Speech, Language and Hearing Sciences

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Programs in speech, language and hearing sciences include the study of typical language, speech, and hearing across the lifespan, as well as the nature, assessment, and treatment of communication disorders that result from a range of factors. Speech, Language and Hearing Sciences 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 develop and implement programs for the treatment of these problems. Audiologists evaluate hearing, identify hearing loss, and participate in the rehabilitation of persons with decreased hearing.

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.

About Speech, Language and Hearing Sciences

The field of Speech, Language and Hearing Sciences 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 differences. 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 (NSSLHA) 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 healthcare 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

Graduate

- MHS in Speech, Language and Hearing Sciences (http://catalog.missouri.edu/collegeofhealthsciences/speechlanguagehearingsciences/mhs-speech-language-hearing-sciences/)
  - with emphasis in Speech-Language Pathology (http://catalog.missouri.edu/collegeofhealthsciences/speechlanguagehearingsciences/mhs-speech-language-hearing-sciences-emphasis-speech-language-pathology/)

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https://healthprofessions.missouri.edu/speech-language-and-hearing-sciences/
attend a program that offers a clinical 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, as well as the MU Robert G. Combs Language Preschool, the Accent Expansion Program, the Language Enhancement for Adults Program, and the Parkinson Speech 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.

SLHS 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 Hour: 1

SLHS 1060: Human Language
(same as ANTHRO 1060, LINGST 1060 and ENGLISH 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

SLHS 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

Prerequisites: SLHS 1100 or equivalent

SLHS 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: SLHS 1100 or equivalent

SLHS 2120: Survey of Communication Disorders
Systematic survey of the disorders of speech, language and hearing.

Credit Hours: 3

SLHS 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: SLHS 1200 with minimum grade of C or instructor's consent

SLHS 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

SLHS 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

SLHS 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

SLHS 3050: Signed English and Communication Development
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 also will be targeted. No prior experience with any sign language and/or sign system is required. Development of a basic vocabulary in Signed English will be included in this course.

Credit Hours: 3

SLHS 3150: 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: Communication Science and Disorders majors only

SLHS 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
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Credit Hours</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLHS 3220</td>
<td>Speech Acoustics (same as LINGST 3220)</td>
<td>An introduction to the acoustic aspects of speech as they relate to the respiratory, phonatory, resonatory, and articulatory systems.</td>
<td>2</td>
<td>Communication Science and Disorders majors only</td>
</tr>
<tr>
<td>SLHS 3230</td>
<td>Hearing Science</td>
<td>Introduction to the nature of sound and its measurement; anatomy and physiology of the auditory and vestibular systems; psychoacoustic methods and phenomena.</td>
<td>3</td>
<td>Communication Science and Disorders majors only</td>
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<tr>
<td>SLHS 3890</td>
<td>Music and the Mind (same as PSYCH 3890)</td>
<td>This course examines music as a universal human behavior, with an emphasis on the perceptual, cognitive and neural processes that underlie it, and their origins in evolution and development.</td>
<td>3</td>
<td>Restricted to Communication Science and Disorders majors only</td>
</tr>
<tr>
<td>SLHS 3950</td>
<td>Research Methods in Speech and Language Sciences</td>
<td>This course is designed to help students gain an understanding of how research in the discipline of speech and language sciences is conducted and how to differentiate between good-quality and poor-quality research design. We will explore the importance of the scientific method in conducting rigorous research. The course will enable students to explore the different types of research conducted within the discipline and will prepare students for an introductory experience in a research lab. Graded on A-F basis only.</td>
<td>3</td>
<td>Sophomore standing</td>
</tr>
<tr>
<td>SLHS 4001</td>
<td>Topics in Speech, Language and Hearing Science</td>
<td>Organized study of selected topics. Subjects and earnable credit may vary from semester to semester. May be repeated with program consent.</td>
<td>1-99</td>
<td>Junior standing and instructor's consent</td>
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<tr>
<td>SLHS 4020</td>
<td>Language Disorders in Children</td>
<td>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.</td>
<td>3</td>
<td>Communication Science and Disorders majors only</td>
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<tr>
<td>SLHS 4210</td>
<td>Fluency Disorders</td>
<td>Introduction to the nature, assessment, and treatment of fluency disorders. Emphasis on developmental stuttering.</td>
<td>2</td>
<td>Communication Science and Disorders majors only</td>
</tr>
<tr>
<td>SLHS 4320</td>
<td>Disorders of Phonology and Articulation</td>
<td>Overview of disorders of use and production of speech sounds with an emphasis on developmental disorders. Introduction to assessment and treatment.</td>
<td>3</td>
<td>Communication Science and Disorders majors only</td>
</tr>
<tr>
<td>SLHS 4330</td>
<td>Introduction to Audiology</td>
<td>Principles and techniques of audiological testing; etiologies of hearing impairment; current technologies in rehabilitation.</td>
<td>3</td>
<td>SLHS 3230; Communication Science and Disorders majors only or instructor's consent</td>
</tr>
<tr>
<td>SLHS 4340</td>
<td>Aural Rehabilitation (cross-leveled with SLHS 7340)</td>
<td>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.</td>
<td>3</td>
<td>SLHS 3230; Communication Science and Disorders majors only or instructor's consent</td>
</tr>
</tbody>
</table>
SLHS 4340W: Aural Rehabilitation-Writing Intensive
(cross-leveled with SLHS 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

