

## BRIEF DESCRIPTION OF Au.D COURSES

### **STPHAUD 5131 Hearing Science. 3 credits.**

The basic principles of acoustics related to hearing will be introduced along with the anatomy and physiology of the auditory system. Topics include: generation, transmission, and measurement of sound; peripheral and central auditory system. Also includes basic electronics and instrumentation.

### **SPTHAUD 5132 Speech Science. 3 credits.**

The basic principles of acoustics related to speech will be introduced. Topics include: generation, transmission, and measurement of sound; frequency, intensity and duration, waveform composition, physiologic and psychologic aspects of acoustic phonetics.

### **SPTHAUD 5201 Introduction to Diagnostic Audiology. 3 credits.**

Introduction to basic audiological testing concepts and procedures including the audiogram, pure tone audiometry, masking, speech testing, and immittance. Students acquire basic proficiency in test procedures.

### **SPTHAUD 5490 Issues in Communication Disorders. 1 credit.**

Presentations and lectures on a variety of professional and clinical issues in audiology and speech language pathology.

### **SPTHAUD 6100 Research in Communication Disorders. 3 credits.**

Ethical and methodological considerations in speech language pathology and audiology research. Critical evaluation of research. Application of research to clinical practice.

### **SPTHAUD 6111 Clinical Laboratory I. 1 credit.**

First year (beginning) students will be paired with a third year practicing student to observe clients throughout the semester. Students will be required to test several simulated patients via computer programs.

### **SPTHAUD 6121 Clinical Laboratory II. 1 credit.**

Continuation of Clinical Laboratory I with students simulating more difficult cases and testing other students for practice. Observation of third year students will continue.

### **SPTHAUD 6130 Neuroscience. 3 credits.**

The structure and function of the nervous system are presented and analyzed, with an emphasis on hearing, speech, and language central organizations. Emphasis is on normal structure and function so the clinician can better understand abnormalities.

### **SPTHAUD 6131 External Observations. 1 credit.**

Four 1 week long observations at the following locations: ENT office, hearing aid manufacturer, private practice, and educational audiology. Experiences must be summarized into a written report.

### **SPTHAUD 6203 Advanced Diagnosis in Audiology. 3 credits.**

This course focuses on the development, administration, and interpretation of advanced procedures in audiology. Included are immittance audiometry, otoacoustic emissions, speech audiometry, central auditory function, and tests for pseudohypacusis. Integration of the total audiological test battery to assess the site of lesion of aural pathologies will be examined. Clinical laboratory is required.

### **SPTHAUD 6205 Auditory Evoked Potentials. 3 credits.**

This course is designed to explore the normal neuroanatomy and neurophysiology of the auditory system. Included will be an overview of normal and abnormal function, assessment, and treatment techniques. Administration and interpretation of auditory brainstem response testing will be emphasized. Clinical laboratory is required.

### **SPTHAUD 6207 Introduction to Hearing Aids. 3 credits.**

This course emphasizes hearing aid hardware, signal processing, and basic clinical procedures including electroacoustical analysis and real-ear measurement..

### **SPTHAUD 6221 Advanced Hearing Aids. 3 credits.**

This course places an emphasis on selection of hearing aid parameters, verification of fit, validation of benefit, orientation to use and care, and troubleshooting. Prerequisite: SPTHAUD 6207.

**SPTHAUD 6227 Medical Audiology. 3 credits.**

A study of the interaction among the anatomical and physiological components of the auditory system and various medical conditions as reflected in the sound transmission characteristics of the auditory system.

**SPTHAUD 6231 Auditory Processing Disorders. 3 credits.**

This course reviews the anatomy and physiology of the central auditory pathway. The development, administration and interpretation of tests of central auditory function are presented as well as current remediation strategies. Clinical laboratory is required.

**SPTHAUD 6235 Psychoacoustics and Speech Perception. 3 credits.**

The determination of psychological correlates of the physical parameters of acoustics will be studied. The general problem of inferring sensation or perception from behavioral data utilizing psychophysical methods and decision theory will be examined.

**SPTHAUD 6237 Advanced Electrophysiological Techniques. 3 credits.**

This course investigates origins and applications of evoked potentials looking at early, middle, and late responses including ECoG, ABR, MLR, LAER, and endogenous (e.g., MMN and P300) potentials. Case studies and detailed analyses of wave forms are emphasized.

**SPTHAUD 6247 Hearing Conservation. 3 credits.**

The student learns how to implement a comprehensive noise program following the OSHA guidelines. Topics include noise measurement, noise-hazards, noise-abatement, and noise-safety programs. Hearing conservation is discussed..

