

**BIOL 152 Introduction to Biological Sciences II**  
**Fall 2019 Syllabus**

**Instructor:** Jonathan Moore  
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**Office:** [Removed]

**Office Hours:** [Removed]  
**Classroom:** [Removed]  
**Class time:** [Removed]

**COURSE OVERVIEW:**

This course will focus on biological diversity from an evolutionary perspective. Along with basic principles and mechanisms of evolution, the role of natural selection in the evolution of life forms, taxonomy and phylogenies, and the introduction/learning of specific vocabulary, details, and concepts, emphasis will be placed on the development of critical thinking skills including the application of the material to novel scenarios and the analysis of novel information. This course is intended to help cultivate a passion for the biological sciences and facilitate the synthesis of existing student knowledge with new topics for a more comprehensive understanding of biological concepts, thereby preparing students for more advanced courses in biology. Designed for biology majors.

**PREREQUISITES:**

The prerequisites for BIOL 152 are a minimum grade of C in both BIOL 151 and CHEM 101. In this course, you will be expected to have mastered the key concepts from BIOL 151 and there will be questions related to topics from BIOL 151 during class, in online assignments and on assessments. If you have questions about the prerequisites, please contact the professor.

**COURSE OBJECTIVES:**

By the end of this course students should be able to:

- 1) Explain the basic principles and mechanisms of evolution
- 2) Distinguish evolutionary relationships between organisms on phylogenetic trees
- 3) Explain the evolution and diversity of different groups of organisms (prokaryotes, eukaryotes; plants, animal, and fungi)
- 4) Describe some key systems in plants, fungi and animals and explain how they are thought to have evolved
- 5) Assess the connections between organisms, adaptations, evolutionary trends and environments
- 6) Apply evolutionary and ecological principles to novel situations
- 7) Analyze new information related to the subject matter and apply course materials to novel situations
- 8) Given the content of and rigor of the course, the student will evaluate current study and time management skills and devise new methods for learning the material.

**REQUIRED MATERIALS:**

**Textbook:**

We will be using a free online textbook this semester housed in Top Hat (see below). Links to individual readings will be provided in each assignment.

**Top Hat:**

We will be using Top Hat which is a platform for in class participation. Information regarding this platform will be provided to you. There is a cost associated with this platform and you ARE required to have a Top Hat Account. In addition, you will need to bring a reliable device (cell phone, smart phone, tablet or computer) to class each day so that you can participate in Top Hat assignments. You must enroll for Top Hat using the Blackboard link.

Join Top Hat using the following links – Please make sure you sign up for the correct section:  
 [Removed]

**Packback:**

This discussion board platform allows students to interact with all BIOL 152 students this semester. Packback allows each student to apply their knowledge, ask big, open-ended questions, and critically think in order to understand the course content better, synthesize information, and prepare you for exams.

The questions you ask each week may:

- 1) Clarify materials that went over your head in lecture or in your work outside of class... but if you are asking these sorts of questions, you should explain in great detail what you do not understand so that both your colleagues and I can help you out.
- 2) Go beyond the lecture – application, synthesis and relationship making
- 3) Discuss current events

The due date for these weekly Packback questions will be decided by the class. Please go to <https://www.packback.co/> and sign up for a student account (cost = \$25). The join code for our discussion board is: **[Removed]**

**Reliable Computer Access to the Internet/Blackboard:**

This course will make relies on Blackboard for homework assignments, course announcements, and additional study materials. It is your responsibility to make sure that you have a reliable computer (some items do not work with iPads and cell phones), access to Blackboard, that you are using the appropriate browser and a reliable connection to the internet. *Loss/lack of internet, computer issues, and browser issues are not acceptable excuses for failure to complete online assignments.*

**COURSE POLICIES/EXPECTATIONS:**

This is what is expected of you as a student in the course and what you can expect of your professor:

- This section of BIOL 152 meets twice a week for 75 minutes. During class you will be expected at a minimum to participate in group work, answer questions on Top Hat and verbally and potentially volunteer for in class demonstrations.
- Outside of class you will be expected to complete reading assignments, graded reading question sets, and additional assignments posted on the course Blackboard site.
- You are expected to show up for class on time and to remain for the entire class period. If you must leave early or arrive late do so in a non-disruptive manner (enter/exit quietly, sit at the back on the end of the rows, minimize the disturbance you may cause).
- During the class period you are expected to behave courteously to your classmates and to your professor. This includes being quiet during lecture. Individuals who are disruptive may be asked to leave the classroom and will not be allowed to re-enter the class until the next class period. Disruptive behavior may include, talking during lecture, surfing the internet, texting, or a cell phone ringing/buzzing during class. *When in doubt, if your behavior could potentially interfere with someone else's learning, assume it is disruptive.*
- You are expected by both VCU and your professor to check your email on a daily basis.
- In addition, you are expected to check the course Blackboard on a daily basis. Course announcements will routinely be sent through email as well as posted on blackboard.
- You will be notified in a timely manner of any changes to the course schedule or due dates for assignments.
- When contacting your professor please be sure to indicate the course you are in and to make sure that your email is courteous. *Whenever possible* emails will be replied to within 24hrs, however this does not include weekends or holidays. If you do not receive a response in a timely manner given the day and time that you sent it, please resend the email to ensure that it was in fact received.
- Please make sure that you are familiar with the VCU policies that are included in the course syllabus as well as the material in the Academic Integrity module that you complete at the beginning of this course. You are expected to know these policies and will be held accountable for the information within them.

**Attendance:**

You are expected to attend class. Keep in mind that if you miss a class you may also miss a class participation opportunity.

- If you miss your assigned class meeting time you must submit a Notification of Absence Form within 48hrs. This includes providing the needed documentation (see below).
- Excused absences will be accepted with a legitimate reason (severe illness, death in the family, accident) and with documentation of reason (Dr.'s note, obituary, police report) turned in within 48 hrs of the absence.
- There are no makeups for missed participation but with appropriate documentation submitted on time, you may be granted an exemption in which the grade for the associated assignment(s) is not included in grade calculations.
- If at the end of the semester your grade is borderline, your attendance record will be taken into account and may affect your final grade.
- Please use the following link and fill out the form if you would like to submit an excused absence:  
[Removed]

**Online work:**

Each week you will have online assignments that must be completed by the due date listed.

- It is your responsibility to check the course Blackboard site for any assignments and to make sure that assignments are **completed before due dates**.
- *No make-ups for missed work will be given nor will late assignments be accepted.*
- Loss of internet access, computer issues, browser issues or other technology related problems are not legitimate excuses for failure to complete assignments before due dates.

- Individuals that do not complete required online assignments prior to class time may not receive credit for any class activities done during that class period even if they participate in the activity.
- Individuals that do not complete online assignments before posted due dates may receive a zero for the assignment at which time subsequent attempts will not be recorded.
- In addition, any incomplete attempts will also be counted as zeros.
- All assignments for a unit must be completed before the unit assessment

### Online Lectures:

It will be necessary throughout the semester for me to provide lectures online, particularly during exam weeks. The lectures will be placed in multiple areas to ensure that you have appropriate access. The lectures will be part of the upcoming exams. ***Other than exam weeks, days in which the class will meet for an abbreviated time and to have online lectures to accompany include [Removed], [Removed], and [Removed]. Days in which the class will not meet include [Removed] and [Removed]. (See schedule below).*** Please note that these may not be the only days you will have an online lecture.

### Class Participation:

This is an important component of this course. It will provide feedback on how well you understand the material being covered and allow me to make adjustments prior to any tests.

