



# Biology - B.S.

College of  
Arts and Sciences

To address the breadth and depth essential to educating biologists, the biology major is structured to include both a broad foundation through core courses and opportunity for specialization within a biological subfield through biology electives. The major is designed to prepare the student for a post-baccalaureate profession in biology, for advanced professional training in the health sciences, or for graduate study in basic and applied areas of the biological sciences.

### 122 hours (minimum)

Any student earning a Bachelor of Science (BS) degree must complete a minimum of 60 hours in natural, physical, mathematical, and computer science. A complete description of College requirements for a Bachelor of Science degree, including a specific listing of courses applicable to the 60 hour requirement, can be found on page 86 of the 2003-2004 UK Bulletin.

### University Studies Program Requirements

- I. Math (completed by Premajor Requirement)
- II. Foreign Language (placement exam recommended) ..... 0-8
- III. Inference–Logic (completed by Premajor Requirement)
- IV. Written Communication ..... 3-6
- V. Oral Communication ..... 3
- VI. Natural Sciences (completed by Premajor Requirements)
- VII. Social Sciences ..... 6
- VIII. Humanities ..... 6
- IX. Cross-Cultural (choose a Humanities course) ..... 3
- X. Electives (choose a Social Science course) ..... 3

USP hours: ..... 24-35

### A&S College Requirements

- I. Foreign Language (placement exam recommended) ..... 0-8
- II. Disciplinary Requirements
  - a. Natural Science (completed by Premajor Requirements)
  - b. Social Science (completed by USP Elective Requirement)
  - c. Humanities (completed by USP Cross-Cultural Requirement)
- III. Laboratory or Field Work (completed by Premajor Requirement)
- IV. Electives ..... 6

College Requirement hours: ..... 6-14

### Premajor Requirements

- \*MA 123 Elementary Calculus and its Applications  
or
- \*MA 113 Calculus I ..... 3-4
- \*CHE 105 General Chemistry I ..... 3
- \*CHE 107 General Chemistry II ..... 3
- \*CHE 115 General Chemistry Laboratory ..... 3
- \*BIO 150 Principles of Biology I ..... 3
- BIO 151 Principles of Biology Laboratory I ..... 2
- BIO 152 Principles of Biology II ..... 3
- BIO 153 Principles of Biology Laboratory II ..... 2

Premajor hours: ..... 22-23

### Major Requirements

#### Major Core Requirements

- BIO 304 Principles of Genetics ..... 4
- BIO 315 Introduction to Cell Biology ..... 3
- BIO 325 Introductory Ecology ..... 4
- ^BIO 350 Animal Physiology ..... 4
- BIO 425 Biology Seminar **or**
- BIO 499 Biology Research Seminar ..... 1

^Students with a strong interest in plants may substitute BIO 430G or BIO 476G for BIO 350 with the approval of faculty advisor.

Major Core hours: ..... 16

#### Other Course Work Required for the Major

##### From the Major Department:

To be chosen from 200+ level BIO courses (excluding BIO 208) or the list below. Two courses **must** contain a laboratory component. Six hours of Independent Research (395) from biological sciences departments may be counted here; however, only BIO 395 is accepted for honors in biology. Note that ANA 209, BIO 208, and PGY 206 **cannot** be used for this requirement ..... 16

**A&S 300, 500** (when offered by the School of Biological Sciences)

**ABT 201, 395, 401, 460, 461, 495**

**ANA 395, 511, 512, 513, 529**

**ANT 332, 551**

**ASC 364, 378, 395, 580**

**BCH 395, 401G, 501, 502, 503, 517**

**BIO – all 200+ level courses except BIO 208**

**CHE 226, 233, 395, 440G, 441G, 442G, 446G, 532, 533, 580**

**ENT 300, 310, 320, 395, 402, 460, 461, 561, 562, 564, 568**

**FOR 219, 221, 315, 340, 375, 402, 410, 564**

**FSC 530**

**GLY 401G**

**MI 494G, 595, 598**

**NRC 320, 395, 420G, 450G, 455G**

**PGY 412G, 502, 560, 590**

**PLS 220, 320, 330, 332, 366, 367, 444, 450G, 502, 564, 566, 567**

**PPA 395, 400G, 503**

**PSY 312, 456, 459, 552, 558, 565**

**STA 281, 291, 292, 503, 570**

(Generally only **one** statistics course is accepted for each student. Other STA courses may be accepted at the discretion of your advisor, and this may depend upon the area of biology in which you choose to specialize)

**TOX 508, 509, 560**

**VS 395**

##### From Outside the Major Department

Choose either CHE 230/231/232

or

CHE 226/231 and BCH 401G ..... 8

Choose either PHY 211/213

or

PHY 231/232/241/242 ..... 10

Other Major hours: ..... 34

Total Minimum Hours Required for Degree ..... 122

\*Course used towards completion of a USP or College Requirement