articulatory systems for speech, with applications to speech disorders. The physiology of swallowing and swallowing disorders is also covered.

**SPHR 372 Speech & Language Development in Children (4)** Provides students with a foundation of knowledge regarding basic processes of language acquisition. In addition to the study of normal language development from a theoretical, developmental, and clinical perspective, related areas of study include cognition, social interactions, play, and literacy. Bilingual and multicultural issues are also addressed.

**SPHR 380 Language Disorders in Children (4)** An overview of developmental language disorders in children. Disorders will be presented in terms of etiology, incidence, and characteristics. Assessment issues and treatment principles will also be discussed. Prerequisite: 372

**SPHR 394 Guided Observation (1)** Designed to acquaint students with the clinical process in speech, language, and audiology cases. Students will observe phases of clinical operation including diagnostic management, parent conferencing, and material preparation.

**SPHR 395 Directed Clinical Assistantship (2)** Designed to acquaint pre-professional students with the direct management of speech, language, and hearing cases in cooperation with advanced clinicians and under the direction of a qualified clinical supervisor. Students enrolled in this course will participate in all phases of clinical operation, inclusive of: scheduling, diagnostic management, parent conferencing, report writing, material preparation, etc. Recommended corequisites: SPHR 370, 372, 380, 464.

**SPHR 461/561 Neurology of Speech and Hearing (4)** A course specifically designed for speech and hearing majors to provide a study in-depth of the neurology of the speech and hearing mechanisms with special attention given to the major deviations affecting verbal communication.

**SPHR 464 Speech Disorders in Children (4)** Discussion of normal speech development and how it can differ in individuals with speech disorders. Exploration of assessment, diagnosis, and treatment for speech disorders in children. Introduction to linguistic and cultural factors related to speech development and disorders, and to special populations with high incidence of speech disorders. Prerequisites: SPHR 370 & 372.

**SPHR 470/570 Audiometric Practicum (2)** Supervised clinical practice designed for Speech and Hearing Science majors. Practical training in basic pure-tone and speech audiometry, including audiometric screening of children and adults. Prerequisite: SPHR 488/588

**SPHR 486/586 Urban Language Clinic (2)** This on-campus practicum provides students an opportunity to participate in a speech and language enrichment classroom program for children. This practicum experience emphasizes development and use of speech and language units and pragmatic techniques with children from various cultural backgrounds. *This is a prerequisite for SPHR 591.* Recommended prerequisite: SPHR 498/598.

**SPHR 487/587 Basic Audiology (4)** Introductory course in audiology emphasizing basic acoustics and psychoacoustics, anatomy and physiology of the ear, hearing measurement, and types and causes of hearing impairment.

**SPHR 488/588 Advanced Audiology (4)** Introduction to the audiological test battery. Topics include bone-condition, masking, speech audiometry, and objective tests. Auditory pathologies and their audiometric correlates are also covered. Recommended prerequisite: SPHR 487/587.

**SPHR 489/589 Aural Rehabilitation (4)** Theoretical course covering the role of speech reading (lip reading) and auditory training as it relates to speech, language, and communication. Historical perspectives and philosophies considered, communication systems, speech acoustics and perception, amplification and hearing aids, speech reading, and auditory training. Multicultural issues will be included. Prerequisite: SPHR 488/588.

**SPHR 495/595 Organic Communication Disorders (4)** Introduction to speech and language disorders with emphasis on voice disorders, stuttering disorders, and neurogenic disorders; cleft palate and cerebral palsy will complete the survey. Recommended prerequisite: SPHR 371, 380.

**SPHR 496/596 Introduction to Clinical Management (4)** Provides an introduction to management of persons with communication disorders in terms of assessment treatment of persons with speech, language, and hearing disorders. Administration and interpretation of standardized tests, interviewing, and case-history taking will be covered. Methods, materials, and techniques in the treatment of communication disorders will be addressed. Terminology and basic techniques of modifying speech, language, and hearing disorders with specific application to clinical management, will be given, with special consideration of program design and delivery. Theoretical considerations and practical applications of behavior modification theory as applied to children and adults with speech, language, and hearing problems. Recommended prerequisites or corequisites: SPHR 464/564, 465/565

**SPHR 498/598 Speech-Language Practicum (2)** Supervised clinical work with speech and/or language disordered children and adults enrolled for assessment and intervention in the PSU Speech and Hearing Clinic and/or associated clinical programs; group discussion of clients, clinical techniques and clinical principles. Recommended prerequisites: SPHR 380, 464/564, 494/594, 496/596 (with grade B- or better).

**SPHR 550 Advanced Speech Disorders Practicum (2)** Students will participate in the evaluation and treatment of children and adults with disorders of speech under the supervision of faculty. Prerequisite: SPHR 495, 498/598

**SPHR 551 Advanced Child Language Disorders Clinic (2)** This on-campus practicum provides students with an opportunity to apply methods covered in SPHR 584 to a practicum experience. Students will evaluate language skills and design and deliver language intervention under faculty supervision to preschool and school-aged children with speech/language delays/disorders. Various models of language intervention will be stressed. *This is a prerequisite for SPHR 591.* Prerequisite: SPHR 498/598, 580. Corequisite: SPHR 584 or permission of instructor.

