BIOLOGY (BA)

This program was approved for students entering the university in the Summer 2019–Spring 2020 catalog year. For more information about catalog year, go to Catalog Year Information (http://catalog.louisville.edu/undergraduate/university-wide-unit-specific-policies/catalog-year).

Bachelor of Arts in Biology
Unit: College of Arts and Sciences (https://louisville.edu/artsandsciences/intro)
Department: Biology (http://louisville.edu/biology)
Academic Plan Code(s): BIOLBA

Program Information

There are two undergraduate degree programs offered in the Biology Department, a Bachelor of Arts in Biology and a Bachelor of Science in Biology. The BA degree is a more general degree than the BS. It is a liberal arts degree designed for those students who desire a broad education in a variety of disciplines. This degree requires more foreign language and social science and/or humanities courses than the BS degree. It is a good degree for students interested in taking a diversity of courses outside the sciences. This degree is also suitable for someone planning to be a teacher. A student planning on applying to professional schools can do so with this degree, as long as the student takes all the prerequisites for admission to the desired program.

Completion of this degree requires work to be submitted for the department's Learning Outcomes Measurement. For details, contact the department.

Degree Summary

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General Education Requirements (<a href="http://catalog.louisville.edu/">http://catalog.louisville.edu/</a></td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>undergraduate/general-education-requirements) ¹</td>
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<tr>
<td></td>
<td>College/School Requirements</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Program/Major Requirements ¹</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>Minimum Total Hours</td>
<td>121</td>
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</table>

¹ Some credit hours from the General Education Requirements may be satisfied by courses defined by the program, in which case additional electives will be required to complete the minimum hours for the degree. See the Degree Requirements tab for specific coursework.

Specific coursework information can be found on the Degree Requirements tab.

Accelerated BA-BS/MS in Biology

Students who wish to pursue an accelerated non-thesis master’s degree in Biology (BA-BS/MS) will be allowed to apply up to nine (9) hours of coursework taken for graduate credit while enrolled as an undergraduate. An additional twenty-four (24) hours of graduate coursework will constitute the minimum number of credit hours for obtaining the non-thesis masters in the accelerated program.

Early Start Program (Jointly with the College of Education and Human Development)

The Master of Arts in Teaching program in conjunction with the undergraduate programs in Chemistry, Biology, and Mathematics offers a comprehensive and professionally-focused program leading to an additional degree of MAT Middle or Secondary Education. This early start program enables superior students to receive two degrees within five years. A total of 148 credits are required for the dual degrees: 121 credits of coursework devoted toward the baccalaureate degree and 36 credits toward the MAT, with nine hours double-counted. This program will be available for students who are entering their junior year. They may take graduate level courses in the College of Education and Human Development (CEHD) in their 4th year of study.

The current qualifications for the joint degree program have been agreed upon by discipline faculty from the Colleges of Arts and Sciences and Education and Human Development. The criteria vary by discipline. Students enrolling in the accelerated program will be non-thesis students and must adhere to all policies pertaining to Graduate Students. All interested students must submit an application to the College of Education and Human Development (CEHD) MAT program and meet the admission criteria.

Departmental Admission Requirements

Admission to the BA in Biology requires completion of BIOL 240, BIOL 242 and BIOL 244 with a grade of C or better; completion of MATH 111 with a grade of C or better OR placement into a mathematics course above the level of MATH 111 on the basis of either the University of Louisville mathematics placement examination or ACT/SAT score; and a minimum overall grade point average of 2.0.

The Application for Major form can be found on the Arts & Sciences Advising Center website (http://louisville.edu/artsandsciences/advising/apply).

General Education Requirements

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</tr>
</tbody>
</table>

The following courses are required by the program and can satisfy the respective General Education Requirement:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 240</td>
<td>Unity of Life - S</td>
<td></td>
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<tr>
<td>or BIOL 242</td>
<td>Diversity of Life - S</td>
<td></td>
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<tr>
<td>BIOL 244</td>
<td>Principles of Biology Laboratory - SL</td>
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</tr>
<tr>
<td>or CHEM 201</td>
<td>Introduction to Chemical Analysis I - SL</td>
<td></td>
</tr>
<tr>
<td>or CHEM 201</td>
<td>Introduction to Chemical Analysis II - SL</td>
<td></td>
</tr>
</tbody>
</table>
Bachelor of Arts Degree.

