CSD Course Descriptions
(Numbers in parentheses indicate course credit for courses other than 1 credit.)

100- and 200-Level Courses

CSD 108 Sound and Communication Health  An introduction to the field of communication sciences and disorders focusing on the role sound plays in basic human communication. Examination of the hearing, speech, language, and learning mechanisms required to process and produce sound. Exploration of disorders that occur from a breakdown in sound processing, and how such disorders are assessed and treated. May not be taken with or after CSD 318, 320, or 373.

CSD 110 Introduction to Hearing and Speech Acoustics  Introduction to acoustics, measurement of hearing, and the acoustical properties of speech sounds. Sound waves; standards of measuring magnitude; audiograms; source-filter theory; and spectrograms.

CSD 112 The Scientific Exploration of Communication  Introduction course to the biology and physics of human communication. Basic properties of speech sounds and how they are produced and received by the listener; relation between human anatomical structures involved in sound production, modulation, and reception; brain mechanisms involved in processing the sounds of speech.

CSD 202 Neurobiology of Communication  Human anatomy, physiology, and neurology in relation to communicative behavior. Sensory, perceptual, cognitive, and motor processes.

CSD 205 Study of Learning and Learning Problems in the Classroom  Study of children’s learning in classroom settings. Field placement, using informal assessments of social, cognitive, and communication functioning, for children with and without exceptionalities.

CSD 207 Seminar in Communication Sciences and Disorders  Major topics of research interest in communicative disorders. Principles of research in communicative disorders.

300-Level Courses

CSD 301 Anatomy and Physiology of the Vocal Mechanism  Anatomical and physiological mechanisms of breathing, phonation, and articulation. Laboratories include dissection and participation in physiological research. Prerequisite: sophomore standing or above.

CSD 302 Anatomy and Physiology of the Peripheral Hearing Mechanism  Gross and fine structure; function of the peripheral auditory system. Prerequisites: junior standing or above, CSD 202, CSD 307, or permission of instructor.
CSD 303 Brain and Cognition Neural bases of cognitive processing with emphases on neuroimaging approaches in the areas of encoding, perception, attention, memory, language, reading, motor control, and executive functioning. Taught with Psyc 365; students may not earn credit for both courses.

CSD 304 Statistics in Communication Sciences and Disorders Introduction to research design and data analysis in communication sciences and disorders; statistical inference.

CSD 305 Phonetics Training in transcription of English speech sounds. Introduction to phonological analysis, dynamics of articulation, and dialect variations.

CSD 306 Psychoacoustics Principles underlying perception of pitch, loudness, auditory space, auditory patterns, and speech. Psychophysical procedures for studying psychoacoustics and the impact of hearing impairment are considered.

CSD 309 Culture, Language, and Learning Language and culture; transmission of culture through language; effects of cultural variety on perception, cognition, and learning; implications of cultural and linguistic diversity in communicative disorders.

CSD 310 Biological Foundations of Speech and Music Anatomy and physiology of the central auditory pathway, experience-related neural plasticity, right/left brain specialization, audiovisual integration, auditory learning and perception, and neural encoding of speech and music. Crosslisted with CSD 410. Prerequisite: junior standing or permission of instructor.

CSD 318 Introduction to Audiology Introduction to the measurement of hearing in humans. Basic anatomy of the ear, measurement of hearing, potential disorders of hearing. Lecture/laboratory.

CSD 319 Aural Rehabilitation Principles and practices in rehabilitation of children and adults, including use of sensory aids, counseling, and communication remediation, emphasizing speech reading, and auditory training techniques.

CSD 320 Introduction to Speech, Language, Learning, and Their Disorders Overview of normal and disordered communication. Speech, language, cognitive development and hearing disorders across the age continuum according to etiology, clinical manifestations, and intervention. Anatomy and physiology of speech, language, and hearing. Psychosocial impact of communicative disorders. Settings for service delivery; ethical and legal considerations; and professional issues.

