

<b>Course Title/Number</b>	<b>BSC 104: INTRODUCTION TO BIOLOGY</b>
<b>Semester/Year</b>	<b>Spring 2014</b>
<b>Instructor</b>	<b>Marcia Harrison-Pitaniello</b>
<b>Days/Time</b>	Lecture: MWF 10:00 am - 10:50 pm Laboratory: (sections 201: Monday 11:00 a.m. - 12:50 p.m.; 202: Monday 1:00 - 2:50 p.m.; 203: Wednesday 11:00 a.m. - 12:50 p.m.; 204: Monday 5:00 - 6:50 p.m.)
<b>Location</b>	Lecture: Corbly Hall 105; Lab: Science 212
<b>Office</b>	Office: Science 200A; Lab: Science 107
<b>Phone</b>	(304) 696-4867
<b>E-Mail</b>	<a href="mailto:harrison@marshall.edu">harrison@marshall.edu</a>
<b>Office/Hours</b>	Mondays, Wednesdays, and Fridays from 11:00 a.m.- 12:00 p.m.; Tuesdays and Wednesdays from 3:00 - 4:00 p.m., or by appointment
<b>University Policies</b>	By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to <a href="http://www.marshall.edu/academic-affairs">www.marshall.edu/academic-affairs</a> and clicking on "Marshall University Policies." Or, you can access the policies directly by going to <a href="http://www.marshall.edu/academic-affairs/?page_id=802">http://www.marshall.edu/academic-affairs/?page_id=802</a> for Academic Dishonesty/ Excused Absence Policy for Undergraduates/ Computing Services Acceptable Use/ Inclement Weather/ Dead Week/ Students with Disabilities/ Academic Forgiveness/ Academic Probation and Suspension/ Academic Rights and Responsibilities of Students/ Affirmative Action/ Sexual Harassment. Assessment Day will be held on Tuesday, April 8 during the spring 2014 semester. <b>Classes will NOT be cancelled on Assessment Day this year.</b>

#### Course Description: From Catalog

<b>Introductory Biology. 4 hrs.</b> Fundamentals of biology with emphasis on the unity of life, energetics, genetics, evolution, classification of organisms in the kingdoms of life. Intended for non-science majors. Does not count toward a major in Biological Science. 3 lec-2 lab.
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<b>Course Student Learning Outcomes</b>	<b>How students will practice each outcome in this Course</b>	<b>How student achievement of each outcome will be assessed in this Course</b>
Students will analyze problems that integrate basic knowledge associated with modern biology and its sub-disciplines (cell biology, genetics, evolution, classification of living organisms).	Students will receive assigned textbook readings and lecture preparation assignments. In-class exercises will review chapter content associated with focus topics.	Student discussion during lectures will be a component of the participation grade. In-class quizzes and exams questions will include problems associated with focus topics.
Students will be able to apply the basic knowledge to current health, political, and social issues.	Students will participate in group discussions of focus topics and biology videos related to course content.	In-class quizzes and exams questions will include problems associated with focus topics and videos.
Students will evaluate the role of scientific methods in the development of current biological science theories.	Laboratory exercises will provide overview of basic skills and hands-on use of equipment used in biology.	Graded lab work includes completion of lab data sheets.

## Required Texts, Additional Reading, and Other Materials

1. Essential Biology, 5<sup>th</sup> Edition. Campbell, Reece, Simon 2007
2. BSC 104 Laboratory Manual
3. Turning Technologies Response Card RFC-03 (LCD) – **enter your device ID in the content area of MUOnline.**
4. Additional materials will be available on MUOnline and at <http://science.marshall.edu/harrison/bsc104.html>

