Biosc 0100 Preparation for biology
Fall Term 2021 Syllabus

INSTRUCTOR

Rebecca Gonda, Ph.D.
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Office Hours: Mondays 1pm-2pm, Wednesdays 10:00am-12:00pm, A253 Langley Hall or via Zoom (links on canvas)
Additional zoom or in-person office hours are available upon request

COURSE STRUCTURE

Though we will plan to be fully in person this semester after the first two weeks, the reality is that we are still in a pandemic and must adjust as necessary. This small course lends itself well to flexibility, and the course structure should not change greatly if we have to move to remote instruction. In this course we will be using Canvas as the Learning Management System; Course material will be provided on Canvas and through Macmillan Achieve (via the online textbook).

Changes to modes of instruction and course adjustments will be announced on Canvas as needed.

The best way to contact me, is at reg11@pitt.edu or by texting or calling (724) 875-8261. If you are feeling unwell or suspect you have been exposed to someone with COVID-19, please do not come to class. Contact Dr. Gonda for any work missed.

TEXTBOOK AND SUPPLEMENTAL MATERIALS

Required:
Sadava: Life The Science of Biology 11th Edition, published by MacMillian

All you have to do is log in to Canvas! Please visit the Pitt Store info page to learn more about digital materials.

Here are the directions for students to get started with the online textbook

You will need the access code **W5YWKWX8** to register.

1. Log into your PITT Canvas account
2. Find this class, and navigate to Macmillan Learning link
3. Click eBook

If you are having issues accessing the material or opting out, or if you would like more information on the capabilities of your ebook, try these helpful links:

https://solve.redshelf.com/hc/en-us/sections/360000927593-Using-Your-eBook
https://solve.redshelf.com/hc/en-us/articles/360007684453-How-to-Access-Through-Canvas
https://solve.redshelf.com/hc/en-us/articles/360013142634-How-to-Opt-Out

TOP HAT

We will be using **Top Hat** (www.tophat.com) for class participation. You will be able to submit answers to in-class questions using Apple or Android smartphones and tablets, laptops, or through text message. For instructions on how to create a Top Hat account and enroll in our Top Hat course, please refer to the invitation sent to your school email address or consult Top Hat's Getting Started Guide (https://bit.ly/31TGMlw).

If you already have a Top Hat account, go to https://app.tophat.com/e/889378 to be taken directly to our course. If you are new to Top Hat, follow the link in the email invitation you received or...

- • Go to https://app.tophat.com/register/student
- • Click "Search by school" and input the name of our school
- • Search for our course with the following join code: **889378**

Should you require assistance with Top Hat at any time please contact their Support Team directly by way of email (support@tophat.com) or the in-app support button. Specific user information may be required by their technical support team when troubleshooting issues.

COURSE OBJECTIVES

The goal of this course is to provide students with a foundation in biology. This course is intended for students who have not taken high school biology in the past 5 years, or who feel that their biology background is weak, yet intend to take additional biology courses. We will concentrate on a subset of topics covered in Foundations of Biology I and II (BIOSCI 150, 160), including a review of chemistry as it applies to biology, the structure and function of macromolecules, the basic structure of cells, energy and cellular respiration, introduction to genetics and molecular biology, and if time permits development.

Lecture and Exam Schedule
The schedule this course is on page 6. Please note the dates of the mid-term and final examinations to avoid any future scheduling conflicts. Both **Mid-Term Examinations** will be given during the regular class meetings. The final examination will be comprehensive in nature.

FINAL GRADE

Your final grade will be determined on the basis of your total points earned during the semester. There will be two mid-term exams, each 50 minutes, scheduled on class days (see page 6). Additionally, there will be a cumulative (comprehensive) final exam. The midterms are worth 50 points each and the final is worth 75 points. There will be quizzes and assignments given during the semester that will account for 75 points total. All graded work will be returned. Please keep track of your points.

2 Midterm Exams	**40%**
1 Final Exam	**30%**
Quizzes and Homework	**30%**

Individual exams and quizzes will not be curved. Two assignments or one quiz may be replaced by an optional 10-pt assignment at the end of the semester. At the end of the term, in the event that the average total points percentage earned by the class is low, total points average will be curved to 75%. Please note that typically this does not happen. The following grading scale will be used:

Percentage Points	Letter Grade	Percentage Points	Letter Grade
98.0 – 100	A+	80.0 - 82.9	B-
93.0 - 97.9	A	78.0 - 79.9	C+
90.0 - 92.9	A-	70.0 - 76.9	C
87.0 - 89.9	B+	60.0 - 69.9	D
83.0 - 86.9	B	59.9 or less	F

MISSED EXAMS

There will be NO MAKE-UP MIDTERM EXAMS. If you miss a mid-term exam due to an excused emergency absence, your final grade will be based on the total points earned on the other mid-terms and the final exam. If you miss an exam due to an emergency (death in the immediate family, serious injury, or illness), you must submit, in writing, to Dr. Gonda, your request for an excused absence. Please use the following guidelines when preparing your written request:

- Indicate your name, the nature of the emergency, and the date of the examination that you missed.
- Your request must be detailed, typed and signed. It must be given to Dr. Gonda no later than 1 week after the missed exam.
- If you missed an exam due to a medical condition, you must include documentation. At the minimum, you must submit a signed letter from your physician.