CSD 332 Assisting in SLP The purpose of this course is to introduce the student to clinical practice, the dynamics of the client/clinician relationship and general clinical protocol, and the development and execution of therapy goals and procedures. Prerequisite: CSD 331, senior standing or above, and permission of instructor.
CSD 334 Delivery Systems in Speech and Language Pathology Organization and administration of speech-language pathology services in schools, health care agencies, and private practice. Prerequisites: senior standing.

CSD 339 Early Communication Intervention with Infants and Toddlers Models of service systems, current practices in early intervention, legislation, infant development processes, and risk factors. Emphasis on individual family service planning, assessment, and intervention.

CSD 342 Typical and Atypical Development in Infants and Toddlers Description and theory relevant to the physical, motor, cognitive, linguistic, and social development of both typical and atypical children during the first three years of life.

CSD 343 Family Systems: Theory and Intervention Strategies in Early Intervention Models of family-systems theory and application pertaining to the functioning of families with disabled infants or toddlers. Intervention strategies appropriate for early-intervention professionals. Prerequisite: advanced status in developmental disabilities or permission of instructor.

CSD 369 Special Topics in Speech and Language Pathology Current scientific and professional problems in speech and language pathology. Topics vary by quarter.

CSD 373 Introduction to Learning Disabilities Psychological, neurological, and linguistic theories of language and learning as related to learning disabilities.

CSD 376 Diagnostic and Remedial Approaches for Children with Learning Problems This course is designed to introduce students to the field of learning disabilities, its theoretical perspectives, principles of assessment and instruction, and the process of clinical teaching. A lifespan perspective is taken. Emphases are placed on instruction, accommodation, service delivery, progress monitoring, and transition. Prerequisite: CSD 373.


CSD 382 Autism Spectrum Disorders An overview of autism, considering in depth the clinical presentation of autism and its potential causes. How autism is diagnosed; assessments commonly employed to characterize autistic features in research; theories of the causes of autism; evidence from studies of behavior, cognition, neuroimaging, and genetics in evaluating these theories; controversial issues such as changing prevalence, and myths about the causes of autism. Prerequisites: A course in language development or developmental or cognitive psychology, or permission of instructor.

CSD 388 Attention Deficit Disorder and Related Disorders Identification and treatment of attention deficit disorders and related childhood behavior disorders.
Emphasis on objective and subjective assessment, life-span issues, and medical and psychological interventions.

**CSD 392 Language Development and Usage** Development of spoken and written language as it relates to child development; includes phonological, morphological, syntactic, semantic, and pragmatic components. Cultural and individual linguistic diversity.

**CSD 396-2 Advanced Diagnostic Procedures in Learning Disabilities** (.5) This course is designed to teach students the skills necessary to perform evaluations of literacy and numeracy skills in individuals with learning disabilities and related disorders. Class will consist of a combination of lecture, demonstration, and discussion as well as specific test administration and evaluation procedures.

**CSD 398-0 Research Practicum in Communication Sciences and Disorders** (.5 or 1) Working with a faculty member on design, execution, and presentation of a research project. Activities may include a review of literature, design of an experiment, data collection, coding, analysis, and spoken or written presentation of experimental results.

**CSD 399 Independent study** (.5 or 1) Prerequisite: permission of undergraduate dean after submission of petition.

### 400-Level Courses

**CSD 401 Signals, Systems and Acoustics for the Communication Sciences**
Introduction to the measurement, analysis and synthesis of acoustic signals.

**CSD 402 Speech Perception** Theories, issues, and major research findings in the field of speech perception. Prerequisites: CSD 307, Ling 350.


**CSD 405-1 Instrumentation and Methods for Psychoacoustics** "Hands-on" psychoacoustic instrumentation and methods, including required technical background. Students will complete at least one project using techniques learned in the course. Prerequisites: CSD 306 or equivalent, and computer programming.

**CSD 405-2 Advanced Psychoacoustics** Development of an in-depth understanding of auditory filtering and temporal resolution in normal and hearing-impaired listeners, comodulation masking release and pitch perception, all viewed through models of the
CSD 407 Implantable Devices  Cochlear implants and other implantable hearing devices. Candidacy, device management, and performance with various devices.

CSD 408 Business and Professional Issues in Audiology  Business and management issues in audiology, including managing clinical operations, writing business plans, establishing financial systems and using medical codes.

