HESP - HEARING AND SPEECH SCIENCES

HESP120 Introduction to Linguistics (3 Credits)
An introduction to the scientific study of natural language with focus on the basic concepts of phonology, syntax, semantics and pragmatics, with subsequent attention to the applied aspects of linguistic principles.

Additional Information: HESP120 is required for HESP majors. HESP majors may not substitute LING200.

HESP150 Introduction to Language Science (3 Credits)
Language science is the scientific study of how humans acquire, use, comprehend, and produce language. Most people in all societies learn and use their native language or languages with apparent ease - but don't be fooled: languages are highly complex, and speaking and understanding language requires some amazing feats of mental acrobatics. Thus there are many opportunities for difficulties with language, which is the focus of our field. Understanding difficulties with speech, language, and hearing require first understanding how processing works when language is successful - the psychological (behavioral) and neurobiological (brain) factors that enable people to learn and use language despite its intricacies, the structure and properties of language itself, and how knowledge of language is acquired, represented, and processed in the mind and brain.

HESP202 Introduction to Hearing and Speech Sciences (3 Credits)
An introduction to communication sciences and disorders; a survey of the bases of normal speech, language and hearing ability, major forms of communicative disorders and their treatment.

HESP214 Should I Buy INTO That? Comparing Media Claims with Scientific Evidence from Brain & Behavior Research (3 Credits)
Millions of dollars are spent each year advertising products that "make you smarter" or "learn a foreign language faster" or "increase your memory", etc. But are these statements true? Can they be backed up? Learn how to critically evaluate media claims of new discoveries in brain and behavior. Read popular-press articles, listen to podcast episodes and review commercial products that claim to be based on science. Then, learn how to find out if the claims are true.

HESP258 Special Topics in Study Abroad II (1-6 Credits)
Special topics course taken as part of an approved study abroad program. Repeatable to: 15 credits if content differs.

HESP300 Introduction to Psycholinguistics (3 Credits)
An introduction to current theories of language and an investigation of their relationship to human communication behavior. Survey of the experimental literature relating to this question.

Prerequisite: Minimum grade of C- in HESP202; or permission of BSOS-Hearing & Speech Sciences department.

Recommended: HESP120.

HESP303 Phonetic transcription (2 Credits)
An introduction to broad and narrow phonetic transcription, and to physiology of speech production. The primary goal of the course is to provide knowledge about phonetics and the ability to use this knowledge in an applied setting.

Prerequisite: Permission of instructor.

HESP305 Anatomy and Physiology of the Speech Mechanism (3 Credits)
Anatomy, physiology, and neurology of speech mechanism.

Prerequisite: Minimum grade of C- in HESP202; or permission of BSOS-Hearing & Speech Sciences department.

HESP306 Anatomy and Physiology of Speech & Hearing (4 Credits)
This is a 4-credit course focusing on the biological and neurological bases of human speech production and human hearing, namely the anatomy, physiology, and neurology of the vocal/speech mechanism and the hearing mechanism. Specifically, respiration, phonation, resonance, articulation, swallowing, and hearing will be highlighted. A strong understanding of normal anatomy and physiology is essential for the successful evaluation and treatment of patients with speech, language, swallowing and hearing disorders.

Prerequisite: Permission of instructor.

HESP307 Speech & Hearing Science (4 Credits)
Human hearing is exquisitely sensitive, allowing us to hear extremely faint sounds, to follow the sounds of a friend's voice in a loud party, and to appreciate subtle differences between words in the language. This course provides an introduction to the basic physics of sound, the acoustic properties of the sounds of speech, and the mechanisms by which those sounds are perceived by the listener.

Prerequisite: HESP303.

HESP311 Anatomy, Pathology and Physiology of the Auditory System (3 Credits)
Gross anatomy of the ear and pathways for transmission of sound energy through the peripheral and central auditory system. Causes, development and effects of pathological conditions contributing to temporary or chronic hearing impairments.

Prerequisite: Minimum grade of C- in HESP202; or permission of BSOS-Hearing & Speech Sciences department.

HESP313 Neurobiology for Speech and Hearing (2 Credits)
This course is designed to provide an understanding of normal neuroanatomy and neurophysiology of speech and language. It will also provide preliminary information regarding pathologic processes, especially those affecting speech and language.

HESP359 Special Topics in Study Abroad III (1-6 Credits)
Special topics course taken as part of an approved study abroad program. Repeatable to: 15 credits if content differs.

HESP386 Experiential Learning (1-3 Credits)
Students will have the opportunity observe and/or participate in therapy activities provided by a speech-language pathologist or audiologist in this experiential learning course.

Restriction: Junior standing or higher; and permission of BSOS-Hearing & Speech Sciences department.

HESP388 Undergraduate Research Externship (1-3 Credits)
Off-campus research internship with departmental affiliates at National Institutes of Health and regional universities. Contact department chairman for openings and descriptions of eligible placements.

Prerequisite: HESP311, HESP300, HESP305, and HESP202.

Restriction: Permission of BSOS-Hearing & Speech Sciences department.

HESP389 LEAP Classroom Internship (1-3 Credits)
Participation in a language-based, literacy-rich preschool classroom for children with speech-language disorders. Students will have the opportunity observe and/or participate in therapy activities provided by a speech-language pathologist or audiologist in this experiential learning course.

Restriction: Junior standing or higher; and permission of BSOS-Hearing & Speech Sciences department.
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.

HESP404 Fluency & Voice Disorders (3 Credits)
Etiology, assessment and therapeutic management of phonation, resonance, and fluency disorders in children and adults.
**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.

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.

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.

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.

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.