SLHS 4420: Reading and Language Disabilities in School Age Children
(cross-leveled with SLHS 7420). The focus of this course is on prevention, identification, assessment, and intervention for language and reading disorders in school-age children. We will learn about evidence-based practice in language and reading disorders, as well as develop the explicit linguistic knowledge necessary to deliver effective intervention. We will emphasize the roles and responsibilities of speech-language pathologists in direct service delivery and as members of the educational team. Graded on A-F basis only.
Credit Hours: 3
Prerequisites: SLHS 3020

SLHS 4430: Neurophysiology for Speech, Language, and Hearing
(cross-leveled with SLHS 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

SLHS 4800: Multicultural Considerations in Speech, Language and Hearing Sciences
This course is designed to heighten student awareness and sensitivity to the cultural and linguistic differences that affect the identification, assessment, treatment, and provision of services to individuals with communication disorders or differences. Throughout this course, topics related to diverse cultures and practices will be explored, and opportunities to apply knowledge of cultural considerations to assessment and treatment practices within speech, language and hearing sciences will be provided. Graded on A-F basis only.
Credit Hours: 3
Prerequisites: senior standing, restricted to BHS students in SLHS major

SLHS 4830: Individual Differences in Language Processing
(cross-leveled with SLHS 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

SLHS 4840: Language and Development in Infancy
(same as PSYCH 4442; cross-leveled with SLHS 7840, PSYCH 7442). 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: Communication Science and Disorders majors only

SLHS 4850: Bilingualism
(cross-leveled with SLHS 7850). This course is intended to establish an understanding of bilingual language processing and of the consequences of bilingualism on cognition. The course begins by reviewing the individual differences that modulate language processing in monolinguals and the factors that predict good second language learning outcomes in adults. This sets up the stage of an in-depth discussion of the ways in which second language proficiency changes the dynamics of language production and comprehension, as well as the cognitive performance across the lifespan. Students will be introduced to theories and models of bilingual language processing and will learn to evaluate evidence for and against the bilingual advantage and the benefits of bilingualism in healthy aging and recovery from acquired language deficits, such as aphasia. Students will also learn to identify patterns of language performance that distinguish bilinguals from monolinguals and from individuals with language disorders. Graded on A-F basis only.
Credit Hours: 3
Recommended: Junior or Senior standing

SLHS 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

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

SLHS 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 9 hrs. maximum.
Credit Hour: 1-9
Prerequisites: instructor's consent

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

SLHS 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

SLHS 7001: Topics in Speech, Language and Hearing Science
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

SLHS 7085: Problems in Speech, Language and Hearing Science
Individual study not leading to thesis or dissertation.

Credit Hour: 1-99
Prerequisites: instructor's consent

SLHS 7100: Introduction to Interprofessional Practice
(same as HTH_PR 7100; cross-leveled with OC_THR 5100, SLHS 4100, PH_THR 5100, HTH_PR 4100). This course serves as a foundation and introduction to interprofessional education and collaboration. Students who enroll in this course will be assigned to mini-teams of students from a range of disciplines. Through this course, students will develop an understanding of their own unique role as a healthcare provider and the importance of client- and community-centered care and effective teamwork, as well as communication skills. Graded on S/U basis only.