CSD 410 Biological Foundations of Speech and Music  Anatomy and physiology of the central auditory pathway, experience-related neural plasticity, right/left brain specialization, audiovisual integration, auditory learning and perception, and neural encoding of speech and music. Crosslisted with CSD 310. Prerequisite: junior standing or permission of instructor.

CSD 411 Evaluation and Use of Amplification Systems  Electroacoustic characteristics of hearing aids, selection of individual and group amplification systems, and client management. Lecture and laboratory. Prerequisite: CSD 423 or permission of instructor.

CSD 412 Scientific Writing  Principles of scientific writing for journals, dissertations, and grant proposals. Emphasis on mastering the structures for presenting concepts and data.

CSD 414 Advanced Topics in Amplification  Characteristics and design of amplification options; electroacoustic measurements; fitting and verification techniques.

CSD 415-1,2,3,4,5,6 Clinical Study and Practicum in Audiology  Lectures, discussions, practicum in University and off-campus hearing clinics. (1) Leadership; (2) Manufacturer Trainings; (3) Adult Aural Rehabilitation; (4) Ethics and Clinical Practice; (5) Supervision and Ethics; (6) Speech Language Pathology.

CSD 417 Noise and Its Effect on People  Measurement and control of environmental noise; acoustic trauma; industrial audiometry; conservation of hearing; medicolegal criteria of hearing loss.

CSD 419 Pediatric Audiology  Etiological factors; hearing screening and assessment; implications of hearing impairment in infants and young children; sensory aids; treatment programs; and parent counseling. Prerequisite: CSD 423 or permission of instructor.

CSD 420 Pathologies of the Auditory System  Physiologic abnormalities of the auditory system that result in hearing impairments.

CSD 421 Pathologies II  Advanced clinical issues in audiology. Various pathologies and disorders of the auditory system along with differential diagnostic procedures and advanced clinical management.
CSD 423 Evaluation of the Peripheral Hearing Mechanism Basic audiometric and immittance techniques; interpretation of test results. Introduction to amplification systems. Lecture and laboratory.

CSD 424 Evaluation and Treatment of Central Auditory Processing Disorders Evaluation and treatment of central auditory system disorders. Prerequisite: CSD 423 or equivalent.

CSD 425 Electrophysiology of the Human Auditory System Electrophysiology of the human auditory system, theory and practice. Relationship to hearing and perception in normal and clinical populations. Prerequisite: CSD 423 or equivalent.

CSD 427 Otoacoustic Emissions: Theory and Practice (.5) Theoretical and practical considerations of otoacoustic emissions; clinical applications; interpretation of test results. Prerequisite: CSD 423 or equivalent.

CSD 428 Fundamentals of Vestibular Science Introduction to theoretical foundations of vestibular science, function testing and management. Topics include the structure and function of the vestibular system, other sensory and motor systems necessary for balance, vestibular pathology, and nonvestibular sources of dizziness and tinnitus.

CSD 429 Evaluation and Treatment of Balance Disorders Evaluation and treatment of individuals with balance disorders, including electrophysiologic evaluation of the vestibular system. Prerequisites: CSD 425 and CSD 428, or permission of instructor.

CSD 432 Neuromotor Speech Disorders in Infants and Children Classifications, symptomatologies, and etiologies of the cerebral palsies, dystrophies, and other upper- and lower-motor neuron diseases of congenital or early onset. Consideration of associated cognitive, perceptual, sensory, and convulsive disorders. Emphasis on evaluation and management of communicative deficits. Prerequisite: CSD 406.

CSD 433 Craniofacial Anomalies and Syndromes Comprehensive study of the interdisciplinary team approach to the identification, evaluation, and treatment of cleft lip and palate and other craniofacial malformations. Prerequisite: CSD 301.

CSD 434 Neuropsychology and Learning Disabilities The neural basis of developmental learning and cognitive disorders, with an emphasis on neuroimaging approaches in the areas of attention, language, and reading.