Only 40 hours in the major department may be applied toward the Program/Major Requirements. College/School Requirements

**Code** | **Title** | **Hours**
--- | --- | ---
GEN 100  | Student Success Center Orientation | 1
or GEN 101  | Arts and Sciences Orientation | 2

**Minimum Electives**

**Program/Major Requirements**

**Code** | **Title** | **Hours**
--- | --- | ---
BIOL 240  | Unity of Life - S | 3
BIOL 242  | Diversity of Life - S | 3
BIOL 244  | Principles of Biology Laboratory - SL | 2
BIOL 329  | Cellular and Molecular Biology | 3
BIOL 330  | Genetics and Molecular Biology | 5
& BIOL 331  | Genetics and Molecular Biology: Laboratory | 3
BIOL 363  | Principles of Ecology | 3
BIOL 409  | Evolutionary Biology - CUE | 3

**Supporting Courses**

**Code** | **Title** | **Hours**
--- | --- | ---
CHEM 201  | General Chemistry I - S | 3
CHEM 202  | General Chemistry II - S | 3
CHEM 207  | Introduction to Chemical Analysis I - SL | 1
CHEM 208  | Introduction to Chemical Analysis II - SL | 1
CHEM 209  | Introduction to Chemical Analysis III | 1
CHEM 341  | Organic Chemistry I | 3
CHEM 342  | Organic Chemistry II | 3
CHEM 343  | Organic Chemistry Laboratory I | 2
CHEM 344  | Organic Chemistry Laboratory II | 2
MATH 180  | Elements of Calculus - QR | 3-4
or MATH 205  | Calculus I - QR | 3

**Minimum Electives**

**Minimum Total Hours**

All degrees require the completion of the University-wide General Education Program (link provided above). Some General Education requirements may be met in the requirements for the major or supporting coursework, in which case additional electives may be required to complete the minimum hours for the degree.

At least 50 of the total minimum hours required must be at the 300 level or above.

**Code** | **Title** | **Hours**
--- | --- | ---
Biol 405  | Undergraduate Research - CUE | 1
Biol 406  | Undergraduate Research (WR) - CUE, WR | 2
Biol 409  | Evolutionary Biology - CUE | 3
Biol 415  | Biology of the Cell - CUE, WR | 4
Biol 430  | Undergraduate Teaching Assistant - CUE | 5
Biol 443  | Developmental Biology - CUE, WR | 6
Biol 485  | Microbial Physiology - CUE, WR | 7
Biol 490  | Biology Internship - CUE | 8
Biol 541  | Medicinal Plant Biochemistry - CUE, WR | 9
Biol 548  | Experimental Design and Analysis - CUE | 10

**Flight Plan**

**Year 1**

**Course** | **Title** | **Hours**
--- | --- | ---
Fall  | GEN 100  | Student Success Center Orientation | 1
or GEN 101  | Arts and Sciences Orientation | 2
BIOL 240  | Unity of Life - S | 3
MATH 180  | Elements of Calculus - QR | 3-4
or MATH 205  | Calculus I - QR | 3

**Spring**

**Course** | **Title** | **Hours**
--- | --- | ---
ENGL 101  | Introduction to College Writing - WC | 3

**Hours**

Only 40 hours in the major department may be applied toward the Bachelor of Arts Degree.
Year 2

**Fall**
- **BIOL 329** Cellular and Molecular Biology 3
- Foreign Language 3 4
- General Education: Cardinal Core Oral Communication - OC 3
- General Education: Cardinal Core Arts & Humanities - AH 3
- General Education: Cardinal Core Social & Behavioral Sciences US Diversity - SBD1 3

**Hours** 16

**Spring**
- **BIOL 330** Genetics and Molecular Biology 3
- **BIOL 331** Genetics and Molecular Biology: Laboratory 2
- **CHEM 202** General Chemistry II - S 3
- **CHEM 209** Introduction to Chemical Analysis III 1
- General Elective 3
- General Elective 3

**Hours** 15

Year 3

**Fall**
- **BIOL 363** Principles of Ecology 3
- Biology Elective (300 level or above) 3-4
- **CHEM 341** Organic Chemistry I 3
- **CHEM 343** Organic Chemistry Laboratory I 2
- General Education: Cardinal Core Social & Behavioral Sciences Historical Perspective - SBH 3

**Hours** 14-15

**Spring**
- **BIOL 350** Biostatistics 3
- **BIOL 409** Evolutionary Biology - CUE 3
- Biology Elective (300 level or above) 3-4
- **CHEM 342** Organic Chemistry II 3
- **CHEM 344** Organic Chemistry Laboratory II 2
- General Education: Cardinal Core Arts & Humanities Global Diversity - AHD2 3

**Hours** 17-18

Year 4

**Fall**
- Biology Elective - CUE 3-4
- Biology Elective (300 level or above) 3-4
- Humanities or Social Science WR course (300 level or above) 3
- General Education: Cardinal Core Social & Behavioral Sciences - SB 3
- General Elective 3

**Hours** 15-17

**Spring**
- Biology Elective (300 level or above) 3-4
- Humanities or Social Science WR Course (300 level or above) 3
- Humanities or Social Science Course (300 level or above) 3
- General Elective (300 level or above) 3
- General Elective (300 level or above) 1-3

**Hours** 13-16

**Minimum Total Hours** 121-129

Degree Audit Report

Degree Audit reports illustrate how your completed courses fulfill the requirements of your academic plan. What-if reports allow you to compare the courses you have completed in your current academic plan to the courses required in another academic plan. Should you have questions about either report, please consult with your academic advisor.

To create either report:

1. Log into your ULink account.
2. Click on the Student Services tab.