



Biology - B.S.

College of Arts and Sciences

NOTE: Courses listed in parentheses after the course title are Kentucky Community and Technical College courses that have been approved to fulfill the equivalent UK requirement.

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 pages 103-104 of the 2007-2008 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 0-4
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: 21-33

Graduation Writing Requirement

After attaining sophomore status, students must complete a Graduation Writing Requirement course. See "University Writing Requirement" on page 72 of the 2007-2008 UK Bulletin.

Graduation Writing Requirement Hours: 3

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 Required hours: 6-14

Premajor Requirements

- \*MA 123 Elementary Calculus and its Applications (MA 123 or MT 170) or
\*MA 113 Calculus I (MA 113 or MT 175) 3-4
\*CHE 105 General College Chemistry I (CHE 105) 3
\*CHE 107 General College Chemistry II (CHE 107) 3
\*CHE 111 Laboratory to Accompany General Chemistry I (CHM 105 preferred; or CHE 115 which fulfills CHE 111 and 113) 1
\*CHE 113 Laboratory to Accompany General Chemistry II (CHM 107 preferred; or CHE 115 which fulfills CHE 111 and 113) 2
\*BIO 150 Principles of Biology I (BIO 150) 3
BIO 151 Principles of Biology Laboratory I (BIO 151) 2
BIO 152 Principles of Biology II (BIO 152) 3
BIO 153 Principles of Biology Laboratory II (BIO 153) 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 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 Department of Biology)
ABT 301, 395, 460, 461, 495
ANA 395, 511, 512
ANT 332
ASC 364, 378, 395
BCH 395, 401G, 503, 517
BIO - all 200+ level courses except BIO 208
CHE 226 (CHE226), 233 (CHE233), 395, 440G, 441G, 442G, 446G, 532, 533, 550, 552, 553, 558, 565
ENT 300, 310, 320, 395, 402, 460, 461, 561, 562, 564, 568
FOR 315, 340, 375, 402
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, 450G, 502, 566, 567

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**PPA** 395, 400G, 503

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

**STA** 281, 291 (*STA 291*), 292, 503, 570, 580 (*Generally only one statistics course is accepted. 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 (*CHE 230/231/232*)

or

CHE 226/231 (*CHE 226/231*) and BCH 401G ..... 8

Choose either PHY 211/213 (*PHY 211/213*)

or

PHY 231/232/241/242 (*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.*