CSD 436 Working with Individuals with Cerebral Palsy (.5) An overview of cerebral palsy, including such topics as causes and types, symptomatology, typical and atypical motor development, associated disorders, speech and language and feeding characteristics of individuals with various types of cerebral palsy, and assessment and treatment. Prerequisite: CSD 435.

CSD 439 The Management of Feeding Disorders in Infants and Toddlers Developmental sequence of feeding skills in infants/toddlers; anatomy and physiology of swallowing, respiratory and gastrointestinal systems; psychological impact of feeding disorders; comparison of atypical oral sensory motor patterns, and feeding and swallowing behaviors across various pediatric disorders; treatment. Prerequisite: CSD 438-1.

CSD 441 Infant and Toddler Assessment Principles involved in the process of assessment; issues that impact on diagnosis; standardized assessment instruments; and informal assessment techniques. All domains of development are included -cognition, speech and language, motor skills, and affective development.

CSD 444 Development and Disorders of Mathematics Theories and research on mathematical development and disorders. Identification, assessment, and remediation of disorders of mathematics and related areas.

CSD 445 Supervision in Speech-Language Pathology The supervisor as agent for development of clinicians and as administrator and organizer of clinical programs. Direct supervision of working clinicians.

CSD 448 Clinical Writing for CSD (.5) Written documentation in professional practice. Knowledge of strategies for improving the quality of treatment reports and diagnostic evaluations. Strategies will focus on selection and prioritization of content, organization, clarity and editing. Prerequisite: graduate standing.

CSD 453 Overview of Language Disorders This course will introduce students to a full range of disorders of or involving language. Information regarding etiology, strengths and weaknesses in language and cognition, variability in presentation/sub-types, differential diagnosis (vs. depression, attention or behavioral disorder, etc.), theoretical positions regarding underlying mechanisms, and relevant empirical evidence will be provided. A developmental perspective will be adopted throughout.

CSD 454 Language Disorders (1.5) This course will discuss the disruption, diagnosis, and treatment of sensori-motor, perceptual-motor, cognitive, and language specific systems across the lifespan. In addition, system deficits will be discussed as they relate to specific language disorders and syndromes. Prerequisite: CSD 451.

CSD 455 Clinical Speech Anatomy, Physiology, and Motor Control Exploration of the structural and functional intricacies of the upper aerodigestive tract and concepts of motor control and learning as they pertain to speech and swallowing. Anatomical structures and physiology of the speech mechanism, including oral, pharyngeal, and laryngeal structures and the respiratory system are reviewed and theories of motor control
and learning are introduced. Clinical scenarios and populations provide the context for concept exploration.

**CSD 456 Clinical Neuroanatomy and Physiology** Exploration of the structures and circuits in the human nervous system mediating motor, sensory, perceptual, linguistic, and cognitive functions. Introduction to physiologic and behavioral deficits associated with neurological pathologies.

**CSD 457 Language Science** Introduction to theories and supporting experimental evidence regarding human recognition and understanding of written and spoken language. Discussion regarding psycholinguistic, neurolinguistic, and cognitive neuropsychological research focused on understanding the neurocognitive mechanisms supporting lexical-semantic and syntactic processes. Emphasis on relevance of lexical-semantic and syntactic theories, models and data to understanding both developmental and acquired language disorders.

**CSD 458 Scientific Clinical Decision Making** Exploration of current best evidence in making decisions about the assessment and treatment of individuals with communication disorders. Overview of different research methodologies as well as tools to evaluate the quality of different types of research studies. Emphasis on the integration of research evidence and critical thinking into practice.

**CSD 460 Counseling and Effective Communication** Exploration of the concepts of counseling as applied to therapeutic relationships in SLP, with a focus on the SLP’s role in supporting the client’s acceptance, growth, autonomy, and decision making. Emphasis on clinician self-awareness as a requisite component for effective counseling. Opportunity for practice of skills during structured exercises.

**CSD 461 Augmentative and Alternative Communication across the Lifespan** Overview of the use augmentative and alternative communication (AAC) across the lifespan. Emphasis on assessment of personal skills and abilities for use of AAC, identification of barriers to communication and participation, and intervention strategies. Exploration of issues of funding and advocacy.

