General Information

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Department of Speech-Language-Hearing Sciences
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Department of Speech-Language-Hearing Sciences

We offer internationally recognized programs in speech-language-hearing sciences, audiology, and speech-language pathology that provide outstanding opportunities for undergraduate and graduate students to pursue academic and clinical careers.

In all programs, we strive to serve scholars within the University and broader community with interwoven coursework and clinical and research experiences. These enable students to better understand the complexities of human communication across the lifespan, and to be sensitive to the personal, social, academic, and vocational consequences of difficulties in communication.
Undergraduate Degree

The Department of Speech-Language-Hearing Sciences offers an undergraduate major leading to a Bachelor of Arts Degree in Speech-Language-Hearing Sciences, as well as an undergraduate minor. The curriculum provides students with information about the physical, biological and behavioral foundations of human communication. Courses within the department focus on processes of normal and disordered hearing, language, speech and voice.

The B.A. degree in Speech-Language-Hearing Sciences offers students a broad liberal arts education in an interdisciplinary field of study. The coursework provides a background in human communication including the production and understanding of speech and language. These complex processes are ones that we often take for granted, but a disorder of one of these processes caused by disease, a problem at birth, or aging can have a profound effect on a person’s life. The field of speech-language-hearing sciences defines normal and disordered communication and provides the research foundation for diagnosis and treatment of communication disorders.

Conditions that interfere with communication are caused by a number of conditions including: autism, stuttering, severe hearing loss, stroke, growth on the vocal cords of a cheerleader or singer, cleft palate, and cerebral palsy. This list, which is far from exhaustive, shows the diversity of problems across the lifespan that are addressed in this field of study. As a consequence, speech, language, and hearing science draws its knowledge from many disciplines, including the ones shown in the diagram below:
Speech-Language-Hearing Science is an ideal major for the individual interested in physical and biological science and who also enjoys learning about people (social science). The University of Minnesota is also a great place to pursue this major. The faculty is recognized internationally for their research and teaching accomplishments; several have received teaching awards and research achievement awards from the University and national organizations. Because of the faculty’s accomplishments and the high quality of their students, the Department of Speech-Language-Hearing Sciences at the University of Minnesota is consistently considered to be among the top programs in the country.

Students who are interested in pursuing study beyond the bachelor’s degree can become a speech-language pathologist, audiologist, or a speech, language, or hearing scientist. Population trends predict a growing demand for professionals who can treat speech, language, and hearing disorders. For detailed career descriptions, please refer to the following American Speech-Language-Hearing Association websites:

- Career Information: [http://www.asha.org/students/professions/overview](http://www.asha.org/students/professions/overview)
- Fact Sheet—Speech Language Pathology: [http://www.asha.org/students/professions/overview/slp.htm](http://www.asha.org/students/professions/overview/slp.htm)
- Fact Sheet—Audiology: [http://www.asha.org/students/professions/overview/audiology.htm](http://www.asha.org/students/professions/overview/audiology.htm)
- Fact Sheet—Speech, Language and Hearing Science: [http://www.asha.org/students/professions/overview/slh.htm](http://www.asha.org/students/professions/overview/slh.htm)

**General Requirements for All Majors and Minors**

- All coursework in the Major and Minor must be completed on the A-F grading basis, with the exception of SLHS 3402W which is offered 'S-N only'.
- A minimum grade of C– is required for all Major and Minor courses, and an overall minimum GPA of 2.0 is required in order to graduate with the Major.
- Any coursework done outside the U of M must be petitioned at the Departmental level for Major/Minor equivalency.
- All majors and minors are encouraged to meet with the Undergraduate Advisor at least once a year for a progress check.
- Majors and Minors are required to obtain and file an Application for Undergraduate Degree in the appropriate College Office in order to graduate with a Major or Minor in Speech-Language-Hearing Sciences.
How and When to Declare a Major or Minor
Students are encouraged to declare a major or minor in the Department of Speech-Language-Hearing Sciences early in the course of study at the U of M. Students should meet with the Undergraduate Advisor to declare their major or minor to formulate a degree plan. Advising appointments can be scheduled by calling the main office at 612-625-2020 or by e-mail at slhsua@umn.edu. They are located in 16 Johnston Hall.

Advising Throughout the Major and Minor Work
Majors and Minors are encouraged to meet at their own initiative at least once a year with the Undergraduate Advisor, and are welcome to meet regarding advising issues as often as they like. Students can email Bill Solheim at slhsua@umn.edu or call 612-625-2020 to schedule an appointment to discuss progress and questions.

Major and Minor Sequence Descriptions
Please refer to the current U of M Undergraduate Catalog for titles and descriptions of all courses listed in the following sections describing Major and Minor options. Undergraduate Catalogs may be obtained via the Internet at www.catalogs.umn.edu

Study Abroad
SLHS majors are encouraged to consider studying abroad to enrich their education. A fact sheet that lists academic and personal considerations as well as sample programs is posted online.
http://www.umabroad.umn.edu/academic/majors/advisingSheets/slhScience.pdf. Make an appointment with Dr. Bill Solheim and visit the Learning Abroad Center http://www.umabroad.umn.edu/ to learn more about these exciting opportunities.

Other Programs for CLA Undergraduate Students

Martin Luther King, Jr. (MLK) Program
The Martin Luther King (MLK) Program, like Psychological Sciences, is one of the student communities within the College of Liberal Arts. It is open to any CLA student who wish- es to embrace or to foster multiculturalism. The MLK advisors work with students from freshman orientation through graduation, ensuring that they make the most of their University of Minnesota experience. Please refer to the MLK website for more information regarding the MLK Program and the various resources they offer to undergraduates in the College of Liberal Arts: http://www.class.umn.edu/mlk
Honors Program (see pages 21-27 for details)
Suite 390 Northrop 84 Church St. SE
Minneapolis, MN 55455
Phone: (612) 624-5522
Email: honors@umn.edu Website: www.honors.edu

Bachelor of Individual Studies & Individually Designed Integrated Major)

Another unique option for students with an interest in SLHS is to consider an individualized degree program. The BIS (Bachelor of Individualized Studies) and the IDIM (Individually Designed Integrated Major) allow a student to reflect a range of interests in a degree program. Because the field of Speech-Language-Hearing Sciences incorporates aspects of several disciplines (health science, psychology, linguistics, education), students have found SLHS to be a complementary field that fit well.

