Communication Sciences and Disorders

Owens, Interim Associate Dean, School of Rehabilitation and Communication Sciences
Chair and Associate Professor: Sanford
Associate Chair and Clinical Professor: Loftin
Professor: Kangas
Associate Professors: Bargen, Blaiser, Brockett, Hudock, Ogiela, Ramsdell-Hudock
Assistant Professors: Brock, Cummings, Scharp
Clinical Professor: Guzi, Holst, Whitaker
Clinical Associate Professor: Hardy, W. Morgan, E. Schniedewind (Morgan), S. Smith
Clinical Assistant Professors: Cheadle, Hansen, Miller, Pierce Ament, C. Smith, Stubbs, Van Donsel, Woods
Emeriti: Bain, Johnson, Schow, Seikel, Smedley, Walber, Weston, Willer

Accreditation

The Doctor of Audiology (Au.D.) and the Master of Science in Speech-Language Pathology (M.S.) are accredited by the Council on Academic Accreditation (CAA) in Audiology and Speech-Language Pathology of the American Speech-Language-Hearing Association (ASHA), 2200 Research Boulevard, #310, Rockville, MD 20850, 800-498-2071 or 301-296-5700 (http://www.asha.org/academic/).

Degree Programs

Degree programs offered by the Department of Communication Sciences and Disorders include:

Doctor of Audiology (Au.D.)
Master of Science in Speech-Language Pathology (M.S.)

Doctor of Audiology (Au.D.)

Admission Requirements

For admission to the Doctor of Audiology program, the applicant must:

1. Have an earned Baccalaureate degree with a major in Communication Sciences and Disorders, or a Baccalaureate degree in any major with equivalent Post-Baccalaureate coursework in Communication Sciences and Disorders.
2. Possess a 3.0 or higher GPA. The method of calculating an Admission GPA is based on the last 60± semester undergraduate credits (90± quarter credits) for coursework taken during the last two years of undergraduate training. Post-Baccalaureate coursework in Communication Sciences and Disorders will be considered in computing GPA.
3. Obtain score of 40th percentile or better on at least one area of the GRE.
4. Submit three letters of recommendation.
5. Apply through Communication Sciences and Disorders Centralized Application Service at: https://csdcas.liaisoncas.com/applicant-ux/#/login.
6. Apply to, and meet all criteria for, admission to Graduate School.

International Students

International students whose native language is not English must achieve at least the 50th percentile on the Verbal section of the GRE. Applicants whose first language is not English need to meet the following TOEFL requirements for Classified admission:

1. Internet-based test (iBT): a total score of 80 with a score of at least 20 on each Section (graduate assistants who teach courses must score 23 or above on the Speaking Section) on the iBT; or
2. Computer-based test: a total score of 213 with a score of at least 21 on Section 1 (Listening Comprehension) on the computer test; or
3. Paper-based test: a total score of 550 with a score of at least 55 on Section 1 (Listening Comprehension) on the paper test or a score of 84 on the MTELP, or a score of 6 on the IELTS. Once admitted, non-native English-speaking students must also receive a passing score on a test of spoken English to participate in clinic.

*We do not accept IELI nor ELS in lieu of TOEFL/IELTS.

Program Capacity

An average of 24 students are in the program at any time. The number of seats available for each new cohort will vary. On average six (6) students are admitted per year. Classes begin in the Fall Semester of each year. Meeting entry-level requirements for admission does not guarantee a seat in the program.

Curriculum

The curriculum is four years in duration, and includes one year (fourth year) of full-time clinical practicum. There are eight regular (fall and spring) semesters and three summer semesters. For the third year, students will be required to relocate to the ISU Meridian campus to continue their academic and clinical instruction in a robust audiology community. Students will assume the financial, housing, and logistical responsibilities of the relocation.

