

# BA HUMAN BIOLOGY

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## SPEECH-LANGUAGE-HEARING SCIENCE CONCENTRATION

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At least **124 hrs.** (of which 45 must be Jr/Sr hrs.—courses numbered 300 or above) **must be completed for graduation.**

Completing the minimum requirements listed on this sheet will result in **118 overall hrs.** and **31 Jr/Sr hrs.**

Double majors must complete at least 15 hrs. unique to the major.

### I. General College Requirements (min. 55 hrs.):

**English** (9 hrs.): ENGL 101 \_\_\_\_; ENGL 102 (or 105) \_\_\_\_;

ENGL 203 (or 205, 209, 210, 211); \_\_\_\_

**Argument & Reason** (3 hrs., one of following): \_\_\_\_

COMS 130, 230, PHIL 148, 310

**Western Civilization** (6 hrs.): HWC 204 (or 114) \_\_\_\_;

HWC 205 (or 115) \_\_\_\_

**Principal Course Distribution Requirements:** (see:

[http://www2.ku.edu/~clasus/pnwc/principal\\_courses.shtml](http://www2.ku.edu/~clasus/pnwc/principal_courses.shtml))

**Humanities** (9 hrs.):

(HT) \_\_\_\_\_, (HL) \_\_\_\_\_, (HR) \_\_\_\_\_

**Social Science** (9 hrs.):

(SC) \_\_\_\_\_, (SI)\* \_\_\_\_\_, (SF) \_\_\_\_\_

[\*PSYC 104 recommended]

**Non-Western Culture** (3 hrs.): \_\_\_\_\_ (see:

[http://www2.ku.edu/~clasus/pnwc/nonwest\\_culture\\_courses.shtml](http://www2.ku.edu/~clasus/pnwc/nonwest_culture_courses.shtml))

**Foreign Language** (16-20 hrs. or proficiency): \_\_\_\_\_,

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

*(Math and Natural Science requirements are usually met by fulfilling the Human Biology requirements.)*

### II. General Science Requirements (min. 33 hrs.):

\_\_\_\_ ANTH 304 Physical Anthropology (3-4 hrs.)

\_\_\_\_ BIOL 150/151 Molecular & Cellular Biol. (4 hrs.)

\_\_\_\_ BIOL 152/3 Principles of Organismal Biol. (4 hrs.)

\_\_\_\_ MATH 115 + MATH 116 (6 hrs) **OR**

\_\_\_\_ MATH 121 (5 hrs.) Calculus I

\_\_\_\_ CHEM 184 Foundations of Chemistry I (5 hrs.)

\_\_\_\_ CHEM 188 Foundations of Chemistry II (5 hrs.)

\_\_\_\_ PHSX 114 College Physics I **OR**

\_\_\_\_ PHSX 211 General Physics I (4 hrs.)

\_\_\_\_ BIOL 570 Intro. Biostatistics (3 hrs.) **OR**

\_\_\_\_ PSYC 300 Statistics/Psychol. Res. (3 hrs.) **OR**

MATH 365 Elem. Statistics (3 hrs.)

### III. Speech-Language-Hearing Concentration (min. 29 hrs.):

\_\_\_\_ PHYSICS (4 hrs.): SPLH 120 Physics of Speech **OR**

\_\_\_\_ PHSX 115 College Physics II

\_\_\_\_ RESEARCH METHODS (3 hrs.): SPLH 660 Research Methods in Human Communication

\_\_\_\_ GENETICS (3 hrs.): BIOL 350, Principles of Genetics

\_\_\_\_ SEMINAR (1 hr.): BIOL 599 Senior Seminar in Human Biology (*must be taken in senior year*)

### Complete two of the following four categories:

#### Development and Genetics (9 hrs.)

\_\_\_\_ BIOL 417 Biology of Development (3 hrs.) *and*

\_\_\_\_ **Six hours selected from the following courses:**

ANTH 762 Human Growth & Development; BIOL 405

Laboratory in Genetics; BIOL 416 Cell Biology; BIOL 595

Human Genetics; PSYC 333 Child Development; PSYC 430

Cognitive; SPLH 464 Infant Development; SPLH 764 Infant

Development; SPLH 466 Language Science; SPLH 566

Language Development

#### Anatomy and Physiology (10 hrs.)

\_\_\_\_ BIOL 646 Mammalian Physiology (4 hrs.) *and*

\_\_\_\_ **Six hours selected from the following courses:**

BIOL 440 Advanced Human Anatomy (lecture and lab);

BIOL 647 Mammalian Physiology laboratory; SPLH 662

Speech Science; SPLH 663 Hearing Science; HSES 672

Exercise Physiology

#### Neuroscience (9 hrs.)

\_\_\_\_ BIOL 408 Physiology of Organisms (3 hrs.) *and*

\_\_\_\_ **Six hours selected from the following courses:**

BIOL 435 Introduction to Neurobiology; PSYC 370 Brain &

Behavior; PSYC 380 Brain & Pathology; PSYC 475

Cognitive Neuroscience; SPLH 320 Neuroscience of Human

Communication; SPLH 464 Neural Bases of Speech & Voice;

SPLH 464 Speech Motor Control

#### Research Practicum (9 hrs.) \_\_\_\_\_

SPLH 464 Circuit Theory & Bioinstrumentation; SPLH 449

Laboratory/Field Work in Human Biology (TOPICS:

Orofacial Neurophysiology, Deep Brain Stimulation in

Progressive Neuromotor Disease, Perceptual Neuroscience

and Functional Brain Imaging; Neuroscience of the Premature

Human Infant; Brain-Behavior Mapping of Language); SPLH

499 Directed Study in SPLH

***SPLH courses are recommended for the Speech-Language-Hearing Science Concentration for fulfilling the requirements in each area. Research practicum courses must be arranged with the course instructor prior to enrollment.***