# Course Syllabus





To print: MAC users press "\mathbb{H}" + "P". PC users press "CTRL" + "P".

# BIO 110: Integrative Biology 1

Fall 2020

# Course description

In this course, we will explore a number of core topics in biology including biochemistry, cell biology, genetics, gene expression, evolution, and ecology. Biology is a rapidly growing and expanding discipline. Because biologists are discovering new things every day, we have selected some of the most significant topics to cover in this course.

## Contact & Class Information

Dr. Jennifer Kovacs

Email: jkovacs@agnesscott.edu (mailto:jkovacs@agnesscott.edu)

Office hours: Zoom Only; I will have office hours on Zoom from 11:40-12:55. You can find the <u>zoom link</u> for my office hours under the <u>Announcements</u> page of the course. If you need to schedule a meeting at a different time or in a format other than Zoom please contact me, either by email or through Canvas by using the Inbox icon on the Canvas Global Navigation menu. In that email, please include 3 times that work for you, and I will do my best to accommodate.

Classtime: Classes will meet synchronously Mondays and Wednesdays from 12:15-1:30 PM EST. Once your small groups are formed I will send out a permanent Zoom Room, but for our first Monday class here is the <a href="mailto:Zoom link">Zoom link</a> (<a href="http://%20https://agnesscott.zoom.us/j/93756565471?</a> <a href="pwd=bTRLMCtDdzgrR2NndWV5andxTG0vUT09">pwd=bTRLMCtDdzgrR2NndWV5andxTG0vUT09</a>). You can also find these details on the <a href="mailto:Announcements">Announcements</a> <a href="mailto:page.">page.</a> The room will open at 12 (noon) EST, and you're welcome to come hangout for a bit before class starts at 12:15 PM EST.

# Participant Success

## Devote ample time to independent study outside of class.

<u>Purpose and Plan:</u> Why are you taking this class? What purpose does this class serve for you? What are your personal goals for this class? What will it take to achieve these goals? Why are these goals important to you? You need to be able to answer these questions for each class you take – because the work will get hard and you will need to remind yourself what you are aiming for at the end of the semester. Set your goal and then make a plan to achieve that goal.

<u>Good Habits: Learning throughout the semester:</u> Preparing for tests and actually learning the material in Bio 110 and every other class you'll take, for that matter is made infinitely easier and more enjoyable if you establish an organized system for approaching the lecture and reading material early on in the semester.

SCHEDULE time and STICK to it: Based on assignments for both lecture and lab, you will spend 8-10 hours studying for this class outside of class time. Please make time to meet with your instructor early in the semester if you are struggling. We are available to meet on Zoom during our weekly office hours as well as by appointment and in other formats if desired. The lecture portion of Biology 110 is a 3 credit course. Additionally, you need to be co-enrolled in the 1 credit Biology 110 lab. BIO 110 and SUMMIT: BIO 110 Counts towards Leadership Skills Across the Liberal Arts.

Add time to your Google Calendar each week for this course. Those time slots will vary based on your level of understanding, but in general, they should be about an hour each.

#### A time slot to:

- (1) read the assigned reading and take notes on it,
- (2) listen to the lecture and take excellent notes,
- (3) complete the DRQ ahead of time in case you have questions you need to ask before submitting it,
- (4) to meet with your study group to review the lecture and prepare for the quiz. Each lecture topic should have 4 time slots, and
- (5) to complete the bigger projects. Schedule several different time slots for the semester projects/assignments to give yourself plenty of time to work on these assignments (and so they don't sneak up on you).

Do not change those times. Make those times a habit - time that is carved out for this class and your success. This class will cover topics you will be expected to retain in your upper level science classes. So it isn't enough to just do well on the test in this class - you will need this information to do well in your upper level classes as well.

## Essential course materials and Textbook

*Biology in Focus*, Second Edition, Person Publishing, by Lisa A. Urry, Michael L. Cain, Steven A. Wasserman, Peter V. Minorsky, Jane B. Reece. ISBN-13: 978-0321962751 | ISBN-10: 0321962753.

Please note this text is also used for Biology 111. It is available both as a physical hard copy textbook and an e-textbook. It is also available through multiple sellers. Choose the format that works best for you. PowerPoints as well as other important information, such as our daily class agenda and notes, will be posted to the Module section of your Canvas course site. MP4s for the lecture will be also available under the Modules section of Canvas and are closed captioned.

# **Technology**

If you are having any difficulties accessing Canvas at any time please don't hesitate to reach out to ITS by emailing itshelp@agnesscott.edu and someone will be in touch within 24 hours. If you need immediate help, please call the ITS help line at 404-471-5487 between the hours of 8:30 a.m. - 4:30 p.m.

Additionally, tutorials on how to use and access Canvas can be found under the Help & Campus Resources tab in your Canvas.

Finally, if you are in a situation where you are unable to access reliable internet resources, Agnes Scott has several options that may be able to help you with your internet. You can find those options at: (https://www.agnesscott.edu/coronavirus/resources.html (https://www.agnesscott.edu/coronavirus/resources.html).

