Communication Science and Disorders

Stacy Wagovich, Chair
School of Health Professions
301 Lewis Hall
(573) 884-2940
mucsd@health.missouri.edu

Advising Contact
Jill S. Diener or Lindsey Hagglund
(573) 882-8011

Communication Science and Disorders includes the study of normal language, speech, and hearing across the life span, as well as communication disorders that result from biological, environmental, and behavioral factors. Communication Science and Disorders includes the professions of speech-language pathology and audiology.

Speech-language pathologists evaluate the speech and language of children and adults to determine whether problems exist in such areas as voice, articulation, fluency, and receptive or expressive language. They also plan and carry out programs for the treatment of these problems. Audiologists evaluate hearing, identify hearing loss, and participate in the rehabilitation of persons with hearing impairments.

The professions of speech-language pathology and audiology require master’s or doctoral degrees. Acceptance to an undergraduate program does not guarantee acceptance to a graduate program. Refer to the Graduate Catalog for information about the MHS degree (http://catalog.missouri.edu/undergraduategraduate/schoolofhealthprofessions/communicationscienceanddisorders/mhs-communication-science-disorders).

Faculty

Associate Professor J. C. Goodman**, S. A. Wagovich**
Assistant Professor R. Botezatu*, M. Dietrich**, E. S. Kelley**, M. Kuruvilla**
Associate Clinical Professor D. R. Fritz*, L. B. Lawrence*, B. A. Mc Lay*
Assistant Clinical Professor C. Baker, G. Hull, G. Nolan
Clinical Instructor L. M. Frye
Research Associate Professor Emerita L. S. Day*

* Graduate Faculty Member - membership is required to teach graduate-level courses, chair master's thesis committees, and serve on doctoral examination and dissertation committees.
** Doctoral Faculty Member - membership is required to chair doctoral examination or dissertation committees. Graduate faculty membership is a prerequisite for Doctoral faculty membership.

Undergraduate

- BHS in Communication Science and Disorders
  (http://catalog.missouri.edu/undergraduategraduate/schoolofhealthprofessions/communicationscienceanddisorders/bhs-communication-science-disorders)

Graduate

- MHS in Communication Science and Disorders
  (http://catalog.missouri.edu/undergraduategraduate/schoolofhealthprofessions/communicationscienceanddisorders/mhs-communication-science-disorders)

- with emphasis in Speech-Language Pathology
  (http://catalog.missouri.edu/undergraduategraduate/schoolofhealthprofessions/communicationscienceanddisorders/mhs-communication-science-disorders-emphasis-speech-lang-path)

Shannon Martin
301 Lewis Hall
(573) 884-2940
https://healthprofessions.missouri.edu/communication-science-and-disorders/degrees/master-of-health-science-csd/

About Communication Science and Disorders

The field of Communication Science and Disorders, or CSD, encompasses the related but distinct disciplines of speech-language pathology (SLP), audiology, and speech, language, and hearing sciences (SLHS). Speech-language pathologists and audiologists are professionals educated in human communication and its disorders. Speech-language pathologists diagnose and treat disorders such as delayed language development, stuttering, articulation, and voice problems. Audiologists specialize in the prevention, identification, assessment, and rehabilitation of hearing disorders. Speech, language, and hearing scientists are professionals concerned with exploring trends in the communication sciences, as well as developing strategies for improving or adding to the knowledge base within the fields of speech-language pathology and audiology.

MU established its first independent master’s and doctoral programs in speech-language pathology and audiology in the 1940s. The MU master’s degree program in speech-language pathology has been continuously accredited by the Council on Academic Accreditation in Audiology and Speech-Language Pathology since 1966. An active local chapter of the National Student Speech Language Hearing Association is sponsored by the program.

The master’s degree prepares students for national certification in speech-language pathology and for professional clinical practice in both health care and educational settings. The doctoral degree involves a program of research and advanced study beyond the clinical master’s degree in preparation for a career in research and college teaching or administration.