Two examples: A recent graduate completed the BIS degree with areas of concentration in 1) Speech-Language-Hearing Sciences, 2) Audio Technology, and 3) Communication Studies. This student then pursued advanced training with IPR (The Institute of Production and Recording), and plans a career in the music industry. Another student is completing the BIS with concentrations in 1) Math, 2) Architecture, and 3) Speech-Language-Hearing Sciences. This student is interested in human space and increasing sonic capabilities within the built environment.

For more information on the BIS and IDIM degrees contact: Individualized Degree Programs Office
16 Johnston Hall
(612) 624-8006
Web: http://idp.class.umn.edu/
Email: idp@class.cla.umn.edu
Major Requirements

Core Curriculum
The core curriculum is designed to provide students with a broad survey of speech, language, and hearing sciences and disorders. The courses listed below must be completed satisfactorily before a student is awarded a Bachelor of Arts degree in Speech-Language-Hearing Sciences.

Courses with equivalent content taken at other institutions can be substituted for Core listings. The determination of equivalence rests with the advisor in consultation with relevant faculty.

Major Requirements for B.A. Degree in Speech-Language-Hearing Sciences (36-37 credits)
To complete the B.A., students must complete at least 120 credits, including the 36-37 credits in the major.

SLHS 1301W* (4 credits) - The Physics and Biology of Spoken Language
OR
SLHS 1402 (3 credits) - The Talking Brain
SLHS 1401/3401 (3 credits) - Communication Differences and Disorders
SLHS 3302 (3 credits) - Anatomy and Physiology of the Speech & Hearing Mechanism
SLHS 3303 (3 credits) - Language Acquisition & Science
SLHS 3304 (3 credits) – Phonetics
SLHS 3305W (3 credits) - Speech Science SLHS 3306 (3 credits)
SLHS 3306 (3 credits) - Hearing Science

SLHS 3402W (3 credits) - Major Project in Speech & Hearing Science
OR
SLHS 3402WH

SLHS 4301 (3 credits) - Introduction to the Neuroscience of Human Communications
SLHS 4402 (3 credits) - Assessment and Treatment in Speech-Language Pathology
SLHS 4801 (3 credits) - Hearing Measurement & Disorders
SLHS 4802 (3 credits) - Rehabilitative Audiology
Examples of Course Schedules for Majors in SLHS
The following examples of course schedules are to serve as guidelines for students declaring their major at different points throughout their undergraduate career. These examples were designed considering the semesters in which courses are currently offered, as well as the prerequisites for upper division level courses. There are many ways to structure the order in which to take classes; the examples below show one possible way of scheduling. The Undergraduate Advisor assists you in planning your course schedule when you declare your major.

*Courses marked with an asterisk are not required for the major, but students are encouraged to take these if time permits.*

Declared Major as a Freshman

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<tr>
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<th>Fall</th>
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<tbody>
<tr>
<td>Freshman Year</td>
<td>SLHS 1401 Comm. Differences &amp; Disorders</td>
<td>SLHS 1301W Physics &amp; Bio or SLHS 1402 Talking Brain</td>
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<tr>
<td>Sophomore Year</td>
<td>SLHS 3302 Anatomy</td>
<td>SLHS 3303 Language Acquisition &amp; Science</td>
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<td>SLHS 3304 Phonetics</td>
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<tr>
<td>Junior Year</td>
<td>SLHS 3305W Speech Science</td>
<td>SLHS 3306 Hearing Science</td>
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<td>SLHS 4301 Neuroscience</td>
<td>*EPSY 5261 Intro to Statistics</td>
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<tr>
<td>Senior Year</td>
<td>SLHS 4402 Assessment/Treatment</td>
<td>SLHS 3402W Major Project</td>
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<tr>
<td></td>
<td>SLHS 4801 Hrg Measures and Disorders</td>
<td>SLHS 4802 Rehabilitative Audiology</td>
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Declared Major as a Sophomore

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<tbody>
<tr>
<td>Sophomore Year</td>
<td>SLHS 1401/3401 Comm. Differences &amp; Disorders</td>
<td>SLHS 1301W Physics &amp; Bio or SLHS 1402 Talking Brain</td>
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<tr>
<td>Junior Year</td>
<td>SLHS 3302 Anatomy</td>
<td>SLHS 3303 Language Acquisition &amp; Science</td>
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<td></td>
<td>SLHS 3305W Speech Science</td>
<td>SLHS 3304 Phonetics</td>
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<td></td>
<td>SLHS 3306 Hearing Science</td>
<td>SLHS 3402W Major Project</td>
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<tr>
<td><strong>Senior Year</strong></td>
<td>SLHS 4301 Neuroscience</td>
<td>SLHS 4802 Rehabilitative Audiometry</td>
</tr>
<tr>
<td></td>
<td>SLHS 4402 Assessment/Treatment</td>
<td>SLHS 4801 Hrg Measures and Disorders</td>
</tr>
<tr>
<td></td>
<td>SLHS 4801 Hrg Measures and Disorders</td>
<td>*EPsy 5261 Intro to Statistics</td>
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**Declared Major as a Junior**

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<tr>
<td><strong>Junior Year</strong></td>
<td>SLHS 1401/3401 Comm. Differences &amp; Disorders</td>
<td>SLHS 1301W Physics &amp; Bio or SLHS 1402 Talking Brain</td>
</tr>
<tr>
<td></td>
<td>SLHS 3302 Anatomy</td>
<td>SLHS 3303 Language Acquisition &amp; Science</td>
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<tr>
<td></td>
<td>SLHS 3305W Speech Science</td>
<td>SLHS 3304 Phonetics</td>
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<tr>
<td><strong>Senior Year</strong></td>
<td>SLHS 4301 Neuroscience</td>
<td>SLHS 3306 Hearing Science</td>
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<td>SLHS 4402 Assessment/Treatment</td>
<td>SLHS 3402W Major Project</td>
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<td></td>
<td>SLHS 4801 Hrg Measures and Disorders</td>
<td>SLHS 4802 Rehabilitative Audiology</td>
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<td>*EPsy 5261 Intro to Statistics</td>
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**Minor Requirements**

