BIO 101: Principles of Biology

Spring 2020 Course Syllabus
MWF 10-10:50 AM, Flowe 110
Course Credit: 4 hours

REQUIRED TEXTS

- Biology: The Unity and Diversity of Life (14th edition) ISBN 13: 978-1-305-07395-1
- *PRINCIPLES OF BIOLOGY: A Laboratory Manual* by Lisa A. Bonner, Rhonda Brown, and Patricia L. Weigant. (The lab manual is available only in the William Peace University bookstore.)

PROFESSORS

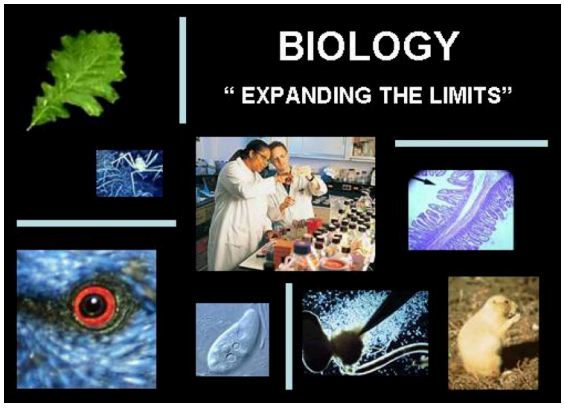
Dr. Rhonda Brown
Pressly 100-A * RLBrown@peace.edu
Professor for Unit I: Cell and Molecular Biology
Office hours: M/W 11 am-12 pm or by appointment

Dr. Patrick Myer
Pressly 202-A * pmyer@peace.edu
Professor for Unit II: Organ Systems & Diversity

WILLIAM PEACE UNIVERSITY
Your Success. Our Mission.

Website: https://mypacernet.peace.edu
Then access MyMoodle under "Bookmarks". A copy of the syllabus, announcements, links and other pertinent information may be accessed at the website.

COURSE OBJECTIVES



This course is an introduction to the basic principles of biology common to all living things. Topics covered include cell structure and function; the flow of energy through living systems; molecular and classical genetics; structure and function of animal organ systems; reproduction and animal development; evolution, diversity and ecology; and current environmental issues.

Dramatic discoveries in science are being made at a rapid pace, and these discoveries affect you every day. Through our discussions, you will learn information that will serve as a foundation for making informed decisions about science-related issues in your life. Hopefully you will leave this class with an appreciation for the relevance, power, and beauty of biology. In the laboratory exercises associated with this course, you should acquire basic critical thinking and analytical skills and an appreciation for the scientific method of discovery. Students will use appropriate methods for gathering, analyzing, and interpreting data. The experiments performed in lab coincide with the material presented in class.

ATTENDANCE POLICY

Your absences in lecture are limited by the 20% rule, as described in the academic catalog. This means that you may not miss more than 20% of class meetings for any reason. In this class, that means 9 classes. Therefore, any student with 10 absences will automatically receive a grade of "F" in this class. If you miss a class for any reason - illness, sleeping late, court subpoenas, athletic events, etc. – it counts as an

absence. Please keep a record of your absences and use them carefully. Attendance will be recorded every day at the beginning of class. Please be on time! If you are late, you may be marked absent. Leaving class early, playing on your phone, and sleeping in class are also grounds for being counted absent. You will be responsible for all work missed because of absence. If your absences exceed 20%, and you feel that your absences warrant special consideration, please talk to your instructor(s) as soon as possible. Appeals to the 20% rule will be considered at the discretion of the instructor(s).

Please note that attendance in lecture and lab is expected 100% of the time, and is crucial for successful completion of this course. Please make your best effort to attend every class.

Attendance in lab is required.

LAB: Student participation in lab is an integral part of this course. Therefore, **student presence in each and every lab is required.** Because lab quizzes are given each week, absences result in a missed quiz grade and lab participation grade. If you leave lab early, any quiz submitted that lab period will not be graded. *Reminder: Only 1 lab quiz can be dropped. After that point, you will receive a 0 for any additional missed quizzes, resulting in a lower final lab grade.*

CELL PHONE AND COMPUTER POLICY

All cell phones and computers must be turned OFF and put away upon entering the classroom or laboratory and remain OFF unless directed by your instructor. If students are seen using cell phones during class, they may be taken during that period and returned when class/lab is over.