# Course objectives

The American Association for the Advancement of Science - with support from National Science Foundation - described the concepts and competencies that form the necessary foundation for science majors (Vision and Change in Undergraduate Biology Education: A call to Action. ISBN#: 978-0-87168-741-8). The objective of Biology 110 is to cover these concepts through our topic explorations and exercise these competencies through assignment.

## Concepts:

- 1. Evolution
- 2. Structure and Function
- 3. Information flow, exchange, and storage
- 4. Pathways & transformations of energy and matter
- 5. Systems

#### Competencies - You will develop the ability to:

- 1. Apply the process of science
- 2. Use quantitative reasoning
- 3. Use modeling and simulation
- 4. Tap into the interdisciplinary nature of science
- 5. Communicate and collaborate with other disciplines
- 6. Understand the relationship for science and society

# Skill Objectives – Skills you will gain from this course that advance your development as a scientist (and you can put on your CV and personal statements).

- 1. <u>Critical thinking/Problem Solving</u> through weekly in class application of knowledge and through analyzing papers, students will develop their ability to think critically about potential solutions to scientific questions.
- 2. <u>Oral Communication</u> through group presentations, students will develop their ability to communicate science.
- 3. <u>Written Communication</u> through the Wiki assignment, and in class assignments, students will develop the ability to write scientifically.
- 4. <u>Teamwork/Collaboration</u> working with a team for presentations and a team for in class assignments will enable the students to practice real-world teamwork and leadership competencies that are taught as a part of SUMMIT.
- 5. <u>Digital Technology</u> students will learn how to navigate various online resources to complete assignments and collaborate with peers. Students will actively use Canvas, PubMed, Google Scholar, Google Drive, Zoom, and Power point, as well as data and image analysis technologies such as Excel, Google Sheets, and ImageJ in lab. If you need help with any of these technologies please contact ITS at <a href="mailto:itshelp@agnesscott.edu">itshelp@agnesscott.edu</a> or contact your instructor.

## Grades

Your grades will be posted to Canvas regularly so you are aware of your standing in the course. Your final grade will be calculated using the following point breakdown:

Use of Sources Assignments	5 points
Science Career Assignments	10 points
Quizzes	90 points (19 quizzes x 5 points each, dropping the lowest quiz grade)
Assisted Reading Questions (ARQs)	100 points (19 lectures + syllabus, 20 total x 5

10/21/21, 1.12 1 N	for integrative Biology 1 M. W. Section
	points each)
Test Points	220 points (4 tests and 1 cumulative final)
Class Activities	95 points (19 activities x 5 points each, dropping the lowest grade)
D-Portfolio Writing	25 points
D-Portfolio Presentation	25 points

## Total points: 570 points total \*Your instructor may assign additional points

The following grading scale will apply for converting numerical grades into final letter grades:
93 to 100: A
90 to 92.9: A-
87 to 89.9: B+
83 to 86.9: B
80 to 82.9: B-
77 to 79.9: C+
73 to 76.9: C
70 to 72.9: C-
67 to 69.9: D+
63 to 66.9: D
60 to 62 9· D-

Lower than 60: F

<sup>\*\*</sup>your grade is not weighted. Your grade is calculated by total points earned divided by totals points possible, multiplied by 100. You can simply add the total points you earned so far and divide by the total points possible so far. Multiple that number by 100 to get your grade currently in the class. You can also use the same math to figure out what you need to get on a test in order to pull your grade up.

## **CLASS ORGANIZATION AND FLOW**

\*\*\*\*Quick note: I've provided links to several locations of resources within the 110 Canvas site. These are not the only ways to access these files. Within Canvas there are often multiple ways to access things. I've provided these links here, but you can also access them from other locations. \*\*\*\*

#### **Prior to class:**

- 1. READ the assigned chapter (see Syllabus Schedule below). The chapter will contain material that is explained differently and supports the lecture. Read and take notes on the chapter (not just highlight) prior to listening to the recorded lecture. Hand-written notes will allow you to retain the information more than highlighting or simply reading. When you read, don't look at your phone or email. Focus on what you are reading. Make sure you have those lecture notes accessible during our synchronous classtimes.
- 2. LECTURE: Open the lecture PDF and create an outline for note taking before listening. Lecture PDF's are found in the Canvas "Module" section of the course under the "Lecture PDF" heading. Listen/watch to the assigned lecture MP4 file for that topic (available under in the "Module" section under the "Lecture Recordings" heading) and minimize distractions so you can pay attention. While listening, take notes putting information in your own words. Add notes from the chapter. And bring those notes to class. If you have questions regarding the lecture or chapter, feel free to email your professor before class or talk with the learning assistants assigned to this class. You can also talk to your team about any questions you have. But you are responsible for the information in the lecture and the chapter for the quiz.

\*Why did we record the lectures? Science education after college will require you to teach yourself the information. With a flipped classroom, you will begin to learn that skill. Medical schools and graduate schools will expect you to come to class knowing much of what was assigned in reading and your class time will take that information further. To prepare you for that type of learning, we have recorded the lectures. This allows you to take the lectures at your own pace. Everyone can get through the lecture - the person who has had AP Biology and the person who didn't have any biology in high school can listen at their own pace and get the same information out of the lectures. Further schooling won't necessarily give you lectures. Because this is college and not graduate school, we have provided these recorded lectures as an aid so you can learn how to study and teach yourself these topics.