## Course Requirements / Due Dates

- 1) **Exams:** Five exams will include multiple choice, matching and short answer questions.  
Exam 1: Wednesday, Feb. 5  
Exam 2: Wednesday, Feb. 19  
Exam 3: Wednesday, March 12  
Exam 4: Wednesday, April 9  
Exam 5: Monday. 5/5 at 10:15 am (according to the Spring 2014 exam schedule)  
**Make-ups for exams 1, 2, 3, or 4 will be given on Friday, May 2.**
- 2) **Laboratory evaluation:** Each laboratory data sheet must be handed in by the student by the end of each lab period – no late data sheets are accepted. The only make-up labs available are other sections of the same course during the same lab week. The lab schedule is posted in each room. If a student attends a make-up lab section, s/he must write his/her name and his/her regular TA's name on the data sheet, and then turn in the data sheet to the TA in the lab attended.
- 3) **Class participation:** Students will be asked to prepare for lecture content, participate in class discussion, write, and work on problems and case-studies during class time. The participation grade will depend on in-class quiz scores, attendance, and contribution to the class discussion.

## Grading Policy

<b><u>Graded material:</u></b>		<b><u>Grading scale:</u></b>
Lecture exams (5 exams; 80 pts each)	400 pts (73%)	A = 100–90% (550-495 points)
Laboratory work (11 data sheets; 10 pts each)	110 pts (20%)	B = 89–80% (494-440 points)
<u>Class participation (attendance, quizzes, videos)</u>	<u>40 pts (7%; 10%)</u>	C=79–70% (439-385 points)
Total points	550 pts	D = 69–60% (384-330 points)
		F = <60% (less than 329 points)

**Lecture exams:** There will be five exams each contributing 80 points each towards your total course grade. Lecture slides which include a study guide for each chapter will be posted on MUOnline. The lecture slides will outline the basic material from the textbook that will be covered for each exams. Note that the lecture discussions and laboratories will also be included in the exam coverage and may contribute to up to 50% of the exam content. None of the exams are cumulative but there will be a cumulative section accompanying exam 5 that may be taken to offset a low exam grade. Please notify the instructor in advance if you know you will miss an exam. (See Attendance policy.) **Make-ups for exams 1-4 will be given on Friday, May 2.**

**Laboratory evaluation:** Your laboratory performance will contribute 110 points of your total grade. These points are based on 13 graded laboratory data sheets @ 10 points/data sheet. Each data sheet must be handed in by the student by the end of each lab period – no late data sheets are accepted. Two data sheet grades may be dropped, for a lab point total of 110 points. Students should attend all labs in order to have the maximum number of graded data sheets from which to select their two lowest grades for dropping. No excuses are necessary for the dropped data sheet grades; however, both excused and unexcused absences do count toward the two drops. If an exception for extra drops due to an extended medical situation (for example) is necessary, arrangements are to be made between the student and the course lecturer, not

between the student and the TA. The only make-up labs available are other sections of the same course during the same lab week. The lab schedule is posted in each room. If a student attends a make-up lab section, s/he must write his/her name and his/her regular TA's name on the data sheet, and then turn in the data sheet to the TA in the lab attended.

**Class participation:** Class participation includes completion of a quiz, and participation in lecture discussion, acting as a class learning assistant, and submission and review of relevant videos.

- *Lecture participation:* Students will be asked to participate in class group discussions and work on problems during class time. Students will participate in weekly in-class quizzes, and surveys that will be used to vote on focus topics, evaluate students' current knowledge of a topic, and to provide feedback on the coursework and assignments. ***Specific information concerning quiz and discussion topics will be provided in announcements sent each Friday.***
- *Learning assistants:* In some lecture, I will ask students to provide information for their group, thus, acting as learning assistants. Learning assistants automatically receive 100 points for that lecture session.
- *Biology videos:* Student are invited to submit videos that relate to class material. If your video is used in class, then this will count as one excused participation score.
- *Grading:* The top 30 of 37 lecture scores (beginning week 2), will be averaged to evaluate student participation for up to 40 points. Points will be determined as follows: >80% = 40 points; 75-79% = 30 points; 70-74% = 20 points; 60-69% = 10 points; <60% = 0 points. **For, students who earn 85% or greater, the participation score moved to 10% of the grade.**