COURSE REQUIREMENTS & GRADING POLICY

Lecture exams [Total points = 600]

Six (6) major lecture exams are each worth 100 points.
A make-up exam will be given only in the event of illness and with appropriate documentation from a doctor or campus Health Services. A student who misses an exam must contact the professor within 24 hours of the missed exam and make up the exam within a week. **Only one exam make-up is allowed per student per semester.**

Lab quizzes [Total points = 100]

You will have a quiz each week in the lab on the previous week's exercise. At the end of the semester, the lowest single quiz grade will be dropped. Your first unexcused absence and the resulting missed quiz will be used as your drop grade. Any unexcused absences after the first will result in a "0" on the missed quiz. If you leave lab early, any quiz submitted that lab period will not be graded. You will write one lab report this semester, and this grade will count as much as one quiz, but it may not be used as your drop grade.
Your lab average will count as much as one exam toward your final grade calculation.

The total possible points accumulated in this course is 700. Final grades are calculated and assigned based on the following scale:

A (90 - 100%)
B (80 - 89%)
C (70 - 79%)
D (60 - 69%)
F (0 - 59%)

NOTE: BIO 101 is also the pre-requisite course for all advanced biology courses, and the student must earn a "C" or better in this course to take advanced biology courses.

ACADEMIC INTEGRITY

William Peace University seeks to develop both the intellect and character of its students. All members of the University are expected to promote a culture of academic integrity, and all students are expected to inform themselves of the University's policies and procedures related to the Honor Code. All forms of academic misconduct are violations of the University's Honor Code. These include, but are not limited to:

- Cheating: Using or attempting to use unauthorized materials, information, or study aids in academic work or in working with others on academic requirements (tests, assignments, etc.)
- Plagiarism: Representing the words or ideas of another as one's own in any academic work, whether intentional or not
- Falsification: Falsifying or inventing any information or citation in academic work
- Facilitating academic dishonesty: Helping or attempting to help another student to commit an act of academic dishonesty
- Lying: Misrepresenting information that is relevant to the classroom or academic performance

If a faculty member suspects academic misconduct has taken place, s/he will complete an Honor Code Violation Report and meet with the student to discuss. A student may accept or decline to accept responsibility. If a student accepts responsibility, s/he will be subject to the penalty determined by the faculty member. If a student declines to admit responsibility, the case will be turned over the Honor Board for adjudication. A complete summary of the Honor Code and Honor Board policy can be found in the *2017-2018 Academic Catalog*.

CHEATING POLICY IN BIO 101: *Cheating on a test or quiz in Biology 101 results in a zero (0) for that exam or quiz.* In addition, the college administration will be notified of the offense as per the policy outlined above.

TUTORIAL SERVICES

Peer Tutoring is available for all WPU students free of charge. Support is offered in many subjects, including anthropology, biology, business, chemistry, criminal justice, history, math, political science, psychology, simulation and game design, and writing. Free workshops on study skills and documentation styles like MLA and APA are also offered each semester. Tutorial Services also has many resources on studying, citation, grammar, and other academic topics. Students can sign up for individual appointments using WPUConnect or in person at the Center for Student Success, located in the 2nd floor of Finch Library. For more information, contact Dr. Deanna Rogers, Director of Academic Support, at drrogers@peace.edu or 919-508-2080.

DISABILITY SERVICES

Disability Services are available to all WPU students who require reasonable accommodations due to any cognitive, physical, or psychological disability, in order to provide equal access to the educational environment. Students will need to be certified with the Disability Services Office and provide appropriate documentation to receive an Academic Accommodation Plan. For more information or to become certified, please contact a counselor in the Disability Services Office, which is located on the 1st Floor of Joyner House. You may also reach Disability Services by sending an email to Disability@peace.edu.

ATHLETIC ABSENCES POLICY

The William Peace University Athletics Department is committed to making every effort to ensure that the fewest number of classes are missed by student athletes. For necessary purposes, however, athletic absences, which are defined as those granted by university officials for university sponsored events, do not count against a student's grade. Moreover, professors will make a reasonable effort to reschedule exams or other academic tasks scheduled to occur when the student athlete is absent due to an athletic event. Students will be held responsible for making up all missed work while absent and are not permitted to use athletic events as "extra" absences in class. In other words, when student athletes miss class due to athletic events, they are using the allowable absences for that class and do not receive additional absences throughout the semester. All student athletes must inform their professors on the first day of class of their athletic involvement and must continue to alert them of days when they will miss class due to athletic events.