Career Opportunities

A wide variety of work settings are available to speech-language pathologists and audiologists. Possibilities range from hospitals, clinics, and rehabilitation centers to schools, colleges and universities, government agencies, and private practice. Speech, language, and hearing scientists work primarily in colleges and universities, research labs and government agencies. Professional certification in speech-language pathology and audiology is awarded by the American Speech-Language-Hearing Association (ASHA). The master’s degree, which is the entry-level degree for speech-language pathologists, typically takes two years beyond the undergraduate degree. Additional prerequisite coursework is required for students with undergraduate degrees outside the field. Students wishing to pursue a career in audiology will need to attend a program that offers clinical a doctorate in audiology (AuD), the entry-level degree for audiologists.
Facilities and Resources

The department uses many cooperative facilities in Columbia, both on and off the MU campus, as clinical and scientific resources. Among these are the University Hospitals and Clinics, Rusk Rehabilitation Center, Ellis Fischel Cancer Center, Truman Memorial Veterans Hospital, Adult Day Connection, Assistive Technology Evaluation Center, Thompson Center for Autism and Neurodevelopmental Disorders, and Columbia Public Schools.

Other cooperative facilities are available both within and outside the State. The department operates the MU Speech and Hearing Clinic, a diagnostic and treatment center serving individuals with communication disorders from the campus and the community, the MU Robert G. Combs Language Preschool, and the Accent Modification and Pronunciation Program. In addition, there are many research opportunities for students in the laboratories of individual faculty where they may gain experience with sophisticated equipment for research and clinical evaluation in normal and disordered speech, language, and hearing. A master's thesis option is available to students interested in conducting research.

Funding

All graduate students are considered for available scholarships, fellowships, work-study grants, traineeships and graduate teaching and research assistantships.

C_S_D 1000: Introduction to Communication Science and Disorders
Nature of communication and its development; types of speech, language and hearing disorders; professional preparation, settings, and work of speech-language pathologists and audiologists. Course graded on S/U basis only.
Credit Hours: 1

C_S_D 1050: Signed English
Introduction to the English-based sign system, Signed English, a system that has been developed to bridge the gap between English and American Sign Language. Graded on A-F basis only.
Credit Hours: 3
Prerequisites: Restricted to Communication, Science and Disorder majors only during Early Registration

C_S_D 1060: Human Language
(same as ANTHRO 1060, LINGST 1060 and ENGLSH 1060). General introduction to various aspects of linguistic study. Elementary analysis of language data with some attention to application of linguistic study to other disciplines.
Credit Hours: 3

C_S_D 1100: American Sign Language I
Introduction to American Sign Language (ASL). Development of basic expressive and receptive skills in ASL, the manual alphabet, numbers, and signed vocabulary. Includes an overview of ASL syntax and grammar. Course graded on A-F basis only.
Credit Hours: 5

C_S_D 1200: American Sign Language II
This course is designed to increase students' understanding of American Sign Language. Students will increase their sign vocabulary, expressive and receptive skills, an understanding of ASL syntax and grammar. Graded on A-F basis only.
Credit Hours: 5
Prerequisites: C_S_D 1100 or equivalent

C_S_D 2120: Survey of Communication Disorders
Systematic survey of the disorders of speech, language and hearing.
Credit Hours: 3

C_S_D 2150: American Sign Language III
This course expands on vocabulary and signing skills developed in ASL II. Includes review of ASL grammar and extensive discussions of ASL linguistic structure and Deaf culture. Class is conducted entirely in ASL. Course graded on A-F basis only.
Credit Hours: 3
Prerequisites: C_S_D 1200 with minimum grade of C or instructor's consent

C_S_D 3010: American Phonetics
(same as LINGST 3010). Analysis of production and acoustics of the sounds of speech with an emphasis on American English; practice in broad and narrow transcription using the International Phonetic Alphabet.
Credit Hours: 3
Prerequisites: Restricted to Communication Science and Disorders majors only

