Date Submitted: 03/02/26 11:56 am

# Viewing: BS-BIOL-3 : Bachelor of Science in Biology

## Last approved: 04/09/25 2:57 pm

## Last edit: 03/02/26 11:56 am

Changes proposed by: li129

Catalog Pages Using this Program
Bachelor of Science in Biology

| | | | |
|---|---|---|---|
| Program Status | Active | | |
| Requestor | Name | Lei li ~~Ayesha Qamer~~ | E-mail li129@iit.edu ~~aqamer@iit.edu~~ |
| Origination Date | 2026-3-2 ~~2025-4-9~~ | | |
| Is this an interdisciplinary program? | No | | |
| Is this stem-eligible? | Yes | | |
| Available for direct application? | Yes | | |
| Academic Unit | Biological Sciences | | |
| College | Lewis College of Science and Letters | | |
| Program Title | Bachelor of Science in Biology | | |
| Effective Academic Year | 2026 ~~2025~~ - 2027 ~~2026~~ | Effective Term | Fall 2026 |
| Academic Level | Undergraduate | | |

## In Workflow

1. BIOL Chair
2. Academic Affairs
3. Undergraduate Academic Affairs
4. LS Dean
5. Undergraduate Studies Committee Chair
6. Faculty Council Chair
7. Academic Affairs

## Approval Path

1. 03/02/26 8:23 am Lei li (li129): Approved for BIOL Chair
2. 03/02/26 11:44 am Ayesha Qamer (aqamer): Rollback to Initiator
3. 03/02/26 11:57 am Lei li (li129): Approved for BIOL Chair

## History

1. Oct 25, 2017 by clmig-jwehrheim
2. Nov 8, 2017 by Sarah Pariseau (sparisea)
3. Apr 27, 2018 by Sarah Pariseau (sparisea)
4. May 1, 2018 by Sarah Pariseau (sparisea)
5. Oct 23, 2020 by

Patty Johnson Winston (winston)
6. Apr 15, 2022 by Tanya Bekyarova (bekytan)
7. Nov 13, 2024 by Tanya Bekyarova (bekytan)
8. Apr 9, 2025 by Ayesha Qamer (aqamer)

*If all courses in a subject in your department are required, please enter each subject followed by the number ranges in the "Quick Add" field in the pop up box when you click the green plus button below. For example: ARCH 100-499.*

What courses will factor the major GPA?

Program Type Degree

Degree Type Bachelor of Science (BS)

CIP Code
26.0101 - Biology/Biological Sciences, General.

Is there more than one Academic Unit proposer?

No

Program Code BS-BIOL-3

Program Attribute

Total Program Credit Hours 120

Please provide a summary and rationale for the requested program revision.

Adjusting the curriculum to allow students more choices in regards to their physics sequence after the creation of this new sequence by the physics department and adjusting the math requirements to accommodate that change. ~~Changes to BS in Biology 1.Remove Chemistry 247 Analytical Chemistry from the list of required collateral courses to a free elective 2.Remove Physics 224 General Physics 3 from the list of required collateral courses to a free elective 3.Remove Biology 430 from the list of required Biology courses to a free elective.4/9/2025,~~

~~AQ:BIOL 430 was not removed from the list so this has been removed."Select 3 credit hours" has been revised to say "select six credit hours"~~

## Program Narrative and Justification

Narrative description of how the institution determined the need for the program. For example, describe what need this program will address and how the institution became aware of that need. If the program is replacing a current program(s), identify the current program(s) that is being replaced by the new program(s) and provide details describing the benefits of the new program(s). If the program will be offered in connection with, or in response to, an initative by a governmental entity, provide details of that initiative.

Narrative description of how the program was designed to meet local market needs, or for an online program, regional or national market needs. For example, indicate if Bureau of Labor Statistics data or State labor data systems information was used, and/or if State, regional, or local workforce agencies were consulted. Include how the course content, program length, academic level, admission requirements, and prerequisites were decided; including information received from potential employers about course content; and information regarding the target students and employers.

Narrative description of any wage analysis the institution may have performed, including any consideration of Bureau of Labor Statistics wage data related to the new program.

Narrative description of how the program was reviewed or approved by, or developed in conjunction with, one or more of the following: a) business advisory committees; b) program integrity boards; c) public or private oversight or regulatory agencies (not including the state licensing/authorization agency and accrediting agency); and d) businesses that would likely employ graduates of the program. For example, describe the steps taken to develop the program, identify when and with whom discussions were held, provide relevant details of any proposals or correspondence generated, and/or describe any process used to evaluate the program.

### Admission Entry Details

What are the enrollment estimates?

| Year 1 | Year 2 | Year 3 |
|---|---|---|

Attach Additional Program Justification Document(s)

## Academic Information

### Advising

Since quality advising is a key component of good retention, graduation, and career placement, how will students be mentored? What student professional organizations will be formed? How will the department work with the Career Services office to develop industry connections?

### Program Resources

Which program resources are necessary to offer this program?