Failure to comply with these guidelines could result in a zero grade being recorded for the missed exam. No one will be excused from more than one missed exam. If you miss more than one exam, you must contact your academic advisor or the CAS Dean's office to discuss your possible options.

G GRADES

Students who wish to petition for a G grade must submit to Dr. Gonda, in writing, a specific request for this grade change documenting your reason(s). You will be required to make arrangements in person, with the instructor, for the specific tasks you must complete to remove the G grade. Remember that G grades, according to CAS guidelines, are to be given only when students who have been attending a course and have been making regular progress are prevented by circumstances beyond their control from completing the course after it is too late to withdraw (University of Pittsburgh Undergraduate Bulletin). If you miss the final and have a valid excuse, you may receive a G grade, but only after the excuse is documented and arrangements to finish the course work are finalized with the instructor.

ACADEMIC INTEGRITY

Cheating/plagiarism will not be tolerated. Students suspected of violating the University of Pittsburgh Policy on Academic Integrity, from the February 1974 Senate Committee on Tenure and Academic Freedom reported to the Senate Council, will be required to participate in the outlined procedural process as initiated by the instructor. A minimum sanction of a zero score for the quiz or exam will be imposed. View the complete policy at www.cfo.pitt.edu/policies/policy/02/02-03-02.html.

DISABILITY RESOURCES

If you have a disability for which you are, or may be, requesting an accommodation, you are encouraged to contact both the instructor for this course and the Office of Disability Resources and Services, 140 William Pitt Union, 412-648-

7890/412-624-3346 (Fax), as early as possible in the term. Disability Resources and Services will verify your disability and determine reasonable accommodations for this course.

EMAIL COMMUNICATION

Each student is issued a University e-mail address (username@pitt.edu) upon admittance. This e-mail address may be used by the University for official communication with students. Students are expected to read e-mail sent to this account on a regular basis. Failure to read and react to University communications in a timely manner does not absolve the student from knowing and complying with the content of the communications. The University provides an e-mail forwarding service that allows students to read their e-mail via other service providers. Students that choose to forward their e-mail from their pitt.edu address to another address do so at their own risk. If e-mail is lost as a result of forwarding, it does not absolve the student from responding to official communications sent to their University e-mail address. To forward e-mail sent to your University account, go to http://accounts.pitt.edu, log into your account, click on **Edit Forwarding Addresses**, and follow the instructions on the page. Be sure to log out of your account when you have finished. (For the full E-mail Communication Policy, go to www.bc.pitt.edu/policies/policy/09/09-10-01.html.)

NATURAL SCIENCE GENERAL EDUCATION REQUIREMENT

This course fulfills one Dietrich School of Arts and Sciences Natural Science General Education

Requirement (GER) as described for the GERs starting Fall 2018 (term 2191). That GER reads as follows:
Three Courses in the Natural Sciences
These will be courses that introduce students to scientific principles and concepts rather than offering a simple codification of facts in a discipline or a history of a discipline. The courses may be interdisciplinary, and no more than two courses may have the same primary departmental sponsor.

COVID-19 SAFETY

During this pandemic, it is extremely important that you abide by the public health regulations the University of Pittsburgh's health standards and guidelines, and Pitt's Health Rules. These rules have been developed to protect the health and safety of all of us. Universal face covering is required in all classrooms and in every building on campus, without exceptions, regardless of vaccination status. This means you must wear a face covering that properly covers your nose and mouth when you are in the classroom. If you do not comply, you will be asked to leave class. It is your responsibility have the required face covering when entering a university building or classroom. For the most up-to-date information and guidance, please visit coronavirus.pitt.edu and check your Pitt email for updates before each class.
If you are required to isolate or quarantine, become sick, or are unable to come to class, contact me as soon as possible to discuss arrangements

Covid-19 Biosc0100 course structure summary:

1. Course will be delivered in classroom (after first two weeks of hybrid option, unless otherwise noted by Pitt)
2. If the instructor is not physically present in the classroom, either the instructor will be available via a monitor when teaching remotely, or another faculty member or teaching assistant will be present
3. Sessions conducted synchronously
4. This class will use Canvas and Zoom if needed
5. Class materials will be available via Canvas
6. Office hours will be held as outlined in the syllabus. Additional Zoom office hours are available upon request

