

Biology 117, General Biology: Cells, Genetics and Evolution

COURSE DESCRIPTION:

An introductory course in the biological sciences covering cells, information coding and transfer, evolution, and diversity of unicellular organisms. This course will emphasize examples from both the plant and animal kingdoms using an integrated approach. Counts for Natural Science core only when taken with BIOL 116. Intended for science majors and other well-prepared students.

COURSE INSTRUCTORS:

SECTION INSTRUCTORS:

Salvador Tarun (tarun@geneseo.edu)

ISC 139D, phone 585-245-5413, office hours: W (4:30 – 5:30 p.m.), Th (4:00 – 5:00 p.m.), F (1:00 – 2:00 p.m.) and by appointment.

Jani Lewis (lewisj@geneseo.edu)

ISC 354, phone 585-245-5310, office hours: Tuesdays 3:30 - 5:20 and Wednesdays 9 - 10 am and by appointment. All office hours will be online.

ADDITIONAL CONTENT INSTRUCTORS:

Rob Feissner (feissner@geneseo.edu)

ISC 356, phone 585-245-5022, office hours: and by appointment.

Isidro Bosch (bosch@geneseo.edu)

ISC 260, phone 585-245-5303, office hours: and by appointment.

Susan Bandoni Muench (bandoni@geneseo.edu)

ISC 257, phone 585-245-5309, office hours: and by appointment.

REQUIRED MATERIALS

TEXTBOOK AND MATERIALS:

Textbook: Absolutely required for this course are access to the online Achieve website and at least the eText for the text book “How Life Works” 3rd Edition, Macmillan publishers. This code will have to be entered via the Canvas website for this course. Through the SUNY Geneseo bookstore you have two options for purchasing this text:

ISBN: 9781319376826 (\$104.99) eText, 12-month Achieve access, 4-year access to Reef Polling

ISBN: 9781319404550 (\$119.99) eText, **24**-month Achieve access, 4-year access to Reef Polling, **Looseleaf copy of text.**

Course materials:

- Other course materials will be available within the Canvas System [202009-BIOL-117-03: Gen Biol:Cells,Genetics,Evol](#)

Self-help guides are available through the Canvas system website as well, <https://wiki.geneseo.edu/display/cit/Canvas+Self+Help+Documents>

Schedule of chapter coverage and exam dates (see end of syllabus table)

GRADE EVALUATION

Graded Work	Contribution:
Exams 4	65%
Day-to-Day Activities Learning Curve (5%) Preclass Quizzes, Homework, HDWK, and Animation Assessments (25%) Reef Polling (5%)	35%

Overall:

There are several types of assignments in Achieve that will help you learn the concepts at a deeper level. In any individual week, you can expect to have four to five assignments, although the exact number and type will vary. Each type is described below. All of these assignments will open at the start of a unit, and close two days before the test to allow for review. Although the assignments are not due on particular days, we recommend that you pace yourself throughout the available time to avoid being overwhelmed. Please note that units refer to the topics associated with a particular test, and will include multiple chapters. If you submit them late you will lose 10% per day from your score for each day they are late (see policies section for exceptions).

Learning Curve (Achieve):

Learning curve assignments are designed to be a pre-class assignment, and you should complete these after familiarizing yourself with the reading assignment, but before other items. There is a target number of points, and you complete questions until you reach the target. Once you obtain the set number of points you receive full credit for the Learning Curve assignment. The more familiar you are with the topic, the sooner you will reach the target so you will be getting feedback about your level of understanding.

Preclass quizzes Homework, HDWK (how do we know) and Animation Assessments (Achieve or Canvas):

These will be found in either Achieve or Canvas and have a set number of points per assignment. These are multiple choice quizzes meant to help you prepare for the tests. Animation assessments are on short videos. Homework assignments consist of practice problems. The HDWK ("How do we know" assignments introduce a significant experiment, and require you to think about experimental design.

Reef Polling:

REEF Polling by i>clicker lets you use your laptop, smart phone, or tablet to answer questions in class or online and review the material afterwards. It is free with your purchase of the Achieve access.

Exams:

There will be 5 total exams given, one for each unit covered. The lowest score of the 5 will be dropped at the end of the semester. All exams will be administered online. These will be predominantly multiple choice questions. The exam will be opened on set dates per the syllabus and will remain open for 14 hours. However, each student will only have 1 hour to complete the exam and must complete it within that 1 hour time frame once they open the exam.