**CSD 462 Professional Issues in Speech Language Pathology** Analysis of a wide variety of issues pertinent to the professional life of the SLP including scope of service, regulatory agencies, workplace skills, employment settings, infection control, and ethics. Exploration of team membership and conflict resolution as well as concepts of cultural awareness and sensitivity, advocacy, and leadership.

**CSD 465 Hearing Impairment** Principles and practices in rehabilitation of children and adults, including use of sensory aids, counseling, and communication remediation, emphasizing speech reading, and auditory training techniques.

**CSD 466 Nature and Measurement of Intelligence** Problems, procedures, and clinical implications of measuring human intelligence; Binet and Wechsler tests.
CSD 467 Seminar: Advanced Topics in Management of Hearing Impairment  Critical review of applied research and professional issues in management of impaired hearing.

CSD 468 Clinical Management of Hearing Impairment and Rehabilitation  Clinical practice in management of impaired hearing.

CSD 470 Diagnostic Studies of Speech, Language, and Learning Disabilities  Clinical study of children and adults with combined speech-language and learning disabilities; participation on a multidisciplinary team involved in differential diagnosis.


CSD 472 Introduction to Clinical Methods  Exploration of the fundamentals of clinical methods, including the concepts of behavior change, session design, and functional, client-focused treatment. Discussion of data collection and documentation methods. Introduction to the assessment process.

CSD 473 Clinical Methods: Pediatric Populations  (0) Clinical experience in the evaluation and treatment of pediatric clients. Registration includes assignment to clinical teams, clinical team meetings, and didactic coursework addressing clinical methods with pediatric clients. Students assessed by clinical performance, team contribution, and didactic performance.

CSD 474 Clinical Methods: Adult Populations  (0) Clinical experience in the evaluation and treatment of adult clients. Registration includes assignment to clinical teams, clinical team meetings, and didactic coursework addressing clinical methods with adult clients. Students assessed by clinical performance, team contribution, and didactic performance.

CSD 475 Advanced Clinical Methods 1  Clinical experience in the evaluation and treatment of a variety of clients. Registration includes assignment to clinical teams and clinical team meetings. Students assessed by clinical performance and team contribution.

CSD 477 Advanced Clinical Methods 2  (1 or 2) Clinical experience in the evaluation and treatment of a variety of clients. Registration includes assignment to clinical teams and clinical team meetings. Students assessed by clinical performance and team contribution.

CSD 478 Externship: Public School Practicum  (2 or 3) Full time supervised practicum in a public school setting. Students assessed by clinical performance and setting appropriate professional behaviors and skills.

CSD 479 Externship: Clinical Practicum  (2 or 3) Full time supervised practicum in a health-based or other clinical setting, including hospitals, rehabilitation centers, skilled
nursing facilities, outpatient facilities, early intervention, private practices, or private schools. Students assessed by clinical performance and setting appropriate professional behaviors and skills.

**CSD 481-1,2,3 Theory and Practice in Learning Disabilities and Related Disorders** (.5,1,1) Supervised practica and seminars in the Learning Clinic at Northwestern University. Design and implement remedial programs. Collaboration with parents and schools.

**CSD 482-1,2 Clinical Study and Research in Differential Diagnosis** The differential diagnosis process, including interviewing, test administration, scoring, and interpretation; assessment of behavior; and oral and written dissemination of results.

**CSD 483-1,2 Student Teaching Practicum in Learning Disabilities and Related Disorders** Supervised teaching of exceptional children. Observation and participation in classes of normal-learning children as well as children with learning problems and related disorders.

**CSD 484-1,2 Student Teaching Seminar in Learning Disabilities and Related Disorders** Discussion of supervised teaching of normal-learning children as well as children with learning problems and related disorders.

**CSD 486 Language Disorders in Children with Learning Disabilities and Related Problems** Theories and research regarding oral language problems of individuals with learning disabilities and other disorders. Assessment and intervention for form, content, and usage is emphasized.

**CSD 487 Advanced Issues in Literacy Disorders** This course will provide theoretical perspectives on typical and atypical development of literacy skills. Current and historical models of reading and written language and their implications for instruction will be presented. Efficacy-based interventions and the use of technology will be addressed.