7. Any change in mode of instruction, or other course adjustments, will be posted on Canvas.
8. Stay engaged in the course by communicating with me and your classmates
9. We will be as flexible and adaptive as possible

THIS IS AN INCLUSIVE CLASSROOM

We are committed to the creation and maintenance of an "inclusive learning" space in this course. The goal is for everyone involved to be treated with respect and dignity and where all individuals are provided equitable opportunity to participate, contribute, and succeed. In BIOSC 0100, all students are welcome regardless of race/ethnicity, gender identities, gender expressions, sexual orientation, socio-economic status, age, disabilities, religion, regional background, Veteran status, citizenship status, nationality and other diverse identities that we each bring to class.
Your success is enhanced by the innovation and creativity of thought that an inclusive classroom facilitates. The success of an inclusive classroom relies on the participation, support, and understanding of you and your peers. We encourage you to speak up and share your views, but also understand that you are doing so in a learning environment in which we all are expected to engage respectfully and with regard to the dignity of all others.

Any student who has difficulty affording groceries or who lacks a safe and stable place to live and believes this may affect their performance in the course is urged to contact me or Pitt Student Affairs for support (http://www.studentaffairs.pitt.edu/).

Other resources you may find helpful:
Free food at the Pitt Pantry: www.studentaffairs.pitt.edu/pittserves/the-pitt-pantry/
Student Support Services: www.asundergrad.pitt.edu/academic-experience/student-support-services
Counseling Center: http://www.studentaffairs.pitt.edu/cc/resources/
Student Health Services: http://www.studentaffairs.pitt.edu/shs/
Borrowing technology: https://www.library.pitt.edu/borrowing-supplies-and-technology-hillman

Prep for Biology
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August and September 2021

Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
					27 -Course Intro -The Chemistry of Life **Chapter 2**	28
29	30 Chemical Bonds **Chapter 2**	31	1 Carbon and Aqueous Solutions **Chapter 3**	2	3 **Activity**: Properties of water	4
5	6 **No Class: Labor Day**	7	8 Macromolecules/ Proteins **Chapter 3**	9	10 **Activity**: Chemical Functional Groups	11
12	13 Enzymes **Chapters 3,8**	14	15 Carbohydrates/ Lipids **Chapter 3**	16	17 **Activity**: Biofuel Experiment **Quiz 1**	18
19	20 Nucleic Acids **Chapter 4**	21	22 The Cell pt. 1 Necessary/ Sufficient **Chapter 5**	23	24 The Cell Pt. 2 (organelles and cytoskeleton) **Chapter 5**	25
26	27 Exam Review	28	29 **EXAM 1**	30		

Notes

Reminder: Office Hours are every **Monday 1pm-2pm** and **Wednesday 10am-12pm** in A253 Langley Hall and via zoom
And available by request (in-person or zoom)

Prep for Biology
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October 2021

Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
					1 Membranes and Transport **Chapter 6**	2
3	4 Cell: Cell Interactions **Chapter 6**	5	6 Interactions and Mina Bissel **Chapters 6, 7**	7	8 Signal Transduction **Activity: Flight or Fight**	9
10	11 Energy and Glucose Metabolism **Chapter 8,9**	12	13 Glycolysis **Chapter 9**	14	15 **Fall Break: No Class**	16
17	18 Feedback Inhibition **Quiz 2**	19	20 Cellular Respiration: Citric Acid Cycle **Chapter 9**	21	22 Electron Transport Chain (**Ch. 9**) **Activity: Respiration accounting**	23
24	25 Fermentation Respiration Overview **Chapter 9**	26	27 The Cell Cycle **Chapter 11**	28	29 Mitosis **Chapter 11**	30
31						

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Prep for Biology
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November and December 2021

Sun.	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.
	1 Meiosis/non-disjunction **Chapter 11**	2	3 Exam Review	4	5 **EXAM 2**	6
7	8 Genetics Overview **Chapter 12**	9	10 Chromosome Theory of Inheritance **Chapter 12**	11	12 **Activity: Genetics Practice using Drosophila**	13
14	15 DNA as genetic material **Chapter 13**	16	17 DNA Replication **Chapter 13**	18	19 Meselson/Stahl **Activity: PCR as and Application**	20
21	22	23	24 **Thanksgiving Break**	25	26	27
28	29 Central Dogma and Anatomy of a Gene **Chapter 14**	30	Dec 1 Transcription, Post-transcription **Chapter 14**	2	3 Translation **Quiz 3**	4
5	6 Control of Eukaryotic Gene Expression **Chapter 16**	7	8 Development and Differential Gene Expression **Chapter 43**	9	10 **Activity: Gene Control during development**	11

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