

*Speech and Hearing Science
Undergraduate Handbook,
2009-2010*

Speech and Hearing Science

Undergraduate Handbook, 2009-2010

What is Speech and Hearing Science?

Speech and Hearing Science is the study of normal and disordered functioning of the auditory system, the speech mechanism, and language processing. It is a diverse field which draws upon a number of other disciplines, including anatomy, physiology, psychology, linguistics, physics, engineering, medicine, and education. Students pursuing a major in Speech and Hearing Science are introduced both to basic and applied research and to clinical applications. Ultimate career paths can include Speech-Language Pathology, Audiology, or Speech, Language, and Hearing Science.

Speech-Language Pathologists assess and treat persons of all ages with speech, language, voice, and fluency disorders. They may also work with people who have oral motor problems that cause eating and swallowing difficulties. They use special instruments, as well as written and oral tests, to determine the nature and extent of impairment, and to record and analyze irregularities in language, speech, swallowing and respiration. For individuals with little or no speech, speech-language pathologists select alternative communication systems, including automated devices and sign language, and teach their use. Entry level positions require at least a Masters degree.

Audiologists specialize in the prevention, assessment, and rehabilitation of hearing disorders. They use a variety of testing devices to measure an individual's hearing sensitivity. When hearing loss exists, they determine the nature and extent of the hearing loss and recommend appropriate treatment, including hearing aids or other assistive devices. Audiologists also test noise levels in workplaces and conduct hearing protection programs. Entry level positions require at least a Doctoral degree (Ph.D. or Au.D.).

Hearing, speech, and language scientists conduct basic and applied research related to human communication processes. They may study speech or music perception, the ecological impact of sound on humans, or the normal processes underlying the production of speech and the use of language. Speech, language and hearing scientists may use either behavioral or biomedical research protocols in their work. While many projects seek a better understanding of normal language, hearing or speech processes, often the ultimate goal of the research is to address disorders of human communication. To work independently and receive grant funding for their research, most hearing, speech, or language scientists hold the PhD degree. Some individuals with a masters or professional doctorate continue into the PhD program.

Speech and Hearing Science at Ohio State

The Department of Speech and Hearing Science at Ohio State can trace its roots to the Department of Rhetoric founded in 1892, and the Department of Phonetics founded in 1930. In 1936, those departments were merged into the Department of Speech with Professor G. Oscar Russell as the head of the phonetics area. Reorganization in 1948 produced five areas in the Speech Department, including Speech Correction and Hearing Therapy, and Education of the Deaf. In 1965, the Speech and Hearing Science Section was reorganized under the leadership of Professor John Black. After 60 years in Derby Hall, the Speech and Hearing Science Section moved to Pressey Hall in 1990 and in 1993 became the Department of Speech and Hearing Science. Since 1968 the unit has been a part of the College of Social and Behavioral Sciences in the Colleges of the Arts and Sciences.

Career opportunities for Speech and Hearing Science majors

Career opportunities for persons with a bachelor's degree in Speech and Hearing Science are comparable to those for students with undergraduate degrees in related fields, such as psychology, sociology, linguistics, or other liberal arts and sciences degrees. While many continue into graduate programs in Audiology or Speech-Language Pathology, others may choose to pursue careers in teaching or other areas in the health professions. Because the degree is a broadly-based liberal arts degree, it should serve as a basis for entry into careers in law, medicine, business, government, or industry.

Speech-language pathologists and audiologists are professionals who work closely with teachers, physicians, psychologists, social workers, rehabilitation counselors, and other members of an interdisciplinary team, but are autonomous and do not work under direct medical supervision.

They provide professional services in:

- * public and private schools
- * rehabilitation centers and nursing care facilities
- * college and university clinics
- * state and local health departments
- * home care
- * centers for the developmentally disabled
- * industries
- hospitals
- community clinics
- private practice offices
- state and federal government agencies
- adult day care centers
- research laboratories

It is important to note that for professional certification and state licensure as a speech-language pathologist a master's degree is necessary. All states that license speech-language pathologists require master's level training. In addition, the American Speech-Language-Hearing Association (ASHA) requires both completion of a master's degree and a year of clinical internship (Clinical Fellowship Year) for the certificate of clinical competence (CCC) in Speech-Language Pathology.

