

# Biology - B.A.

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.

## 120 hours (minimum)

Any student earning a Bachelor of Arts (BA) degree must complete a minimum of 39 hours at the 300+ level. These hours are generally completed by the major requirements. However, keep this hour requirement in mind as you choose your course work for the requirements in the major. See the complete description of College requirements for a Bachelor of Arts degree in the *Arts and Sciences* section of the 2017-2018 *Undergraduate Bulletin*.

## UK Core Requirements

See the *UK Core* section of the 2017-2018 *Undergraduate Bulletin* for the complete UK Core requirements. The courses listed below are (a) recommended by the college, or (b) required courses that also fulfill UK Core areas. Students should work closely with their advisor to complete the UK Core requirements.

### I. Intellectual Inquiry in Arts and Creativity

Choose one course from approved list ..... 3

### II. Intellectual Inquiry in the Humanities

Choose one course from approved list ..... 3

### III. Intellectual Inquiry in the Social Sciences

Choose one course from approved list ..... 3

### IV. Intellectual Inquiry in the Natural, Physical, and Mathematical Sciences

CHE 105 General College Chemistry I ..... 4  
CHE 111 Laboratory to Accompany General Chemistry I ..... 1

### V. Composition and Communication I

CIS/WRD 110 Composition and Communication I ..... 3

### VI. Composition and Communication II

CIS/WRD 111 Composition and Communication II ..... 3

### VII. Quantitative Foundations

MA 137 Calculus I With Life Science Applications  
or  
MA 113 Calculus I  
or  
MA 123 Elementary Calculus and its Applications ..... 4

### VIII. Statistical Inferential Reasoning

STA 296 Statistical Methods and Motivations ..... 3

### IX. Community, Culture and Citizenship in the USA

Choose one course from approved list ..... 3

### X. Global Dynamics

Choose one course from approved list ..... 3

**UK Core hours** ..... **33**

### Graduation Composition and Communication Requirement (GCCR)

Choose one of three options:

- BIO 425 Biology Seminar (Subtitle required)  
and  
BIO 350 Animal Physiology ..... 5
- BIO 425 Biology Seminar (Subtitle required)  
and  
BIO 430G Plant Physiology ..... 5
- WRD 204 Technical Writing ..... 3

### Graduation Composition and Communication Requirement

**hours (GCCR)** ..... **3-5**

### College Requirements

Humanities – two courses ..... 6  
Social Science – two courses ..... 6  
Third and fourth semesters of language ..... 6  
Free Electives ..... 6

Lab or Field Experience – *satisfied by major*

Graduation Writing Requirement (choose any GWR Humanities 300-level course; this will also count as one of the two Humanities courses in the College Requirements)

**UK Core and College hours:** ..... **57 (45)**

### Premajor Requirements

BIO 148 Introductory Biology I ..... 3  
BIO 152 Principles of Biology II ..... 3  
BIO 155 Laboratory for Introductory Biology I  
or  
BIO 198 Scholars Biology Research ..... 1-2  
†CHE 105 General College Chemistry I ..... 4  
CHE 111 Laboratory to Accompany General Chemistry I ..... 1  
CHE 107 General College Chemistry II ..... 3  
CHE 113 Laboratory to Accompany General Chemistry II ..... 2  
MA 137 Calculus I With Life Science Applications  
or  
MA 113 Calculus I  
or  
MA 123 Elementary Calculus and its Applications ..... 4  
Free Elective ..... 0-1

†The CHE 105 requirement can be satisfied with CHE 109 and CHE 110.

**Premajor hours:** ..... **21**

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University of Kentucky is accredited by the Southern Association of Colleges and Schools Commission on Colleges to award associate, baccalaureate, masters, and doctorate degrees. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, call 404-679-4500, or online at [www.sacscoc.org](http://www.sacscoc.org) for questions about the accreditation of University of Kentucky.

# Biology (B.A.) • 2

## Major Requirements

Minimum major requirement for graduation is 54 credit hours in courses as detailed below. The minimum GPA of all major and premajor courses must be at least 2.0.

### First Tier Core

BIO 303 Introduction to Evolution .....	4
BIO 304 Principles of Genetics .....	4

### Second Tier Core

To be taken **after** completion of First Tier Core.

