COMMUNICATIONS SCIENCES AND DISORDERS (CSD)

CSD 3113. Terminology in Communication Sciences and Disorders. 3 Credit Hours.

Prerequisites: Admission into program. Multi-Level Course: CSD 7113 A course designed to familiarize CSD undergraduate students with a portion of the large body of terms used in various Allied Health disciplines, in particular, Audiology and Speech-Language Pathology. **Course Type:** Independent Study

CSD 3313. Language Development. 3 Credit Hours.

Prerequisites: Permission. Language is analyzed in terms of interacting systems of sound, syntax and meaning. Students investigate developments of each of these systems in children. **Course Type:** Lecture

CSD 3333. Phonetics. 3 Credit Hours.

Prerequisites: None Multi-Level Course: CSD 5113 Lecture and supervised exercises in the analysis, categorization and transcription of the sounds of speech.

Course Type: Lecture

CSD 3413. Anatomy Physiology of the Speech Mechanisms. 3 Credit Hours.

Prerequisites: None Multi-Level Course: CSD 5153 Considers specific mechanisms directly related to generation of speech signals as well as current theories of voice production.

Course Type: Lecture

CSD 3423. Anatomy and Physiology of the Hearing Mechanisms. 3 Credit Hours.

Prerequisites: None Multi-Level Course: CSD 7423 Considers the specific anatomical and physiological mechanisms directly related to the reception of acoustic signals as well as the current theories of hearing. **Course Type:** Lecture

CSD 3433. Introduction to Speech Pathology and Audiology. 3 Credit Hours.

Prerequisities: Permission. Basic principles of assessment and management of articulation, fluency voice, and hearing problems in children and adults.

Course Type: Lecture

CSD 3443. Foundations of Speech & Language Development. 3 Credit Hours.

Prerequisites: None Multi-Level Course: CSD 5173 & 7443 This course will examine the developmental milestones of speech, language, and cognition. In addition, the theories for speech/language development and learning will be studied.

Course Type: Lecture

CSD 3453. Introduction to Articulation Disorders. 3 Credit Hours.

Prerequisites: Permission. Multi-Level Course: CSD 5323 Nature and causes of articulation disorders; diagnosis and management. **Course Type:** Lecture

CSD 3463. Foundations of Audiology. 3 Credit Hours.

Prerequisites: CSD 3422 or permission. Multi-Level Course: CSD 5183 & 7463 Presents concepts and rationale underlying the measurement of hearing with special reference to pure tone air and bone conduction tests, speech audiometry and impedance measures. **Course Type:** Lecture

$\label{eq:csd} \text{CSD 3473. Language Disorders in the Exceptional Child. 3 Credit Hours.}$

Prerequisites: CSD 3313 or permission. Multi-Level Course: CSD 5193 An introduction to the assessment and remediation of language disorders in exceptional children.

Course Type: Lecture

CSD 3960. Honors Readings. 1-3 Credit Hours.

Prerequisites: Admissions to the Honors Program. May be repeated with change of content; maximum credit 6 hours. Honors reading will consist of topics designated by the instructor in keeping with the student's major program. The topics will cover materials not usually presented in the regular courses.

Course Type: Lecture

CSD 3970. Honors Seminar. 1-3 Credit Hours.

May be repeated; maximum credit 6 hours. The projects covered in this course will vary. The content will deal with concepts not usually presented in regular coursework. maximum credit six hours. **Course Type:** Lecture

CSD 3980. Honors Research. 1-3 Credit Hours.

Will provide an opportunity for the gifted honors candidate to work a special project in the student's field. May be repeated; maximum credit six hours.

Course Type: Laboratory

CSD 3993. Honors Colloquium. 3 Credit Hours.

An interdepartmental course involving two or more instructors from different departments developed and approved by the honors program director and listed in each departmental honors program. Students are required to enroll in the colloquium under their major departmental number.

Course Type: Lecture

CSD 4113. Augmentative and Alternative Communication. 3 Credit Hours.

Prerequisites: None This course will develop an understanding of the concepts, strategies, techniques, and issues that are unique to the field of augmentative and alternative communication (AAC). Hands-on experience with various methods and devices will illustrate best-practice AAC assessment and intervention for individuals with developmental/ acquired disabilities.

Course Type: Lecture

CSD 4270. Augmentative Methods in Communication. 1-3 Credit Hours.

Prerequisites: None. May be repeated with change of subject matter. Maximum credit twelve hours. Selected communication disorders topics are addressed and may include: cued speech, various sign language systems, and augmentative communication devices. **Course Type:** Lecture

CSD 4343. Neural Bases of Communication. 3 Credit Hours.

Introduction to neuroanatomy and neurophysiology as they relate to speech and language production and processing. Approved for graduate credit (CSD 5363).

Course Type: Lecture

CSD 4363. Fluency. 3 Credit Hours.

Prerequisites: Permission. Factors affecting speech fluency, theory of stuttering behavior, developmental factors, and traditional and recent developments in diagnostic and remedial procedures. **Course Type:** Lecture

CSD 4373. Introduction to Adult Neurological Communication Disorders. 3 Credit Hours.