Audiologists practice in many of the same settings as speech-language pathologists, but with a greater representation in such settings as hospitals and clinics, or private practices. Although requirements for licensure vary from state to state, **all states require a graduate degree, and many require a doctoral degree to practice Audiology.** ASHA certification (CCC-A) and licensure in the State of Ohio require a doctoral degree (AuD or equivalent).

Hearing, speech, and language scientists are found primarily in universities, research institutions, government agencies, and industry. There are no specific credentialing requirements; however, most positions will specify a graduate degree, typically a Ph.D.

Graduate School

Admission to most graduate programs is very competitive. Undergraduate majors in Speech and Hearing Science should begin thinking about graduate programs before the beginning of the senior year. Students are encouraged to see an advisor in Speech and Hearing Science, to discuss possible graduate programs that match their interests and abilities.

In addition, students should plan to take the Graduate Record Examination (GRE) during the autumn quarter of the senior year. Most graduate programs in Speech and Hearing will require the GRE, and will base decisions for admission on GRE scores, GPA, and letters of recommendation

from faculty members in the student's program. Students should contact faculty members for recommendations before the autumn quarter of the senior year.

For students who do not plan to attend graduate school immediately, alternative career options are available. Students should contact an advisor in Speech and Hearing Science to discuss alternatives to graduate school. In addition, the Arts and Sciences Career Office in Townsend Hall can provide information about job opportunities for students with an Arts and Sciences degree.

Employment Outlook

Employment of speech-Language pathologists and audiologists is expected to increase faster than the average for all occupations through the year 2015. Recent estimates place audiology in the top 20 growth professions, and speech-language pathology in the top 10. Employment in the health care industry is projected to grow faster than the average for all occupations, while employment in education is expected to grow only as fast as the average.

The American Speech-Language-Hearing Association (ASHA) web site provides timely information about market trends for Audiologists and Speech-Language Pathologists. Students can get the most up-to-date information from that site: www.asha.org/careers .

Salary Trends

According to the ASHA SLP Healthcare Survey (2007) the median annual salary for speech-language pathologists was \$65,000 for SLPs working in a healthcare setting; the SLP Schools Survey (2004 – 2008) reported a median salary of \$58,000 (9/10 months) for those working in an educational setting. According to the ASHA Audiology Survey (2008) the median annual salary for audiologists was \$73,000. Salaries for speech, language, and hearing scientists are quite variable, depending on the employment setting, and can range from \$35,000 for master's to over \$90,000 Ph.D. graduates. The ASHA web site has links to survey results with details about work settings, demographics and salary trends that can be accessed by students considering careers in speech-language pathology, audiology or speech, language, or hearing science <http://www.asha.org/about/membership-certification/member-data/> .

How to major in Speech and Hearing Science at Ohio State

The first step for a student interested in majoring in Speech and Hearing Science is to see a counselor in the Colleges of the Arts and Sciences office in Denney Hall (temporarily moved to 437 Lincoln Tower after Sept 14, 2009). The CAS counselor will work with the student to set up a program of study to complete General Education Curriculum (GEC) requirements. **Prospective majors must take Math 148 (or its equivalent), and Biology 101 or 113 before enrolling in Speech and Hearing Science classes beyond SHS 230. Math 148 is a prerequisite for SHS 340.**

After meeting with the CAS advisor, the prospective Speech and Hearing Science major should meet with an advisor in the Department of Speech and Hearing Science in Pressey Hall to plan coursework for the student's major program. **It is extremely important to maintain close contact with both CAS and SHS advisors.**

Speech and Hearing Science Requirements

As a prerequisite to declaring a major in Speech and Hearing Science, students must complete SHS 230, "Introduction to Communication and Its Disorders." This five-hour course may be taken concurrently with other lower-level courses in the major, e.g., SHS 320 or 340. The following courses are required to complete the major:

SHS 320	Principles of Phonetics
SHS 330	Language Acquisition
SHS 340	Introduction to the Science of Sound
SHS 360*	Observation in Communication Disorders— Speech-Language Pathology and Audiology
SHS 420	Introduction to Speech Science
SHS 440	Introduction to Hearing Science
SHS 520	Introduction to Speech-Language Pathology
SHS 540	Introduction to Audiology

Elective Courses**

- a) 3 credit hours (300 level or above) in a human development,
Recommended human development courses:

Psychology 340

Human Development Family Science 364

Allied Medicine 425

(Other courses only if approved by advisor)

- b) 10 credit hours in Speech and Hearing Science at the 600 or 700 levels (must be approved by a Speech and Hearing Science advisor).