**CSD 490 Adult Neuromotor Speech Disorders** Examination of the potential etiologies and characteristics of motor speech disorders in adults, including acoustic, perceptual, physiologic, and neurologic correlates. Focus on assessment, diagnosis, and effective treatment. Emphasis on the integration of normative data, scientific knowledge, and clinical practice.

**CSD 491-0 Pediatric Speech Sound Disorders** Overview of potential etiologies and characteristics of speech sound disorders in children. Focus on assessment, diagnosis, and effective treatment of articulation and phonological disorders as well as childhood
apraxia of speech. Emphasis on the integration of normative data, scientific knowledge, and clinical practice.

**CSD 491-2 Advanced Articulation and Phonological Disorders in Children (.5)**
Advanced study of research in the evaluation and treatment of articulation and phonological disorders in children. Application in the design of treatment protocols. Prerequisite: CSD 491-1.

**CSD 492 Pediatric Language Disorders** Overview of potential etiologies and characteristics of language disorders in children from infancy through adolescence. Focus on assessment, diagnosis, and effective treatment of children with specific language impairments, autism spectrum disorders, and cognitively based language impairments as well as the interplay between language, learning, and literacy. Emphasis on the integration of normative data, scientific knowledge, and clinical practice.

**CSD 493-0 Vocal Physiology and Pathology** Overview of the anatomy and physiology of voice production. Exploration of diagnosis and management of congenital, acquired, and non-organic disorders of phonation. Emphasis on the integration of normative data, scientific knowledge, and clinical practice.

**CSD 493-2 Advanced Studies in Voice Problems (.5)** Review of research with application to treatments of voice disorders in special populations. Emphasis on techniques for clinical decision making, case management, and laboratory measurement. Prerequisite: CSD 493-1.

**CSD 494-0 Fluency, and Fluency Disorders** Overview of potential etiologies and characteristics of fluency disorders in children and adults. Focus on assessment, diagnosis, and effective treatment of stuttering across the lifespan. Consideration of the experience of stuttering from the point of view of the person who stutters. Emphasis on the integration of normative data, scientific knowledge, and clinical practice.


**CSD 495-0 Acquired Neurolinguistic and Neurocognitive Disorders** Examination of the neural bases and characteristics of acquired linguistic and cognitive disorders, including aphasia, dementia, and right hemisphere syndrome. Exploration of how normal language and cognitive systems are fractionated by brain damage. Focus on assessment, diagnosis, prognosis, treatment and recovery processes associated with these disorders. Emphasis on the integration of normative data, scientific knowledge, and clinical practice.

**CSD 495-2 Approaches to Aphasia Treatment (.5)** Study of linguistic, cognitive, neuropsychological, functional, and other treatment approaches in aphasia. Critical
evaluation of the strength of evidence of each approach. Prerequisite: CSD 495-1 or permission of instructor.

**CSD 496 Approaches to Cognitive Treatment** An overview of acquired disorders of cognition and approaches to their clinical management.

**CSD 497 Swallow Physiology and Pathology** Exploration of the anatomy and physiology of normal swallowing and the anatomic and physiologic disturbances affecting deglutition. Focus on recognizing clinical and radiographic signs and symptoms of dysphagia and selection and implementation of treatment and management. Discussion of ethical considerations. Emphasis on the integration of normative data, scientific knowledge, and clinical practice.

**CSD 499 Independent Study** (0.5, 1, 2, or 3) May be repeated for credit. Permission of instructor and department required.

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**500-Level Courses**

**CSD 507 Neural Mechanisms of Language Processing** Topics in brain-behavior relationships, emphasizing normal and abnormal speech and language.

**CSD 508 Research in Clinical Audiology** Seminar in contemporary research practices and procedures in clinical audiology.

**CSD 511 Translational Research in Communication Sciences and Disorders** The purpose of this course is to build greater understanding of how all aspects of communication—sensory processing, cognitive/language factors, and motor processes—interact in normal and disordered functioning, and how research can address treatment outcomes.