*Speech-Language-Hearing Sciences Minor Requirements*

Students must select a minimum of **14 upper-level credits** from the courses listed below:

- SLHS 3401 (3 credits) - Communication Differences and Disorders
- SLHS 3302 (3 credits) - Anatomy and Physiology of the Speech & Hearing Mechanism
- SLHS 3303 (3 credits) - Language Acquisition & Science
- SLHS 3304 (3 credits) - Phonetics
- SLHS 3305W (3 credits) - Speech Science
- SLHS 3306 (3 credits) - Hearing Science [Prereq – SLHS 3302 and 3305W]
SLHS 4301 (3 credits) - Introduction to the Neuroscience of Human Communications
SLHS 4402 (3 credits) - Assessment & Treatment in Speech-Language Pathology [Pre-req – SLHS 1401, 3303, 3304; 4301 before or concurrently]
SLHS 4801 (3 credits) - Hearing Measurement & Disorders  [Pre-req – SLHS 3302, 3305W]
SLHS 4802 (3 credits) - Rehabilitative Audiology [Pre-req – SLHS 4801]

Provided below are suggested courses for persons with specific needs. The Undergraduate Advisor can assist you choose courses when you declare your minor.

**Music Psychology: Emphasizing basic science foundations of the field**
SLHS 3302 Anatomy & Physiology
SLHS 3305W Speech Science
SLHS 3306 Hearing Science
SLHS 3994 Directed Research; Capstone Project
SLHS 4301 Neuroscience

**Linguistics, Child Development, Education, Psychology: Emphasizing cognitive and behavioral aspects of the field**
SLHS 3401 Communication Differences and Disorders
SLHS 3303 Language Acquisition & Science
SLHS 3304 Phonetics
SLHS 4301 Neuroscience
SLHS 4402 Assessment and Treatment
Course Descriptions

SLHS 1301W (4 credits)-The Physics and Biology of Spoken Language
Offered in Fall and Spring Semesters
(Meets CLE req. of Physical Science/Lab Core; Meets CLE req. of Writing Intensive)
This course covers the physics and biology of spoken language, from the talker’s production of sounds and words, to the transmission of sound, to the listener’s perception of what was said. Computer analysis and synthesis of speech are incorporated into the course content. **Students who are considering attending graduate school to become an Audiologist or Speech-Language Pathologist can enroll in this class, but they should know that they will also be required to complete a physical science course outside of the major.

SLHS 1302 (3 credits)-Rate Your World: Quantifying Judgments of Human Behavior
Offered in Fall and Spring Semesters
(Meets CLE req. of Mathematical Thinking)
This course will allow students with little mathematics background to learn basic quantitative methods as they apply to measuring human behavior. Introductory mathematical principles will be applied to measuring behaviors such as: rating personality and attention, evaluating infant speech perception, studying opinion polls, measuring voice and sound, and quantifying speech recognition through cochlear implants.

SLHS 1401/3401 (3 Credits) Communication Disorders and Differences
Offered in Fall and Spring Semesters
Introduction to normal and disordered cognition and communication in regards to hearing, speech, and language in pediatric and adult populations. Specific focus on functional communication, assessment, and intervention as it relates to socially, culturally, and linguistically diverse populations.
SLHS 1402 (3 credits) The Talking Brain
Offered in Spring Semester only
Within the last decade, new medical techniques have allowed people to examine brain function. We now understand how differences in brain function relate to behavioral diversity in people with normal brain function as well as people with brain injury. The increased understanding has been matched with an increased coverage of this topic in the popular media. This course focuses on how the brain produces and understands speech and language, by exploring scientific information through readings and videos, as well as literature and feature-length films.

SLHS 3302 (3 credits) Anatomy and Physiology of the Speech and Hearing Mechanisms
Offered in Fall Semester only
The course is designed to teach the gross anatomy and basic physiology of the nervous, auditory, respiratory, laryngeal, velopharyngeal, and orofacial systems with an emphasis on normal communication processes.

SLHS 3303 (3 credits) Language Acquisition and Science
Offered Spring Semester only.
Meets CLE req. of Social Science Core
This course is constructed as a survey of typical language development and major theoretical perspectives about development. Applications of current theory to analysis of children’s language are presented.

SLHS 3304 (3 credits) Phonetics
Offered in Spring Semester only
This course covers phonetic analysis, transcription of speech, articulatory, correlates of speech sounds, and practicum in transcription of speech sounds. Emphasis is provided in narrow transcription of normal adult English and special populations in speech-language pathology.
SLHS 3305W (3 credits) Speech Science
Offered in Fall Semester only
Meets CLE req. of Writing Intensive

This course is a survey of theories, methods, and research in the discipline of speech science. It includes the areas of speech acoustics, speech perception, and speech production.

SLHS 3306 (3 credits) Hearing Science
Offered in Spring Semester only
Prerequisites: SLHS 3301 and 3302

This course addresses theories, methods, and research in psychological and physiological acoustics with emphasis on the relation between physiological measures and perception. Topics include cochlear microphonics, auditory nerve firing patterns, scaling, and object perception.

SLHS 3401 Communication Differences and Disorders
Offered in Fall and Spring Semesters

Introduction to normal and disordered cognition and communication in regards to hearing, speech, and language in pediatric and adult populations. Specific focus on functional communication, assessment, and intervention as it relates to socially, culturally, and linguistically diverse populations.

SLHS 3402W (3 credits) Major Project
Offered in Spring Semester only.
Meets CLE req of Writing Intensive Offered S-N only

This course is the seminar for completion of the undergraduate major project paper by students in the fall semester of their junior or senior year.