**SPTHAUD 6273 Pediatric Audiology. 3 credits.**

A developmental approach to the evaluation of hearing of the neonate, infant and young child will be studied. The principles and procedures for screening, testing, and monitoring the pediatric client will be presented. Laboratory.

**SPTHAUD 6581 Cochlear Implants and Other Specialized Hearing Devices. 3 credits.**

Treatment of profoundly hearing impaired adults and children is discussed. Function, assessment, and performance of cochlear implants is investigated from inception to current practice. Assessment and treatment techniques incorporating implantable hearing aids, tactile aids, and assistive listening devices are presented.

**SPTHAUD 6701 Clinical Practicum Audiology. 1 credit.**

Supervised clinical experiences for audiology students. For those students assigned to onsite clinic at the LSUHSC Department of Communication Disorders Clinic, the clinic assignment will include on time call with hearing aid dispensary, and duties as described in the Clinic Handbook.

**SPTHAUD 7131 Principles of Managing the Pediatric Hearing Impaired. 3 Credits.**

This course focuses on the habilitation/rehabilitation of children with hearing impairments. Psychological, social, and educational aspects of hearing impairment in children are addressed. Parental and family counseling are discussed. Educational options, assistive technology, and speech perception testing are included.

**SPTHAUD 7211 Electronystagmography (ENG). 3 credits.**

This course will focus on the functional anatomy and physiology of the vestibular system, with emphasis on administration and interpretation of standard clinical tests of ENG. Extensive laboratory work will be required. This course is the prerequisite for the advanced vestibular testing and rehabilitation course.

**SPTHAUD 7215 Educational Audiology. 3 credits.**

This course focuses on the various educational models for education/communication of hearing impaired children, as well as assistive technology and classroom acoustics. Speech perception testing and functional listening evaluation are covered along with pediatric rehabilitative strategies. Laboratory required.

**SPTHAUD 7225 Genetics. 1 credit.**

The science of genetics as it applies to audiology and hearing.

**SPTHAUD 7231 Clinical Rotation. 1 credit.**

This is a 4 to 6 week offsite clinical audiology placement. It may be repeated for credit.

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**SPTHAUD 7233 Research Laboratory Experience. 1 credit.**

Since solving clinical problems involves procedures very similar to those used by the laboratory researcher, Au.D practitioners must have some knowledge of research methods. Students will team up with a research scientist and assist or participate in research activities over the course of a full semester.

**SPTHAUD 7235 Instrumentation. 2 credits.**

Participants will develop an understanding of issues involved in measuring sound including calibration of equipment, trouble shooting, use of terms and technical aspects of equipment. Lab required.

**SPTHAUD 7239 Geriatric Audiology. 3 credits.**

This course is an overview on the anatomical and physiological effects of aging on the peripheral and central auditory system. Subjective and objective measurements will be discussed as well as rehabilitation methods.

**SPTHAUD 7311 Hearing Aid Modification and Repair. 1 credit.**

Lecture and lab work on hearing aid repair and earmold modification.

**SPTHAUD 7315 Introduction to Sign Language. 1 credit.**

Introduction to basic sign systems and rudimentary ASL.

**SPTHAUD 7319 Practice Management in Audiology. 3 credits.**

This course considers the non-clinical aspects of professional practice. Topics presented include ethics, employment, billing, information management, suppliers and manufacturers, private practice, laws and regulations.

**SPTHAUD 7323 Advanced Vestibular Testing and Rehabilitation. 3 credits.**

While ENG testing remains the primary tool for evaluating vestibular dysfunction, in recent years new computer assisted procedures have been developed that assess the patient's posture and balance functions. This course will focus on these new procedures which, in combination with ENG, provides a more complete picture of both peripheral and central vestibular problems.

**SPTHAUD 7325 Sign Language II. 1 credit.**

Basic sign language for audiologists and other health professionals. Introduction to Sign Language is a prerequisite for this course.

**SPTHAUD 7329 Pharmacology 1 credit.**

Basic pharmacology course for audiologists and other health professionals. This course focuses on the actions of drugs that will affect hearing.

**SPTHAUD 7501 Externship I. 6 credits.**

This course is part of a 9 to 12 month externship designed to provide the student with at least 35 hours per week of audiology experience. May be repeated until clinical training is completed.

**SPTHAUD 7502 Externship II. 6 credits.**

This course is part of a 9 to 12 month externship designed to provide the student with at least 35 hours per week of audiology experience. May be repeated until clinical training is completed. Prerequisite: satisfactory completion of Externship I.

**SPTHAUD 7503 Externship III. 6 credits.**

This course is part of a 9 to 12 month externship designed to provide the student with at least 35 hours per week of audiology experience. May be repeated until clinical training is completed. Prerequisite: satisfactory completion of Externship II.