Doctor of Audiology (Au.D.) (Regular 4 year)

Course List

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSD 5517</td>
<td>Interdisciplinary Evaluation Team</td>
<td>1</td>
</tr>
<tr>
<td>CSD 5570</td>
<td>Advanced Topics in Educational Audiology</td>
<td>3</td>
</tr>
<tr>
<td>CSD 5580</td>
<td>Genetics for the Health Care Professionals</td>
<td>2</td>
</tr>
<tr>
<td>CSD 6600</td>
<td>Principles of Research in Communication Disorders</td>
<td>3</td>
</tr>
<tr>
<td>CSD 6603</td>
<td>Clinical Practicum Audiology</td>
<td>1-4</td>
</tr>
<tr>
<td>CSD 6603L</td>
<td>Clinical Practicum Laboratory</td>
<td>0</td>
</tr>
<tr>
<td>CSD 6605</td>
<td>Externship in Audiology</td>
<td>4</td>
</tr>
<tr>
<td>CSD 6611</td>
<td>Advanced Auditory Assessment and Speech Audiometry</td>
<td>4</td>
</tr>
<tr>
<td>CSD 6621</td>
<td>Aud Rehab and Amplification I</td>
<td>3</td>
</tr>
<tr>
<td>CSD 6623</td>
<td>Pediatric Audiology</td>
<td>3</td>
</tr>
<tr>
<td>CSD 6626</td>
<td>Introduction to Balance Function Assessment</td>
<td>1</td>
</tr>
<tr>
<td>CSD 6631</td>
<td>Immittance/Special Assessment</td>
<td>3</td>
</tr>
<tr>
<td>CSD 6633</td>
<td>Introduction to Evoked Potential Audimetry</td>
<td>3</td>
</tr>
<tr>
<td>CSD 6641</td>
<td>Aud Rehab and Amplification II</td>
<td>3</td>
</tr>
</tbody>
</table>
CSD 6645 Auditory Anatomy and Physiology 2
CSD 6646 Central Auditory Processing 2
CSD 6647 Auditory Physiology of Speech and Non Speech Signals 2
CSD 6652 Auditory Language Learning 3
CSD 6670 Auditory Pathologies 3
CSD 6673 Introduction to Audiology Clinical Processes 1
CSD 6675 Hearing Conservation in Noise 2
CSD 6680 Counseling in Audiology 2
CSD 6692 Comprehensive Seminar 1
CSD 6693 Hearing Assistive Technology Systems 1
CSD 7705 Off Campus Clinical Practicum 4
CSD 7705L Off Campus Clinical Practicum Laboratory 1
CSD 7710 Advanced Topics in Aud Rehab 3
CSD 7720 Audiology Practice Management and Dispensing 3
CSD 7730 Advanced Auditory Evoked Potential Audiometry and Early Identification 3
CSD 7740 Advanced Vestibular and Balance Function Assessment 3
CSD 8805 Fourth Year Externship 1-8
CSD 8810 Clinical Project 6

1 or CSD 6691 if IET was taken as an undergraduate
2 If a student has not taken IET, she/he may take it as a graduate student

Master of Science in Speech-Language Pathology (M.S.)

Admission Requirements

For admission to the M.S. degree program in Speech-Language Pathology the applicant must:

1. Have an earned Baccalaureate degree with a major in communication sciences and disorders, or a Baccalaureate degree in any major with equivalent Post-Baccalaureate coursework in communication sciences and disorders.

2. Possess a 3.0 or higher GPA. The method of calculating an Admission GPA is based on the last 60 credits of undergraduate coursework taken during the last two years of undergraduate training.

3. Obtain score of 40th Percentile or better on at least one area of the GRE.

4. Submit three letters of recommendation.


6. Apply to, and meet all criteria for, admission to Graduate School.

International Students

International students whose native language is not English must meet at least the 50th percentile on the Verbal section of the GRE. Applicants whose first language is not English need to meet the following TOEFL requirements for Classified admission:

1. Internet-based test (iBT): a total score of 80 with a score of at least 20 on each section (graduate assistants who teach courses must score 23 or above on the Speaking Section) on the iBT; or

2. Computer-based test: a total score of 213 with a score of at least 21 on Section 1 (Listening Comprehension) on the computer test; or

3. Paper-based test: a total score of 550 with a score of at least 55 on Section 1 (Listening Comprehension) on the paper test or a score of 84 on the MTELP, or a score of 6 on the IELTS. Once admitted, non-native English-speaking students must also receive a passing score on a test of spoken English to participate in clinic.