The majority of the material on each exam will come from the chapters covered just prior to that exam. There will be a few questions from the previous exams found on subsequent exams. These questions will be based on the areas where students had difficulty based on the previous exam. For instance, if most of the class missed a question or questions related to one area of material, questions pertaining to that material will be found on the next test as well. They will not be the exact same questions but will represent the same content. This is meant to encourage students to go back and review concepts that were not mastered for the previous exam. The instructors for this course will make students aware of the areas of content that appeared not to have been mastered on each exam.

COURSE GOALS AND CONTENT

This course has two main objectives. The first is to increase your biological knowledge and prepare a firm foundation of knowledge for the courses that follow. The second objective is to help you develop the intellectual skills needed for advanced study of biology: to develop the ability to organize information from various disciplines, to fit it into a conceptual framework, to use it in the synthesis of new ideas and to understand how biologists think and approach scientific questions.

LEARNING OUTCOMES FOR BIOL 117:

1. Demonstrate knowledge and conceptual understanding for selected topics in the following content areas: chemistry of life, cellular structure and function, genetics, mechanisms of evolution and evolutionary history and biological diversity of unicellular organisms.
2. Demonstrate readiness for intermediate course work in Biology through using and applying your knowledge and understanding in these same topics in biology through solving problems that call for recognizing correct relationships among variables, or for correctly predicting the outcome of alterations of these variables.
3. Demonstrate an understanding of scientific processes through predicting correctly the outcome of an experiment, or through interpreting the results of an experiment.
4. Use models to explain complex biological phenomena.
5. Demonstrate adjustment to college expectations through successful completion of course requirements including learning curve assignments, preclass quizzes, homework, How Do We Know (HDWK) assignments, and animation assessments with increasing independence through the semester.

RESOURCES FOR SUCCESS

Successful students in BIOL 117 achieve their goals through their own unique paths, but they have several characteristics in common. They recognize the importance of strategic planning for a task, monitoring their performance on the task, reflecting on how their performance on the task relates to what they did or did not do, and finally modifying their plans for similar future tasks. They also know that this cycle of learning is a process that requires them to take the first step, and expect that success in different courses may require different strategies. Thus, your faculty members have designed BIOL 117 with a range of resources for you to incorporate into your strategies for learning. In past semesters, we have found that students who take an active approach to learning—by using these resources regularly—earn on average a full letter grade higher than those who do not. Here are your options:

Attendance and expectations for class :

There will be an in-person or synchronous online session each week and an asynchronous alternative. Synchronous online and in-person class sessions will be used for active learning discussion and student questions, not for lecture. Active participation is strongly linked to student success, and participation in the in-person or synchronous online sessions will be strongly encouraged. The activities presented during these face to face sessions and online are meant to reinforce key concepts covered in the lectures. These concepts have been carefully chosen to reflect the more difficult areas of the content with which students in past semesters have struggled. The activities are meant to be done in groups of 2 or 3 people so even if you do these activities entirely online, you may consider setting up a Zoom session with a friend to go through these activities. Often it is during these group activities where students become more aware of the areas that they find confusing.

There is no direct participation grade. Please note that for in-person sessions, you are assigned to a cohort (group A or group B), and must attend on the day you are scheduled so that we can be in compliance with New York State requirements for room occupancy under social distancing. Because all of the sections are following the same schedule, there may be opportunities to make up missed sessions with another section, but these must be arranged in advance with the instructors in charge of those sections.

Supplemental Instruction:

Supplemental instruction (SI) will also be available for this class. SI sessions are facilitated by trained peer leaders and will focus on mastery of the content and concepts in Biol 117. SI sessions will be online and times will be placed on the announcements for when these meetings will occur. SI will increase your chances of achieving a better

grade in this class by providing guided practice and assistance with studying. Additional information will be provided by your SI (insert name) and more information on the SI program can be found at the following link: <https://www.geneseo.edu/supplemental-instruction>

Faculty Office hours:

Your faculty instructor will have online office hours as designated on the first page of the syllabus. These sessions are usually one to one (via an online link) or in small groups. During the designated hours for your course you can “drop in” without an appointment. Always feel free to contact your section instructors and also to contact the instructor in charge of a given content section (see course instructors and content instructors).