 Complete the ASSISTED READING QUESTIONS (ARQs) which are based on the book and the lecture. Answer the questions <u>after</u> you listen to the recorded lecture outside of class and after you read the assigned chapter. This will help you review what you know and what you need to review (consider using these questions as a test). ARQs are turned in on Canvas 36 hours prior to class. The ARQ's are found in Canvas in the "Modules" section under the "Assisted Reading Questions" heading. ARQ's are submitted in Canvas under the "Turn ARQ's in here" heading under the "Modules" section. Make sure your ARQ's are accessible to you during our synchronous class times, as they may assist in the in class activity. There will be no late work accepted or time extensions. If Canvas is down, email your ARQ before the due date to receive credit. Your lowest ARQ grade will be dropped. ARQs again are a tool to help you learn how to study and teach these topics to yourself. They will allow you to focus on what the professor feels is important.

4. QUIZZES: Before your class, you will take a lecture quiz online. Quizzes will be open 24 hours prior to class. You will find these quizzes in the "Module" section under the "Lecture Quizzes" heading. You will have 20 minutes to take the quiz. You may use any notes or ARQs to answer quiz question. This quiz will cover the recorded lecture material and assigned chapter material. There will be no make-up quizzes. Your lowest quiz grade will be dropped. Quizzes will allow you analyze your knowledge, practice the type of test questions - all so you can prepare best for the upcoming tests. They are application questions, multiple choice

#### In Class:

1. IN CLASS ACTIVITIES are meant to practice and apply what was learned in the lecture. These will be completed in teams during the lecture time. Group in-class activities are found in the "Modules" section of your 110 Canvas site under the "In Class Activities" heading. We recommend that each member download, open, and read over the assignment PRIOR to the start of class. Additionally, your group may decide to work on the assignment in a shared Google doc during class time. If that is the case, we recommend that one of you create and share the doc with all of the group members PRIOR to class. You could even make a Google folder with ALL of the shared in-class group assignments in one go, if you were so inclined. These group assignments are due 24 hours after the end of class and are turned in on Canvas in the "Modules" section under the "Turn in Class Assignments Here" heading. You will be assigned a single grade for your group group. While completing the assignment you can use your notes, your ARQs and your book. Being able to apply what you learned through the lectures will be necessary to remember the information for your time in BIO 111, your upper level courses, and for your science career.

## ONLINE AND HYBRID EXPECTATIONS

Online and hybrid classes allow for flexibility and convenience. But online and hybrid classes require certain learning traits from you, the student.

- 1. Persistence and independence You need to work daily on every class and persist through challenges. When you run into a challenge, make sure you seek help! Remember this is your education and only yours. What you put into it is what you get out of it.
- 2. Effective Time-Management. Because you need to spend time daily on this class, make sure you schedule that time to make sure you manage your time well! Develop a daily to do and a long term plan for completing the major assignments.
- 3. Remember that your professors want to help but as we are on zoom, we may not pick up on the usual non-verbal cues students give us. In a typical classroom, we pick up on confused looks or blank stares. As we don't have those cues, reach out! Email or talk to your group or a learning assistant. Engage with the online discussions including the <a href="Community Forum">Community Forum</a>!
- 4. Be aware of the software needs and make sure you know how to navigate those programs required for the course. Reach out to <a href="mailto:itshelp@agnesscott.edu%20">ITS (mailto:itshelp@agnesscott.edu%20</a>) or a friend or a YouTube how to video for the software/programs for the class.
- 5. Additionally, accessibility resources, such as screen readers and maginifiers are available to you both in Canvas (<a href="https://community.canvaslms.com/t5/Canvas-Basics-Guide/What-are-the-Canvas-accessibility-standards/ta-p/1564">https://community.canvaslms.com/t5/Canvas-Basics-accessibility-standards/ta-p/1564</a> (<a href="https://community.canvaslms.com/t5/Canvas-Basics-Guide/What-are-the-Canvas-accessibility-standards/ta-p/1564">https://community.canvaslms.com/t5/Canvas-Basics-Guide/What-are-the-Canvas-accessibility-standards/ta-p/1564</a>) and in the Google Suite (<a href="https://www.google.com/accessibility/products-features/">https://www.google.com/accessibility/products-features/</a>). If you have accessibility issues with some of our technologies or in general, please do not hesitate to reach out to the Offices of Academic Advising and Accessible Education for help (<a href="magnesscott.edu/academicadvising/accessible-education/index.html">https://agnesscott.edu/academicadvising/accessible-education/index.html</a>).
- 6. When you are engaging in course material, find a good study space. Turn off your cell phone, be in a comfortable space, minimize any distractions, no TV or games, etc.

## Tests

Tests will consist of multiple choice and short-answer questions that evaluate your knowledge. They will be application questions. Tests will be open note. There are 4 tests for this course (one for each unit of study) and one final exam. The final exam will be cumulative. See schedule below for test dates. All of the tests will be online and can be found in the "Tests" section of "Modules".