*We do not accept IEI nor ELS in lieu of TOEFL/IELTS.

Master of Science in Speech-Language Pathology (M.S.)

Required Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSD 6600</td>
<td>Principles of Research in Communication Disorders</td>
<td>3</td>
</tr>
<tr>
<td>CSD 6602</td>
<td>Clinical Practicum Speech-Language &amp; Off Campus Practicum</td>
<td>2-8</td>
</tr>
<tr>
<td>CSD 6606</td>
<td>Externship in Speech Language Pathology</td>
<td>1-9</td>
</tr>
<tr>
<td>CSD 6614</td>
<td>School Age Language Development and Disorders</td>
<td>3</td>
</tr>
<tr>
<td>CSD 6616</td>
<td>Augmentative and Alternative Communication</td>
<td>3</td>
</tr>
<tr>
<td>CSD 6620</td>
<td>Early Language Development and Disorders</td>
<td>3</td>
</tr>
<tr>
<td>CSD 6622</td>
<td>Speech Sound Disorders</td>
<td>3</td>
</tr>
<tr>
<td>CSD 6624</td>
<td>Disorders of Swallowing</td>
<td>3</td>
</tr>
<tr>
<td>CSD 6625</td>
<td>Advanced Issues in Language Disorders</td>
<td>3</td>
</tr>
</tbody>
</table>

General Requirements

Students receiving the degree of Doctor of Audiology must have satisfactorily completed all courses in the curriculum and passed all clinical practicum assignments. In addition, in the fall semester of the third year, the student must pass the written comprehensive examination, and then in the spring, an internal departmental oral comprehensive examination that includes defense of the doctoral project. Students must take and pass the national Praxis prior to beginning the fourth year. According to university regulations, no student may be granted a graduate degree who does not have a 3.0 grade point average for coursework taken during the last two years of undergraduate training. Post-Baccalaureate coursework in communication sciences and disorders will be considered in computing GPA.

Additionally, graduate students deemed by the faculty not to have made satisfactory progress in the acquisition of clinical skills may be required to enroll for further credits in clinical practicum in addition to the minimum required of all students. Students may be dismissed for failure to make satisfactory progress in clinical practicum.
General Requirements

Students must pass written and oral comprehensive examinations. For the Master of Science in Speech-Language Pathology the written exam may be fulfilled by either a portfolio or a thesis. Examinations for students choosing the portfolio track are conducted internally through the department, while students choosing to do a thesis will require a Graduate Faculty Representative and will follow ISU Graduate School policies for thesis and dissertations.

According to the university regulations, no student may be granted a graduate degree who does not have a 3.0 grade point average for courses listed on the program of study upon completion of all academic work. In addition, the Department of Communication Sciences & Disorders will terminate the graduate program of any student who has received grades of C+, or lower, in two or more departmental courses, or if the cumulative GPA falls below 2.7 in the first year of study and 3.0 by the completion of graduate studies. If a student’s graduate education is terminated for reasons of poor academic performance, he/she may reapply for admission no sooner than one full semester following the semester of dismissal.

Students with inadequate backgrounds in speech pathology and audiology may be required to take up to one year of undergraduate course work in addition to the above courses. In addition to the required graduate courses, students may have to take other courses in the department and related areas such as psychology and statistics. In addition to taking clinical practice (CSD 6602, CSD 6603, or CSD 6604) in the department, all graduate students must complete a minimum of an eight-week, full-time externship in some professional program or agency. Exceptions may be made depending on the student's background. Graduate students deemed by the faculty not to have made satisfactory progress in the acquisition of clinical skills may be required to enroll for further credits in clinical practicum in addition to the minimum required of all students. Students may be dismissed for failure to make satisfactory progress in clinical practicum.

Courses

CSD 5517 Interdisciplinary Evaluation Team: 1 semester hour.

CSD 5520 Clinical Processes Adult: 3 semester hours.
Diagnostic principles, procedures, tests and clinical examination in the evaluation of speech, language and hearing disorders. Covers norms, reliability and validity. PREREQ: PSYC 4445, CSD 3315, and Statistics and/or approval of instructor.

