BIOL 102 General Biology I

This is a 14-week active learning, in-person course for the Spring semester at RIT.

Prerequisites

None

Purpose of the course:

This is an introductory biology course designed for non-biology majors that have a science requirement. You will receive a broad approach to the field of biology. For instance, you will become familiar with anatomy and physiology, but you will rarely need to know the specific chemical pathways that make them function (except for your endocrine system!).

Schedule and time commitment

You will be provided the content for this course primarily on myCourses, and we will apply this content in class. You should be reviewing the course daily content before coming in to class.

A word of caution: Do ***NOT*** rely on the myCourses calendar feature! There are things that cannot be displayed in the calendar feature. Read the Weekly Announcement posted by Monday morning every week regarding the plan for the week. The Course Schedule tab will keep you on track for the entire semester!

As this is a 3-credit course, to succeed you should plan to spend 3 to 6 hours minimally outside of class each week working on materials and assignments associated with this course.

- Review content (lecture materials - readings, videos, etc.)
- Complete online assignments (quizzes, assessments, project pieces, etc.)
- Read the text and other resources, as needed, to supplement your learning
- Attend weekly Drop In hours to ask questions, or just to gossip about biology

Please be assured that I want students to learn and to receive the good grades they have earned and deserve. Please make an appointment with me should you have unanticipated difficulty with your work in this course.

Course Learning Goals

a. Students will gain a broad background in fundamental principles of biology.
b. Students will gain knowledge and experience in the basic methods used to explore biological principles.
c. Students will apply fundamental biological concepts to novel scenarios.
d. Students apply scientific thinking to everyday problems.
e. Students will articulate the relevance of biology to society.

Content Learning Outcomes and Assessments

Content Learning Outcomes	**Assessment Methods**
Define and correctly use scientific terminology in regard to biological organisms and processes.	● Quizzes ● Activities ● Quarterly Assessment ● Project
Describe the organization and structure of the human body	● Quizzes ● Activities ● Quarterly Assessment ● Project
Explain, using appropriate medical terminology, various diseases of the human organ systems as presented in the lecture	● Quizzes ● Activities ● Quarterly Assessment ● Project
Compare major organ systems, structures, and functions in plants	● Quizzes ● Activities

	• Quarterly Assessment
Describe the characteristics of the Earth's biosphere, including the development of basic abiotic components of all ecosystems	• Quizzes • Activities • Quarterly Assessment
Compare and contrast the characteristics of the major terrestrial ecosystems, including their representative community structures (plant and animal)	• Quizzes • Activities • Quarterly Assessment
Compare and contrast the characteristics of the major aquatic (freshwater and marine) ecosystems, including their representative community structures (plant and animal)	• Quizzes • Activities • Quarterly Assessment
Analyze population growth curves and describe the effects of those patterns on the surrounding ecosystems and other community members	• Quizzes • Activities • Quarterly Assessment • Project
Describe community interactions and relationships, including anthropogenic effects on those interactions	• Quizzes • Activities • Quarterly Assessment • Project
Explore the impact of the environment on the human body and possible disease that might be caused by environmental factors.	• Quizzes • Activities • Quarterly Assessment • Project

Instructor:

Ms. Coon-Frisch (Ms. CF)

Preferred Contact Information:

Email: excsbi@rit.edu

Office Phone: TBD

Office Hours:

General office hours: Times for these hours will be established in week 1 of class. Want to talk about biology? Great! Stop by! Want to talk about Gracie's food?! Great!! Stop by!

Meetings by appointment: Virtual and / or in person meetings may be scheduled. Please email me to schedule a meeting at least 48 hours in advance (meetings Monday through Friday).

Course Communication from the Class to Your Instructor:

For this class, **I will respond to your email within 24 hours MONDAY through FRIDAY.** If you do not hear from me within 48 hours, please resend your email. The email system is not always the most reliable. Over the weekend, do not expect a response until Monday morning. Now, it is quite likely that you will receive your response in less than 24 hours, but I do not guarantee it.

If you have general questions about the course that are not covered in here on myCourses, please post your questions to the Course Q&A Discussion Board so all students can benefit from

the answer. If, as a student, you can answer a question pose in the Course Q & A, I encourage you to reply to your classmate!

Course Communication from Your Instructor to the Class:

I will provide any course announcements through the News / Announcements on the Course Home Page. This includes any updates or changes to assignments or other course assignments, as well as general comments about assignment results or discussions. You should plan on checking for new posts at least two times a week.