Prerequisites: Admission into BS-CSD program; Permission of instructor This course introduces students to basic concepts in disordered communication in adults as a result of neurologic disease or injury. Foundational information in human brain anatomy will be followed by principles of evaluation and intervention that focus on disorders of speech, language and cognitive communication. **Course Type:** Lecture

CSD 4413. Speech and Hearing Science. 3 Credit Hours.

Prerequisites: None Multi-Level Course: CSD 5443 & 7413 Introduction to the physical principles underlying the production and reception of speech and language. Approved for graduate credit (Course ID 110126 CSD 5443).

Course Type: Lecture

CSD 4430. Seminar in Communication Sciences and Disorders. 1 Credit Hour.

Prerequisites: Admission into program. May be repeated; maximum credit 4 hours. Each student will read and present an article, chosen by faculty, in the disciplines of Audiology or Speech-Language Pathology, to the class. An open discussion of the article will be facilitated by the student and a faculty member.

Course Type: Lecture

CSD 4433. Instructional Procedures in Communication Disorders. 3 Credit Hours.

Prerequisites: Earned bachelor's degree from an accredited university and admission into the SLP MA program. Multi-Level Course: CSD 4433 Introduction to the methods and techniques of evaluation, instruction by objectives, and instructional planning for disorders in speech, hearing and language. Extensive observation and some practicum.

Course Type: Lecture

CSD 4443. Clinical Observation in CSD. 3 Credit Hours.

Prerequisites:None Multi-Level Course: CSD 7453 Didactic and observation in speech pathology and audiology. A portfolio of microthemes concerning the observations will be kept. (Spring) **Course Type:** Clinical

CSD 4460. Directed Readings in Communication Disorders. 1-4 Credit Hours.

May be repeated with change of content; maximum credit 4 hours. Provides opportunity for independent study through review of the literature in a particular area of interest under a selected professor. **Course Type:** Independent Study

CSD 4473. Diagnosis and Rehabilitation of Speech Language Pathology. 3 Credit Hours.

This course will examine the definition of speech and language disorders, the concepts underlying differential diagnosis, and rehabilitation of articulation/phonology, fluency, voice/resonance, and language disorders. **Course Type:** Lecture

CSD 4483. Sign Language I. 3 Credit Hours.

To introduce a nonverbal communication system to hearing students. The materials presented will be a combination of signed exact English (s.e.e.), signed English and American sign language (asl). Approved for graduate and professional credit (Course ID 110128 CSD 5583 and Course ID 110129 CSD 9153).

Course Type: Lecture

CSD 4490. Special Studies in Communication Disorders. 1-4 Credit Hours.

Prerequisites: None. May be repeated with change of subject matter; multiple enrollment within same term, maximum credit twelve hours. Provides opportunity for independent study in a particular area of interest under a selected professor.

Course Type: Independent Study

CSD 4493. Diagnosis and Rehabilitation in Audiology. 3 Credit Hours.

Prerequisites: CSD 3463. Multi-Level Course: CSD7493 & 5273 This course will examine the diagnostic and treatment of disorders of hearing and introduct the nonmedical rehabilitation options for treatment of these disorders.

Course Type: Lecture

CSD 4513. Clinical Interviewing and Counseling in Communication Disorders. 3 Credit Hours.

Prerequisites: None This course provides an overview of counseling principles, theories, and techniques. Students will develop basic understanding of counseling theories and the rationale for using them in clinical practice and they will practice using interviewing techniques for information giving and gathering with a spectrum of clients. (SP IV) **Course Type:** Lecture

CSD 4583. Sign Language II. 3 Credit Hours.

Prerequisites: CSD 4483 Sign Language I The course enables CSD students to continue expanding their signed vocabulary and to enhance the skills acquired in the Sign Language I course. Material presented will be a combination of Signed Exact English and American Sign Language. Emphasis will be placed on practiced communication, while continuing to build signed vocabulary.

Course Type: Lecture

CSD 4993. Capstone in Communication Sciences and Disorders. 3 Credit Hours.

Prerequisites: None This course provides a summative learning experience for students in the Bachelor of Science Degree Program in Communication Sciences and Disorders (BS-CSD). It provides instruction in scientific writing and it promotes development of skills in leadership and advocacy for individuals with disabilities and their families. **Course Type:** Lecture

CSD 5100. Practicum for Teachers of Deaf Blind Multi-Handicapped Children. 1-8 Credit Hours.

May be repeated; maximum credit 8 hours. For the teacher of the deaf blind, multi-handicapped children and will cover: neurological, sensory, psychological, motoric and educational development and evaluation; education and therapeutic intervention; documentation, material development, and practicum work with deaf/blind children in area programs. May be repeated; maximum credit eight hours. **Course Type:** Practicum

CSD 5102. Learning and the Communication Process. 2 Credit Hours.

Prerequisites: Permissions. Review of basic learning processes, including closely related behavioral phenomena, and an introduction to the principles of behavior modification with specific attention to speech and language behavior.

Course Type: Lecture

CSD 5113. Phonetics. 3 Credit Hours.