Credit Hour: 1

SLHS 7340: Aural Rehabilitation
(cross-leveled with SLHS 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

SLHS 7420: Reading and Language Disabilities in School Age Children
(cross-leveled with SLHS 4420). This course will focus on three key questions: (1) The science of reading: How do children learn to read? (2) Effective instruction: What kind of teaching helps children learn to read? (3) Intensive intervention: What do struggling readers need to succeed? We will learn about evidence-based practice in reading and language disorders, as well as develop the explicit linguistic knowledge necessary to deliver effective intervention. We will consider the roles and responsibilities of speech-language pathologists in prevention and intervention of reading disorders. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: SLHS 3020

SLHS 7430: Neurophysiology for Speech, Language, and Hearing
(cross-leveled with SLHS 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

SLHS 7840: Language and Development in Infancy
(same as PSYCH 7442; cross-leveled with SLHS 4840, PSYCH 4442). 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

SLHS 7850: Bilingualism
(cross-leveled with SLHS 4850). This course is intended to establish an understanding of bilingual language processing and of the consequences of bilingualism on cognition. The course begins by reviewing the individual differences that modulate language processing in monolinguals and the factors that predict good second language learning outcomes in adults. This sets up the stage of an in-depth discussion of the ways in which second language proficiency changes the dynamics of language production and comprehension, as well as the cognitive performance across the lifespan. Students will be introduced to theories and models of bilingual language processing and will learn to evaluate evidence for and against the bilingual advantage and the benefits of bilingualism in healthy aging and recovery from acquired language deficits, such as aphasia. Students will also learn to identify patterns of language performance that distinguish bilinguals from monolinguals and from individuals with language disorders. Graded on A-F basis only.

Credit Hours: 3

SLHS 8001: Topics in Speech, Language and Hearing Science
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

SLHS 8020: Developmental Language Disorders

Credit Hours: 3
Prerequisites: Communication Science and Disorders students only

SLHS 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

SLHS 8050: Research in Speech, Language and Hearing Science
Independent research leading to a report but not to a thesis or dissertation.

Credit Hour: 1-99
Prerequisites: instructor's consent
SLHS 8085: Problems in Speech, Language and Hearing Science
Individual study not leading to thesis or dissertation.
Credit Hour: 1-99
Prerequisites: instructor's consent

SLHS 8090: Research in Speech, Language and Hearing Science
Research leading to thesis or dissertation.
Credit Hour: 1-99
Prerequisites: instructor's consent. Graded on a S/U basis only

SLHS 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: 3
Prerequisites: Communication Science and Disorders students only

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

SLHS 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

SLHS 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

SLHS 8240: Cleft Palate/Craniofacial Disorders
Credit Hour: 1
Prerequisites: Communication Science and Disorders students only

SLHS 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

SLHS 8260: Diagnosis in Speech-Language Pathology
General principles of diagnosis; specific diagnostic tools and procedures for various speech and language disorders.
Credit Hours: 3
Prerequisites: Communication Science and Disorders students only

SLHS 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: 2
Prerequisites: Communication Science and Disorders students only

SLHS 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: 2
Prerequisites: Communication Science and Disorders students only

SLHS 8350: Medical Speech-Language Pathology
This course covers topics related to medical speech-language pathology practice, including anatomy and physiology, diagnoses, collaborations, and diagnostic and therapeutic approaches. Graded on A-F basis only.
Credit Hours: 3
Prerequisites: Restricted to MHS in SLHS students only

SLHS 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

SLHS 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

SLHS 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
SLHS 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

SLHS 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

SLHS 8960: Directed Reading in Speech, Language and Hearing Science
Independent reading; reports.

Credit Hour: 1-3
Prerequisites: instructor's consent

SLHS 9050: Research in Speech, Language and Hearing Science
Independent research leading to a report but not to a thesis or dissertation.

Credit Hour: 1-99
Prerequisites: instructor's consent

SLHS 9090: Research in Speech, Language and Hearing Science
Research leading to thesis or dissertation. Graded on a S/U basis only.

Credit Hour: 1-99
Prerequisites: instructor's consent