### Proposed Catalog Entry

Admission Requirements

Course Requirements

# Required Courses

| Biology Requirements | | (31) |
|---|---|---|
| BIOL 100 | Introduction to the Profession | 2 |
| BIOL 107 | General Biology Lectures | 3 |
| BIOL 109 | General Biology Laboratory | 1 |
| BIOL 115 | Human Biology | 3 |
| BIOL 117 | Human Biology Laboratory | 1 |
| BIOL 210 | Microbiology | 3 |
| BIOL 214 | Genetics | 3 |
| BIOL 225 | Microbiology Laboratory | 2 |
| BIOL 401 | Introductory Biochemistry | 3 |

| | | |
|---|---|---|
| BIOL 402 | Metabolic Biochemistry | 3 |
| BIOL 445 | Cell Biology | 3 |
| BIOL 451 | Biological Literature | 2 |
| BIOL 495 | Biology Colloquium | 1 |
| BIOL 495 | Biology Colloquium | 1 |
| **Senior Biology Laboratory Requirements** | | **(6)** |
| Select two courses from the following: | | 6 |
| BIOL 404 | Biochemistry Laboratory | 3 |
| BIOL 431 | Animal Physiology Laboratory | 3 |
| BIOL 446 | Cell Biology Laboratory | 3 |
| BIOL 455 | Macromolecular Techniques | 3 |
| **Technical Electives** | | **(12)** |
| Select 12 credit hours | | 12 |
| **Mathematics Requirements** | | **(8)** |
| MATH 151 | Calculus I | 5 |
| ~~MATH 152~~ | ~~Calculus II~~ | ~~5~~ |
| MATH 425 | Statistical Methods | 3 |
| **Chemistry Requirements** | | **(15)** |
| CHEM 124 | Principles of Chemistry I with Laboratory | 4 |
| CHEM 125 | Principles of Chemistry II with Laboratory | 4 |
| CHEM 237 | Organic Chemistry I | 4 |
| CHEM 239 | Organic Chemistry II | 3 |
| **Physics Requirements** | | **(8)** |
| Choose of 1 of the 2 options | | 8 |
| PHYS 113 & PHYS 211 | Fundamental Physics I and Fundamental Physics II | 8 |
| PHYS 123 & PHYS 221 | General Physics I: Mechanics and General Physics II: Electricity and Magnetism | 8 |
| ~~PHYS 221~~ | ~~General Physics II: Electricity and Magnetism~~ | ~~4~~ |
| **Computer Science Requirement** | | **(2)** |
| CS 105 | Introduction to Computer Programming | 2 |
| or CS 110 | Computing Principles | |
| **Interprofessional Projects** | | **(6)** |

| | | |
|---|---|---|
| See Illinois Tech Core Curriculum, section E | 6 | |
| **Humanities and Social Science Requirements** | **(21)** | |
| See Illinois Tech Core Curriculum, sections B and C | 21 | |
| **Free Elective** | **(11)** | **11** |
| ~~Select six credit hours~~ | ~~6~~ | |
| Total Credit Hours | 120 | |

Sample Curriculum/
Program
Requirements

# Bachelor of Science in Biology Curriculum

Year 1

| Semester 1 | Credit Hours | Semester 2 | Credit Hours |
|---|---|---|---|
| BIOL 100 | 2 | BIOL 115 | 3 |
| BIOL 107 | 3 | BIOL 117 | 1 |
| BIOL 109 | 1 | CHEM 125 | 4 |
| CHEM 124 | 4 | ~~MATH 152~~ | ~~5~~ |
| MATH 151 | 5 | Humanities 200-level Course | 3 |
| | | FREE ELECTIVE | 5 |
| | 15 | | 16 |

Year 2

| Semester 1 | Credit Hours | Semester 2 | Credit Hours |
|---|---|---|---|
| BIOL 214 | 3 | BIOL 210 | 3 |
| CHEM 237 | 4 | BIOL 225 | 2 |
| ~~PHYS 123~~ | ~~4~~ | CHEM 239 | 3 |
| PHYS 113 | 4 | ~~PHYS 221~~ | ~~4~~ |
| Social Sciences Elective | 3 | PHYS 211 | 4 |
| Humanities or Social Sciences Elective | 3 | Humanities Elective (300+) | 3 |
| | 17 | | 15 |

Year 3

| Semester 1 | Credit Hours | Semester 2 | Credit Hours |
|---|---|---|---|
| BIOL 401 | 3 | BIOL 402 | 3 |
| Senior Biology Laboratory Elective[1] | 3 | IPRO Elective I | 3 |
| Social Sciences Elective (300+) | 3 | FREE ELECTIVE | 3 |
| TECHNICAL ELECTIVE | 3 | CS 105 or 110 | 2 |
| FREE ELECTIVE | 3 | MATH 425 | 3 |

| | | | |
|---|---|---|---|
| | | Humanities Elective (300+) | 3 |
| | 15 | | 17 |

Year 4

| Semester 1 | Credit Hours | Semester 2 | Credit Hours |
|---|---|---|---|
| BIOL 445 | 3 | BIOL 451 | 2 |
| BIOL 495 | 1 | BIOL 495 | 1 |
| Senior Biology Laboratory Elective[1] | 3 | IPRO Elective II | 3 |
| Technical Elective | 3 | Technical Elective | 3 |
| Technical Elective | 3 | Social Sciences Elective (300+) | 3 |
| | 13 | | 12 |

Total Credit Hours: 120

1 Choose from the following courses: BIOL 404, BIOL 431, BIOL 446, or BIOL 455.

Specialization Requirements

## Program Outcomes and Assessment Process

What are your learning objectives in this program? Please list each learning objective in the boxes below:

*Note: These should be the same as described in your assessment plan at the bottom of this form.*

Upload your assessment plan

here:

## Undergraduate Program Requirements

What courses will factor the major GPA?

### Undergraduate Degree Requirements

Minimum credit hours 120

Specialization required?
No

Minor required?
No

### Proposed General Curriculum

List Major Course Requirements

List Mathematics Requirements

List Science Requirements

List Computer Science Requirements

List Humanities and Social Sciences Requirements

List Interprofessional Project (IPRO) Requirements

List Technical Elective Course Options

List Free Elective Credit Hours (if applicable)

Semester-by-semester plan of study for the degree program

Reviewer Comments

**Ayesha Qamer (aqamer) (03/02/26 11:44 am):** Rollback: Roll back requested by Kathryn Spink

Key: 35