Audiology and Speech Sciences

College of Communication Arts and Sciences

108. Voice and Articulation
Fall, Winter, Spring, Summer. 3(3-0)
The study and development of the skills of voice and articulation.

222. Oral Language Development
Winter, Summer. 3(2-0)
Emergence and development of receptive and expressive aspects of oral language of the child.

227. Physics for Audiology and Speech Sciences
Fall, Spring. 3(3-0); MTH 108. Not open to students with credit in PHY 237. Interdepartmental and administered by the Department of Physics.

274. Structures and Functions of Speech and Hearing Mechanisms
Fall, Winter. 4(3-0) ASC 108 or approval of department.
Peripheral and central auditory mechanisms and the respiratory, phonatory and articulatory mechanisms for speech.

276. Descriptive Phonetics
Winter, Spring. 3(3-0) ASC 274 or approval of department.
Detailed description of the principles that underlie the production of speech sounds.

277. Scientific Bases of Voice Communication Process
Fall, Spring. 3(3-0) ASC 276 and PHY 237 or approval of department.
Scientific bases of voice communication with special reference to the acoustic aspect of production.

322. Speech Pathology I
Fall, Winter. 5(3-0) ASC 276, ASC 277.
Etiology, symptomatology, and rationale of therapy for speech and language problems.

373. Clinical Procedures in Speech Pathology and Audiology
Winter. 4(3-2) 2.00 grade-point average in ASC 277 and ASC 372 or approval of department.
Principles underlying the clinical interview and client relationships essential to diagnosis and therapy. Procedures in obtaining, recording, and evaluating test results and therapeutic methods.

444. Oral Language of Urban Areas
Winter, Summer. 3(3-0)
Concentration in the characteristics of language and human communication as these relate to studies and practices of those involved in urban affairs.

454. Introduction to Audiology
Fall, Spring. 5(4-1) ASC 276, ASC 277.
Fundamental aspects of normal hearing; hearing disorders, hearing tests.

460. Aural Rehabilitation
Winter, Summer. 5(4-1) ASC 454 or approval of instructor.
Fundamental aspects of hearing aids, auditory training, and speechreading for the hearing-impaired person.

470. Communication Disorders
Spring, Summer. 3(3-0) Juniors. Not open to Audiology and Speech Sciences majors.
An overview of communication disorders; the professions of speech and language pathology and audiology and their relationships to allied professions.

474. Clinical Practicum in Speech and Language Pathology
Fall, Winter, Spring. 3(3-2) May reenroll for a maximum of 2 credits. Grade of 2.0 or better in both ASC 372 and ASC 373.
Therapeutic experience in speech and language pathology.

476. Sleep Pathology II: Diagnostics
Fall, Winter, Spring, Summer. 3(3-2) ASC 474 or approval of department.
Test procedures and analysis, supervised clinical experience in language and speech evaluations and report writing.

490. Research Design in Audiology and Speech Sciences
Fall, Spring. 4(3-0) Self-paced. Senior majors or approval of department.
Sampling, measurement, experimental design, data collection, and quantitative procedures as applied to audiology and speech sciences.

491. Independent Study
Fall, Winter, Spring. 1 to 6 credits. May reenroll for a maximum of 12 credits. Approval of department.

501. Advanced Study of Articulatory Behavior
Summer. 4(3-2) Approval of department.
Theoretical and pragmatic implications of the interrelationships of articulatory behavior and language production, especially as related to investigating procedures and results.

510. Audiologic Calibration Standards
Summer. 4(3-2) ASC 854 or ASC 833A and ASC 833B; ASC 890A; approval of department.
Contemporary electro-aoustic and other measurement standards for audiometers, sound level meters, earphones, hearing aids, and related devices; current issues in standards development, laboratory in applied measurement.

831. Speech and Hearing Problems of Adults
A. Neuropathologies of Speech
Winter. 4(3-0)
Neuropathology, symptomatology, and speech and language rehabilitation of adults.
B. Voice Disorders
Spring. 4(3-0)
Etiology, symptomatology, and therapeutic procedures for disorders of voice. Speech pathologist and audiologist in relation to other disciplines in the rehabilitation of adults with voice disorders.

832. Speech and Hearing Evaluation and Therapy
A. Hearing Handicap
Summer. 4(2-2)
A theoretical approach to the study of the aural rehabilitative process.

B. Cerebral Palsy
Spring. 4(3-0)
Etiology, symptomatology, structural and functional consideration of cerebral palsied. Therapeutic procedures for the speech of the cerebral palsied.

C. Delayed Language Development
Winter. 4(3-0)
Evaluative techniques including audiometry, psychometry, and case history as aids to the differential evaluation of delayed language development.

D. Mental Retardation
Summer. 4(3-0)
Language behavior and speech development of the mentally retarded as related to all facets of personal-social development and adjustment.

E. Stuttering
Fall. 4(3-0)
Longitudinal studies of stuttering theories and the therapies accompanying them.

F. Cleft Palate
Summer. 4(3-1)
Etiology, symptomatology, structural and functional consideration of cleft palate. Therapeutic procedures for the speech habilitation of cleft palate individuals.

833. Specialized Clinical Audiology
A. Differential Audiology
Fall. 4(3-0)
Pure tone audiometric tests as an aid to the otologist in evaluating the pathology of hearing loss, including the development of norms. Consideration of monaural loss.

