

Date Submitted: 03/18/26 9:43 am

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

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

Last edit: 03/18/26 11:49 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	2026-3-18 2025-4-9		
Is this an interdisciplinary program?	No		
Is this an incubator program?			
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	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
4. 03/09/26 3:04 pm
Ayesha Qamer (aqamer): Rollback to Initiator
5. 03/18/26 9:45 am
Lei li (li129):
Approved for BIOL Chair
6. 03/18/26 11:49 am
Ayesha Qamer (aqamer): Approved for Academic Affairs
7. 03/18/26 12:54 pm
Joseph Gorzkowski (jgorzkow):
Approved for

Undergraduate
 Academic Affairs
 8. 03/18/26 1:42 pm
 Jennifer deWinter
 (jdewinter):
 Approved for LS
 Dean

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 120
Credit Hours

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 initiative 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	Course BIOL 401 Not Found	3
BIOL 402	Metabolic Biochemistry	3
BIOL 301	Introductory Biochemistry	<u>3</u>
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	Course BIOL 455 Not Found	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)
<u>Choose of 1 of the 2 options</u>		<u>8</u>
PHYS 113 & PHYS 211	<u>Fundamental Physics I</u> & <u>Fundamental Physics II</u>	<u>8</u>
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)
<u>See Illinois Tech Core Curriculum, section E</u>		6
Humanities and Social Science Requirements		(21)
<u>See Illinois Tech Core Curriculum, sections B and C</u>		21
Free Elective		(11)
Select six credit hours		6
<u>Free Electives</u>		<u>11</u>
Total Credit Hours		120

Sample
Curriculum/Program
Requirements

Bachelor of Science in Biology Curriculum

Semester 1	Credit Hours	Semester 2	Year 1 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	<u>5</u>
	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	<u>4</u>	PHYS 221	4
Social Sciences Elective	3	PHYS 211	<u>4</u>
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
BIOL 301	<u>3</u>	I PRO Elective I	3
Senior Biology Laboratory Elective ¹	3	FREE-ELECTIVE	3
Social Sciences Elective (300+)	3	Free Elective	<u>3</u>
TECHNICAL-ELECTIVE	3	CS 105 or 110	2
FREE-ELECTIVE	3	MATH 425	3
Technical Elective	<u>3</u>	Humanities Elective (300+)	3
Free Elective	<u>3</u>		
	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	I PRO 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](#).

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 120
hours

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

Report to Faculty
Council

Reviewer
Comments

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

Ayesha Qamer (aqamer) (03/09/26 3:04 pm): Rollback: Under course requirements, please remove BIOL 455 as this course was eliminated. Also please remove BIOL 455 from the footnotes in the sample curriculum. Please also add free elective as a comment entry.

Ayesha Qamer (aqamer) (03/18/26 11:49 am): 3/18/2026, AQ: Adjusted footnote in sample curriculum to remove BIOL 455 and adjusted formatting. Adjusted course requirements table formatting.