CSD 5540 Special Topics Workshop: 1-3 semester hours.
Presentation of professionally related topics in workshop format. Meets for a minimum of 16 contact hours per credit with appropriate outside assignments, readings, or papers. May be repeated for up to 6 credits. Graded S/U.

CSD 5560 Educational Audiology: 3 semester hours.
Overview of school-based audiology services and the educational audiology model of service provision including working within the public school system, legal issues, and options for providing comprehensive services to children with hearing loss and their families.

CSD 5570 Advanced Topics in Educational Audiology: 3 semester hours.
An in-depth study and application of audiological services for school age students, evaluation of laws pertaining to public school services, exploration of working with families and educational personnel, verification and validation of hearing assistive technology, and creation of evaluation protocols.

CSD 5580 Genetics for the Health Care Professionals: 2 semester hours.
An in-depth interdisciplinary review of the impact of genetics on patients and patient care and the biological, social, ethical, and legal issues surrounding genetics and genomics. Specific, evaluated graduate-level activities and/or performances are identified in the course syllabus. Equivalent to DHS 5580 and NURS 5580.
CSD 5582 Independent Study: 1-4 semester hours.
Study of problems selected by students and faculty. May be repeated for up to 8 credits.

CSD 5591 Seminar: 1-4 semester hours.
Reading, preparation, and discussion of reports and projects in all areas of speech and hearing science, speech pathology and audiology. May be repeated for up to 12 credits.

CSD 5599 Experimental Course: 1-6 semester hours.
This is an experimental course. The course title and number of credits are noted by course section and announced in the class schedule by the scheduling department. Experimental courses may be offered no more than three times. May be repeated.

CSD 6600 Principles of Research in Communication Disorders: 3 semester hours.
Methodology including quantitative and qualitative approaches to research and use of evidence-based practice. Use of informational resources to develop a research proposal. PREREQ: Statistics or permission of instructor.

CSD 6602 Clinical Practicum Speech-Language: 1-4 semester hours.
Students, under supervision, gain experience in the diagnosing, staffing, programming, and counseling of cases with speech and language disorders. May be repeated up to 16 credits. PREREQ: Approval of Clinic Director.

CSD 6602L Clinical Practicum Laboratory: 0 semester hours.
Weekly staffing, grand rounds discussion, and professional presentations of new trends in speech pathology.

CSD 6603 Clinical Practicum Audiology: 1-4 semester hours.
Students gain experience in diagnosing, programming, and counseling cases with hearing disorders, and implementing rehabilitation programs for persons with hearing losses. May be repeated for up to 13 credits. PREREQ: Approval of advisor and Audiology Clinic Coordinator. COREQ: CSD 6603L.

CSD 6603L Clinical Practicum Laboratory: 0 semester hours.
Weekly staffing, grand rounds discussion, and professional presentations of new trends in audiology. COREQ: CSD 6603.

CSD 6604 Off Campus Practicum: 1-4 semester hours.
Designed to provide clinical experience under supervision of speech-language pathologist within placement setting. Placements include private clinics, hospitals, residential care facilities, developmental centers, and schools. May be repeated for up to 16 credits. Graded S/U. PREREQ: Approval of Clinic Director.

CSD 6605 Externship in Audiology: 1-8 semester hours.
Eight week off-campus placement that can be split between two summers. Final approval is the responsibility of the clinic director. Each student should obtain a minimum of 100 clock hours of clinical experience per eight week externship. May be repeated. Graded S/U. COREQ: CSD 7705L. PREREQ: Clinic Director Approval.

CSD 6606 Externship in Speech Language Pathology: 1-9 semester hours.
Designed to give Speech-Language Pathology students full-time practical experience in a professional setting, i.e., schools, hospitals, clinics, and private practices. May be repeated for up to 18 credits. Graded S/U. PREREQ: Completion of academic program.

CSD 6611 Advanced Auditory Assessment and Speech Audiology: 4 semester hours.
Thorough study in the historical and clinical aspects of fundamental audiological procedures such as pure-tone air- and bone-conduction testing, speech audiometry, and masking.