C_S_D 3020: Normal Language Development
Language development in children and changes in language processing during normal aging. Cognition and language; language learning processes; language sample analysis; relationship between spoken and written language.
Credit Hours: 3
Prerequisites: Communication Science and Disorders majors only

C_S_D 3020W: Normal Language Development - Writing Intensive
Language development in children and changes in language processing during normal aging. Cognition and language; language learning processes; language sample analysis; relationship between spoken and written language.
Credit Hours: 3
Prerequisites: Communication Science and Disorders majors only

C_S_D 3210: Anatomy and Physiology of the Speech Mechanism
(same as LINGST 3210). Introduction to anatomical and functional aspects of the speech mechanism.
Credit Hours: 3
Prerequisites: Communication Science and Disorders majors only

C_S_D 3220: Speech Acoustics
(same as LINGST 3220). An introduction to the acoustic aspects of speech as they relate to the respiratory, phonatory, resonatory, and articulatory systems.
Credit Hours: 2
**Prerequisites:** Communication Science and Disorders majors only or instructor's consent

**C_S_D 3230: Hearing Science**
Introduction to the nature of sound and its measurement; anatomy and physiology of the auditory and vestibular systems; psychoacoustic methods and phenomena.

**Credit Hours:** 3

**C_S_D 4001: Topics in Communication Science and Disorders**
Organized study of selected topics. Subjects and earnable credit may vary from semester to semester. May be repeated with program consent.

**Credit Hour:** 1-99

**Prerequisites:** junior standing and instructor's consent

**C_S_D 4020: Language Disorders in Children**
Overview of language disorders from early childhood through adolescence. Includes language disorders as primary disability and as secondary to other disabilities. Introduction to assessment and intervention.

**Credit Hours:** 3

**Prerequisites:** Communication Science and Disorders majors only

**C_S_D 4020W: Language Disorders in Children - Writing Intensive**
Overview of language disorders from early childhood through adolescence. Includes language disorders as primary disability and as secondary to other disabilities. Introduction to assessment and intervention.

**Credit Hours:** 3

**Prerequisites:** Communication Science and Disorders majors only

**C_S_D 4030: Language Disorders of Adults**
Introduction to acquired adult language disorders. Review of neuroanatomy/physiology, etiology and symptomatology, with introduction to assessment and treatment procedures.

**Credit Hours:** 2

**Prerequisites:** Communication Science and Disorders majors only

**C_S_D 4050: Clinical Applications of Sign Language**
(cross-leveled with C_S_D 7050). This course covers research, theory, and methods of using sign language to assist the communication of the Deaf, individuals with disabilities, and hearing learners. Use of sign language to improve literacy and classroom management will also be targeted. Graded on A-F basis only.

**Credit Hours:** 3

**Prerequisites:** Instructor's consent required

**Recommended:** C_S_D 1050 or C_S_D 1100 or equivalent

**C_S_D 4210: Fluency Disorders**

**Credit Hours:** 2

**Prerequisites:** Communication Science and Disorders majors only

**C_S_D 4220: Voice Disorders**
Introduction to voice disorders in children and adults. Includes overview of perceptual and instrumental assessment procedures and selected treatment approaches.

**Credit Hours:** 1

**Prerequisites:** Communication Science and Disorders majors only

**C_S_D 4320: Disorders of Phonology and Articulation**
Overview of disorders of use and production of speech sounds with an emphasis on developmental disorders. Introduction to assessment and treatment.

**Credit Hours:** 3

**Prerequisites:** Communication Science and Disorders majors only

**C_S_D 4330: Introduction to Audiology**
Principles and techniques of audiological testing; etiologies of hearing impairment; current technologies in rehabilitation.

**Credit Hours:** 3

**Prerequisites:** C_S_D 3230; Communication Science and Disorders majors only or instructor's consent

**C_S_D 4340: Aural Rehabilitation**
(cross-leveled with C_S_D 7340). Identification, evaluation, and management of problems associated with hearing impairment in both children and adults. Includes issues related to speech/language development, communication, education, and social factors.