SLHS 4301 (3 credits) Introduction to the Neuroscience of Human Communication
Offered in Fall Semester only

This course covers basic neuroanatomy and neurophysiology, specifically as they relate to normal speech, language, and hearing processes.
SLHS 4402 (3 credits) Assessment & Treatment in Speech-Language Pathology

Offered in Fall Semester only
Prerequisites: SLHS 1401/3401, 3303 and 3304
This course is an introduction to clinical methods/issues in communication disorders. Professional/legal mandates, collection/analysis of clinical data, principles/models of intervention with adults/children, clinical reporting.

SLHS 4801 (3 credits) Hearing Measurement and Disorders

Offered Fall Semester only.
Prerequisites: SLHS 3301 and 3302
This course is designed as an introduction to theory, administration, and interpretation of behavioral/physiological hearing tests for all age groups. Immitance, pure tone, speech, otoacoustic emissions, and evoked potentials measures are presented with an emphasis on hearing-screening protocols.

SLHS 4802 (3 credits) Rehabilitative Audiology

Offered in Spring Semester only
Prerequisites: SLHS 3305 and 4801
This course provides a survey of sensory aids and methods used in rehabilitation across the lifespan after the diagnosis of hearing loss. It provides a discussion of the degree of hearing loss, developmental level, communication modalities, client/family choice, disability, and cultural considerations.
Honors Program

To graduate with Honors, a student must be admitted to the University Honors Program, and must meet the Honors Graduation requirements including GPA levels, Honors Residency Requirement (60 UMTC credits), and designated Honors Experiences. General requirements for the graduating with Latin Honors are listed at this link (http://honors.umn.edu/experiences/requirements/index.php).

Honors Opportunities for Speech-Language- Hearing Sciences Majors

Courses

The Speech-Language-Hearing Sciences major has fewer students than some other majors and, for this reason, honors sections for classes are not offered frequently. Nonetheless, there are many honors opportunities for students in the SLHS major.

Honors Contract: Students can turn a non-honors course into an honors course through an honors contract. An honors contract is a written agreement with the professor of the course that is completed during the first two weeks of a course. The contract lists additional, honors quality work that is done by the student during the semester. The written agreement should list the student’s responsibilities in this class. No additional credit registrations are required for this option. Students who select this option must receive a B- or higher grade in the class to fulfill this honors requirement. Only one contract is allowed each academic year.

Learning Abroad: There are limited opportunities for SLHS students to study abroad and earn credits in the major. The content of the classes needs to match closely with that of our classes because many students plan to attend graduate school to become a speech-language pathologist or an audiologist and the content of courses needs to meet certification requirements in the USA. Students are still encouraged to study abroad. Some students have gained international experience in speech-language-hearing sciences that has broadened their perspectives and proven to be a valuable investment. Opportunities for studying abroad for SLHS majors are described in detail at the following link: http://umabroad.umn.edu/students/maps/cla/slhs

Directed Research in preparation for the Honors Thesis: Register for credits of SLHS 3994 with your faculty thesis adviser.

Graduate Level Courses: Students can complete a graduate course (5xxx or 8xxx) to fulfill an honors requirement (only if the course does not meet a major requirement). Students will need the permission of the instructor. There are several factors to consider in selecting this option because some graduate courses are inappropriate. Some graduate courses are designed for advanced graduate students and may not be appropriate for an undergraduate student. Other courses, which are part of the curriculum for a clinical degree, may need to be repeated if a student attends a different
college for graduate school. The courses may also be part of a sequence, and an extended delay between taking the first course as an undergraduate and the second one as a graduate student could present a challenge.

An ideal course to take in this situation is one in which the faculty has an area of expertise that may not be offered at other colleges. Appropriate courses are ones that provide students with background in an area that they intend to conduct research. Students should meet with the instructor of a graduate course and discuss how completing the course will help them meet their long term academic goals.

Students need to earn a C or higher for a graduate course to fulfill an honors requirement.

**Non-course Honors experiences in SLHS**

The Honors Web page describes non-course experiences as “participation in a distinctive educational opportunity outside of the classroom may count as an Honors Experience. These experiences must exhibit significant levels of participation and adhere to non-course Honors Experience guidelines in order to be approved. You should discuss all non-course options with your honors advisor.” A special form must be submitted to receive this kind of credit.

**Faculty Directed Research:**

Directed Research credits (SLHS 3394): students can receive non-course honors credit for enrolling in credits of directed research. This is the most common method of fulfilling a non-course honors experience.

Undergraduate Research Opportunities Program (UROP) Grants: students can meet the requirements for an honors experience by working on a grant proposal awarded by UROP. A proposal for a UROP grant is developed with a faculty mentor before being submitted for evaluation by a college committee to determine its suitability for funding. Students are typically paid for work on a UROP grant and qualifies as an honors experience. Students cannot be paid for writing an honors thesis, but preliminary work, including data collection, is permitted.

**Service Learning:** In past years, SLHS 3402V has included a service-learning unit. Service learning is a teaching pedagogy grounded in the belief that we learn by doing. As a teaching strategy, it builds on experiential learning theory and acts upon the notion that the academy has a fundamental responsibility to prepare students as contributing members of society and their chosen profession. Service learning is not volunteering or employment; it is a reciprocal relationship between the organization and the student. Service learning provides students with the opportunity to apply what they have learned through hands-on experiences in a non-profit organization, and it provides the organization an opportunity to do something they would not have been able to do otherwise. The service learning experience that is initiated during this class can count as a non-course honors experience.
**Leadership:** Occasionally students can fulfill this opportunity within the Department of SLHS. For instance, during one two-year period, a student who was elected as the president of the local chapter of the National Student Speech, Language Hearing Association made a major commitment to leading the group through officer meetings, coordinating and organizing events, including fundraising activities. The time commitment was greater than 45 hours, a requirement for fulfilling this option.

**Tutoring:** In the past, some students who earned an A grade in a large enrollment undergraduate class have volunteered to be tutors for that class. Contact the professor of the class to learn more about this option.