101
LECTURE SCHEDULE

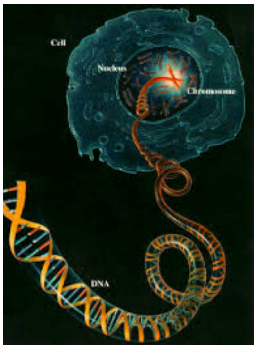
UNIT I. Cell-Molecular Biology, Genetics & Evolution *with Dr. Brown*

EXAM 1: Monday, January 27 (Chapters 1-5)

EXAM 2: Wednesday, February 12 (Chapters 5-9, 11)

EXAM 3: Friday, February 28 (Chapters 13-14, 16-19, 20-23)

DATE	SEQUENCE OF TOPICS	CHAPTER
Jan 8……..	Introduction and Atoms & Molecules	1/2
Jan 10……..	Life's Chemical Basis: Atoms & Molecules	2
Jan 13……..	Molecules of Life: Water & Organic Molecules…	3
Jan 15/17 ……	Cell Structure/Function	4
Jan 20……..	**NO CLASS—LABOR DAY**	
Jan 22……...	Membrane Transport	5
Jan 24……...	Cell Division: Fission & Mitosis (Begin exam 2 info)	11
Jan 27……	**EXAM I (Intro to Membrane Transport—Ch 1-5)**	
Jan 29……...	Enzymes & Energy	5
Jan 31……...	ATP & Cellular Respiration	7
Feb 3……...	Photosynthesis …….	6
Feb 5/7…….....	DNA Structure and Protein Synthesis	8-9
Feb 10……...	Review/catch up…….	NA
Feb 12……..	**EXAM II (Cell Division to Protein Synthesis--Ch 5-9, 11)**	
Feb 14/17….....	Genetics and Heredity	13-14
Feb 19/21……	Evolution, Classification & Taxonomy...	16-19
Feb 24/26……..	Climbing the Tree of Life: Biological Diversity (Viruses, Bacteria, Fungi, Protists)	20-23
Feb 28……..	**EXAM III (Genetics to Protists—Ch 13-23)**	
Mar 2-6……	**NO CLASS—SPRING BREAK**	



UNIT II. Human Organ Systems, Diversity & Ecology *with Dr. Myer*

EXAM 4: TBA

EXAM 5: TBA

EXAM 6: during final exam week

SEQUENCE OF TOPICS	CHAPTER
Climbing the Tree of Life: Animal Diversity	24-26
The Web of Life: Ecosystems	46
The Biosphere & Human Impact	48
Human Organ Systems	31-40
Reproduction and Development	41

BIO 101 LAB SCHEDULE—SPRING 2020

Meeting Place: Pressly 102

Instructors: Dr. Sarah Parsons (separsons@peace.edu)
Dr. Megan Serr (meserr@peace.edu)

Laboratory Text: *PRINCIPLES OF BIOLOGY: A Laboratory Manual* by Bonner, Brown, and Weigant
(The lab manual is only available in the WPU bookstore.)

Date:	**Lab Manual Exercises**
Jan 13/14	Microscopes and Cells (Exercise 1)
Jan 20/21	**No labs (MLK Day on Monday)**
Jan 27/28	Membranes (Exercise 2)
Feb 3/4	DNA and Mitosis (Exercise 3)
Feb 10/11	Photosynthesis & Respiration (Exercise 4)
Feb 17/18	Genetics I (Exercise 5)
Feb 24/25	Genetics II (Exercise 6)
Mar 2/3	**No labs (Spring Break)**
Mar 9/10	Plant Diversity/Structure (Exercise 7)
Mar 16/17	Scientific Method/Lab Report—Pill Bug Activity (Exercise 8)
Mar 23/24	Animal Diversity (Exercise 9)
Mar 30/31	Organ Systems (Exercise 10) (Pill Bug Lab Report Due)
Apr 6/7	Rat Dissection (Exercise 11)
Apr 13/14	**No labs (Showcase on Tuesday)**
Apr 20/21	Lab Practical—Rat and Bones