CSD 6614 School Age Language Development and Disorders: 3 semester hours.
Advanced study of language development and disorders in school-age children and youth. Methods of assessing later language disorders in educational settings. PREREQ: CSD 6620.

CSD 6616 Augmentative and Alternative Communication: 3 semester hours.
Functional approaches to enhancing communication for people with severe disabilities. Includes introduction to electronic communication devices, low technology strategies, empowering clients, and inclusive practices. PREREQ: CSD 6620.

CSD 6620 Early Language Development and Disorders: 3 semester hours.
Study of language development and disorders in children (0-5 years of age). Includes theories of development and disorders, assessment and intervention of child and environment. PREREQ: CSD 3330 and CSD 3335 and/or equivalent.

CSD 6621 Aud Rehab and Amplification I: 3 semester hours.
Introduction to practice of audiological rehabilitative patient care with an emphasis on acoustic hearing aids. Basic instrument design, component, and coupling features of various wearable amplification devices will be included. Assessment of patient candidacy, fitting protocols, and outcome measures.

CSD 6622 Speech Sound Disorders: 3 semester hours.
Characteristics of children with speech sound disorders. Current approaches to assessment and theoretically-based treatment of speech sound errors, including multicultural applications. PREREQ: CSD 3325 or permission of instructor.

CSD 6623 Pediatric Audiology: 3 semester hours.
Advanced study of hearing disorders and hearing test procedures in children. Topics include development of the auditory mechanism, auditory pathologies, developmental milestones, auditory testing, differential diagnosis, and management.

CSD 6624 Disorders of Swallowing: 3 semester hours.
Assessment and treatment of disorders associated with all stages of swallowing in adults and children. Includes oromotor functional, oral preparatory, oral, pharyngeal, and esophageal swallowing disorders.

CSD 6625 Advanced Issues in Language Disorders: 3 semester hours.
Critical issues in childhood language disorders including linguistic and cultural diversity, classroom-based strategies, and children with mental retardation, autism, learning disability and deafness. PREREQ: CSD 6614 or equivalent.

CSD 6626 Introduction to Balance Function Assessment: 1 semester hour.
Introduction to the assessment of the patient with dizziness and/or balance concerns. Emphasis will be on videonystagmography procedures, interpretation of findings, and communication to the referral source.

CSD 6627 Neuropathologies of Speech: 3 semester hours.
Examines etiologies, characteristics, assessment and treatment of dysarthria, apraxia, and right-hemisphere dysfunction. PREREQ: CSD 4405 or permission of instructor.

CSD 6630 Fluency Disorders in Children and Adults: 3 semester hours.
Advanced study of assessment and treatment for fluency disorders in adults and children. Includes theory, developmental issues, cluttering, and specific treatment for adults and children.

CSD 6631 Immittance/Special Assessment: 3 semester hours.
Study of immittance and other special audiological tests used in site of lesion (differential) diagnostic work ups. Background, rationale, administration, and interpretations of immittance and other special tests will be considered along with the concept of Clinical Decision Analysis (CDA).

CSD 6632 Craniofacial Anomalies: 2 semester hours.
Consideration of the speech-language pathologist's role in the habilitation of patients with craniofacial anomalies. Clefts of the lip and palate are discussed. Team approaches to assessment and management are presented.
CSD 6633 Introduction to Evoked Potential Audiometry: 3 semester hours.
Introduction to the study of evoked potential audiometry and otoacoustic emissions. Emphasis will be on the physiologic processes and instrumentation.

CSD 6634 Voice Disorders: 2 semester hours.

CSD 6636 Medical/School Practice in Speech Language Pathology: 3 semester hours.
Examines methods and practices specific to medical and school settings. Includes billing procedures, record keeping, referral procedures, ethics, treatment models related to settings, caseload management, Interdisciplinary Education program requirements, legal mandates, collaborative strategies, and inclusive practices. PREREQ: CSD 6614 or CSD 6639 or equivalent.

CSD 6639 Neurogenic Disorders of Language and Cognition: 3 semester hours.
Etiologies, characteristics, assessments, and treatment of aphasia, traumatic brain injury, and dementia.