**Credit Hours:** 3

**Prerequisites:** Communication Science and Disorders majors only

**C_S_D 4430: Neurophysiology for Speech, Language, and Hearing**
(cross-leveled with C_S_D 7430). Principles of basic neurophysiology, emphasizing correlation of structure and function of the nervous system.

**Credit Hours:** 3

**Prerequisites:** Communications Science and Disorders majors only

**C_S_D 4810: Psycholinguistics**
(same as LINGST 4810; cross-leveled with C_S_D 7810, LINGST 7810). Examination of the knowledge and processes that underlie the human ability to produce and understand language.

**Credit Hours:** 3

**Prerequisites:** instructor's consent

**C_S_D 4820: Speech Perception**
(same as LINGST 4820; cross-leveled with C_S_D 7820, LINGST 7820). Selected topics in the perceptual processing of speech sounds and spoken language.

**Credit Hours:** 3

**Prerequisites:** instructor's consent

**C_S_D 4830: Individual Differences in Language Processing**
(cross-leveled with C_S_D 7830). Examination of the normal variations exhibited across individuals in the acquisition, use, and representation of language. Also considered are individual differences seen in second language learning, the aging process, and language disorders.
C_S_D 4840: Language and Development in Infancy  
(cross-leveled with C_S_D 7840). Overview of theory and research on the foundations and development of language in infancy (0 to 2 years), with an emphasis on relevant, interrelated areas of development, individual differences, early recognition of delay, and assessment.  
Credit Hours: 3  
Prerequisites: instructor's consent

C_S_D 4900: Clinical Observation in Communication Disorders  
Directed clinical observations designed to prepare the student for clinical practicum. Required for professional certification. Graded on a S/U basis only.  
Credit Hours: 2  
Prerequisites: Communication Science and Disorders majors only

C_S_D 4945: Clinical Apprenticeship in Communication Disorders  
Supervised observation and clinical experience in speech-language pathology for undergraduates.  
Credit Hour: 1-3  
Prerequisites: senior standing and departmental consent. Communication Science and Disorders majors only

C_S_D 4950: Research Apprenticeship  
Research apprenticeship with a faculty member, assisting in the development and execution of research in communication processes and disorders. May be repeated to 6 hrs. maximum.  
Credit Hours: 1-99  
Prerequisites: instructor's consent

C_S_D 4960: Directed Reading in Communication Science and Disorders  
Independent reading; reports.  
Credit Hours: 1-3  
Prerequisites: instructor's consent

C_S_D 4990: Honors Thesis  
Individual honors thesis on a topic selected with a faculty advisor. Requires planning, conducting, and writing up a research project under the guidance of a faculty member. Successful completion of thesis and maintenance of 3.3 GPA leads to degree with departmental honors. Graded on A-F basis only.  
Credit Hours: 3  
Prerequisites: Senior standing; 3.3 GPA; 3.5 GPA in Communication Science and Disorders courses; instructor's consent. Restricted to Communication Science and Disorders students only

C_S_D 7001: Topics in Communication Science and Disorders  
Study of selected topics in speech pathology/audiology. Topic and credit may vary from semester to semester. May be repeated for credit with instructor and departmental consent.  
Credit Hour: 1-99

C_S_D 7050: Clinical Applications of Sign Language  
(cross-leveled with C_S_D 4050). This course covers research, theory, and methods of using sign language to assist the communication of the Deaf, individuals with disabilities, and hearing learners. Use of sign language to improve literacy and classroom management will also be targeted. Graded on A-F basis only.  
Credit Hours: 3  
Prerequisites: instructor's consent

C_S_D 7085: Problems in Communication Science and Disorders  
Individual study not leading to thesis or dissertation.  
Credit Hour: 1-99  
Prerequisites: instructor's consent