Except for emergency announcements, I will **not** email the class.

Course Schedule

You are responsible for your learning. I can provide piles of information, multiple types of assessments, and all of the guidance in the world, but if you do not step up, take responsibility, and be accountable for your learning, I cannot do much to help.

In this course, we will approach learning through the following stages:

- Building Knowledge
  - OpenStax Biology 2e Readings
  - Powerpoint lectures w/ videos
  - Activity videos
- Remembering / Understanding Knowledge
  - Lectures / ppt files (2 per week)
  - myCourses Quizzes (1 per week - due Friday's with few exceptions - see Weekly Announcements for due dates)
- Applying / Analyzing Knowledge
  - In class participation

    - Projects
- Analyzing / Evaluating Knowledge
    - Quarterly Assessments (4 per semester)
- Creating Knowledge
    - Project (pieces due throughout the semester)
    - Further information on the project will be posted by the end of Week #3 (Week of January 28th).

All assignments are due at 11:59pm (myCourses Time) on the date indicated, unless otherwise noted.

Last Updated: January 4

Unit	**Topics**	Remembering / Understanding Knowledge	Applying / Analyzing Knowledge	Analyzing / Evaluating Knowledge	Creating Knowledge

1	Lectures: Body Organization (Form & Function) Homeostasis Animal Behavior (Endo / Exotherms) Immunity Cardiovascular Respiratory	Biology 2e: Form & Function (Ch 33 - all) Homeostasis (Ch 33.3) Ch 45.7: Behavioral Biology Immune System (Ch 42 - all) Ch 40: Circulation Ch 39: Respiration See content by date: Module 1	**Quizzes** Q#1: Syllabus & Form and Function - Due Friday, January 19 Q#2: Behavior & Immunity - Due Friday, January 26 Q#3: Cardio & Respiratory - Due Friday, February 2	**Quarterly Assessment** **#1: Tuesday, February 6** **In class** The Quarterly Assessment (45 points) will include: 3 multiple choice bonus questions (1 point each) 5 short response questions (~1 paragraph) worth 5 points each 2 longer response questions (multiple paragraphs) worth 20 points total	*The Project will be introduced in class on February 1.* Project Description: TBA

2	Lectures: Skeletal Nervous Sensory Endocrine Digestion Nutrition (w/ macromolecules) *Project Work Day - Thursday, February 29*	Biology 2e Chapters: Skeletal (Ch 38 - all) Nervous (Ch 35 - all) Sensory (Ch 36 - all) Endocrine (Ch 37 - all) Ch 34: Digestion (34.1, 34.3, 34.4) Ch 34: Nutrition (34.2) See content by date: Module 2	**Quizzes** Q#4: Skeletal - Due Friday, February 9 Q#5: Nervous & Sensory - Due Friday, February 16 Q#6: Endocrine & Digestion - Due Friday, February 23 Q#7: Nutrition - Due Friday, March 1	**Quarterly Assessment** **#2: Tuesday, March 5** **In class**	***Project Proposal Due:* Friday, March 1, *11:59pm*** ***Group Submission - Google Form***

3	Lectures: Virtual Field Trip! (*March 7*) - TBA Ecosystem Dynamics Biomes Community Population Ecology	Biology 2e Chapters: Ch 46: Ecosystems Ch 44: Ecology Ch 45: Population & Community Dynamics See content by date: Module 3	**Quizzes** Q#8: Field Trip, March 8 *Spring Break: March 10 - 17, 2024* Q#9: Ecosystem Dynamics & Biomes - Due Friday, March 22 Q#10: Community & Population Ecology - Due Friday, March 29	**Quarterly Assessment** **#3: Tuesday, April 2**	***Project Midterm Check In Due: April 5, 11:59pm*** ***Individual Submission - Google Form***

4	Lectures: Plant / Animal Interactions Plant Cells (Form) Plant Function Plant Nutrition Plant Hormones *Project Work Day - Thursday, April 25*	Biology 2e Chapters: Ch 26.4: Plant / Animal Interactions Ch30.1 - 30.5: Plant Form & Function Ch 31: Plant Nutrition Ch 30.6: Plant Hormones See content by date: Module 4	**Quizzes** Q#11: Plant & Animal Interactions - Due Friday, April 5 Q#12: Plant Cells & Function - Due Friday, April 12 Q#12: Plant Nutrients & Hormones - Due Friday, April 19	**Quarterly Assessment** **#4: Tuesday, April 23**	***Project Group Submission: Thursday, May 2, 5pm - Science Fair Submission*** ***Science Fair Group Presentation: Friday, May 3, 10am-6pm (sign up in 15 minute blocks in class on April 25)*** ***Project Final Check In Due: May 3, 11:59pm (Individual Submission - Google Form)*** ***Science Fair Evaluations: Friday, May 3 (Individual "grading" of other teams!)***

Textbook:

Biology 2e from OpenStax, Print ISBN 1947172514, Digital ISBN 1947172522, https://openstax.org/details/books/biology-2e

Good news! Your textbook for this class is available for free online! If you prefer, you can also get a print version at a very low cost.