**CSD 513 Seminar: Problems in Speech Science** Issues in speech science. Open to doctoral students.

**CSD 514 Seminar: Topics in Peripheral Auditory Neuroscience** Problems in the biophysics and physiology of hearing.

**CSD 516 Seminar: Experimental and Theoretical Aspects of Audiology** Open to graduate students pursuing the PhD degree.

**CSD 525 Seminar: Topics in Central Auditory Neuroscience** Neurobiology underlying perception and learning of complex sounds such as speech and music. Prerequisite: CSD 302.

**CSD 530 Professional Issues in Speech and Language Pathology** (0) Meetings and updates on professional issues in speech and language pathology.
CSD 532-1,2,3 Treatment: Clinical Procedures in Speech and Language Pathology (.5) Therapeutic management of individuals with problems of speech-sound learning, fluency, voice, language, swallowing, or multiple disorders. Prerequisite: 531.

CSD 533-1,2 Advanced Treatment: Clinical Procedures in Speech and Language Pathology (1 or 2) Therapeutic management of individuals with problems of speech-sound learning, fluency, voice, language, swallowing, or multiple disorders. Prerequisite: 532-1,2,3.

CSD 534-1,2 Diagnostics: Clinical Procedures in Speech and Language Pathology (1 or 2) Diagnostic evaluation of preschool, school-age, and adult individuals with speech and language impairment/differences. Taken simultaneously with 533.

CSD 535-1,2,3 School Practicum in Speech and Language Pathology Supervised practicum of speech-language pathology services in schools. Participation in parent-teacher conferences and on IEP teams. Prerequisites: CSD 334 and CSD 532-1,2,3.

CSD 536 Practicum in Health-Based Facilities: Clinical Procedures in Speech and Language Pathology (3) Clinical practicum in hospital or rehabilitation-center settings; participation in interdisciplinary conferences. See department for registration details.

CSD 537-1,2,3 Advanced School Practicum in Speech and Language Pathology Advanced supervised clinical teaching in speech and language pathology in a specialized school setting.

CSD 538 Advanced Practicum in Health-Based Facilities: Clinical Procedures in Speech and Language Pathology (2 or 3) Advanced clinical practicum in a specialized hospital or rehabilitation-center setting.

CSD 539 Early Intervention: Clinical Procedures in Speech and Language Pathology (2 or 3) Theory and practice of assessment and intervention in the birth-to-three population. Emphasis on working with families and professional teams in various practicum settings.

CSD 545 Survey of Research in Communication Studies and Disorders Seminar designed to present an introduction to research in the field of communication sciences and disorders by providing a brief introduction to ethics in clinical research and providing information about the research labs in the department. Prerequisite: faculty permission. Recommended enrollment in first quarter of doctoral study.

CSD 546-0 Directed Teaching in Communication Sciences and Disorders Guided teaching experience. Preparation and delivery of class lectures, as well as observation of teaching methods, preparation of the course outline, selection of readings, and writing of exam questions.
CSD 550-1,2 Research Procedures in Communication Sciences and Disorders
Development of research projects in communication sciences and disorders including critical review.

CSD 551 Topics in Communication Sciences and Disorders
Reading, reviewing, and critiquing published research in a specific topic area in communication sciences and disorders. Topics to be announced.

CSD 552-1,2,3 Laboratory Experiences in Communication Sciences and Disorders
Experience in laboratory research in communication sciences and disorders. Prerequisite: faculty permission.

CSD 553 Computational Modeling in Communication Sciences and Disorders
Introduction to the use of computer programming and computational modeling to address problems in communication sciences and disorders.

CSD 570-1,2,3 Seminar: Capstone Project

CSD 575 Advanced Seminar: Current Topics in Learning Disabilities
Review of areas of current research. May be repeated for credit with change of topic.

CSD 580-1,2,3,4 Clinical Externship
Supervised clinical experience in off-campus setting(s) and special topics lectures.

CSD 589 Advanced Study and Research in Differential Diagnosis of Learning Disabilities
Individual research in differential diagnosis of language and learning disabilities in adults.

CSD 590 Research
(1, 2, or 3) Independent investigation of selected problems pertaining to thesis or dissertation. May be repeated for credit.