- You must come to class prepared. Failure to complete homework before coming to class may result in a zero for any in-class assignments done that day.
- During class, you are expected to actively participate in any group assignments that are given. Failure to do so may result in you being assigned a zero for the work.
- If you are seen to be using your computer or other electronic devices for purposes other than completing in-class assignments, following lecture on Top Hat, or answering Top Hat questions you may be asked to leave the classroom and zeros will be recorded for any class assignments for that class period.
- ***Should you miss more than four consecutive online assignments, four consecutive classes or fail to access the course Blackboard for more than five days you may be administratively dropped from the class.***

### Lecture Exams:

There will be five lecture exams and a cumulative final. Each exam can and will build from previous information and so will likely have questions about previous material. Ergo, do not forget *anything*. Exams will be given in two parts. One part will be multiple, multiple choice taken on a scantron (you'll need a #2 pencil). This will likely be a foreign testing procedure, but highly valuable. Briefly, you must select all answers that are correct/true and not select incorrect/false answers. For each answer chosen that is correct and each answer NOT chosen that is incorrect, you receive a point. Ergo, if a single question has five answers (A-E), then that question is worth a total of five points (one point per answer). This testing format grants you credit for knowing an answer choice is correct and knowing an answer choice is incorrect (by not selecting it). The challenging part is that ANY combination correct/incorrect of answers is possible, to include all or none of the answers. The second part of each assessment will consist of a set of short answer/drawing questions.

Exam Dates:  
[Removed]

If for some reason you find that you cannot possibly be in class on the designated assessments dates *you must notify the professor within 24hrs* (this is different from the regular attendance notification policy) with a legitimate reason (severe illness, death in family, accident) and with *documentation of reason* (Dr.'s note, obituary, police report). Travel plans, including vacations, are not legitimate excuses. The format of all makeup exams is at the discretion of the professor and must be taken within three days of the original date of the exam. Alternate testing formats may be requested and will be given at the instructors' discretion.

### Lecture Exam policies:

***Failure to comply with any of these policies may result in the forfeit of the exam or the involvement of the honor system***

- Memorize your V# prior to your first exam.
  - Bring a photo ID for each exam.
- No cell phones during the exam... for any reason.
- No hats
- No ear devices or any other electronic devices
  - No clipboards or any other materials may be out during the exam

- You may leave the class during an exam only with the permission of the instructor
- Do not look at any exam but your own, you may be asked to move, or your exam may be taken if this appears to be occurring
- Do not speak to your classmates once the exam has commenced.
- Turn in all exam materials to the Instructor or preceptors, to include extra exams.
- Once you have turned in your exam leave the classroom unless otherwise instructed.
- No duplication/copying of exams in any way, you may not write down any questions/answers that you remember from the exam nor may you share your knowledge of the questions with any other student.
- Individuals who violate any of these policies will have their exams taken may receive a zero for the exam and may be reported for an academic integrity violation

### Lecture Exam Rebuttal Policies:

All exams will have a written component to them. Given the sheer number of students in this class, I will have several people (preceptors, graduate students, faculty, or others with college biology training as needed and available) help grade exams. Though a key/rubric will be provided, human error is always possible. This process allows any student to review their own graded work against the exam key/rubric and determine whether appropriate points were given to any question of the written section. This process will follow the following steps:

*If you are **ONLY** seeking points for miscalculations, you may bring your tests to the instructor directly and bypass the subsequent steps.*

- 1) The written portion of the exam will be returned to the students as soon as grading is completed and recorded.
- 2) Students may then visit the main biology office (126 Trani Life Sciences) and compare their answers to the answer key/rubric and assess the points.
  - a. ***When you visit the office, please identify who you are, the specific course in which you are enrolled, the specific instructor for the course (me), and the specific test key to which you are requesting access. Please have your ID ready to be given to the personnel at the front desk.***
  - b. Students may not copy the keys in any way, but only take general notes about the topics on which they lost points. The individuals at the front desk will monitor this part.
- 3) If students identify a possible discrepancy in the points they were awarded, they must TYPE their rationale defending why they believe they should have received more points – this INCLUDES arithmetic errors (though see note above).
- 4) Students then must turn in their written portion of their test **and** their typed rebuttal to the instructor (me) within ONE WEEK of the tests being returned one of the following ways:
  - a. Give them directly to me.
  - b. Turn them into the front office (126 Trani Life Sciences).
  - c. Sliding them under my office door.