### Attendance Policy

Attendance in lectures and laboratory exercises is integrated into your grade. You are responsible for any material missed by being absent. Absences from exams or quizzes due to illness, death in the family, or institutional activities will be excused with the appropriate notification from Marshall University Student Affairs Office (MSC2W38, 696-6422). Class and/or lab will be cancelled due to inclement weather according to the policy described at [http://www.marshall.edu/academic-affairs/?page\\_id=802](http://www.marshall.edu/academic-affairs/?page_id=802).

**BSC 104: Dr. Marcia Harrison.** Office: Science 200A; Lab: Science 107; (304) 696-4867; [harrison@marshall.edu](mailto:harrison@marshall.edu)  
Office Hours: Mondays, Wednesdays, and Fridays from 11:00 a.m. - 12:00 p.m.; Tuesdays and Wednesdays from 3:00 - 4:00 p.m., or by appointment

Week	Dates	Lab Schedule	Lecture Content and Exam Schedule
1	1/13-1/17	Lab 1: Laboratory Safety	Chapter 1. Introduction: Biology Today Chapter 2. Essential Chemistry for Biology Chapter 3. The Molecules of Life Chapter 4. A Tour of the Cell Chapter 5. The Working Cell  <b>2/3: Exam 1 wrap-up and review</b> <b>2/5: Exam 1</b>
2	1/20-1/24	NO LAB- Martin Luther King Jr. Holiday <b>Wed. Labs 203 meets this week</b> <b>1/20 No Lecture</b>	
3	1/27-1/31	Lab 2: Scientific Measurement	
4	2/3-2/7	Lab 3: Hypothesis Testing	
5	2/10-2/14	Lab 4: Diffusion and Osmosis	Chapter 6. Cellular Respiration: Obtaining Energy from Food Chapter 7. Photosynthesis: Using Light to Make Food Chapter 8. Cellular Reproduction: Cells from Cells  <b>2/17: Exam 2 wrap-up and review</b> <b>2/19: Exam 2</b>
6	2/17-2/21	Lab 5: Photosynthesis	
7	2/24-2/28	Lab 6: Karyotyping	Chapter 9. Patterns of Inheritance Chapter 10. The Structure and Function of DNA Chapter 11. How Genes are Controlled Chapter 12. DNA Technology  <b>3/10: Exam 3 wrap-up and review</b> <b>3/12: Exam 3</b>
8	3/3-3/7	Lab 7: Epigenetics	
9	3/10-14	Lab 8: Mendelian Genetics	
	<b>3/17-3/21</b>	<b>Spring Break-no class</b>	
10	3/24-3/28	Lab 9: Microevolution – Population Genetics <b>3/28: Last Day to drop a course</b>	Chapter 13. How Populations Evolve Chapter 14. How Biological Diversity Evolves Chapter 15. The Evolution of Microbial Life Chapter 16. Plants, Fungi, and the Move onto Land  <b>4/7: Exam 4 wrap-up and review</b> <b>4/9: Exam 4</b>
11	3/31-4/4	Lab 10: Microscope and Cells	
12	4/7-4/11	Lab 11: Prokaryotes, Protista, and Fungi	
13	4/14-4/18	Lab 12: Plants and Animals	
14	4/21-4/25	Lab13: Pop. Growth and Impact of Human Population on the Environment	Chapter 17. The Evolution of Animals Chapter 18. The Ecology of Organisms and Populations Chapter 19. Communities and Ecosystems Chapter 20. Human Impact on the Environment  <b>4/31: Exam 5 wrap-up and review</b> <b>5/2: Exam make-ups</b>  <b>5/5: Exam 5 at 10:15 am in CH105</b> (according to the Spring 2014 exam schedule)
15	4/28-5/2	<b>NO LAB THIS WEEK</b>	
	5/5		