Developing good study strategies early on will save you lots of time and frustration over the next four years and beyond. You may find that the way you studied in high school doesn't work as well in college, where exams test whether you can apply and extend what you've learned rather than regurgitate minute details. A small amount of time every day is more effective than late-night marathon sessions. If a longer, intensive study session is needed, do it two nights before a test to guarantee a full night's rest.

1. <u>Form a study group:</u> Study groups, if well structured, can be the most effective and time efficient way to review. Some tips on how to make a great study group: Size: Study groups that are too big tend to get disorganized, and if some students are more comfortable with the material than others some may not get all their questions answered. Most students find groups of 2 to 5 friends works best. Prepare: It's important to review the material before coming to a study group. This could merely be skimming your notes to identify confusing areas, but you should make a list of questions to bring to the group. Organize: Assign each person a specific section (topic, lecture, etc.) to study and explain to the group. If you have to explain something to a group, you are sure to understand it.
Group dynamic: Don't let one person dominate the conversation or get sidetracked by other distractions.

\*\*\*\*Forming a study group in an online environment: This may seem like a HUGE challenge, but it may actually make it easier. Use the "Community Forum" under discussions to find folks who have a similar schedule, time zone, goal, etc. The Community Forum is yours to use and operate as you want, so post a "Wanted: Study Group Members" post and go from there.

Bio 110 Learning Assistants with the Research Center for Math and Science: You also have two wonderful peer learning assistants who are here to help you develop your study skills and succeed in the course. Both have taken 110 before and are amazing resources for improving your performance in 110. They also maybe able to set you up with a study group. Both <a href="mailto:gkirschke@agnesscott.edu">Gwen Kirschke</a> (mailto:gkirschke@agnesscott.edu) and <a href="mailto:gkirschke@agnesscott.edu">Amunet Jacobs (mailto:jacobs038@agnesscott.edu)</a> will be meeting with us during our first class sessions. Please reach out to them early and often this semester.

2. **Start studying early:** Review notes and make a study guide. Have an organized system for reviewing your notes. Here's my own personal strategy: **Outline lecture notes:** Read through your class notes and write down main ideas in outline form, including some specific details that you think you'll forget. I like to put these study guides together at the end of the semester to make studying for the final easier. Color-coding (by topic or importance) is also useful.

**Use textbook/reading notes:** If you see anything surprising or particularly relevant to lecture material, or find a useful diagram, reference it in the margin of your lecture notes outline. **Flashcards:** Use flashcards with vocabulary from the chapter as well as some basic questions to quiz yourself. **Draw your own diagrams:** After studying your lecture notes, try to tie the material together by putting it in picture form (without looking at your notes.)

**Write your own test.** If you had 20 (or 50, or 100) questions that you could ask about this information – what would you ask? What topics are the most important? How would you ask questions about each of these topics? Knowing what will be on a test is a difficult skill – but, with practice, you should be able to figure it out.

**Review: past exams** Biology exams can vary quite a bit so it's important not to simply memorize questions and answers. **Labs** Review all your lab notes. Labs and lectures are intended to overlap. Lab

may be a space that can help shed light. **Lectures** Your instructor is the one giving the exam, so pay close attention to what they find most important and interesting. **ARQs/In Class Activities** Review all your material for the section. Your assignments cover the topics your instructor believes to be most important.

- 3. <u>AFTER studying:</u> Do practice problems and textbook questions. Go to review sessions. Bring questions when you go to a review session; otherwise, it will be a waste of time. <u>Explaining the material to friends is one of the best ways to study</u> and identify the things you don't know.
- 4. <u>After the test:</u> It's not over yet! Some things you should do after an exam: Review questions you got wrong, talk to the professor if you're unhappy with your grade and save study guide to build on all semester.

**Grading:** Don't get discouraged if you don't do well on your first test or quiz. Many instructors will reward you in your final grade if they see improvement throughout the semester.

## Other odds and ends:

It's never too early to start thinking about the summer. Agnes Scott has an amazing undergraduate research program; if you're at all interested in research, start thinking about which professor you might like to work with. You will need a really strong personal statement and CV/resume as these experiences are competitive.

# Four additional assignments for BIO 110:

## 1 Use of Sources Assignment

For this assignment, you will need to read the following: <u>Knowing and Avoiding Plagiarism During</u>

<u>Scientific Writing P Mohan Kumar, N Swapna Priya, [...], and M Nagasree.</u>

(https://agnesscott.instructure.com/courses/2826/files/98894/download?download\_frd=1) There is a series of questions to answer after you read the article. The due date will be posted to Canvas which is where you will <u>upload your answers</u>. This is individual work.

### 2. Science Career Assignment

For this assignment, you will be reading "Guide to Life Science Careers" (https://agnesscott.instructure.com/courses/2826/files/98918/download?download\_frd=1) and answering questions based on the reading and 2 appointments: 1) an appointment with the Office of Internships and Career Development (https://www.agnesscott.edu/internship-and-career-development/) for your

career assessment and 2) drafting your resume with <u>Dr. Molly Embree</u> (mailto:membree@agnesscott.edu).