Your book is available in web view and PDF for free. You can also choose to purchase on iBooks or get a print version from OpenStax on Amazon.com.

You can use whichever formats you want. Web view is recommended -- the responsive design works seamlessly on any device. If you buy on Amazon, make sure you use the link on your book page on openstax.org so you get the official OpenStax print version. (Simple printouts sold by third parties on Amazon are not verifiable and not as high-quality.)

Internet Connection:

For this course, a reliable and consistent internet connection is required. Please review the RIT Computer Policy. A problem with your Internet access may not be used as an excuse for late, missing, or incomplete coursework. If you experience problems with your Internet connection while working on this course, it is your responsibility to find an alternative Internet access point, such as the library or Wi-Fi ® hotspot.

RIT myCourses: https://mycourses.rit.edu/

Look here for: lecture materials, study materials, quizzes, worksheets, assignments, assessments, and your grades.

Zoom: https://rit.zoom.us/

Your instructor may use Zoom for office hours. You will need to login to Zoom using your RIT account to get access to those sessions.

Course Artificial Intelligence Policy:

ChatGPT and other generative AI products are widely used at this point in our world. In this class, we will focus on developing skills such as critical thinking, creativity, generating hypotheses or new ideas, and communication. These are all skills designed to help you in your development and future, which is why for this course, I am requiring that you refrain from using generative AI tools when completing assignments, quizzes, or exams. This includes, but is not limited to, using them to generate or summarize ideas, create text or code, answer questions or discussions, or review material that you have written yourself to obtain feedback. Any such use of generative AI tools will be considered academic dishonesty (refer to RIT's Student Academic Integrity Policy for detailed information). Instead, I encourage you to

develop your own ideas and engage in independent thinking, as this will help you learn and grow as a student and as a future professional

[Adapted from the University of Wisconsin-Green Bay, Center for the Advancement of Teaching and Learning]

Participation in the learning space:

RIT does not have a requirement for attendance in courses (https://www.rit.edu/academicaffairs/policiesmanual/d040), however, engagement in this course every week day is critical for success in the courses.

I expect that students in my course will engage with the modality of my course as outlined, barring any unforeseen issues such as illness, quarantine, etc. Engaging in class materials with me and your peers is important for your learning the materials. In this class, participation expectations can be met by attending class and completing the in class activities, logging in to and working in myCourses, attending my drop in office hours, and others to be defined throughout the semester. If you have questions about your participation in this course, please contact me.

Late Assignment Policy:

Every assignment has a due date. Your future employer does not care if you had to take your roommate to the emergency room and were there all night – your project is still due on time. Or, you can find a new job. While this may seem harsh, it is the reality that we all face.

Assignments submitted after the due date will receive a 10% grade deduction per day (including weekends). Work submitted after THREE days (including the weekend!) past the original due date will not be accepted and will receive a zero.

- Project Pieces are the only graded items that will be accepted late in this course
- There are NO late submissions for the quizzes or the Quarterly Assessments.

Your instructor will review exceptional circumstances on a case-by-case basis and make decisions accordingly. If an emergency arises that prevents you from completing your work on time, your must contact your instructor via email as soon as possible so that arrangements can be made for you to keep up in the class. The late policy may be waived at the instructor's discretion in case of an emergency. Emergencies are defined as anything that is serious and unexpected. Emergencies cannot be written on

the calendar in advance. Examples of emergencies are: car accidents, serious health crisis of the student or in the student's *immediate* family. Examples of non-emergencies are: family weddings, vacations, nail appointments or any other event that can be planned around. If false emergencies are claimed and discovered ("cry wolf"), it will be reported to RIT Academic Review, and the student may receive a 0% in the course, not just on the assignment in question.