ACCESSIBILITY

SUNY Geneseo is dedicated to providing an equitable and inclusive educational experience for all students. The Office of Accessibility Services will coordinate reasonable accommodations for persons with documented physical, emotional, or cognitive disabilities, as well as medical conditions related to pregnancy or parenting. Students with letters of accommodation should submit a letter to each faculty member at the beginning of the semester and discuss specific arrangements. Please contact the Office of Accessibility Services <https://www.geneseo.edu/accessibility-office>

- *Student responsibility:* Please submit your letter of accommodations to us at the beginning of the semester and make an appointment to discuss arrangements.
- *Instructor responsibility:* We are committed to working with you to figure out how to create a just learning environment while meeting the learning outcomes of the course. Unless you communicate otherwise, we will keep all accommodations confidential.

PROFESSIONALISM

Policy for this semester requires all students wear a face mask in instructional spaces including classrooms, lecture halls, and laboratories, and all common areas including residence halls and all buildings. There is misinformation circulating about exemptions from face mask requirements connected to interpretations of the Americans with Disabilities Act (ADA). At this time, the ADA does not cite a blanket exemption from face covering requirements for individuals with disabilities, and has not issued documentation to support this exemption (e.g., "ADA cards"/letters/flyers). Please refer to the [ADA and Facemask Policy Guide](#) for more information.

Anytime you feel ill we ask that you do not come to the in class sessions. All activities carried out in class will be available for completion and review online. Links to these can be found in the corresponding chapter module as well as in a module titled "IN CLASS ACTIVITIES"

For your scheduled in class activities please arrive on time, stay through class, turn off your cell phone (including vibration mode), and use laptops and other technology only for class-related activities. It is understood that the continuing development of new technology can be beneficial to the process of education. For this reason, laptops and smartphones are permitted for note-taking and viewing classroom materials as well as for interaction with the Reef-polling system. Unacceptable classroom use of technology includes, but is not limited to social media websites, e-mail, playing games, and cell phone photography. These diversions not only reduce your class participation, they can also distract those around you. If you disrupt the lecture or are distracting others around you, you may be asked to leave. If the behavior of other students around you is affecting your learning please tell us.

If you have an emergency for which you need your cell phone to be turned on, talk to the instructor before the beginning of in class sessions and to be excused from this rule. Only then will you not be asked to leave if your cell phone rings/vibrates during the in class session.

COMMUNICATION

Set up Canvas to provide daily updates via email or text message in order to ensure that you receive any updates or changes to the schedule. Check the announcements section regularly. Besides online office hours, the fastest way to get in touch with your instructors is via e-mail. Please include your name (not just your email address) and the course name or number (Biol 117) in all e-mails sent to your instructors. To preserve work-life balance, we reserve the option to delay answering emails sent after 5 pm or on the weekends until the start of the next business day.

MISSING EXAMS

All five exams are required, and making up an exam requires a valid excuse. Examples of valid reasons for missing exams include (but are not limited to) personal illness, death or serious illness in the family, representing the college, religious observances, and required training for work or military service. Where possible, discussion of alternative arrangements should take place ahead of the exam. For emergencies arising on the day of the exam, you need to contact us within 24 hours to arrange an alternative time to take your exam. Because you may drop a test, one option is that you may also simply skip a test if you are sick or have an emergency. This can sometimes

help to minimize your stress during difficult times. If you are unable to complete a test for a prolonged period of time, you may receive an alternative test in order for instructors to be able to return tests to others promptly.

Remember that exams will be open during a 14 hour period and you can choose to take it at any time during that open window. However, you only have 1 hour to complete the exam from the time at which you first open it.

MISSING ASSIGNMENTS ON ACHIEVE (PRELEARNING QUIZZES, HDWK, HOMEWORK ASSIGNMENTS AND ANIMATION ASSESMENTS)

The benefits of completing the online assignments in Achieve are greatest if you use these to stay caught up on the reading and modules. Opportunities to make up assignments are not guaranteed, and may require documentation, and instructors reserve the option to limit excessive use of extensions and make-ups. In general the material will open just before the material is being covered and will close two days before the exam for those unit chapters. In completing the assignments we advise you to follow the outline for each chapter as found in the modules and to access them through the modules and NOT the MacMillan Learning portal. This means completing the Learning Curve and Preclass Quizzes before attending the in class or online sessions. For the HDWK, homework assignments and animation assessments, these are most useful to do as you go through and review the material and doing them while you go through the online lectures or shortly after you go through them. Making the assignments due 2 days before the unit exam allows time for you to analyze your performance and seek help on specific concepts before each exam. We do recognize that things come up and you might miss an assignment deadline. For each day past the due date for the assignments you will lose 10% of your score on that item. The policies above may be further modified on a case-by-case basis for students working with the Dean of Students or with the Office of Accessibility Services. We reserve the right to limit the extensions on Achieve assignments and the number of assignments in cases without additional documentation.