Prerequisites: Earned bachelor's degree from an accredited university and admission into the SLP MA program. Multi-Level Course: CSD 3333 Lecture and supervised exercises in the analysis, categorization and transcription of the sound of speech.

CSD 5133. Research Foundations in Communication Disorders. 3 Credit Hours.

Prerequisites: Permission. Ethical, logical, practical and methodological considerations associated with research in speech/language pathology and audiology; basic concepts in data management; critical evaluation of research publications. Approved for professional credit (Course ID 110136 CSD 9333).

Course Type: Lecture

CSD 5143. Autism Spectrum Disorders. 3 Credit Hours.

Prerequisites: None This course covers the knowledge and skills needed to provide effective assessments and evidence-based treatments for communication impairments in individuals with autism spectrum disorders (ASD). Topics covered include ASD characteristics and etiologies, functional communication systems, structured teaching principles, and positive environmental supports for effective learning. (Fall)

Course Type: Lecture

CSD 5153. Anatomy and Physiology of the Speech Mechanisms. 3 Credit Hours.

Prerequisites: Earned bachelor's degree from an accredited university and admission into the SLP MA program. Multi-level Course: CSD 3413 Considers specific mechanisms directly related to generation of speech signals as well as current theories of voice production.

Course Type: Lecture

CSD 5173. Foundations of Speech & Language Development. 3 Credit Hours.

Prerequisites: Earned bachelor's degree from an accredited university and admission into the SLP MA program. Multi-Level Course: CSD 3443 & 7443 This course will examine the developmental milestones of speech, language, and cognition in addition, the theories for speech/language development and learning will be studied.

Course Type: Lecture

CSD 5183. Foundations of Audiology. 3 Credit Hours.

Prerequisites: Earned bachelor's degree from an accredited university and admission into the SLP MA program. Multi-Level Courses: CSD 3463 & 7463 Presents concepts and rationale underlying the measurement of hearing with special reference to pure tone air and bone conduction tests, speech audiometry and impedance measures.

Course Type: Lecture

CSD 5193. Language Disorders in the Exceptional Child. 3 Credit Hours. Prerequisites: Earned bachelor's degree from an accredited university and admission into the SLP MA program. Multi-Level Course: CSD 3473 An introduction to the assessment and remediation of language disorders in exceptional children.

Course Type: Lecture

CSD 5270. Augmentative Methods in Communication. 1-3 Credit Hours.

Prerequisites: Permission. May be repeated with change of subject matter. maximum credit twelve hours. Selected communication disorders topics are addressed and may include: cued speech, various sign language systems, and augmentative communication devices. Approved for undergraduates and professional credit (Course ID 110130 CSD 4270 and Course ID 110131 CSD 8270).

Course Type: Lecture

CSD 5273. Diagnosis and Rehabilitation in Audiology. 3 Credit Hours.

Prerequisites: Earned bachelor's degree from an accredited university and admission into the SLP MA program. Multi-Level Courses: CSD 4493 & 7493 This course will examine the diagnosis and treatment of disorders of hearing and introduce the nonmedical rehabilitation options for treatment o these disorders. **Course Type:** Lecture

course type. Lecture

CSD 5282. Management of the High Risk Infant. 2 Credit Hours.

Organization and delivery of parent-oriented programs appropriate to the speech, language, and development needs of the high-risk youngsters from birth to three years of age and aimed at counteracting the educational and language retardation otherwise associated with high risk infants.

Course Type: Lecture

CSD 5292. Language Analysis. 2 Credit Hours.

Prerequisites: CSD 3313. Criterion-referenced, informal assessment measures of language, language sampling, discourse analysis, oral storytelling analysis, play-based assessment, analyzing the linguistic demands of the classroom.

Course Type: Lecture

CSD 5313. Phonological Disorders. 3 Credit Hours.

The evaluation and management of phonological disorders stressing problems that are functional in origin.

Course Type: Lecture

CSD 5323. Introduction to Articulation Disorders. 3 Credit Hours.

Prerequisites: Earned bachelor's degree from an accredited university and admission into the SLP MA program. Multi-Level Course: CSD 3453 Nature and causes of articulation disorders: diagnosis and management. **Course Type:** Lecture

CSD 5333. Instructional Procedures in Communication Disorders. 3 Credit Hours.

Prerequisites: Earned bachelor's degree from an accredited university and admission into the SLP MA program. Multi-Level Course: CSD 4433 Introduction to the methods and techniques of evaluation, instruction by objectives, and instructional planning for disorders in speech, language, and hearing. Extensive observation and some clinical. **Course Type:** Lecture

CSD 5363. Neural Bases of Communication. 3 Credit Hours.

Introduction to neuroanatomy and neurophysiology as they relate to speech and language production and processing. Approved for Graduate credit.

Course Type: Lecture

CSD 5403. Orofacial Anomalies. 3 Credit Hours.

Prerequisites: CSD 3413 or Permission. Communication problems of individuals with cleft lip and palate condition; evaluation and management is stressed. (Summer)

Course Type: Lecture

CSD 5413. Speech Science. 3 Credit Hours.

Prerequisites: CSD 3413 or Permission. Methods employed in the scientific study of speech and voice.

