### Speech & Hearing Science: Neuroscience of Communication, BS

**for the degree of Bachelor of Science Major in Speech & Hearing Science, Neuroscience of Communication Concentration**

- department website: [http://shs.illinois.edu/](http://shs.illinois.edu/)
- department faculty: [https://ahs.illinois.edu/shs-directory](https://ahs.illinois.edu/shs-directory)
- college catalog page: [http://catalog.illinois.edu/schools/ahs/academic-units/](http://catalog.illinois.edu/schools/ahs/academic-units/)
- college website: [http://www.ahs.illinois.edu/](http://www.ahs.illinois.edu/)

The Neuroscience of Communication concentration provides and interdisciplinary understanding of the neurological systems that underlie human communication. Students will study the biological basis of communication in order to understand brain-behavior correlates of typical and disordered speech, language, and hearing function. In addition, students will benefit from faculty research that utilizes innovative technologies to study the structure and function of the sensory-motor systems that underlie human communication abilities. This concentration is intended to help prepare students for health and science-related careers, including medicine and neuroscience. In addition, undergraduates interested in pursuing careers as an audiologist or speech-language pathologist can combine this concentration with precertification requirements.

**General Education**: Students are advised to select their General Education course requirements from the University’s approved list of courses ([https://courses.illinois.edu/gened/DEFAULT/DEFAULT](https://courses.illinois.edu/gened/DEFAULT/DEFAULT)) and to work in close consultation with their academic advisor to ensure graduation requirements are addressed.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>RHET 105</td>
<td>Writing and Research</td>
<td>4-6</td>
</tr>
<tr>
<td>or CMN 111 Oral &amp; Written Comm I</td>
<td></td>
<td>&amp; CMN 112 Oral &amp; Written Comm II</td>
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<tr>
<td>Advanced Composition</td>
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<td>3</td>
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</table>

One course in Advanced Writing/Composition II from university approved Gen Ed list.

**Quantitative Reasoning I**

Choose one of the following:

- STAT 100 Statistics
- STAT 107 Data Science Discovery
- STAT 200 Statistical Analysis
- STAT 212 Biostatistics

**Quantitative Reasoning II**

One course from the university approved Gen Ed list.

**Humanities and the Arts**

Minimum of two courses from university approved Gen Ed list.

**Social and Behavioral Sciences**

Minimum of two courses from university approved Gen Ed list.

**Natural Sciences and Technology**

Choose one from the following and one from the university approved Gen Ed list.

- CHEM 101 Introductory Chemistry
- CHEM 102 General Chemistry I & CHEM 103 and General Chemistry Lab I
- CHEM 104 General Chemistry II & CHEM 105 and General Chemistry Lab II
- CHEM 108 Chemistry, Everyday Phenomena
- CHEM 202 Accelerated Chemistry I & CHEM 203 and Accelerated Chemistry Lab I
- CHEM 204 Accelerated Chemistry II & CHEM 205 and Accelerated Chemistry Lab II
- PHYS 101 College Physics: Mech & Heat
- PHYS 102 College Physics: E&M & Modern
- PHYS 123 Physics Made Easy
- PHYS 140 How Things Work
- PHYS 150 Physics of Societal Issues
- PHYS 211 University Physics: Mechanics
- PHYS 212 University Physics: Elec & Mag
- PHYS 213 Univ Physics: Thermal Physics
- PHYS 214 Univ Physics: Quantum Physics

**Cultural Studies**

- One course from Western Cultures university approved Gen Ed list.
- One course from Non-Western Cultures university approved Gen Ed list.
- One course from U.S. Minority Cultures university approved Gen Ed list.

**Foreign Language**

May be satisfied if had three years of one non-English language in high school or completed the equivalent of three semesters of college level foreign language (through the intermediate level).

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<tr>
<td>SHS 170</td>
<td>Intro Hum Comm Sys &amp; Disorders</td>
<td>3</td>
</tr>
<tr>
<td>SHS 191</td>
<td>Freshmen Seminar</td>
<td>1</td>
</tr>
<tr>
<td>SHS 200</td>
<td>General Phonetics</td>
<td>3</td>
</tr>
<tr>
<td>SHS 240</td>
<td>Intro Sound &amp; Hearing Science</td>
<td>3</td>
</tr>
<tr>
<td>SHS 300</td>
<td>Anat &amp; Physiol Spch Mechanism</td>
<td>4</td>
</tr>
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Information listed in this catalog is current as of 04/2020
Electives

All students are encouraged to take electives in and outside the department that will count towards the 128 required hours for graduation (the total number of electives students may take may vary with each individual). Students are encouraged to select electives that will complement their areas of interest and future goals. Areas listed below are only a sampling of possibilities; they are not to be considered as requirements and students are not limited to these choices. All students are responsible for addressing course pre-requisites and course availability may vary.

Anthropology (ANTH), Communications (CMN), Kinesiology and Community Health (KIN, CHLH), Educational Organization and Leadership (EOL), Curriculum & Instruction (CI), Educational Policy Studies (EPS), Educational Psychology (EPSY), English (ENGL), English as a Second Language (ESL), Human Development and Family Studies (HDFS), Library and Information Science (LIS), Linguistics (LING), Psychology (PSYC), Recreation, Sport, & Tourism (RST), Rehabilitation Counseling (REHB), Special Education (SPED), Sociology (SOC), Social Work (SOCW). Additional areas to explore may include: courses in a foreign language beyond the completion of the University’s requirement, as well as additional courses in science, such as Biology (IB, MCB), Physics (PHYS), microcomputer applications (e.g. ACE), and courses in cultural studies.

Neuroscience of Communication Concentration

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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>SHS 280</td>
<td>Communication Neuroscience</td>
<td>3</td>
</tr>
<tr>
<td>SHS 389</td>
<td>Neuroplasticity and Communication</td>
<td>3</td>
</tr>
<tr>
<td>SHS 427</td>
<td>Language and the Brain</td>
<td>3</td>
</tr>
<tr>
<td>SHS 470</td>
<td>Neural Bases Spch Lang</td>
<td>4</td>
</tr>
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Students must also take 6 hours from the following specified electives:

- Any Chemistry or Physics 100-level class
- IB 100    Biology in Today's World
- PSYC 204  Intro to Brain and Cognition
- PSYC 216  Child Psych
  or EPSY 236id Development in Education
- PSYC 230  Perception & Sensory Processes
- PSYC 224  Cognitive Psych
- PSYC 248  Learning and Memory
- SHS 271  Communication and Aging
- SHS 291  Research Lab Experience in SHS

Total Hours 19

1 No more than 3 credits from SHS 291, SHS 390 and SHS 395 may be counted toward the 6 credits of specified electives.