EXPLANATION OF FINAL GRADES

Grades are determined using the scale presented below almost always without any adjustment or curve. There are no quotas for particular letter grades. Helping others can only help you, and cannot hurt your grade in any way. Scores will be rounded up or down to the nearest whole number. The point distribution is the standard Geneseo distribution; Canvas is set to display this. The distribution is as follows:

- >93%, A
- 90-92%, A-
- 87-89%, B+
- 83-86%, B
- 80-82%, B-
- 77-79%, C+
- 73-76%, C
- 70-72%, C-
- 60-69%, D
- <60%, E

APPEALING GRADES

Any graded work may be submitted for re-evaluation along with a written appeal submitted via email and should include a brief explanation of your concerns, including your understanding of the test question or assignment directions and why you believe your work meets the requirements. Appeals should be sent in within one week of receiving the graded work. When you submit your appeal, we will schedule an individual conference to go over our response.

ACADEMIC DISHONESTY

Academic dishonesty devalues the work of other students. Cheating on exams is a serious breach of trust and will be treated accordingly. Examples of cheating on tests include (but are not limited to) collaboration or communication with others in any form. Plagiarism is the misrepresentation of the originality of your work. Collaborating on a test will result in a failing grade for the test, and may result in a failing grade for the course. Ignorance of the policy or of the definition of cheating will not serve to excuse the behavior. Because academic dishonesty is defined in detail here, claiming ignorance of the policies cannot serve as an excuse. Should serious academic cheating be identified the procedures addressing these incidents are addressed in detail through the [Dean of Academic Planning and Advising's](#) webpage.

POLICY EXCEPTIONS AND CHANGES

Policies are designed to address common issues and concerns. We cannot anticipate every possible problem that may arise, and therefore policies can have limits and exceptions! If you are experiencing problems in completing class work for any reason, please make an appointment to talk with one of us. Please note that in light of the current pandemic it is also possible that we will have to return to a fully online format. In that case policies may change again and we will post those changes if and when they occur.

IMPORTANT DATES

September	04	Drop/Add period ends
September	18	Exam #1 opens at 8 am and closes at 10 pm
September	30	Rejuvenation day
October	09	Exam #2 opens at 8 am and closes at 10 pm
October	19	Midsemester
October	27	Rejuvenation day
October	30	Exam #3 opens at 8 am and closes at 10 pm
November	20	Exam #4 opens at 8 am and closes at 10 pm
November	25 - 27	Thanksgiving Break
December	14	Last day to withdraw from full semester courses
December	14	Last day to elect Pass/Fail for full semester courses
December	18	Exam #5 opens at 8 am and closes at 10 pm

POLICIES FOR THE BIOLOGY MAJOR

Biology and Biochemistry proficiency: Students must have a C+ or better average in their first two REQUIRED Biology lecture courses at SUNY Geneseo to remain as Biology or Biochemistry majors. For most this is Biol 117 and Biol 119 but for those accepting AP credits or transfer students it could be other combinations.

Minimum Competence Requirement: To graduate with a biology major, students must attain a grade of C- or better in all required biology courses (excluding electives). A grade of C- must be achieved in any course before it can be used as a prerequisite for another course. A student may only repeat a required biology course or related requirement once for major credit and the course must be taken at the next offering of the class. If a student does not earn at least a "C-" on the second taking of the class, she/he will not be able to complete the major.

COPYRIGHT NOTICE

Many of the materials that are provided to students in this course have been created by Biol 117 instructors or by the publisher of our textbook. Students would be best to assume that all course materials are protected by legal copyright. Copyright protection means that reproduction of this material is prohibited without the author's consent. Thus, students are prohibited from sharing or posting copyrighted material to any websites outside our course Canvas site. Students are also prohibited from reproducing material to be shared with other more limited groups (eg. sorority/fraternity test bank). Be aware that UUP (Union of University Professionals, the union representing faculty on this campus) is seeking to take legal action against these and other sites, and that posting or selling copies of materials to such sites may put a student in legal jeopardy.