**SPHR 553 Counseling in Communication Disorders (2)** Designed for speech-language pathology and audiology majors to receive an introduction into the major theories of counseling techniques and how they can implement these techniques throughout their careers.

**SPHR 554 Articulatory and Phonological Disorders (4)** Development and disorder of the articulation and phonology of speech sounds, with particular emphasis on children. Phonological and phonetic theories used in understanding speech and speech disorders. Various means of assessing and providing intervention for speech sound disorders. Information specific to special topic areas, such as childhood apraxia of speech, cleft palate, childhood dysarthria, and oral motor approaches to intervention.

**SPHR 556 Hearing Aids II (4)** Advanced topics in amplification for the hearing impaired. Topics include: hearing aid evaluation, prescription of electroacoustic characteristics, fitting procedures, and post-fitting counseling. Prerequisite: SPHR 555.

**SPHR 557 Hearing Aids Laboratory (2)** Provides practical experience in hearing aid testing, repair and modification.

**SPHR 558 Computer Applications in Communication Disorders (2)** Provides students with basic information on using computerized resources in diagnosis, treatment, and data management. Internet information resources will also be explored. (not offered every year)

**SPHR 559 Augmentative and Alternative Communication (2)** Introductory course in augmentative and alternative communication (AAC) with a focus on manual and technological communication methods. Includes strategies for appropriate assessment of speech, language, cognitive, and motor skills, and addresses partner support requirements for AAC use. Students gain knowledge and skills for treating children, adolescents, and adults with moderate to severe congenital or acquired disorders in speech and language.

**SPHR 560 Research Methods in Speech-language Pathology & Audiology (4)** Introduction to research methods in communication disorders, including clinical efficacy studies. Students become familiar with the scientific method, issues in hypothesis tests, approaches to literature review, data collection, reduction, and analysis. Background in statistics is helpful. Questions of current interest in the fields of speech, language, and hearing are presented. Students are encouraged to focus on one as a thesis topic and develop a mini-prospectus for a thesis through class assignments. Computer applications in research also outlined. Prerequisites: Stat 243, 244 or equivalent.

**SPHR 562 Instrumentation in Speech Sciences (4)** This course is designed for speech-language pathology majors to enable exploration of current instrumentation in the speech sciences. Provides exposure to recording equipment, flexible and rigid endoscopy, spirometry digital speech analysis as well as to a variety of computer applications for use in evaluation and therapeutic settings. Prerequisites: SPHR 380, 464/564, 495/595, 560. (not offered every year)

**SPHR 563 Adult Language Disorders (4)** Serves as an introduction to neurogenic communication disorders. Topics include aphasia, dementia, right-hemisphere disorders, and brain injury. Causes, symptoms, and multicultural issues in assessment and treatment will be discussed. Prerequisite: SPHR 495/595.

**SPHR 565 Dysphagia (4)** Designed to provide in-depth study of anatomy and physiology of swallow mechanism. Assessment and treatment of dysphagia and feeding disorders in neonatal through older adult populations to be addressed. Prerequisite: SPHR 563.

**SPHR 566 Motor Speech Disorders (4)** Advanced seminar in diagnosis of the dysarthrias and apraxia of speech. Prerequisites: SPHR 495, 563, 565

**SPHR 567 Craniofacial Disorders and Speech (3)** Acquaints students with clinical management of cleft palate and other craniofacial anomalies, particularly the role of speech-language pathologist. Students gain exposure to analysis of articulation and resonance disorders of persons with velopharyngeal incompetence. Prerequisite: SPHR 495/595. (not offered every year)

**SPHR 569 Advanced Audiology Practicum (2)** Supervised clinical practicum in the PSU Speech and Hearing Clinic. Students provide assessment of hearing and hearing aid evaluation and fittings for children and adults. Prerequisites: SPHR 488/588, 577, or concurrent.

**SPHR 571 Advanced Hearing Science I (4)** Psychoacoustics and the fundamentals of acoustics. Topics include simple harmonic motion, simple and complex sounds, decibel scales, and impedance. Also covered are psychophysical measurement, auditory sensitivity, pitch and loudness perception, masking, auditory nonlinearities, and binaural hearing. Prerequisites: SPHR 487/587

**SPHR 572 Advanced Hearing Science II (4)** Anatomy and physiology of the auditory system, including transmission properties of the middle ear, cochlea, mechanics and transduction, and the processing of auditory information from cochlea to cortex. The course begins with an introduction to basic electricity, including Ohm's Law, series and parallel circuits, alternating and direct currents. Prerequisites: SPHR 487/587.

**SPHR 573 Industrial Audiology (2)** The course focuses on the role of audiology in hearing conservation in industry. Includes effects of noise on the auditory system, noise measurement, and medical-legal aspects of noise exposure. Prerequisites: SPHR 487/587, 488/588, 572.