C_S_D 7340: Aural Rehabilitation  
(cross-leveled with C_S_D 4340). Identification, evaluation, and management of problems associated with hearing impairment in both children and adults. Includes issues related to speech/language development, communication, education, and social factors.  
Credit Hours: 3  
Prerequisites: Communication Science and Disorders majors only

C_S_D 7430: Neurophysiology for Speech, Language, and Hearing  
(cross-leveled with C_S_D 4430). Principles of basic neurophysiology, emphasizing correlation of structure and function of the nervous system.  
Credit Hours: 3  
Prerequisites: Communication Science and Disorders majors or instructor's consent

C_S_D 7810: Psycholinguistics  
(same as LINGST 7810; cross-leveled with C_S_D 4810, LINGST 4810). Examination of the knowledge and processes that underlie the human ability to produce and understand language.  
Credit Hours: 3  
Prerequisites: instructor's consent

C_S_D 7820: Speech Perception  
(same as LINGST 7820; cross-leveled with C_S_D 4820, LINGST 4820). Selected topics in the perceptual processing of speech sounds and spoken language.  
Credit Hours: 3  
Prerequisites: instructor's consent

C_S_D 7830: Individual Differences in Language Processing  
(cross-leveled with C_S_D 7830). Examination of the normal variations exhibited across individuals in the acquisition, use, and representation of language. Also considered are individual differences seen in second language learning, the aging process, and language disorders.  
Credit Hours: 2  
Prerequisites: instructor's consent
C_S_D 7840: Language and Development in Infancy  
(cross-leveled with C_S_D 4840). Overview of theory and research on the foundations and development of language in infancy (0 to 2 years), with an emphasis on relevant, interrelated areas of development, individual differences, early recognition of delay, and assessment.  
**Credit Hours:** 3

C_S_D 8001: Topics in Communication Science and Disorders  
Study of selected topics in speech pathology/audiology. Topic and credit may vary from semester to semester. May be repeated for credit with instructor and departmental consent.  
**Credit Hour:** 1-99  
**Prerequisites:** instructor's consent, instructor's

C_S_D 8020: Developmental Language Disorders  
**Credit Hours:** 3  
**Prerequisites:** Communication Science and Disorders students only

C_S_D 8030: Acquired Language Disorders  
Etiology, symptomatology, assessment and rehabilitation of acquired neurogenic communication disorders in aphasia, traumatic brain injury, and dementia.  
**Credit Hours:** 3  
**Prerequisites:** Communication Science and Disorders students only

C_S_D 8050: Research in Communication Science and Disorders  
Independent research leading to a report but not to a thesis or dissertation.  
**Credit Hour:** 1-99  
**Prerequisites:** instructor's consent

C_S_D 8085: Problems in Communication Science and Disorders  
Individual study not leading to thesis or dissertation.  
**Credit Hour:** 1-99  
**Prerequisites:** instructor's consent

C_S_D 8087: Seminar: Contemporary Topics in Speech-Language Pathology  
Advanced study involving critical literature review and research on selected topics in speech and language. May be repeated for up to 6 credits.  
**Credit Hour:** 1-3  
**Prerequisites:** instructor's consent

C_S_D 8090: Research in Communication Science and Disorders  
Research leading to thesis or dissertation.  
**Credit Hour:** 1-99  
**Prerequisites:** instructor's consent. Graded on a S/U basis only

C_S_D 8200: Motor Speech Disorders  
Etiology, symptomatology, epidemiology, and prognosis of motor speech disorders resulting from acquired neurological damage. Emphasis on clinical assessment and rehabilitation procedures. Graded on A-F basis only.  
**Credit Hours:** 2  
**Prerequisites:** Communication Science and Disorders students only

C_S_D 8210: Disorders of Fluency  
Identification and remediation of fluency disorders in children and adults.  
**Credit Hours:** 3  
**Prerequisites:** Communication Science and Disorders students only