SCHEDULE OF CHAPTER COVERAGE AND EXAM DATES

Week	Unit	Mon	Tues	Wed	Thurs	Fri	Sat	Sun
1	1	August 31 Unit 1 starts Cohort A (A-L) meets in person	Sept 1	Sept 2 Cohort B (M-Z) meets in person	Sept 3	Sept 4 Online via Zoom	Sept 5	Sept 6
2	1	Sept 7 Labor Day Holiday No class	Sept 8	Sept 9 Cohort A (A-L) meets in person	Sept 10	Sept 11 Cohort B (M-Z) meets in person	Sept 12	Sept 13
3	1 & 2	Sept 14 Cohort A (A-L) meets in person	Sept 15	Sept 16 Unit 2 starts Cohort B (M-Z)	Sept 17	Sept 18 Exam #1 Online 8:00 am – 10:00 PM	Sept 19	Sept 20

				meets in person				
4	2	Sept 21 Cohort A (A-L) meets in person	Sept 22	Sept 23 Cohort B (M-Z) meets in person	Sept 24	Sept 25 Online via Zoom	Sept 26	Sept 27
5	2	Sept 28 Cohort A (A-L) meets in person	Sept 29	Sept 30 Hiatus day	Oct 1	Oct 2 Cohort B (M-Z) meets in person	Oct 3	Oct 4
6	3	Oct 5 Unit 3 Starts Cohort A (A-L) meets in person	Oct 6	Oct 7 Cohort B (M-Z) meets in person	Oct 8	Oct 9 Exam #2 Online 8:00 am – 10:00 PM	Oct 10	Oct 11

7	3	Oct 12 Cohort A (A-L) meets in person	Oct 13	Oct 14 Cohort B (M-Z) meets in person	Oct 15	Oct 16 Online via Zoom	Oct 16	Oct 17
8	3 & 4	Oct 19 Cohort A (A-L) meets in person	Oct 20	Oct 21 Unit 4 Starts Cohort B (M-Z) meets in person	Oct 22	Oct 23 Online via Zoom	Oct 24	Oct 25
9	4	Oct 26 Cohort A (A-L) meets in person	Oct 27 Hiatus day	Oct 28 Cohort B (M-Z) meets in person	Oct 29	Oct 30 Exam #3 Online 8:00 am – 10:00 PM	Oct 31	Nov 1
10	4 & 5	Nov 2 Cohort A (A-L) meets in person	Nov 3	Nov 4 Cohort B (M-Z) meets in person	Nov 5	Nov 6 Unit 5 Starts Online via Zoom	Nov 7	Nov 8

11	5	Nov 9 Cohort A (A-L) meets in person	Nov 10	Nov 11 Cohort B (M-Z) meets in person	Nov 12	Nov 13 Online via Zoom	Nov 14	Nov 15
12	5	Nov 16 Cohort A (A-L) meets in person	Nov 17	Nov 18 Cohort B (M-Z) meets in person	Nov 19	Nov 20 Exam #4 Online 8:00 am – 10:00 PM	Nov 21	Nov 22
13 OFF	-	Nov 23 No Class Meeting	Nov 24	Nov 25 THKSGIVING BREAK	Nov 26 THKSGIVING BREAK	Nov 27 THKSGIVING BREAK	Nov 28	Nov 29
14	6	Nov 30 Unit 6 Starts Cohort A (A-L) meets in person	Dec 1	Dec 2 Cohort B (M-Z) meets in person	Dec 3	Dec 4 Online via Zoom	Dec 5	Dec 6
15	6	Dec 7 Cohort A (A-L) meets in person	Dec 8	Dec 9 Cohort B (M-Z) meets in person	Dec 10	Dec 11 Online via Zoom	Dec 12	Dec 13

16	6	Dec 14 Cohort A (A-L) meets in person	Dec 15	Dec 16 Cohort B (M-Z) meets in person	Dec 17	Dec 18 Exam #5 Online 8:00 am – 10:00 PM	Dec 19	Dec 20
		Dec 21	Dec 22					