Recommended Speech and Hearing Science upper level courses**

SHS 605 Multicultural Aspects of Communication Disorders UG 5

SHS 734 Introduction to Aural Rehabilitation UG 5

SHS 765 Neurology of Communication

SHS 785 Research methods I

SHS 714 (Course content under revision – new title to be announced)

SHS 716 (Course content under revision – new title to be announced)

**** The courses chosen to fulfill the human development and upper level speech and hearing course requirements should be taken during the junior or senior year.**

How to minor in Speech and Hearing Science at Ohio State

The Undergraduate Minor in Speech and Hearing Sciences is a complement of the basic liberal arts degree. Its purpose is to educate and promote the awareness of communication disorders. In addition, students completing a minor in Speech and Hearing Science would be prepared to have some of the prerequisites required to apply for an advanced degree in Speech and Hearing Science, completed.

To declare the minor, students should meet with a member of the Speech and Hearing Science Undergraduate Studies Committee. After the coordinating adviser in the Department of Speech and Hearing Science has approved the Minor Program Form, you must file the form with your college or school counselor. For further information about the minor program, contact the Department of Speech and Hearing Science.

The minor in Speech and Hearing Science consists of 25 credit hours.

All minor programs require:

Speech and Hearing Science 230

Speech and Hearing Science 320

Speech and Hearing Science 340

Following the completion of these three courses, students choose one of four options, each of which will supply the remaining 10 credits.

Option 1 (Speech-Language Pathology):

Speech and Hearing Science 420

Speech and Hearing Science 520

Option 2 (Audiology):

Speech and Hearing Science 440

Speech and Hearing Science 540

Option 3 (multicultural/disability):

Speech and Hearing Science 310

Speech and Hearing Science 510

Option 4 (Speech & Hearing Science):

Speech and Hearing Science 420

Speech and Hearing Science 440

Sample Curriculum

Freshman Year

Coursework toward GEC requirements (including: Biology and Mathematics 148)

Sophomore Year

SHS 230

SHS 320

SHS 330

SHS 340

SHS 360*

Prerequisites

none

none

none

Math 148

SHS 230

Junior Year **

SHS 420

SHS 440

Human Development

SHS 360*

SHS 520 (or SHS 540)

SHS 320, 340 & biology

SHS 340 & biology

SHS 230

SHS 320,330,420 & 360

Senior Year **

SHS 540 (or SHS 520)

Upper Level Elective SHS 605

Upper Level Elective SHS 734

Upper Level Elective SHS 714

Upper Level Elective SHS 716

SHS 360* & 440

SHS 230 or 330

SHS 540

none

SHS 714

* SHS 360 could be taken during the sophomore or junior year at a time to fit the student's schedule. **Please note: SHS 360 requires that each student complete at least 25 hours of supervised observation in an approved clinical site. Department policy permits students to**

complete up to 10 hours of observation before enrolling in SHS 360, provided that the observation is properly documented. Proper documentation must include: number of hours, type of disorder, treatment or evaluation, age of patient(s), and other relevant information about the observation experience. It must be signed by the supervising Speech-Language Pathologist or Audiologist and include their ASHA CCC number and state license number. The student should contact Dr. Gail Whitelaw (whitelaw.1@osu.edu) if you have questions about the suitability of a specific observation site.

IMPORTANT: All Speech and Hearing Science majors must attain a grade of C- or higher in each of the courses listed above. If a C- is not attained, the course must be repeated. No substitutions for the core requirements are permitted. Students who must repeat a course should contact an advisor in Speech and Hearing Science to determine when the course will be repeated.