Grading of Activities and Assignments

In accordance with RIT policy, all assessments for this course graded within 2 weeks of the due date of the item (*except for the project pieces!!*). If there is a delay on grading, you will be informed via a myCourses Announcement and in class.

If you are missing a grade / feedback for an item and feel that that grade / feedback is critical for your progression in the course, please email me and explain the issue. I am happy to help you, if I can!

Rubrics

Rubrics will be posted in advance of the assignment due date where applicable (discussions, project).

Answer Keys

Answer keys are not posted in this course. If there is an exception to this, the answer keys will be made available on myCourses for all students.

Final Grade Calculation

Weekly Quizzes *(2 will be dropped at the end of the term)*	15%

Science Fair Project *(no pieces of the project are dropped)* ● *Group Project Proposal (20%)* ● *Individual Project Midterm Check In (7.5%)* ● *Group Project Submission (35%)* ● *Group Project Presentation - Science Fair Evaluations (30%)* ○ *Science Fair Peer Evaluations* ○ *Science Fair Instructor Evaluations* ● *Individual Project Final Check In (7.5%)*	30%
Quarterly Assessments *(1 will be dropped at the end of the term)*	55%
Total	**100%**

Grade Scale

Based on the 100% total listed above, letter grades will be assigned as follows:

	A	B	C	D
(+)	--	87.0	77.0	--

(letter)	94.0	84.0	74.0	60.0
(-)	90.0	80.0	70.0	--

Student feedback and evaluation

You are always welcome to provide constructive and professional feedback to your instructor via email. If you are not comfortable contacting your instructor, we encourage you to talk with the class TA's and / or your advisor who can act as intermediaries.

Final student evaluation

An end-of-course evaluation will be administered by RIT through S-RATE around week 13. The evaluations provide valuable information to the instructor and department. Your feedback will remain anonymous and is used by departments and RIT to improve your educational experience.

The final exam period at RIT was changed in the 2018-2019 academic year. The New York State Education Department (NYSED) and Middle States Commission on Higher Education (MSCHE) contact hour requirements, for three credit hour classes, states that classes must meet 2250 minutes in the semester.

Our calendar change to 14-weeks does not afford this time, as the class periods are MWF 50 minutes and TR 75 minutes on a 14 week block. To meet the requirement of the state, all courses must have a "meaningful educational activity" for 150 minutes in the final exam week. To facilitate compliance with NYSED and MSCHE contact hour requirements, all three credit in-person classes will be scheduled for a 2.5 hour exam block in the final exam week.

Faculty are governed on this requirement by RIT University Policy D11.0; in particular: "If the instructor chooses not to give a formal final examination, it is the expectation that the instructor will treat the exam week as a full component of the academic term. During this exam week, appropriate educational activities should be scheduled, including the opportunity for students to benefit from the instructor's professional counsel."

In this course, there will not be a formal written exam during the final exam period assigned to us, but you will present your semester-long group project in a Science Fair during Exam Week, **meaning that you need to be engaged with the course after the last day of classes**. We will discuss this further in the project assignment.**What students in this course can expect from their instructor:**

- Grades will be posted on myCourses within 2 weeks of artifact submission, unless otherwise noted in the assignment. This is in accordance with the RIT Policy D05.0 Grades which states in part,
    - "*Faculty members must provide feedback for all submitted work within two weeks of the submission deadline. Posting grades to RIT's Electronic Course Management System is required. The two-week posting requirement is waived in the case of deadline extensions, late submission of work, any extraneous circumstances, or when explicitly stated in the evaluation criteria.*" (https://www.rit.edu/academicaffairs/policiesmanual/d050.

- Office hours may be accessed in person or virtually. Posting of office hours and the location can be found on the front page of our myCourses class and will be updated as needed. If those times do not work for you, you may always request an appointment via email.

- Email / Communication policy:
    - For this class, I will respond to your emails within **24 hours Monday through Friday**. Over the weekend and during Institute breaks, do not expect a response. If you have not received a response after 24 hours Monday through Friday, please see me in office hours or class as your email may have not been delivered (it happens!).

Changes to the syllabus:

I have provided this syllabus as guide to my course and have made every attempt to provide an accurate overview of the course. However, as your instructor, I reserve the right to modify this document during the semester, if necessary, to ensure that we achieve course learning objectives. You will receive advance notice of any changes to the syllabus through myCourses.

Changes to the University Calendar:

In the event that there is a significant change to the University calendar, this syllabus will be modified to meet those changes, if necessary. Modifications will be shared immediately with our class via myCourses and communications directly from me.