Course Type: Lecture

CSD 5423. Neuropathologies of Speech. 3 Credit Hours.

Prerequisites: CSD 4343 or Permission. The evaluation and management of certain neuropathologies which affect normal speech production. **Course Type:** Lecture

CSD 5433. Voice Disorders. 3 Credit Hours.

Prerequisites: CSD 3413, CSD 5412 or Permission. The nature, causes, identification, and clinical management of disorders of voice in children and adults.

Course Type: Lecture

CSD 5443. Speech and Hearing Science. 3 Credit Hours.

Prerequisites: None Multi-Level Course: CSD 4413 & 7413 Introduction to the physical principles underlying the production and reception of speech and language. Approved for graduate credit. **Course Type:** Lecture

CSD 5453. Adult Neurolinguistic Disorders. 3 Credit Hours. Prerequisites: CSD 4343 or Permission. Instruction in the evaluation and management of adult neurolinguistic disorders. Course Type: Lecture

CSD 5463. Fluency. 3 Credit Hours.

Prerequisites: Permission. Factors affecting speech fluency, theory of stuttering behavior developmental factors, and traditional and recent developments in diagnostic and remedial procedures.

Course Type: Lecture

CSD 5473. Language Assessment and Remediation in School-Age and Adolescent Population. 3 Credit Hours.

Prerequisites: CSD 3313, CSD 4343 or Permission. The rationale, methods, and procedures for the assessment and modification of language disorders in school-age and adolescent children. **Course Type:** Lecture

CSD 5483. Language Assessment and Remediation in the Preschool Population. 3 Credit Hours.

Prerequisites: CSD 3313, CSD 4343 or Permission. The rationale, methods, and procedures for the modification of language disorders in preschool children.

Course Type: Lecture

CSD 5493. Speech Perception. 3 Credit Hours.

Prerequisites: CSD 5413, CSD 5863 or Permission. Consideration of the theories and research findings related to the perception of normal speech and language.

Course Type: Lecture

CSD 5510. Practicum in Communication Disorders. 1-15 Credit Hours.

Prerequisites: Nine (9) hours in area of communication disorders or Permission. May be repeated; maximum credit 15 hours. Practice under supervision with children and adults with wide variety of communication disorders. Practicum experience may include: practicum in speech pathology; or practicum in audiology; or practicum in education of the deaf; or any combination of these.

Course Type: Clinical

CSD 5522. Diagnostic Methods in Speech Pathology. 2 Credit Hours. Prerequisites: Permission. The tests, methods, and procedures involved in the evaluation of speech and language disorders. **Course Type:** Lecture

CSD 5523. Diagnostic and Instructional Procedures in Speech Language Pathology. 3 Credit Hours.

Prerequisites: CSD 4433, CSD 4343 or Permission. Introduction to the scientific method, interdisciplinary, multidisciplinary, and transdisciplinary approaches to assessment, psychometrics, formal Vs informal testing, obtaining a clinical history, differential diagnosis, report writing, formulating basic and specific intervention goals, treatment efficacy, developing clinical skills, working with families, working within the professional community, multicultural issues. **Course Type:** Lecture

CSD 5530. Seminar in Communication Disorders. 1-3 Credit Hours.

Prerequisites: Permission. May be repeated with change of subject matter; multiple enrollment within same term, maximum credit twelve hours. Study in depth of various aspects of communication disorders of particular interest to students.

Course Type: Discussion

CSD 5532. Augmentative/Alternative Communication. 2 Credit Hours.

Prerequisites: CSD 3113 or Permission. Augmentative/alternative communication is designed specifically to assist students in the field of communication sciences and disorders in the integration of knowledge of human communication with the principles behind augmentative and alternative modes of communication and the technology available to implement these modes.

Course Type: Lecture

CSD 5540. Seminar in Communication Science. 2-3 Credit Hours.

Prerequisites: Permission. May be repeated with change of subject matter; maximum credit twelve hours. Discussion of specific areas of communication science, topics selected to meet needs and interests of students.

Course Type: Discussion

CSD 5550. Seminar in Professional Issues. 2-3 Credit Hours.

Prerequisites: Permission. May be repeated with a change in subject matter; maximum credit twelve hours. The study of selected professional issues of interest to students.

Course Type: Discussion

CSD 5553. Communication Disorders with Right Hemisphere Impairment/Traumatic Brain Injury. 3 Credit Hours.

Prerequisites: CSD 5453 or Permission. Functional neuroanatomy, connectionistic symptom/lesion principles, cognitive and linguistic symptomatologies, etiologies, prognostic factors, recovery profiles, differential diagnosis, concomitant disorders, report writing, rehabilitation goal task analyses, treatment principles and procedures, progress notes, treatment efficacy, ethical issues, interdisciplinary case management, case analyses.

Course Type: Lecture

CSD 5562. Speech Rehab of Laryngectomized, Tracheotomized and Vents. 2 Credit Hours.

Ventilator-dependent patients. Speech pathology graduate students study how to provide clinically for the speech rehabilitation of individuals in two groups: alaryngeal and ventilator-dependent. Standard and experimental rehabilitation methods are studied in detail. Both the relevant literature and selected clinical case studies are reviewed. **Course Type:** Lecture

CSD 5572. Dysphagia. 2 Credit Hours.