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**The Honors Thesis**

Honors students must complete an honors thesis to graduate with *Latin honors*. The University Honors Program offers several options for theses. The requirements differ depending on the level of *Latin honors*. The level of *Latin Honors* students receive is contingent upon the quality of the honors thesis they complete and the grade point average of their last 60 graded (A–F) U of M-Twin Cities credits. The summa thesis is an option for students who have a GPA of 3.75 or higher. The magna thesis requires a GPA of 3.66 or higher and the cum laude thesis a GPA of 3.5 or higher. See your faculty or University Honors Program adviser for complete requirements.

All honors theses require a written document with a critical review in the student’s chosen area of study. All theses require original analysis/work and are not simply a summary of previously published research. A thesis requires multiple revisions. In addition, a summa thesis often involves data collection or analysis while working in a faculty member’s laboratory.

An honors thesis offers students an opportunity to work closely with a faculty member. In the case of a summa thesis, the student also has an introductory research experience. The scope of a summa thesis is small compared to that of a master’s thesis, but it usually contains most elements of graduate research projects. Some summa theses have led to presentations at national conventions and/or publications with the student listed as a co-author with the faculty adviser.

1. Students completing a thesis should meet with the Director of Undergraduate Studies (DUS) in SLHS after declaring their major (as early as possible in their degree plan). The DUS will answer any questions about the process and introduce the student to faculty who are potential mentors, if necessary. Students will often develop an interest in an area of potential research after completing a class with a faculty member. Students can learn about the research areas of faculty members by exploring the department’s website ([http://slhs.umn.edu/people/](http://slhs.umn.edu/people/)).

2. A thesis topic is selected during discussions with the faculty mentor. Faculty mentors typically only supervise research projects within their area of expertise. For a summa
thesis students will enroll in 2 credits of honors thesis (SLHS 3555H). For a cum laude thesis or a magna thesis, students will enroll in 1 credit of SLHS 3555H. The section number for these enrollments must correspond to the ones assigned to your faculty adviser.

3. All thesis students are required to enroll in SLHS 3402V: Major Project in Speech and Hearing. Students who plan to complete a summa or a magna thesis should enroll in this class during the spring semester of the junior year (allowing at least 1 year to complete the background work and their thesis). Exceptions are made for students who are studying abroad during their junior year. Students completing a summa thesis need to begin earlier than the spring semester of their senior year to allow time for the more in-depth nature of their work which could involve laboratory data collection. Students should consult with their faculty adviser and consider enrolling for Directed Research (SLHS 3994) credits if their summa or magna thesis project expands to include a presentation at a national conference or in some other manner that requires effort beyond that for a typical thesis. Honors students will write a paper as part of SLHS 3402V that can serve as background research for their thesis. At times, portions of this paper can become part of the Introduction to the thesis. The paper written as credit for SLHS 3402V meets the requirements for that class; your thesis adviser will work with you to determine the requirements for your thesis.

4. The completed summa thesis will be read and approved by 3 faculty members (one of whom is the adviser). Two of the faculty must have tenure track appointments; one may be an adjunct faculty member or other person with special expertise. The thesis adviser will recruit the committee of faculty who will serve as readers. A summa thesis also requires a public presentation. Students can present their theses to a class, a laboratory group, or in a colloquium arranged for this purpose. Magna and cum laude theses only require the signature of the adviser. The honors program has a special form that requires the signatures of the advisers.
Faculty

Professors

Arlene E. Carney, Ph.D., CCC-A, primary research interests are in the development of speech perception in adults and children with normal and impaired hearing. Dr. Carney has served as the Editor for Hearing of the Journal of Speech, Language, and Hearing Research, Associate Editor for Cochlear Implants for the journal Ear and Hearing, and as a member of the Advisory Council of the National Institute on Deafness and Other Communication Disorders at the National Institutes of Health. Currently, she is a member of the Board of Ethics for the American Speech-Language-Hearing Association. E-mail: carne005@umn.edu

Ben Munson, Ph.D., has a background in both speech-language pathology (MA and PhD) and linguistics (BA). Also, he has an associate graduate faculty appointment in the program in Linguistics. He regularly teaches undergraduate courses in the physics and biology of spoken language and quantifying measures of human behavior, as well as a graduate course in speech sound development and disorders. In the past, he has taught phonetics, speech science, and speech and language disorders. His primary research program examines how children's speech sound learning is related to their vocabulary development, looking at children with hearing impairment, children with speech-sound disorder, and children with language impairments. His secondary line of research examines how socially relevant information is produced and perceived by children and adults, focusing on how adults convey sexual orientation through speech, and how children, adolescents, and young adults learn ways of speaking that convey their emerging gender identity and sexual orientation. E-mail: munso005@umn.edu

Peggy Nelson, Ph.D., CCC-A, teaches courses in amplification and diagnostic audiology. She has three primary areas of research interest: 1) hearing aid signal processing for improved speech understanding by hard-of-hearing listeners, 2) speech perception by cochlear implant users, and 3) effect of reverberation and noise on children's understanding of speech. Recent research projects have included real-time digital algorithms for amplitude compression and spectral sharpening of speech, and investigation of release from masking in implant listeners. E-mail: nelso477@umn.edu

Joe E. Reichle, Ph.D., teaches courses in augmentative communication systems, beginning communication intervention with individuals with ASD and positive approaches to managing problem behavior. His current research interests include; (a) the
investigation of factors that influence the selection and implementation of augmentative communication systems, (b) appropriate and inappropriate generalization of newly acquired communicative acts, and (c) establishing socially acceptable.

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Robert. S. Schlauch, Ph.D., teaches classes and conducts research in the area of hearing. He teaches courses in hearing science and diagnostic audiology. His primary line of research addresses questions about the perception of sound and understanding of speech, and how hearing loss and cognitive processes influence our perception. His secondary line of research addresses ways to make diagnostics hearing tests more effective, including the development of a speech test for persons whose first language is not English.