C_S_D 8225: Voice Science and Voice Disorders  
Diagnosis and management of communicative disorders resulting from pathologies or misuse of the phonatory system. Includes experience with pertinent laboratory instrumentation. Graded on A-F basis only.  
**Credit Hours:** 3  
**Prerequisites:** restricted to MHS CSD students; or with instructor's consent

C_S_D 8230: Dysphagia  
Etiology, symptomatology, and epidemiology of acquired and developmental swallowing disorders (dysphagia). Emphasis on instrumental and non-instrumental methods for assessing and treating dysphagia.  
**Credit Hours:** 3  
**Prerequisites:** Communication Science and Disorders students only

C_S_D 8240: Orofacial Anomalies  
**Credit Hour:** 1  
**Prerequisites:** Communication Science and Disorders students only

C_S_D 8250: Clinical Methods in Speech-Language Pathology  
An introduction to clinical procedures and evidence-based intervention methods relating to speech and language disorders. Topics include session design, data collection, measurement of progress, reporting of clinical results, and various treatment options. Graded on A-F basis only.  
**Credit Hours:** 3  
**Prerequisites:** Communication Science and Disorders students only

C_S_D 8300: Neurological Bases of Speech and Language  
Structure and function of the human brain and nervous system including general organization, cranial nerves, basal ganglia, cerebellum, and descending motor pathways as related to the field of speech language pathology. Graded on A-F basis only.  
**Credit Hours:** 3  
**Prerequisites:** Communication Science and Disorders students only
C_S_D 8320: Speech Sound Disorders
Principles of clinical assessment and treatment for speech sound disorders in children. Includes foundations in research on early speech sound acquisition, organic and developmental disorders, and treatment efficacy. Graded on A-F basis only.
Credit Hours: 3
Prerequisites: Communication Science and Disorders students only

C_S_D 8420: Reading and Language Disabilities in School-Age Children
Theories, research, and practice in reading development and disorders. Assessment and remediation of reading disabilities related to language disorders of various etiologies including developmental language disorders and head injury.
Credit Hours: 2
Prerequisites: C_S_D 4020 or C_S_D 8020

C_S_D 8430: Augmentative and Alternative Communication
Students will learn the principles of AAC assessment, methods of intervention, and types of technology available for individuals unable to communicate fully through speech. Graded on A-F basis only.
Credit Hours: 2
Prerequisites: Communication Science and Disorders students only

C_S_D 8500: Issues in Professional Practice
Organizational, inter-professional, economic, legal, and ethical aspects of delivering speech, language, and hearing services. Graded on A/F basis only.
Credit Hours: 2
Prerequisites: Communication Science and Disorders students only

C_S_D 8600: Clinical Language Analysis
This course provides a theoretical framework for understanding the morphology, semantics, syntax, and pragmatics of English as well as practice in the analysis of typical and atypical language samples. Graded on A-F basis only.
Credit Hours: 3
Prerequisites: Communication Science and Disorders students only

C_S_D 8935: Clinical Practice in Audiology
Supervised practice in hearing screening, hearing conservation, and aural re/habilitation. May be repeated for credit. Graded on S/U basis only.
Credit Hour: 1

C_S_D 8945: Clinical Practice in Speech-Language Pathology
Supervised clinical practice in speech pathology for graduate students. May be repeated for credit.
Credit Hour: 1-10
Prerequisites: Communication Science and Disorders students only

C_S_D 8960: Directed Reading in Communication Science and Disorders
Independent reading; reports.

C_S_D 9050: Research in Communication Science and Disorders
Independent research leading to a report but not to a thesis or dissertation.
Credit Hour: 1-99
Prerequisites: Instructor's consent

C_S_D 9087: Seminar: Contemporary Topics in Speech-Language Pathology
Advanced study involving critical literature review and research on selected topics in speech and language. May be repeated for up to 6 credits.
Credit Hour: 1-3
Prerequisites: Instructor's consent

C_S_D 9090: Research in Communication Science and Disorders
Research leading to thesis or dissertation. Graded on a S/U basis only.
Credit Hour: 1-99
Prerequisites: Instructor's consent