**SPHR 574 Objective Auditory Measures (4)** Introduction to clinical measurement of auditory evoked potentials. Normative and pathological aspects of electrocochleography and brainstem responses. Also covers advanced acoustic immittance, including physical principles and diagnostic applications. Prerequisite: SPHR 488/588.

**SPHR 575 Pediatric Audiology (2)** This course covers the embryology of the ear, the development of hearing, the etiology and pathology of hearing loss in children, and the assessment of hearing in children. It also covers amplification for hearing impaired children, and management of children with hearing losses. Prerequisite: SPHR 488/588.

**SPHR 576 Geriatric Audiology (2)** The study of hearing in aging. Physiological changes in the hearing mechanism associated with primary and secondary aging. Audiological assessment of the prebycusic patient, as well as intervention procedures are emphasized. Psychosocial forces associated with hearing impairment during the aging years are examined. Prerequisite: SPHR 488/588.

**SPHR 577 Medical Audiology I (4)** Evaluation of practical application of differential auditory tests used in the assessment of various hearing disorders. Focus on procedures, applications, and implications of various auditory measures forming test batteries which assist in the detection of conduction, cochlear, and retrocochlear lesions. Class demonstrations and supervised experiences. Prerequisites: SPHR 487/587, 488/588.

**SPHR 578 Medical Audiology II (2)** Continues examination of medical audiology from SPHR 577. Specific topics to be addressed include otacoustics emissions, central auditory assessment. Class demonstrations and supervised experiences. Prerequisites: SPHR 577.

**SPHR 574 Objective Auditory Measures (4)** Introduction to clinical measurements of auditory evoked potentials. Normative and pathological aspects of electro-cochleography and brainstem responses. Also covers advanced acoustic immittance, including physical principles and diagnostic application. Prerequisite: SPHR 488/588.

**SPHR 579 Medical Audiology III (2)** Continues examination of medical aspects of audiology from SpHR 577 and 578. Specific topics to be addressed include central auditory processing and tinnitus. Evaluation and management of both pathological conditions will be included. Prerequisite SPHR 578.

**SPHR 581 Stuttering (4)** Study of stuttering theories, research methods of diagnosis, and treatment for stuttering and other disorders of fluency. Prerequisites: SPHR 495/595.

**SPHR 582 Voice Disorders (4)** Deviations of voice found in children and adults. Study of normal and abnormal function of the voice mechanism. Attention to detection, referral, and differential diagnosis of voice problems. Demonstrations of typical voice problems; demonstrations in examination and treatment procedures; review of recent literature and research. Prerequisite: SPHR 495/595.

**SPHR 583 Language Development and Disorders in Children (4)** This course will provide students with a basis of knowledge of current research related to language acquisition in children, from both a theoretical and developmental perspective. Normal language processes will be used as a framework for the study of language differences and disorders in the acquisition of language. Areas of study will include specific language and learning disorders, and language delays secondary to mental retardation, autism, brain lesions/pathology, and hearing impairments. Related areas of development, including cognition, play, learning, and literacy acquisition will be discussed. Issues of bilingualism and multicultural issues will also be addressed.

**SPHR 584 Assessment & Treatment of Language Disorders: Birth to Age Five (4)**

Outlines causation, prevention, evaluation, and management procedures for addressing developmental disorders in infants, toddlers, and preschool children. Formal and informal assessment procedures will be covered. Uses and misuses of standardized tests will be discussed. Models of language disorders will be compared and contrasted. Speech sample analysis procedures will be studied. Pragmatic intervention techniques will be stressed. Relations between language and phonology and multicultural issues will also be included. Family-centered practice techniques will be emphasized. Prerequisites: SPHR 498/598, 583. Corequisite: SPHR 551.

**SPHR 585 Assessment & Treatment of Language Disorders in School-aged Children &**

**Adolescents (4)** Provides information on assessment and intervention of language and learning disorders in children, aged six through adolescence. Formal, informal, dynamic, and curriculum-based assessment of language difficulties will be covered. Treatment topics will include service delivery models, including consultation and collaboration with other school personnel, and intervention strategies. The relationship of language and learning disabilities will be addressed, with a focus on the assessment and treatment of language-based disorders of reading and writing. Issues of assessment and treatment in culturally diverse populations will be presented. Prerequisites: SPHR 583, 584

**SPHR 591 Student Teaching: Speech-language Pathology (10)** Practicum in speech-language pathology in the public school setting under the direction of a supervising speech-language clinician (ASHA CCC-SP). Students participate in the following activities: diagnosis and evaluation; section of caseload and scheduling; management of an entire caseload; maintaining appropriate records; handling both incoming and outgoing referrals; and parent/teacher/staff conferences. Concurrent registration in SPHR 592 required. Admission by approved application only, one full academic term in advance.

**SPHR 592 Seminar: Speech-language Pathology in Schools (2)** Survey of current methods and materials available to and appropriate for the public school speech-language pathologist. Specific problems encountered in the practicum experience are utilized as topics of discussion. Prerequisite: SPHR 585. Concurrent registration in SPHR 591 required.