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Associate Professors

Lizbeth H. Finestack, Ph.D., CCC-SLP, teaches courses on child language development, assessment, and intervention. Her research is focused on improving the effectiveness of child language interventions with a focus on grammatical and narrative interventions for children with specific language impairment, children with autism spectrum disorder, and adolescents with Down syndrome.

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Jayanthi Sasisekaran, Ph.D., teaches Communication Differences and Disorders and Talking Brain. Her primary research interests include linguistic processing skills in adults and children who stutter, language-speech motor interactions and neurophysiological indices of language processing in fluent and disfluent speakers.

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Peter Watson, Ph.D., CCC, teaches courses in speech production and disorders. His past research has focused on breathing control in professional opera singers and actors. His current research focus is on normal and abnormal speech production as it relates to motor speech disorders, specifically in Parkinson's disease.

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Yang Zhang, Ph.D., teaches The Physics and Biology of Spoken Language. He researches in the areas of learning and cognitive development and the neural bases of language processing and speech communication.

E-mail: zhang470@umn.edu
**Assistant Professors**

*Jessica Brown, Ph.D., CCC-SLP,* teaches courses related to neuroanatomy and neurophysiology especially as it pertains to speech, language and hearing processes. Dr. Brown conducts research in adult language and cognitive disorders such as brain injury and aphasia.

**E-mail:** brow4565@umn.edu

*Sheri T. Stronach, Ph.D., CCC-SLP,* teaches courses in clinical methods in Speech-Language Pathology and considerations for working with culturally and linguistically diverse populations. Her primary research focuses is early social communication development across cultures. Dr. Stronach also conducts research examining screening tools and parent-implemented interventions for toddlers with autism spectrum disorder.

**E-mail:** sstronac@umn.edu

**Clinical Program Director**

*Mark DeRuiter, Ph.D., CCC-A/SLP,* is the Director of Graduate Studies and Clinical Programs. Dr. DeRuiter manages the operations of the Julia M. Davis Speech-Language- Hearing Center and directs the curricular and clinical education of graduate programs. His interests are in auditory processing disorders and speech perception.

**E-mail:** derui001@umn.edu

**Clinical Professionals**

*Sara Angerman, Ph.D. CCC-A* supervises graduate students enrolled in clinical practicum in audiology in the department’s Julia M. Davis Speech-Language-Hearing Center. She also supervises students at off-campus hearing screenings for senior centers, special education programs, and the Special Olympics. She teaches graduate courses in auditory processing disorders and balance assessment. She is a Past-President of the Minnesota Speech-Language-Hearing Association. **E-mail:** erick147@umn.edu

*Marilyn Fairchild, M.A., M.A., CCC-S,* is a clinical supervisor who works with graduate students in the Davis Speech Language Hearing Center and in school settings. She has interests in communication differences and disorders in members of culturally and linguistically diverse populations, the intersection of literacy and speech sound disorders, and formative assessment in clinical supervision. She works with both pediatric and adult populations with various types of communication disorders and difficulties. **E-mail:** fairc003@umn.edu
Linda Hinderscheit, M.A., CCC-S, is a clinical supervisor who supervises students in the first or second practicum of their graduate program. She has an interest in communication disorders that are developmental in nature. Her clients include children and adults with phonological, language and/or fluency disorders. These clients may have other identified developmental disorders such as Down syndrome, cerebral palsy, cleft palate, hearing loss, etc. Ms. Hinderscheit also co-leads the local chapter of the National Stuttering Association (a self-help, self-advocacy organization for adults who stutter), the local chapter of the TWST (Teens Who STutter) group, and the University of Minnesota Kids Who Stutter day camp.

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Rebecca Lulai, M.A., CCC-SLP, is a clinical supervisor for first and second year graduate students completing a practicum experience at the Julia M. Davis Speech-Language-Hearing Center. Her clients include adults who are in need of rehabilitative speech and language therapy after a medical event as well as children with developmental speech and language disorders. She has special interests in the areas of cognitive impairments and selective mutism.

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Kerry Witherell, Au.D., CCC-A, is a clinical supervisor who supervises graduate students enrolled in clinical practicum in audiology in the Julia M. Davis Speech-Language-Hearing Center. She has an interest in the evaluation and clinical management of both children and adults who have a hearing impairments. In addition to working with graduate students in the clinical setting, she also teaches the lab modules that are associated with a number of the graduate level audiology courses.

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Frequently Asked Questions

What scholarships are available to undergraduates?

Please refer to www.cla.umn.edu for listings of various University of Minnesota scholarships. Speak with the Undergraduate Advisor to find out about scholarship opportunities.

The Alworth Memorial Fund awards a generous scholarship for undergraduates who are majoring in Speech-Language-Hearing Sciences. To qualify, applicants must have graduated in the upper 20% of their high school class from a high school located in northern Minnesota (7 counties qualify). To learn more about this generous scholarship and its requirements, visit http://www.alworthscholarship.org/

What research opportunities are available to undergraduates?

UROP (Undergraduate Research Opportunities Program)

“The Undergraduate Research Opportunities Program (UROP) is administered by the Vice President for Research and the Dean of the Graduate School at the University of Minnesota. This program is designed to give undergraduate students and faculty members the opportunity to work together on research, scholarly, or creative activities. Started in 1985, this competitive program provides over 400 students a year with financial support in the form of a stipend (up to $1400.00) and/or an expense allowance (up to $300) while they assist with a faculty member's scholarship or carry out projects of their own under the supervision of a faculty member.”

“Full-time undergraduates enrolled in each of the 23 participating colleges on all 4 University of Minnesota campuses are eligible to apply provided they are enrolled in a baccalaureate or pre-baccalaureate program. Similarly, all University faculty members, whatever their college, rank, or nature of appointment, may serve as UROP sponsors. Students may choose to work with faculty members from their own colleges or from other colleges and campuses, thus giving students access to the University's wide range of faculty and research facilities. Students may submit proposals twice yearly (deadlines are usually in early October and early March).”

The above information was obtained from the UROP web-site: www.urop.umn.edu. For more information about deadlines, application process and forms, please refer to the website.
**REU (Research Experience for Undergraduates)**

“This program is a ten-week summer research program administered by the Center for Cognitive Sciences and is funded by the National Science Foundation, the National Institute of Mental Health and the University of Minnesota. The program is open to 22 Undergraduates.”