### 3. <u>Digital portfolio "Wiki" assignment:</u>

Biology 110 includes a team project that utilizes your digital portfolio. We will be exploring diversity of life through team projects focused on non-vertebrate organisms. Student teams of approximately 5 students will each prepare a wiki-style entry on their assigned organism (or team of organisms). Each student is responsible for one category of the wiki entry. The 5 categories correspond to the core concepts outlined by the American Association for the Advancement of Science and the National Science Foundation (see pg. 1 of syllabus). You will put your contribution to the wiki on your D-portfolio and present your contribution to the class. More details on this assignment can be found here. (https://agnesscott.instructure.com/courses/2826/files/98869/download?download frd=1)

#### 4. CV or Resume and Personal Statement

This assignment is meant to ensure that what you learn in this class is reflected in your career documents.

# Academic Honesty for your work as a scientist:

<u>You are responsible</u>. Review each course syllabus for the professor's expectations regarding course work and class attendance. Violations of the honor code results in consequences ranging from failure of the assignment, failure of the course, to expulsion from the college. You should speak with your professors if you need clarification about any of these policies.

You are expected to read the article and complete the assignment (see schedule for due date):

Knowing and Avoiding Plagiarism During Scientific Writing by \(\psi\)

(https://agnesscott.instructure.com/courses/2826/files/98894/download?download\_frd=1) P Mohan Kumar,

N Swapna Priya,1 SVVS Musalaiah, and M Nagasree 🔱

 $(https://agnesscott.instructure.com/courses/2826/files/98894/download?download\_frd=1)\ \underline{.\ Ann\ Med}$ 

<u>Health Sci Res. 2014 Sep-Oct; 4(Suppl 3): S193–S198</u> <u>↓</u>

(https://agnesscott.instructure.com/courses/2826/files/98894/download?download\_frd=1) . If you have any questions about that article, please email your professor.

By placing your name on ANY assignment, you are stating that you completed that assignment with academic honesty. Cheating in this class may keep your grade where you want it, but it will not help your career long term – you cannot cheat the GRE or the MCAT. You have to learn this material in order to succeed in science. Additionally, academic dishonesty is reported to medical schools and graduate

schools as per their request. Finally, anyone caught cheating relinquishes the privilege of asking for a letter of recommendation from the professor and will receive a 0 on the assignment. Acts of academic dishonesty will be turned over to Honor Court.

Plagiarism: do attribute all ideas taken from other sources; this shows respect for other scholars. Plagiarism can include portraying another's work or ideas as your own, buying a paper online and turning it in as if it were your own work, or not citing or improperly citing references on a reference page or within the text of a paper. Passing off someone else's work as your own represents intellectual fraud and theft, and violates the core values of our academic community. Plagiarism is passing off any work that is not yours as your own work \*\* EVEN WITH A CITATION\*\*\*. If you are using a source and citing the source, the information from that source STILL must be reworded in your own voice. Putting a citation behind a statement gives ownership to that source, but, if you do not reword that information, it is plagiarism. Do not cut and paste from the slide, your book, your neighbor, Wikipedia, or the internet. To further your science education, you need to be able re-word science in your own voice. If your answers are not your own, you will receive a 0 for the assignment. All cases of academic dishonesty will be turned into Honor Court.

<u>Intellectual Fraud:</u> do not falsify or create data and resources or alter a graded work without the prior consent of your professor. This includes making up a reference for a works cited page or making up statistics or facts for academic work.

<u>Cheating:</u> do not allow another party to do your work/exam, or submit the same or similar work in more than one course without permission from the course instructors. Cheating also includes taking an exam for another person, looking on another person's exam for answers, using exams from previous classes without permission, or bringing and using unauthorized notes or resources (i.e., electronic, written, or otherwise) during an exam. Cheating also includes when you help another student complete a take home exam, give answers to an exam, talk about an exam with a student who has not taken it, or collaborate with others on work that is supposed to be completed independently.

## **CLASS MANAGEMENT:**

**Email:** Instructors will make announcements regularly via email and announcements. <u>It is your responsibility to check your Agnes Scott email account daily.</u> When responding to a professor via email, take care that your email is professional.

**Course evaluations:** At the end of the semester you will receive an email asking you to submit an evaluation of the course. Please give feedback! Your input is important to the college as a whole and to us as instructors. We take your comments very seriously.

ADA: Agnes Scott College seeks to provide equal access to its programs, services and activities for people with various abilities. If you will need accommodations in this class, please contact the Office of Academic Advising and Accessible Education (https://www.agnesscott.edu/academicadvising/) (404-471-6150) to complete the registration process. Once registered, please contact me so we can discuss the specific accommodations needed for this course.

**Title IX:** For the safety of the entire community, any incidence of or information about sexual misconduct must be reported immediately to Title IX Coordinator Marti Fessenden (mfessenden@agnesscott.edu (mailto:kgilbert@agnesscott.edu), 404-471-6547) or Deputy Title IX Coordinator Karen Gilbert (kgilbert@agnesscott.edu (mailto:kcontreras@agnesscott.edu), 404-471-6435).