Prerequisites: CSD 3413, CSD 4343. Anatomic, physiologic, and developmental influences on swallowing and respiration, etiologies and components of the abnormal swallow, and dysphagia diagnosis and treatment. (Spring)

Course Type: Lecture

CSD 5583. Sign Language I. 3 Credit Hours.

To introduce a nonverbal communication system to hearing students. The materials presented will be a combination of signed exact English (s.e.e.), signed English and American Sign Language (ASL). **Course Type:** Lecture

CSD 5803. Adult Aural Rehabilitation. 3 Credit Hours.

Prerequisites: CSD 3463, CSD 5813 or Permission. Study of the manifestations and implications of acquired hearing impairment on human communication; topics include auditory processing, social and psychological adjustment to hearing loss, impact of the aging process, rehabilitation protocols, assistive devices, and evaluation techniques. **Course Type:** Lecture

CSD 5813. Audiology I. 3 Credit Hours.

Prerequisites: Permission. Air-conduction and bone-conduction pure-tone audiometry, speech audiometry, masking, and immittance audiometry. **Course Type:** Discussion

CSD 5823. Hearing Aids I. 3 Credit Hours.

Prerequisites: CSD 5813 or Permission. Physical characteristics of hearing aids, hearing aid standards, ear-mold acoustics, selection of hearing aids, group amplification systems, alternative communication aids for the hearing impaired.

Course Type: Lecture

CSD 5830. Instrumentation and Electroacoustics. 1-3 Credit Hours.

Prerequisites: Permission. May be repeated; maximum credit 6 hours. Electronic instruments and electroacoustic devices used in the communication disorders clinic or laboratory. May be repeated up to six hours with a change in content.

Course Type: Lecture

CSD 5833. Hearing Aid II. 3 Credit Hours.

Prerequisites: CSD 5823. In depth study of theories and philosophies governing the candidacy for amplification, hearing aid fitting strategies, and modifications of hearing aids and earmolds. New circuit technology (adaptive compression, wide-dynamic-range-compression, programmable) will also be reviewed and examined. **Course Type:** Lecture

CSD 5843. Audiology II. 3 Credit Hours.

Prerequisites: CSD 5813. The history, rationale, methodology, and interpretation of behavioral auditory tests intended to aid in the determination of the site of lesion within the auditory system. Included are tests for functional (non-organic) loss, sensory Vs neural loss, and localization of lesions within the central auditory pathways. **Course Type:** Lecture

CSD 5853. Physiologic Measures I. 3 Credit Hours.

The focus of the course is on peripheral physiologic assessment of the auditory mechanism and will include discussion of the physical basis, instrumentation, and diagnostic use of immittance audiometry, Electrony-stagmography, electrocochleography, and otoacoustic emissions across the age span.

Course Type: Lecture

CSD 5863. Hearing Science. 3 Credit Hours.

Prerequisites: Permission. Course content will include an in-dept review of: vibration, period, frequency, phase, wave equation, amplitude, RMS, pressure, intensity, decibels, complex sounds, fundamental frequency, audibility thresholds, temporal integration, simultaneous and temporal masking, critical bandwidth, binaural hearing, difference limens. **Course Type:** Lecture

CSD 5872. Electronystagmography. 2 Credit Hours.

Anatomy and applied neurophysiology of the vestibular system. Technique of recording nystagmus. The gaze, succade, tracking, optokinetic, positional, hallpike and bithermal caloric tests. Interpretation of test battery.

Course Type: Lecture

CSD 5873. Pediatric Audiology. 3 Credit Hours.

Prerequisites: CSD 5813 or Permission. Study of the development of human auditory behavior; high risk registries; identification audiometry; the rationale and conduct of behavioral as well as physiological techniques of assessing the auditory function of young children; selection of hearing aids; and appropriate referral resources. **Course Type:** Lecture

CSD 5960. Directed Readings in Communication Disorders. 1-4 Credit Hours.

May be repeated with change of content; maximum credit 4 hours. Provides opportunity for independent study through review of the literature in a particular area of interest under a selected professor. Approved for undergraduate and professional credit (Course ID 110132 CSD 5960 and Course ID 110133 CSD 8460). **Course Type:** Independent Study

CSD 5980. Research for Master's Thesis. 1-4 Credit Hours.

May be repeated; maximum credit 99 hours. Master's Thesis credit hours vary.

Course Type: Independent Study

CSD 5990. Special Studies in Communication Disorders. 1-4 Credit Hours.

Prerequisite: None. May be repeated with change of subject matter; multiple enrollment within same term, maximum credit twelve hours. Provides opportunity for independent study in a particular area of interest under a selected professor. Approved for undergraduate and professional credit (Course ID 110134 CSD 4490 and Course ID 110135 CSD 8490). **Course Type:** Independent Study

CSD 6413. Advanced Neural Bases. 3 Credit Hours.