“The general program goals are:
- To give qualified undergraduates the opportunity to find out about graduate school and advanced research in cognition, biobehavioral sciences, and mental health.
- To persuade participants that a career in these scientific areas offers an exciting challenge.
- To increase the overall numbers and diversity of students entering research careers.
- To provide the opportunity for students to identify their focal interests through direct experience and exposure to the many areas of research in the behavioral sciences.”

“The program seeks to demonstrate to the participants that they are fully capable of such careers and that such careers offer many personal and intellectual rewards.”

“Faculty mentors are drawn from the departments of Psychology, Child Development, Speech-Language-Hearing Sciences, Psychiatry, Pharmacology, Computer Science, Decision Science, Kinesiology, and other related disciplines.”

The information above was obtained from the Center for Cognitive Sciences (University of Minnesota) website. For more information regarding program description, activities, eligibility, application, and financial support, please refer to the following website: [www.cogsci.umn.edu/REU/REU.htm](http://www.cogsci.umn.edu/REU/REU.htm).

**What is the National Student Speech Language Hearing Association (NSSHLA)?**

NSSHLA is the national pre-professional organization (recognized by the American Speech-Language Hearing Association) for undergraduate and graduate students studying communication disorders. Students can become involved in NSSHLA at both the national and local level.

**Local NSSHLA:**
The Department of Speech-Language-Hearing Sciences at the University of Minnesota has a local chapter of NSSHLA. Students may wonder “What can local NSSHLA do for me?” A few of the benefits of membership include:
- Scholarships to attend local and national conventions
- Fundraisers
- Social Events
• Speaker meetings where you get a chance to learn about topics in our field from professionals in the community
• Discounted prices on NSSLHA t-shirts
• A chance to meet fellow students and professionals in our field

An additional club/professional organization you can list on your graduate school applications or resume!

Local NSSLHA membership is good for one school year. You must join/re-join by filling out a membership form and submit $10.00. Forms can be given to the current NSSLHA President or to the main office, 115 Shevlin Hall. We encourage students to join every fall at the beginning of the semester.

_National NSSLHA:_

Joining Local NSSLHA does not automatically make you a member of National NSSLHA. To join National NSSLHA, there is a separate application form (which can be found in the M.A. room or online at www.nsslha.org/nsslha/join/) and a fee of $45. National NSSLHA runs on the calendar year. Applications received between September 1st and December 31st are processed for the following calendar year, and NSSLHA membership applications received between January 1st and August 31st are processed for the calendar year in which they were received.

Some of the benefits of being a National NSSLHA member include:
• NSSLHA’s biannual publication _Contemporary Issues in Communication Science and Disorders (CICSD)_
• NSSLHA’s biannual newsletter _News and Notes_
• The ASHA (American Speech-Language Hearing Association) Leader
• A choice of one ASHA journal
  ○ _American Journal of Audiology: A Journal of Clinical Practice (AJA)_
  ○ _American Journal of Speech-Language Pathology: A Journal of Clinical Practice (AJSLP)_
  ○ _Journal of Speech, Language, and Hearing Research (JSLHR)_
  ○ _Language, Speech, and Hearing Services in Schools (LSHSS)_
• Reduced registration fees for the annual ASHA Convention
• Significant Savings on dues for your first year of ASHA membership and certification
• Access to ASHA’s Employment Referral System and Placement Center
What Professional Organizations exist in the field of Speech-Language Pathology and Audiology?


Some interesting links on this site for undergraduates include:

- Career information about audiology, speech-language pathology and speech and hearing science fact sheets, salary information, information for persons beginning a career, and persons considering a career:
  http://www.asha.org/students/professions/overview

- About Academic Programs - includes information about successful entry into graduate school, CAA accredited programs and historically black and minority emphasis programs.
  http://professional.asha.org/academic/graduate_schools.cfm

- Financial Aid Resources - http://www.asha.org/students/financial-aid


3. Minnesota Speech-Language Hearing Association (MSHA)

MSHA offers students membership rates, as well as discounts to their annual fall and spring convention. For more information, contact MSHA at http://www.msha.net

*Note: Most states have professional organizations such as MSHA.

What volunteer opportunities are available in the Twin Cities? Within the department?

- Courage Center: (612) 588-0811
  Great Minneapolis Crisis Nursery: Contact the Volunteer Dept. at: (763) 591-0400

- Fraser School: (612) 861-1688
  NSSLHA: Participate in volunteer opportunities with Local U of M NSSLHA members (past events have included: Cooking dinner at the Ronald McDonald House, Runs/Walks for various organizations, Book drive for Toys for Tots)

Contact the Undergraduate Advisor for a list volunteer and observation opportunities our department has compiled.

Department of Speech-Language Hearing Sciences- contact a professor directly to explore volunteer experiences within their respective labs.

What are some websites of interest?
Judy Kuster’s Homepage: provides numerous links to topics in communication disorders: http://www.mnsu.edu/dept/comdis/kuster2/welcome.html

National Center for Voice and Speech: http://www.ncvs.org
Grievance Policy

1. This policy addresses academic grievances only. Academic grievances are complaints brought by students regarding the University’s provision of education and academic services affecting their role as students. Academic grievances must be based on a University rule, policy, or established practice. This policy does not limit the University’s right to change rules, policies or practices.

2. This policy does not apply to conflicts connected with student employment or actions taken under the Student Conduct Code. Also, complaints alleging violation of the University’s policies of sexual harassment and academic misconduct are not grievances under this policy. Such claims shall be referred to the appropriate office for investigation and review. Any complaint alleging discrimination in the University/student relationship, other than sexual harassment, may be filed either under this policy or with the Office of Equal Opportunity and Affirmative Action, but not both.

3. Students enrolled at any campus of the University of Minnesota may file academic grievances under this policy.

4. It is the goal of this policy to provide a simple and expeditious process, allowing for both informal and formal resolutions of conflicts. Resolutions may include student reinstatement or other corrective action for the benefit of the student, but may not award monetary compensation or take disciplinary action against any employee of the University.