Choose **two** of the following to complete 8 hours:

BIO 350 Animal Physiology	
<b>or</b>	
BIO 430G Plant Physiology .....	4
BIO 315 Introduction to Cell Biology .....	4
BIO 325 Ecology .....	4

### plus:

STA 296 Statistical Methods and Motivations .....	3
BIO 425 Biology Seminar (Subtitle required)	
<b>or</b>	
BIO 499 Biology Research Seminar .....	1
<b>Core hours:</b> .....	<b>20</b>

### Other Course Work Required for the Major From Outside the Major Department

CHE 236/231 Survey of Organic Chemistry/ Organic Chemistry Laboratory I	
<b>or</b>	
CHE 230/231 Organic Chemistry I/Laboratory I .....	4
PHY 211 General Physics	
<b>or</b>	
††PHY 151 Introduction to Physics .....	3-5
††PHY 151 is not accepted for admission into Medical, Dental or Pharmacy School. Check with your advisor before choosing a physics course.	
<b>Other Major hours:</b> .....	<b>7-9</b>

## Options

Complete **one** of the following options. **Students cannot mix and match requirements from the two options.** An option must be completed in its entirety.

### Option A – Minor Option

**NOTE:** Fourteen of these hours must be at the 300-level or above.

Complete the requirements for any minor other than the biology minor .....	18-21
**Biology Electives – A minimum of 6 of the 4-9 upper-level elective credit hours must be BIO courses (i.e., have a BIO prefix). If fewer than 6 hours are required to complete the requirements, all hours must be upper-level elective BIO courses. A maximum of 3 credits of independent research course work may be used in this section.	

If students double-dip major and minor requirements, additional biology electives must be taken to meet the graduation requirement of 54 hours for the B.A. in Biology.

<b>Total hours Option A</b> .....	<b>25-27</b>
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### Option B – Topical Focus Option

**NOTE:** Fourteen of these hours must be at the 300-level or above.

Complete a 12 credit hour sequence of courses with a topical focus. At least 6 of these hours must be at the 300-level or above .....

**NOTE:** Students who have multiple interests or interests that do not fall into the requirements for a minor offered at the University of Kentucky may select a 12 credit hour sequence of courses with a topical focus. Courses in several disciplines and in the various interdisciplinary programs may be combined to pursue the topical focus. **Students interested in pursuing Option B must have the 12 credit hour sequence of courses APPROVED IN ADVANCE by the Director of Undergraduate Studies, Department of Biology. Students must submit an Approval of Topical Focus Form to the Director of Undergraduate Studies.**

\*\*Biology Electives – A minimum of 9 of the 13-15 upper-level elective credit hours must be BIO courses (i.e., have a BIO prefix). A maximum of 6 credits of independent research course work may be used in this section.

<b>Total hours Option B</b> .....	<b>25-27</b>
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### Biology Electives

Hours to be chosen from 300+ level BIO courses or the list below. For the B.A. with Topical Focus option, a minimum of 9 of the 13-15 upper-level elective credit hours must be BIO courses. For the B.A. with Minor option, a minimum of 6 of the 4-9 upper-level elective credit hours be BIO courses. If fewer than 6 hours are required to complete the requirements, all hours must be upper-level BIO courses. Note: ANA 209, BIO 208, BIO 209 and PGY 206 CANNOT be used for this requirement. A maximum of 1 credit hour of seminar course work (for example BIO 425, BIO 426, BIO 427) may be counted within this elective requirement.

### Acceptable upper-level electives for the B.A. in Biology:

**BIO 3XX, BIO 4XX, BIO 5XX, BIO 6XX** (BIO 208 and BIO 209 CANNOT be used to satisfy the upper-level requirement for the B.A., B.S. or minor in Biology.)

**ABT 460**

**ANA 511\*, 512\*, 516\*** (some other anatomy courses at the 500-level are accepted, but are usually restricted to professional students)

**ANT 332**

**ASC 364, 378**

**BCH 401G**

**CHE 226, 232, 233, 440G, 441, 442G, 446G, 532, 533, 550, 552, 558, 565**

**EES 401G**

**ENT 310, 320, 402, 460, 561, 564, 568**

**FOR 340\*, 402\***

**FSC 530\***

**MI 494G, 595, 598\***

**NRE 320, 420G\*, 450G, 455G\***

**PGY 412G, 560, 590** (PGY 412G is acceptable as an elective for upper-level biology credit ONLY IF a student does NOT complete BIO 350; PGY 412G does not substitute for BIO 350 or BIO 430G)

**PLS 320\*, 330\*, 332\*, 366, 450G, 502, 566, 567\***

**PPA 400G**

**PSY 459**

**STA 570, 580** (Biology usually accepts only **one** of these courses 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 509**

Other courses may be accepted at the discretion of the Director of Undergraduate Studies in the Department of Biology.

\*Lab courses that satisfy upper-level lab requirement.

<b>Total Minimum Hours Required for Degree</b> .....	<b>120</b>
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