B. Speech Audiology and Evaluation of Hearing Aids
Fall. 4(4-0)
Speech audiology; principles and methods in the selection of hearing aids; physical characteristics of hearing aids.

C. Industrial Audiology
Spring. 4(2-2)
Evaluation of the role of the audiologist in industry emphasizing identification procedures, damage-risk criteria, measurement and control of noise, conservation procedures, and medicolegal problems.

D. Advanced Audiological Evaluation
Winter. 4(3-2)
Theory, administration and evaluation of selected objective tests of the peripheral and central auditory mechanism.

E. Pediatric Audiology
Winter. 4(2-0)
Evaluative procedures including play audiometry, language assessment, audiologic case studies as aids to the differential diagnosis of auditory disorders in children; habilitative procedures for the acoustically handicapped child.

Spring. 4(4-0)
Approval of department.
Evaluation and analysis of various theories of speech perception and their implications for speech and language pathologists, audiologists, and speech and hearing scientists.

854. Psychophysics and Theories of Audition
Winter. 4(4-0)
Approval of instructor.
Nature of auditory stimuli and the results of psychophysical experimentation in audition.

874. Speech and Hearing Problems of Cerebral Palsied
Summer. 4(3-0) May reenroll for a maximum of 16 credits.
Graduate seminar in speech and hearing involving problems that arise in relation to speech and hearing therapy in the public schools.

875A. Clinical Practicum in Speech and Language Pathology
Fall, Winter, Spring, Summer. 1 credit.
ASC 474. May reenroll for a maximum of 8 credits.
Directed diagnostic, therapeutic, and prognostic experience in speech and language pathology.

875B. Clinical Practicum in Audiology
Fall, Winter, Spring, Summer. 1 credit.
ASC 454. May reenroll for a maximum of 8 credits.
Directed diagnostic, therapeutic and prognostic experience in audiology in various clinical settings.

876. Communication Disorders: Neuroanatomy-Neurophysiology
Fall. 4(3-1) Approval of department.
Neuromotorical and neurophysiological correlates of speech, language, and hearing.

880A. Algorithms for Speech and Hearing Sciences
Fall. 4(4-0)
A discussion of useful algorithms applicable to the classification of phenomena related to audiology and speech sciences.

880B. Acoustic Phonetics
Winter. 4(2-2) ASC 880A or approval of department.
An analytic study of the acoustics of speech.

880C. Instruments and Electronics for Audiology and Speech Sciences
Spring. 4(3-3) ASC 880B or approval of department.
A discussion of the electronic instruments and instruments necessary to measure parameters related to hearing and speech processes.

880D. Experimental Phonetics
Summer. 4(4-0) ASC 880C or approval of department.
Critical review of the literature in experimental phonetics. Selected papers on acoustic and physiological phonetics and related fields are presented in seminar fashion.

899. Master's Thesis Research
Fall, Winter, Spring, Summer. Variable credit.
Approval of department.

940. Seminar in Audiology and Speech Sciences
Spring. 4(2-0) May reenroll for a maximum of 16 credits.

990. Special Problems in Audiology and Speech Sciences
Fall, Winter, Spring, Summer. 1 to 6 credits.
Special projects in audiology and speech sciences.

999. Doctoral Dissertation Research
Fall, Winter, Spring, Summer. Variable credit.
Approval of department.

BIOCHEMISTRY

BCH

College of Agriculture and Natural Resources
College of Human Medicine
College of Natural Science
College of Osteopathic Medicine

200. Introduction to Biochemistry
Winter, Summer. 5(5-0) Credit may not be earned in both BCH 200 and BCH 401. General chemistry; one term organic chemistry. Not acceptable for a B.S. degree in biochemistry.
Survey of biochemistry emphasizing the major metabolic activities of living organisms.

400H. Honors Work
Fall, Winter, Spring. Variable credit.
Approval of department.
Assigned reading and experimentation.

401. Basic Biochemistry
Fall, Spring. 5(5-0) Credit may not be earned in both BCH 200 and BCH 401. One year organic chemistry or CEM 242; not open to biochemistry majors.
A one-term presentation of biochemistry emphasizing structure and function of major biomolecules, metabolism and regulation. Examples used for illustrative purposes will emphasize the mammalian organism.

404. General Biochemistry Laboratory
Winter, Spring. 3(1-0) Analytical chemistry, BCH 401 or BCH 451.
Experimental aspects of biochemistry.

412. Clinical Biochemistry
(363.) Winter, Summer. 3(2-3) BCH 401, CEM 162. Medical Technology majors. Not acceptable for a BS degree in biochemistry. Others: approval of department.
Quantitative clinical laboratory methods.

451. Biochemistry
Fall. 3(3-0) Credit may not be earned in both BCH 401 and BCH 451. One year organic chemistry or CEM 242.
A comprehensive survey of biochemistry with emphasis on the properties and functions of biomolecules, energy-yielding and energy-regulating processes, and the transfer of genetic information.

452. Biochemistry
Winter. 3(3-0) BCH 451.
Continuation of BCH 451.

453. Biochemistry
Spring. 3(3-0) BCH 452.
Continuation of BCH 452.