Advising

Students who major in Speech and Hearing Science use a dual advising system. Advising for courses required to complete GEC or Colleges of the Arts and Sciences requirements will be done through the CAS advising service. Advising for Speech and Hearing Science major requirements will be done by members of the Undergraduate Studies Committee of Speech and Hearing Science. To make an appointment to see an undergraduate advisor in the department, email shs_ug_advisor@osu.edu or call 292-8207.

All prospective majors in Speech and Hearing Science must meet with a SHS advisor when formally declaring the major to complete a major program form, outlining the course of study. Students are required to see an advisor one quarter prior to graduation, for revisions in the major program form and completion of paperwork for graduation. However, students are encouraged to see an advisor in the department at least once a year, to ensure that their major program is proceeding satisfactorily, or to discuss graduate school, thesis, or other topics.

Honors program

The honors program is an enhancement of the basic liberal arts degree for the Speech and Hearing Science major. Students in the honors program will take enriched honors courses, and will complete an honors contract leading to graduation with honors in the Liberal Arts (no thesis), or to graduation with distinction (thesis). Eligibility for the honors program in Arts and Sciences requires a 3.4 point GPA, although a slightly lower level is sometimes accepted in special circumstances. We encourage participation in the honors program, because the honors program will provide additional depth to the undergraduate experience, and also strengthen the student's credentials for graduate school.

The Senior Thesis is a special and personal opportunity for a student to grow in knowledge and understanding. The thesis provides a vehicle for students to gain firsthand knowledge of ongoing research activities in their own discipline, and allows the student to work closely with a faculty advisor to complete an individual research project matched to the student's interests. Development of a thesis project can be an interesting and rewarding experience, and further enhances the student's record for graduate school. Students can gain 8-15 hours of credit for thesis work, through Speech and Hearing H783. Work on the thesis typically spans 3 quarters of the senior year.

In the past, students in Speech and Hearing Science completing an honors thesis have received Undergraduate Research Scholarships to support their work on the project. These scholarships

provide support for costs associated with the research, and are awarded competitively across the college, based on the quality of the project. Deadlines for application for Undergraduate Research Scholarships occur several times each year. In addition, students completing an honors thesis have the opportunity to participate in the Undergraduate Research Forum, a university-wide competition in which students display the results of their thesis work. Prizes are awarded for particularly outstanding work. Contact an advisor in Speech and Hearing Science to obtain more information about the honors program and thesis opportunities. Dr. Michelle Bourgeois is the SHS Honors Advisor.

Transfer students

Students who have transferred to Ohio State from another college or university, and who plan to major in Speech and Hearing Science, should contact an undergraduate advisor in Speech and Hearing Science after their arrival at Ohio State. They should bring any paperwork completed by the Admissions Office to their meeting with the advisor, as well as syllabi from speech and hearing coursework completed at other universities. Transfer students may follow a somewhat unusual schedule in attempting to complete the major coursework.

Student organizations:

NSSLHA

All undergraduate majors in Speech and Hearing Science are encouraged to join the Ohio State chapter of the National Student Speech-Language-Hearing Association (NSSLHA). NSSLHA is the student organization sponsored by the American Speech-Language-Hearing Association (ASHA), which oversees professional certification of audiologists and speech-language pathologists in the United States. The Ohio State chapter typically sponsors a number of activities each quarter for students who are interested in gaining additional information or experience in areas related to Speech and Hearing. Guest speakers, volunteer opportunities, and social activities are all part of NSSLHA's program. In addition, students who join NSSLHA can receive discounts on membership in ASHA when they attain professional status. For more information, visit the NSSLHA web site nsslha.org.ohio-state.edu or contact the advisor, Nadine Ocock Whiteman (ocock.3@osu.edu).

SAA

The Student Academy of Audiology (SAA) welcomes undergraduates interested in exploring further study in Audiology. For further information, contact the advisor, Christy Goodman (goodman.58@osu.edu), or visit the SAA web site <http://audstudent.org.ohio-state.edu>.

For More Information:

Visit the department web page at: <http://sphs.osu.edu>

Lawrence L Feth, Ph.D. Coordinator, Undergraduate Studies, feth.1@osu.edu
Michelle Bourgeois, Ph.D. Honors Coordinator, bourgeois.14@osu.edu
Undergraduate Advisor, shs_ug_advisor@osu.edu or call 292-8207 to make an appointment to see an advisor