Prerequisites: CSD 4343 or the equivalent or permission of instructor. Extension of topics and issues covered in introductory courses on neural bases of human communication; in-depth treatment of all functional systems, with direct application to communication processes and behaviors; rules of neural organization and details of developmental and acquired neural dysfunction's as they relate to communication disorders. **Course Type:** Lecture

CSD 6423. Communication Neuroscience. 3 Credit Hours.

Prerequisites: CSD 6413 or the equivalent or permission of instructor. Overview of this new specialty designation; survey of techniques for assessing the three target areas-behavior, peripheral physics, and physiology, central anatomy and physiology (including brain imaging); review of principles for experimental design emphasizing coordinated test batteries; new approaches to models of human brain development and function.

Course Type: Lecture

CSD 6513. Voice Disorders-Advanced. 3 Credit Hours.

Prerequisites: CSD 5433 or Permission. Advanced training in the diagnosis, treatment, and research of voice disorders. **Course Type:** Lecture

CSD 6523. Articulation Problems-Advanced. 3 Credit Hours.

Prerequisites: CSD 5313 or Permission. In-depth review of research related to speech articulation, intended primarily for doctoral level students.

CSD 6533. Advanced Language Science. 3 Credit Hours.

Prerequisites: Permission of Instructors. Survey core concepts in formal and applied linguistics, providing historical and current perspectives on social, psychological, and neurobiological aspects of language. Approved for professional credit (Course ID 110137 CSD 8433). Course Type: Lecture

CSD 6543. Speech Science-Advanced. 3 Credit Hours.

Prerequisites: CSD 5413 or Permission. Concepts pertinent to the laboratory investigation of speech and voice. Emphasizes review of research literature selected to illustrate a variety of research methods. Primarily for the doctoral level student.

Course Type: Lecture

CSD 6553. Speech Science Laboratory. 3 Credit Hours.

Prerequisites: CSD 5413 or Permission. Laboratory instruction and experience basic to the effective use of speech research equipment. Intended primarily for doctoral level students. Course Type: Laboratory

CSD 6563. Research Methods in Communication and Its Disorders. 3 Credit Hours.

Prerequisites: Permission. May be repeated with change of subject matter; maximum nine hours. Consideration of experimental design, concepts, and procedures. Topics are drawn from many areas including auditory, speech, and language disorders, psychoacoustics, experimental phonetics, speech perception.

Course Type: Lecture

CSD 6573. Psychophysics. 3 Credit Hours.

Prerequisites: BSE 5163 or Permission or equivalent. Introduce the student to the evolution of psychophsical measurement techniques and the application of those techniques to research and clinical measurement.

Course Type: Lecture

CSD 6663. Problems in Stuttering. 3 Credit Hours.

Prerequisites: CSD 5463 or Permission. Comprehensive survey of research and experimental techniques in speech fluency and stuttering; discussion of special clinical problems and procedures. Course Type: Lecture

CSD 6813. Instrumentation for Auditory Research. 3 Credit Hours.

Prerequisites: CSD 5832 or Permission. Basic electrical and electronic principles and terminology, electronic measuring instruments and principles of measurement, signal generation, conditioning, control and transduction, and the design of viable instrumentation schemes for audiological research. doctoral level course.

Course Type: Lecture

CSD 6822. Audiologic Instrumentation Laboratory. 2 Credit Hours.

Prerequisites: CSD 6813 or Concurrent enrollment. Demonstration and practical hands-on experience in implementing the principles elucidated in 6813.

Course Type: Lecture

CSD 6823. Industrial Audiology. 3 Credit Hours.

Prerequisites: CSD 5813 or Permission. Physical measurement of noise, study of the spectral analysis techniques; auditory and non-auditory effects of noise on man damage risk criteria; and hearing conservation programs in industry.

Course Type: Lecture

CSD 6833. Psychoacoustics. 3 Credit Hours.

Prerequisites: Permission. Detailed examination of current topics in psychoacoustics based on reading of both classical and recent literature. Intended primarily for doctoral level students. Course Type: Lecture

CSD 6853. Physiology Measures II. 3 Credit Hours.

Prerequisites: Physiology Measures I. Lectures and laboratory experience with a variety of methods for assessing human physiology related to speech and hearing, including otoacoustic emissions, evoked potentials and quantitative electroencephalography. Course Type: Lecture

CSD 6980. Research for Doctor's Dissertation. 1-15 Credit Hours. May be repeated; maximum credit 99 hours. Credit hours vary.

Course Type: Independent Study

CSD 7113. Terminology in CSD. 3 Credit Hours.

Prerequisites: Earned bachelor's degree from an accredited institution and admission into the Audiology program. Multi-Level: CSD 3113 A course designed to familiarize CSD undergraduate students with a portion of the large body of terms used in various Allied Health disciplines, in particular, Audiology and Speech-Language Pathology. Course Type: Lecture

CSD 7413. Speech and Hearing Science. 3 Credit Hours.

Prerequisites: Earned bachelor's degree from an accredited institution and admission into the Audiology program. Multi-Level Course: CSD 4413 & 5543 Introduction to the physical principles underlying the production and reception of speech and language. Approved for graduate credit CSD 5443.