**Inclusion:** This course adheres to the principles of diversity and inclusion integral to the Agnes Scott community. We respect people from all backgrounds and recognize the differences among our students, including racial and ethnic identities, religious practices, and gender expressions. We strive for our campus to be a safe space in which all students feel acknowledged and supported. At the same time, we understand that course content, critical inquiry, and classroom dialogues give us opportunities to examine topics from a variety of perspectives. Such discourse is a defining feature of a liberal arts education, and can compel debates that challenge beliefs and positions, sometimes causing discomfort, especially around issues related to personal identities. While we uphold and preserve the tenets of academic freedom, we request and invite your thoughtful and constructive feedback on ways that we can, as a community of learners, respectfully assist and challenge one another in our individual and collective academic work.

**Content warning:** This course will explore cell biology, genetics, ecology and evolution, which might raise issues of racism, sexism, classism, heterosexism, cissexism, ableism, and other kinds of privilege. I invite you to come see me if want more information. If you feel you will be unable to fully participate in the course requirements, set up a meeting with the course instructor to determine appropriate accommodations.

Week	Date	Lecture #	Topic	Quiz	Reading	Homework
					Prior to	

10/27/21,					Class	iology I M/W Section
	TH 8/20	First day of classes	PRE-TEST DUE FRIDAY 8/21 @ 11:59 PM EST			
1	M 8/24		Syllabus/ Class Success/ Study Skills/Resources		syllabus	Syllabus ARQ Due Sunday
1	W 8/26		Group Agreements			Group Agreements Due Friday
2	1	#1 - 40 min	Biological Themes	L1 quiz	Chapter 1	L1 ARQ Due Sunday
2	W 9/2	#2 - 17 min	Chemistry of Biology	L2 quiz	2 and Kareklas 2016	Use of Sources Assignment Due L2 ARQ Due Tuesday
3	M 9/7		No Class - Labor Day			
3	100 5/5	#3 - 30 min	Biological Molecules	L3 quiz	3	L3 ARQ Due Tues
3	F 9/11	ONLINE	Test #1 on Foundations of Biology (lectures 1 - 3)			Exam #1 Due Friday
4	1	#4 - 32 min	Population Ecology	L4 quiz	40 and Dantzer 2013	L4 ARQ Due Sun
4	1	#5 - 27 min	Species Interactions	L5 quiz	41	L5 ARQ Due Tues
5	1	#6 - 33 min	Ecosystems and Energy	L6 quiz	42	L6 ARQ Due Sun
5	1	#7 - 24 min	Descent with modification	L7 quiz	19	L7 ARQ Due Tues
	1	1	1	1	1	1

0/27/21,	1:12 PM			Syllabu	s for Integrative B	iology I M/W Section
6	M	#8 - 44	Population evolution	L8	21	L8 ARQ Due
	9/28	min		quiz		Sun
6	W 9/30		Ecology and Evolution Review			
6	F 10/2	ONLINE	Test #2 on Ecology and Evolution (Lectures 4 - 8)			Exam #2 Due Friday
7	M 10/5	#9 - 33 min	The Cell	L9 quiz	4	L9 ARQ Due Sun
8	W 10/7		Wiki Project In-class workday			
8	F 10/9		Wiki Outline due			Wiki Outline due
8	M 10/12	#10 - 22 min	The cell cycle	L10 quiz	9.0 - 9.2	L10 ARQ Due Sun
8	1	#11 - 10 min	Cell Cycle Regulation	L11 quiz	9.3	L11 ARQ Due Tues
9	M 10/19		DNA replication and structure	L12 quiz	13 and Meselson and Stahl 1958	l
9	1	#13 - 27 min	Mendelian Genetics	L13 quiz	11.1- 11.2	Wiki Writing Assignment DUE 10/23 Friday L13 ARQ Due Tue
10	M 10/26		Cell Review			
10	W 10/28		Extensions of Mendelian genetics	L14 quiz	11.3 - 11.4	L14 ARQ Due Tues
	F 10/30	ONLINE	Test #3 on the Cell (Lectures 9 - 12)			Exam #3 Due Friday
	1					

10/2//21,	1:12 PWI	_	_	Syllabu	s for integrative b	lology I M/W Section
11	M 11/2	#15 - 28 min	Meiosis and sexual life cycles	L15 quiz	10	L15 ARQ Due Sun
11	W 11/4	#16 - 15 min	Chromosomal basis of inheritance	L16 quiz	12.0 - 12.2	Scientific Career Assignment Due Fri 11/6 L16 ARQ Due Tues
12	M 11/9	#17 - 10 min	gene linkage, and abnormalities	L17 quiz	12.3 - 12.4	L17 ARQ Due Sun
12	W 11/11	#18 - 13 min	Transcription	L18 quiz	14.1-14.3	L18 ARQ Due Tues
13	M 11/16	#19 - 19 min	Translation	L19 quiz	14.4 - 14.5	L19 Due Sun
13	W 11/18		Genetics Review			
13	F 11/20	ONLINE	Test # 4 - Genetics (Lectures 13 - 19)			Exam #4 Due Friday
14	M 11/23		CV/Personal statement			CV/personal statement
14	W 11/25		Wiki Group Presentation work day			Wiki Group presentation Assignment Due Wed Dec 2
	Wed Dec 2 - Mon Dec 7		Cumulative Final during finals week - 100 points			