Additional information on the Grievance Policy can be found at http://www1.umn.edu/usenate/policies/stugriev.html
Considerations for Students Applying to Graduate School

Read the Department’s Statement of General Expectations for Graduate Students

By the completion of the Master's program, students should acquire independent clinical management skills. To achieve this objective, students will be supervised according to ASHA guidelines throughout their clinical education.

Students are assigned to work with a variety of populations and age groups. Clinical practica will provide students with experience in a broad range of communication disorders in different clinical settings.

Students must demonstrate effective interpersonal and behavioral management skills to work with infants, pre-school and school aged children, and adults of all ages.

Students must be able to collaborate with supervisors and other professionals in clinical settings.

Students will be responsible for reporting communication findings and recommendations at interdisciplinary staff or school IEP meetings. Students must communicate information accurately and appropriately to clients, caregivers, and families, in a manner that is respectful of various cultural, educational, and linguistic backgrounds.

Clinical education demands direct application of academic background to an applied setting. For example, many typical clinical settings in speech-language pathology will require a student to be able to:

1. Perform a thorough oral mechanism and motor speech examination.
2. Interact with a child to gather a language sample.
3. Provide visual and auditory perceptual judgments of voice, speech, or swallowing function.
4. Observe and interpret non-verbal communicative behaviors.
5. Administer, score, and interpret standardized examinations of speech, language, or cognition.
6. Keep accurate and timely records of intervention, including lesson plans, chart notes, formal diagnostic reports, and other written clinical summaries.
7. Counsel speech- and language impaired clients and their families.

Some examples in audiology practica are listed below. Typical clinical settings will require a student to:

1. Visually inspect the ear canal and tympanic membrane.
2. Observe and monitor client responses to sounds.
3. Manually fit hearing aids, test probes, ear mold material, and other prostheses in the ear.
4. Adhere to standardized hearing assessment protocols.
5. Counsel hearing impaired clients and their families.
6. Keep accurate and timely records of intervention, including lesson plans, chart notes, formal diagnostic reports, and other written clinical summaries.

Additionally, all students entering clinical practica must complete a criminal background study conducted through the State of Minnesota Department of Human Services.

**Observation Hours**

Students who are interested in pursuing a career in Speech-Language-Hearing Sciences should try to observe Speech-Language Pathologists and Audiologists in their work settings as they provide services to clients. Such observations are important for making a career choice.

How to arrange observation hours:

Students interested in observing a practicing clinician have two options.

1. Students may set up their own observations. Observations can be arranged if the student has contacts within the professional community.
2. Students who have no private contacts can contact the Clinical Student Program coordinator by calling 612-624-9535 or emailing slhsed@umn.edu.

**Training Requirements**

You are required to complete HIPAA training before earning observation hours. To sign up for HIPPA training, contact the Clinical Student Program coordinator by calling 612-624-9535 or emailing slhsed@umn.edu.

**Documentation Requirements**

You will need to fill out an hours observation form and have your observation supervisor sign the form. Make two copies: one for your records and one to be submitted to the Clinical Student Program Coordinator in Shevlin 115. You can obtain the form from the Clinical Student Program coordinator. The undergraduate advisor and the Clinical Student Program coordinator have more information about observation.

**What is the process for applying to Graduate School?**

Below is a timetable and tips for applying to graduate school. All times indicated below apply to the senior year of college and are approximate. Students should study deadlines for specific programs carefully since they may vary significantly depending on the program to which they apply.
**SUMMER**

Go to [http://www.asha.org](http://www.asha.org). Examine the list of accredited graduate programs and request information and applications from graduate schools you are interested in applying to.

Write a draft of your personal statement. This is one of the most important parts of your application. It will be evaluated for quality of writing as well as for clarity of professional goals.

Sign up for the GRE (Graduate Record Examination). Eddy Hall has information on how to register for the GREs (612-624-5520). The Assessment and Achievement Center (612-626-1055) has exam preparation materials.

**OCTOBER**

Meet with faculty members to ask for letters of recommendation. Give your professors the forms to fill out or the addresses to which they should send their letters. It is helpful to them if you give them copies of your personal statement and resume/vitae.

**NOVEMBER**

Order transcripts. Ask if your record's office can send a transcript with your fall semester grades in time to meet the deadlines of programs to which you are applying. Remember to request transcripts from every college/university you have attended.

**DECEMBER**

Complete applications. Even if deadlines are later, it is better to send the applications early.

**Common Criteria for Graduate School Applications:**

1. *Official Transcripts:* Supply transcripts from every college and university you have attended. Allow plenty of time for processing of your transcripts.
2. *Graduate Record Examination (GRE):* The General GRE consists of three sections: Verbal, Quantitative, and a Writing Sample.
3. *Letters of Recommendation:* Ask persons who know your academic and creative capabilities: instructors in courses with whom you have interacted, research project advisor, academic advisor.

Letters from academic faculty are preferred. However, if you are a returning student, it may also be important to ask for letters from people who can attest to your ability to succeed.
Inquire to make sure the individuals you plan to list as references are willing to write letters on your behalf. Indicate your application plans (e.g., how many schools will require letters).

Prepare a brief statement or vitae of your undergraduate activities, interests, and other pertinent information to provide to letter writers to use in their letters.

Request letters well in advance of application deadlines (1-3 months prior to deadlines).

4. *Personal Statement:* Usually, a personal statement is about one page in length, and it is an opportunity for the student to express her/his immediate and long-range career goals. Every institution has specifications concerning what information to provide in the personal statement. Students should follow requirements for each institution.

**How Are Application Materials Evaluated?**

Applications usually are examined by a committee of faculty members. No single criterion will guarantee admission, nor is there a formula by which admissibility can be calculated.

Common Criteria include:
- Official Transcripts (indicating a student’s GPA)
- GRE
- Letters of Recommendation (usually 3)
- Personal Statement (usually 1 or 2 pages)