Course Type: Lecture

CSD 7423. Anatomy and Physiology of the Hearing Mechanism. 3 Credit Hours.

Prerequisites: Earned bachelor's degree from an accredited institution and admission into the Audiology program. Multi-Level Course: CSD 3423 Considers the specific anatomical and physiological mechanisms directly related to the reception of acoustic signals as well as the current theories of hearing.

Course Type: Lecture

CSD 7443. Foundations of Speech Language Development. 3 Credit Hours.

Prerequisites: Earned bachelor's degree from an accredited institution and admission into the Audiology program. Multi-Level: CSD 3443 & 5173 This course will examine the developmental milestones of speech, language, and cognition. In addition, the theories for speech/language development and learning will be studied.

Course Type: Lecture

CSD 7453. Clinical Observations in CSD. 3 Credit Hours.

Prerequisites: Earned Bachelor's degree from an accredited institution and admission into the audiology program. Multi-level Course: CSD 4443 Didactic and observation in speech pathology and audiology. A portfolio of microthemes concerning the observations will be kept. (Spring) Course Type: Lecture

CSD 7463. Foundations of Audiology. 3 Credit Hours.

Prerequisites: Earned bachelor's degree from an accredited institution and admission into the Audiology program. Multi-Level: CSD 3463 & 5183 Presents concepts and rationale underlying the measurement of hearing with special reference to pure tone air and bone conduction tests, speech audiometry and impedance measures.

CSD 7493. Diagnosis and Rehabilitation (DX/RX) in Audiology. 3 Credit Hours.

Prerequisites: Earned bachelor's degree from an accredited institution and admission into the Audiology program. Multi-Level Course: CSD 4493 & 5273 This course will examine the diagnostic and treatment of disorders of hearing and introduce the nonmedical rehabilitation options for treatment of these disorders.

Course Type: Lecture

CSD 8133. Audiology I. 3 Credit Hours.

Air-conduction and bone-conduction pure-tone audiometry, speech audiometry, masking, and immittance audiometry. **Course Type:** Lecture

CSD 8143. Instrumentation and Electroacoustics. 1-3 Credit Hours.

May be repeated; maximum credit 6 hours. Electronic instruments and electroacoustic devices used in the communication disorders clinic or laboratory. May be repeated up to six hours with a change in content. This course is cross listed with CSD 5830.

Course Type: Lecture

CSD 8153. Instrumentation and Electroacoustics. 3 Credit Hours.

Electronic instruments and electroacoustic devices used in the communication disorders clinic or laboratory. May be repeated up to six hours with a change in content.

Course Type: Laboratory

CSD 8173. Advanced Anatomy & Physiology of Hearing. 3 Credit Hours.

To provide in-depth knowledge pertaining to the anatomy and physiology of the auditory and vestibular system. Course will utilize a combination of didactic lectures with exercises.

Course Type: Lecture

CSD 8193. Physiology Measures II. 3 Credit Hours.

Lectures and laboratory experience with a variety of methods for assessing human physiology related to speech and hearing, including otoacoustic emissions, evoked potentials and quantitative electroencephalography.

Course Type: Lecture

CSD 8213. Hearing Aids I. 3 Credit Hours.

Physical characteristics of hearing aids, hearing aids standards, earmold acoustics, selection of hearing aids, group amplification systems, alternative communication aids for the hearing impaired. **Course Type:** Lecture

CSD 8233. Audiology II. 3 Credit Hours.

The history, rationale, methodology, and interpretation of behavioral auditory tests intended to aid in the determination of the site of lesion within the auditory system. Included are tests for functional (non-organic) loss, sensory vs neural loss, and localization of lesions within the central auditory pathways.

Course Type: Lecture

CSD 8253. Physiologic Measures I. 3 Credit Hours.

The focus of the course is on peripheral physiologic assessment of the auditory mechanism and will include discussion of the physical basis, instrumentation, and diagnostic use of immittance audiometry. Electrony-stagmography, electrocochleography, and otoacoustic emissions across the age span.

Course Type: Lecture

CSD 8270. Augmentative Methods in Communication. 1-3 Credit Hours.

Prerequisites: None. May be repeated with change of subject matter, maximum credit twelve hours. Selected communication disorders topics are addressed and may include: cued speech, various sign language systems, and augmentative communication devices. **Course Type:** Lecture

CSD 8273. Pathologies of the Auditory System. 3 Credit Hours.

Study of pathologies of the auditory system which may adversely affect auditory and vestibular function.

Course Type: Lecture

CSD 8293. Industrial Audiology. 3 Credit Hours.

Physical measurement of noise, study of the spectral analysis techniques, auditory and non-auditory effects of noise on man damage risk criteria, and hearing conservation programs in industry. **Course Type:** Lecture

CSD 8313. Pediatric Audiology. 3 Credit Hours.

Study of the development of human auditory behavior, high risk registries, identification audiometry, the rationale and conduct of behavioral as well as physiological techniques of assessing the auditory function of young children, selection of hearing aids, and appropriate referral resources. **Course Type:** Lecture

CSD 8333. Hearing Aid II. 3 Credit Hours.

