

## BIOL 152 Introduction to Biological Sciences II Spring 2017 Syllabus

**Instructor:** Jonathan Moore  
**Email:** s2jrmoor@vcu.edu  
**Office:** Life Sciences Building room 234

**Office Hours:** [removed]  
**Classroom:** LSB (Trani) 151  
**Class time:** TR 9:30-10:45 AM

### Course Description

Semester course; 3 lecture hours. 3 credits. Prerequisites: BIOL 151 and CHEM 101. Focuses on evolutionary principles, the role of natural selection in the evolution of life forms, taxonomy and phylogenies, and biological diversity in the context of form and function of organisms. Designed for biology majors.

### 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 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.

### Learning 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) Assess the connections between organisms, adaptations and evolutionary trends
- 4) Explain the evolution and diversity of plants and describe some key systems in plants
- 5) Explain the evolution and diversity of animals and describe some key systems in animals
- 6) Analyze new information related to the subject matter and apply course materials to novel situations
- 7) 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

*Biology: How Life Works 2<sup>nd</sup> edition* by Morris, J et al.

#### Top Hat

We will be using the Top Hat ([www.tophat.com](http://www.tophat.com)) classroom response system in class. You will be able to submit answers to in-class questions, discussions, group work, etc. using Apple or Android smartphones and tablets, laptops, or through text message.

You can visit [tinyurl.com/TopHatStudentGuide](http://tinyurl.com/TopHatStudentGuide) for the Student Quick Start Guide which outlines how you will register for a Top Hat account, as well as providing a brief overview to get you up

and running on the system. An email invitation will also be sent to your school email account (if you don't receive this email, you can register by visiting our course website [removed]).

Top Hat will require a paid subscription, and a full breakdown of all subscription options available can be found here: [www.tophat.com/pricing](http://www.tophat.com/pricing).

Should you require assistance with Top Hat at any time, due to the fact that they require specific user information to troubleshoot these issues, please contact their Support Team directly by way of email ([support@tophat.com](mailto:support@tophat.com)), the in app support button, or by calling 1-888-663-5491.

### **Lecture Exams**

There will be four lecture exams and a final. Each exam can and shall build from previous information, to include BIOL 151, and so will likely have questions about previous material. Ergo, do not forget *anything*. Exams will consist of multiple choice, fill-in-the-blank questions, short answer, drawings, and essays.

### **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. – Not knowing your V# and/or improperly filling out your number may result in the loss of points on the 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
- You may leave the class during an exam with the permission by the instructor
- Do not look at any exam but your own
- Do not speak to your classmates once the exam has commenced.
- Turn in all exam materials to the Instructor, to include extra exams.
- No duplication of exams in any way.

### **Class Attendance/Participation:**

Attendance will be taken daily via Top Hat following add/drop. We will often be doing work during class in the form of top hat questions, group work, or individual work. This work will allow both of us to assess your mastery of the material, and make adjustments accordingly.\*\*

### **Online Work:**

Each week you may have online assignments that must be completed primarily through Top Hat. It is your responsibility to make sure that assignments are completed before due dates/times. Loss of internet access, computer issues, browser issues or other technology related problems may not be considered legitimate excuses for failure to complete assignments before due dates.\*\*

**Attendance & Missed Work Policy:**

Missed Work - It is the student's responsibility to get notes from a classmate due to an absence. It is the student's responsibility to find out from a classmate what was missed, so *be kind and courteous to your colleagues!*

Make-Ups - Lecture exams may be made up at the instructor's discretion, but will require an acceptable reason for missing the exam.

**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 600 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 70% of your overall final grade with point values as listed in option 1. The other 30% will be calculated from your classroom/participation and online work grades. At the end of the semester, each method will be calculated and your grade will be the higher of the two calculations.

**Classroom Conduct & Computer Use Policy:**

Any behavior which is distracting or disruptive to fellow students or to me will not be tolerated – you will be asked to leave. If you bring a computer to lecture it must be used solely for that class. If you are caught doing something other than class work, you will lose your privilege to bring a computer to class for the rest of the semester.

**Grading Scale & Extra Credit:**

90.00-100% = A

80-89.99% = B

70.00-79.99% = C

60.00-69.99% = D

Below 60.00% = F

**No extra credit****Statements for Syllabi and Blackboard Pages**

Since this is a legacy/archived document, the statements that were originally provided may be out-of-date and have therefore been removed.

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.

DATE	DAY	TOPIC	TEXT
17-Jan	T	Introduction to Evolution	Section 1.4, Openstax 18.1
19-Jan	R		
24-Jan	T	Evolution of Populations	Chapter 21, Population Genetics PowerPoint (BB)
26-Jan	R		
31-Jan	T	Origin of Species (End of Exam 1 Material)	Chapter 22
2-Feb	R		
7-Feb	T	Evolution of Early Life and Intro to Phylogenies <b>Exam 1</b>	Sections 23.1- 23.2, Campbell Chapter, and BB article
9-Feb	R		
14-Feb	T	Bacteria and Archaea; Form, function and diversity	Chapter 26
16-Feb	R		
21-Feb	T	Eukarya / Evolution of Multicellularity (End of Exam 2 Material)	Chapter 27 & 28
23-Feb	R		
28-Feb	T	Evolution of Plants from Algae <b>Exam 2</b>	Chapter 33
2-Mar	R		
7-Mar	T	<b>Spring Break</b>	
9-Mar	R		
14-Mar	T	Evolution of Plants / Seed Plants	Chapter 33; Sections 31.1, 29.3, 29.4
16-Mar	R		
21-Mar	T	Fungal Evolution and Diversity	Sections 34.1-34.3 (up to pg 34-13)
23-Mar	R		
24-Mar	F	<b>Last Day to Withdraw</b>	
28-Mar	T	Introduction to Animal Diversity <b>Exam 3</b>	Sections 44.1, Review 27.1, Section 44.2, Openstax 27.1
30-Mar	R		
4-Apr	T	Bilateria / Nervous System Muscle System / Skeletal System	Sections 44.3, 35.1, 37.1, 37.3
6-Apr	R		
11-Apr	T	Vertebrate Evolution and Selected Systems	Sections 44.4, 37.4, 39.1, 39.2, and 39.4
13-Apr	R		
18-Apr	T	Population Ecology <b>Exam 4</b>	Chapter 46
20-Apr	R		
25-Apr	T	Species Interactions, Communities, and Ecosystems	Chapter 47
27-Apr	R		
2-May	T		
<b>11-May</b>	<b>R</b>	<b>CUMULATIVE FINAL EXAM</b>	<b>8AM-11AM</b>