# Course Summary:

Date Details Due

Date	Details Due
Sun Aug 23, 2020	Syllabus ARQ turn in here (https://agnesscott.instructure.com/courses/2826/assignments/11966)
Fri Aug 28, 2020	Group Agreements Due Here (https://agnesscott.instructure.com/courses/2826/assignments/11925)
Sun Aug 30, 2020	L1 ARQ Turn in Here (https://agnesscott.instructure.com/courses/2826/assignments/11947)
Mon Aug 31, 2020	L1 Quiz due by 11:30pm (https://agnesscott.instructure.com/courses/2826/assignments/11904)
Tue Sep 1, 2020	L2 ARQs Turn in Here  (https://agnesscott.instructure.com/courses/2826/assignments/11949)
Wed Sep 2, 2020	L1 group activity  (https://agnesscott.instructure.com/courses/2826/assignments/11948)  due by 12:30pm
Thu Sep 3, 2020	L2 Quiz  (https://agnesscott.instructure.com/courses/2826/assignments/11911)
	L2 group activity  (https://agnesscott.instructure.com/courses/2826/assignments/11950)
Fri Sep 4, 2020	Use of Sources Assignment (https://agnesscott.instructure.com/courses/2826/assignments/11969)
Tue Sep 8, 2020	L3 ARQ Turn in Here  (https://agnesscott.instructure.com/courses/2826/assignments/11951)
	Description      L3 Quiz
Wed Sep 9, 2020	L3 group activity due by 12:30pm (https://agnesscott.instructure.com/courses/2826/assignments/11952)
Fri Sep 11, 2020	Test #1 due by 11:59pm (https://agnesscott.instructure.com/courses/2826/assignments/11901)
Sun Sep 13, 2020	L4 ARQ Turn in Here (https://agnesscott.instructure.com/courses/2826/assignments/11953)
Sun Sep 13, 2020	due by 3:59p (https://agnesscott.instructure.com/courses/2826/assignments/11953)

Date	Details Due
Mon Sep 14, 2020	L4 quiz due by 10:30an (https://agnesscott.instructure.com/courses/2826/assignments/11922)
Tue Sep 15, 2020	L4 group activity due by 12:30pn (https://agnesscott.instructure.com/courses/2826/assignments/11954)
тие Зер 13, 2020	L5 ARQ Turn in Here  (https://agnesscott.instructure.com/courses/2826/assignments/11955)
Wed Sep 16, 2020	L5 quiz due by 10:30an (https://agnesscott.instructure.com/courses/2826/assignments/11920)
Fri Sep 18, 2020	L5 group activity due by 12:30pn (https://agnesscott.instructure.com/courses/2826/assignments/11956)
Sun Sep 20, 2020	L6 ARQ Turn in Here (https://agnesscott.instructure.com/courses/2826/assignments/11957)
Mon Sep 21, 2020	L6 quiz due by 10:30an (https://agnesscott.instructure.com/courses/2826/assignments/11905)
T . 0 00 0000	L6 group activity  (https://agnesscott.instructure.com/courses/2826/assignments/11958)
Tue Sep 22, 2020	L7 ARQ Turn in Here (https://agnesscott.instructure.com/courses/2826/assignments/11959)
Wed Sep 23, 2020	L7 Quiz  (https://agnesscott.instructure.com/courses/2826/assignments/11912)
Fri Sep 25, 2020	L7 group activity due by 12:30pn (https://agnesscott.instructure.com/courses/2826/assignments/11960)
Sun Sep 27, 2020	L8 ARQ Turn in Here (https://agnesscott.instructure.com/courses/2826/assignments/11961)
Mon Sep 28, 2020	L8 quiz due by 10:30an (https://agnesscott.instructure.com/courses/2826/assignments/11903)
Tue Sep 29, 2020	L8 group activity  (https://agnesscott.instructure.com/courses/2826/assignments/11962)

Date	Details	Due
Wed Sep 30, 2020	First Draft of Resume CV SUBMIT HERE (https://agnesscott.instructure.com/courses/2826/assignment)	due by 11:59pm ts/14643)
Sun Oct 4, 2020	L9 ARQ Turn in Here (https://agnesscott.instructure.com/courses/2826/assignment)	due by 3:59pm ts/11963)
Mon Oct 5, 2020	L9 quiz (https://agnesscott.instructure.com/courses/2826/assignment	due by 10:30am
Tue Oct 6, 2020	L9 group activity (https://agnesscott.instructure.com/courses/2826/assignment	due by 12:30pm
Fri Oct 9, 2020	₩iki Outline Due 10/9 (https://agnesscott.instructure.com/courses/2826/assignment)  (https://agnesscott.instructure.com	due by 5pm
Sun Oct 11, 2020	L10 ARQ Turn in Here (https://agnesscott.instructure.com/courses/2826/assignment	due by 11:59pm
Mon Oct 12, 2020	L10 Quiz (https://agnesscott.instructure.com/courses/2826/assignment	due by 10:30am
Tuo Oct 12, 2020	L10 group activity (https://agnesscott.instructure.com/courses/2826/assignment	due by 12:30pm
Tue Oct 13, 2020	L11 ARQ Turn in Here (https://agnesscott.instructure.com/courses/2826/assignment	due by 3:59pm
Wed Oct 14, 2020	L11 quiz (https://agnesscott.instructure.com/courses/2826/assignment	due by 10:30am
Thu Oct 15, 2020	L11 group activity (https://agnesscott.instructure.com/courses/2826/assignment	due by 12:30pm
Sun Oct 18, 2020	L12 ARQ Turn in Here (https://agnesscott.instructure.com/courses/2826/assignment	due by 11:59pm ts/11931)
Mon Oct 19, 2020	L12 quiz (https://agnesscott.instructure.com/courses/2826/assignment	due by 10:30am