CSD 6641 Aud Rehab and Amplification II: 3 semester hours.
Continued review of amplification technology focused on advanced signal processing, prescriptive fitting rationales, verification/validation methodologies, and programming software. Patient orientation, programming adjustments, and hearing aid repair will also be covered with experiential learning activities.

CSD 6643 Aural Rehab and Cochlear Implants: 3 semester hours.
Directed classroom instruction and clinical experience with implantable hearing technologies and with cochlear implants. Current hardware and software and approaches to assessment, fitting, and rehabilitation of implanted adults and children. Lab instruction on current manufacturer devices and software will also be covered in this course.

CSD 6644 Implantable Technologies: 1 semester hour.
Directed classroom instruction and clinical experience with Middle Ear Implants, Acoustic Implants, Bone Anchored Hearing Appliances, Auditory Brainstem Implants, and Vestibular Implants. Current candidacy requirements, assessment procedures, technology, surgery implications, fittings, and rehabilitation for children and adults. There will also be lab opportunities for Bone Anchored Hearing Aid Appliance software, candidacy, and fittings.

CSD 6645 Auditory Anatomy and Physiology: 2 semester hours.
Comprehensive treatment of the anatomy, physiology, and neuroanatomy of the auditory system from the outer ear to the auditory cortex.

CSD 6646 Central Auditory Processing: 2 semester hours.
This course will review the anatomical and neurophysiological aspects of auditory processing. The nature and causes of auditory processing disorders in children and adults will be discussed including disorder symptoms, assessment, treatment, clinical management and referrals. The impact of auditory processing disorders on language and learning will be discussed as well as differential diagnosis, the collaborative model, counseling, and advocacy.

CSD 6647 Auditory Physiology of Speech and Non Speech Signals: 2 semester hours.
Continuation of advanced study of the auditory system, including central pathways, auditory perception of speech and non-speech signals, and psychoacoustics, with focus on pitch and loudness phenomenon, masking, and binaural effect. PREREQ: CSD 6645.

CSD 6648 Professional Issues in Speech Language Pathology: 3 semester hours.
Advanced preparation for professional practice in speech-language pathology. Includes study of policies and practices in employment settings, service delivery models, ethics, counseling, and supervision. PREREQ: Two semesters of CSD 6602.
CSD 7710 Advanced Topics in Aud Rehab: 3 semester hours. 
Advanced topics include rehabilitation issues targeting outcome measures and efficacy. Topics of tinnitus and pharmacology along with professional issues will be included. PREREQ: CSD 6621, CSD 6641, and CSD 6643.

CSD 7720 Audiology Practice Management and Dispensing: 3 semester hours.
Ethics and professional issues in various practice settings, including multicultural considerations, licensure, certification, best practice, outcome measures, hearing aid dispensing, liability, malpractice, marketing, and practice/business management. PREREQ: CSD 6641 and CSD 6643.

CSD 7730 Advanced Auditory Evoked Potential Audiometry and Early Identification: 3 semester hours.
Comprehensive discussion of advanced evoked potentials including test protocols, measurement, and interpretation. Topics in early identification of individuals with hearing loss will also be covered. PREREQ: CSD 6633.

CSD 7740 Advanced Vestibular and Balance Function Assessment: 3 semester hours.
Advanced vestibular and balance function assessment including underlying causes of balance disorders, rotary chair, computerized posturography, VEMP, advances in VNG/ENG technology, and collaborative approaches to vestibular rehabilitation. PREREQ: CSD 6633.

CSD 8805 Fourth Year Externship: 1-8 semester hours.
Full time placement designed to provide the student with a breadth and depth of clinical experience equivalent to one year of full-time work (approximately 2,000 hours). Students must enroll for three semesters minimum. Students are responsible for identifying potential sites and working with externship coordinator to arrange affiliation agreements. Final approval is the responsibility of the externship coordinator. May be repeated. Graded S/U. COREQ: CSD 7705L.

CSD 8810 Clinical Project: 1-6 semester hours.
Clinically-based scholarly project completed under the supervision of the audiology faculty. May be repeated for a total of 6 credits. Graded S/U.