Failure to comply with any of these steps will result in the no points being awarded.

### Final Grade Calculation:

Final grades will be calculated in one of two ways. 1) Final grades will be based on your exam grades alone, meaning that each of your exams is worth 100 points and your final exam is worth 200 points for a total of 700 points. **\*\*This method will not consider grades associated with class attendance/participation and any online assignments.** 2) Final grades will be based on both exam grades and your other class grades. Exams grades will count for 60% of your overall final grade with point values as listed in option 1. The other 40% will be calculated from your classroom/participation and online work grades, all equally weighted with one exception - Packback is 1/4 of the 40% of your grade (10% of your overall grade). At the end of the semester each method will be calculated, and your grade will be the higher of the two calculations.

### Grading Scale:

90.00-100% = A	80-89.99% = B	70.00-79.99% = C
60.00-69.99% = D	Below 60.00% = F	

### Statements for Syllabi and Blackboard Pages:

Students should visit <http://go.vcu.edu/syllabus> and review all syllabus statement information. The full university syllabus statement includes information on safety, registration, the VCU Honor Code, student conduct, withdrawal and more.

**Projected Course Schedule: This schedule may be altered as necessary.**

Week	Date	Day	Unit	Module: Topic		
1	[Removed]	T	Unit I (Modules 1-3)	Module 1: Intro to Evolutionary Theory		
	[Removed]	R				
2	[Removed]	T		Unit I (Modules 1-3)	Module 2: Population Genetics and Evolution	
	[Removed]	R				
3	[Removed]	T			Unit I (Modules 1-3)	Module 3: Species and Speciation
	[Removed]	R*				
4	[Removed]	<b>T - Unit I Exam</b>	Unit II (Modules 4-6)			Module 4: Evolution of Early Life and Phylogenies
	[Removed]	R				
5	[Removed]	T		Unit II (Modules 4-6)		Module 5: Evolution of Bacteria and Archaea
	[Removed]	R				
6	[Removed]	T			Unit II (Modules 4-6)	Module 6: Evolution of Multicellularity
	[Removed]	R				
7	[Removed]	<b>T - Unit II Exam</b>	Unit III (Modules 7-9)			Module 7: Evolution of Fungi
	[Removed]	R*				
8	[Removed]	<b>T**</b>		Unit III (Modules 7-9)		Module 8: Evolution of Plants from Algae
	[Removed]	R				
9	[Removed]	T			Unit III (Modules 7-9)	Module 9: How Plants Work
	[Removed]	R				
10	[Removed]	<b>T - Unit III Exam</b>	Unit IV (Modules 10-12)			Module 10: Animal Diversity
	[Removed]	R				
11	[Removed]	T		Unit IV (Modules 10-12)		Module 11: Evolution of Animals
	[Removed]	R				
12	[Removed]	T			Unit IV (Modules 10-12)	Module 12: Tetrapod Evolution
	[Removed]	R*				
13	[Removed]	<b>T - Unit IV Exam</b>	Unit V (Modules 13-14)			Module 13: Population Ecology
	[Removed]	R**				
14	[Removed]	T		Unit V (Modules 13-14)		Module 14: Communities and Ecosystems
	[Removed]	R				
15	[Removed]	T			Unit V (Modules 13-14)	<b>THANKSGIVING - NO CLASS</b>
	[Removed]	R				
16	[Removed]	T	Unit V (Modules 13-14)			Communities and Ecosystems con't
	[Removed]	<b>R - Unit V Exam</b>				

\*Class will meet for part of the scheduled time. An online lecture will be available for that class.

\*\*Class will not meet. An online lecture will replace class.