In depth study of theories and philosophies governing the candidacy for amplification, hearing aid fitting strategies, and modifications of hearing aids and earmolds. New circuit technology (adaptive compression, widedynamic-range-compression, programmable) will also be reviewed and examined.

Course Type: Lecture

CSD 8352. Counseling in Audiology. 2 Credit Hours.

Course will present counseling theory, counseling strategies and intervention techniques for audiologists. **Course Type:** Lecture

CSD 8420. Practicum in Communication Disorders. 1-15 Credit Hours. May be repeated; maximum credit 15 hours. Practice under supervision with children and adults with wide variety of communication disorders. Practicum experience may include practicum in speech pathology, or practicum in audiology, or practicum in education of the deaf, or any combination of these.

Course Type: Lecture

CSD 8433. Advanced Language Science. 3 Credit Hours.

Survey core concepts in formal and applied linguistics, providing historical and current perspectives on social, psychological, and neurobiological aspects of language. **Course Type:** Lecture

CSD 8460. Directed Readings in Communication Disorders. 1-4 Credit Hours.

May be repeated with change of content; maximum credit 4 hours. Provides opportunity for independent study through review of the literature in a particular area of interest under a selected professor. **Course Type:** Independent Study

CSD 8490. Special Studies in Communication Disorders. 1-4 Credit Hours.

Prerequisites: None. May be repeated with change of subject matter; multiple enrollment within same term, maximum credit twelve hours. Provides opportunity for independent study in a particular area of interest under a selected professor.

Course Type: Independent Study

CSD 8813. Hearing Science. 3 Credit Hours.

Course content will include an indepth review of vibration, period, frequency, phase, wave equation, amplitude, RMS, pressure, intensity, decibels, complex sounds, fundamental frequency, audibility thresholds, temporal integration, simultaneous and temporal masking, critical bandwidth, biaural hearing, diffence limens.

Course Type: Lecture

CSD 9113. Pediatric Habilitation. 3 Credit Hours.

Course is designed to provide basic information concerning development of language, speech, and auditory skills in children who are hard of hearing or deaf. Communication and educational options will be presented. Techniques for fitting amplification assistive devices, and criteria for selection of cochlear implants for children will be included. **Course Type:** Lecture

CSD 9123. Tinnitus and Sound Sensitivities. 3 Credit Hours.

Prerequisites: CSD 8133, CSD 8233, CSD 8420 (Sections I, II, & III) This course presents concepts regarding the underlying epidemiology, potential mechanisms, and management of individuals with tinnitus, sound sensitivities and related disorders. (Fall) II & III **Course Type:** Lecture

CSD 9133. Balance Assessment. 3 Credit Hours.

To provide an in-depth knowledge pertaining to the physiology, pathophysiology, and therapeutic measures associated with balance disorders.

Course Type: Laboratory

CSD 9142. Ototoxicity and Pharmacology. 2 Credit Hours.

Prerequisites: None The course introduces audiology students to the basic principles of pharmacology and ototoxicity. Topics will include medications and chemicals that may cause damage to the ear, basic mechanisms of toxicity relevant to the auditory system, audiologic monitoring and management, and emerging research regarding otoprotective agents. (Fall) II & III
Course Type: Lecture

CSD 9153. Sign Language I. 3 Credit Hours.

To introduce a nonverbal communiation system to hearing students. the materials presented will be a combination of signed exact english (s.e.e.), signed english and american sign language (asl). **Course Type:** Lecture

CSD 9173. Central Auditory Assessment. 3 Credit Hours.

Course will include a study of normal central auditory processing and related disorders. An examination of various auditory tests for central processing, including strengths and weaknesses of the tests will be covered. Assessment and management techniques will be reviewed. **Course Type:** Lecture

CSD 9213. Advanced Amplification Systems. 3 Credit Hours.

Couse will familiarize students with the design, construction, and operating characteristics of advanced amplification systems. Emphasis will be placed on developing assessment and fitting skills that allow students to appropriately select, program, fit and verify the function of advanced amplification systems.

Course Type: Laboratory

CSD 9233. Medical Arts/Otolaryngology Practices. 3 Credit Hours. Prerequisites: None Course will provide basic knowledge in the medical management of individuals with hearing and balance problems essential for cooperative and effective cross professional collaboration and communication. Approved for graduate credit. (Spring) Course Type: Lecture

CSD 9253. Professional Practices in Audiology. 3 Credit Hours.

Course will provide the knowledge and skills needed to develop and manage an autonomous practice in audiology Emphasis will be placed on professional ethics, human resources management, quality control, business and marketing principles and use of computer technology in administrative audiology services.

Course Type: Lecture

CSD 9273. Adult Aural Rehabilitation. 3 Credit Hours.

Study of the manifestations of acquired hearing impairment on human communication, topics include auditory processing, social and psychological adjustment to hearing loss, impact of the aging process, rehabilitation protocols, assistive devices and evaluation techniques. **Course Type:** Lecture

CSD 9333. Research Foundations in Communication Disorders. 3 Credit Hours.

Ethical, logical, practical and methodological considerations associated with research in speech/language pathology and audiology; basic concepts in data management; critical evaluation of research publicaions.