Date	Details	Due
Tue Oct 20, 2020	L12 group activity due b (https://agnesscott.instructure.com/courses/2826/assignments/11932)	y 12:30pm
Tue Oct 20, 2020	L13 ARQ Turn in Here (https://agnesscott.instructure.com/courses/2826/assignments/11933)	by 3:59pm
Wed Oct 21, 2020	□ L13 quiz     due b     (https://agnesscott.instructure.com/courses/2826/assignments/11909)	y 10:30am
	L13 group activity     due b     (https://agnesscott.instructure.com/courses/2826/assignments/11934)	y 12:30pm
Fri Oct 23, 2020	Wiki Writing Assignment (500 word) 10/23 d (https://agnesscott.instructure.com/courses/2826/assignments/11972)	ue by 5pm
Sun Oct 25, 2020	Test #2 due b (https://agnesscott.instructure.com/courses/2826/assignments/11908)	y 11:59pm
Tue Oct 27, 2020	L14 ARQ Turn in Here (https://agnesscott.instructure.com/courses/2826/assignments/11935	y 11:59pm
Fri Oct 30, 2020	L14 group activity due b (https://agnesscott.instructure.com/courses/2826/assignments/11936)	y 12:30pm
Sun Nov 1, 2020	L15 ARQ Turn in Here (https://agnesscott.instructure.com/courses/2826/assignments/11937)	by 3:59pm
Mon Nov 2, 2020	Turn in resume FINAL  VERSION here  (https://agnesscott.instructure.com/courses/2826/assignments/11967)	lue by 5pm
T. N. 0.000	L15 group activity due b (https://agnesscott.instructure.com/courses/2826/assignments/11938)	y 12:30pm
Tue Nov 3, 2020	L16 ARQ Turn in Here (https://agnesscott.instructure.com/courses/2826/assignments/11939	y 11:59pm
Fri Nov 6, 2020	L16 group activity due b (https://agnesscott.instructure.com/courses/2826/assignments/11940)	y 12:30pm

Date	Details	Due
	Science Career Assignment due (https://agnesscott.instructure.com/courses/2826/assignments/11965)	by 5pm
	Test #3 due by 1 (https://agnesscott.instructure.com/courses/2826/assignments/11917)	1:50pm
Sat Nov 7, 2020	L14 quiz (https://agnesscott.instructure.com/courses/2826/assignments/11910)	1:59pm
	L15 quiz (https://agnesscott.instructure.com/courses/2826/assignments/11915)	1:59pm
Sun Nov 8, 2020	L17 ARQ Turn in Here  (https://agnesscott.instructure.com/courses/2826/assignments/11941)	3:59pm
M N 0. 0000	L17 Quiz     (https://agnesscott.instructure.com/courses/2826/assignments/11906)	0:30am
Mon Nov 9, 2020	L16 quiz (https://agnesscott.instructure.com/courses/2826/assignments/11921)	1:59am
Tue Nov 10, 2020	L18 ARQ Turn in Here  (https://agnesscott.instructure.com/courses/2826/assignments/11943)	1:59pm
	L18 quiz (https://agnesscott.instructure.com/courses/2826/assignments/11907)	0:30am
Wed Nov 11, 2020	L17 group activity  (https://agnesscott.instructure.com/courses/2826/assignments/11942)	2:30pm
Fri Nov 13, 2020	L18 group activity  (https://agnesscott.instructure.com/courses/2826/assignments/11944)	2:30pm
Sun Nov 15, 2020	L19 ARQ Turn in Here (https://agnesscott.instructure.com/courses/2826/assignments/11945)	3:59pm
Mon Nov 16, 2020	L19 quiz (https://agnesscott.instructure.com/courses/2826/assignments/11914)	0:30am
Wed Nov 18, 2020	L19 group activity  (https://agnesscott.instructure.com/courses/2826/assignments/11946)	2:30pm
	(https://agnesscott.instructure.com/courses/2826/assignments/11946)	opii

Date	Details	Due
Fri Nov 20, 2020	Turn in Personal Statement  Here  (https://agnesscott.instructure.com/courses/2826/assignments/1	due by 5pm 1968)
	Test #4 (https://agnesscott.instructure.com/courses/2826/assignments/1	due by 11:59pm 1902)
Wed Dec 2, 2020	Wiki Presentation Assignment  due  (https://agnesscott.instructure.com/courses/2826/assignments/1	due by 5pm 1971)
Mon Dec 7, 2020	BIO 110 FA20 Final (https://agnesscott.instructure.com/courses/2826/assignments/1	due by 11:59pm