

## BIOLOGY 101 SYLLABUS

FALL 2017

### BIOLOGY 101 – BIOLOGICAL PRINCIPLES COURSE SYLLABUS

Dr. Dennis Gervin

Sections: 7140, 7141

#### Instructor

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*This is my faculty Webpage:* <http://gervind.faculty.mjc.edu/default.html>

**Course Description:** This course is a study of general principles of biology in relationship to the processes of all living organisms. Topics include an introduction to the nature of science, reproduction, development, evolution, energetics, molecular biology, genetics, cellular structure, homeostatic mechanisms, ecology and taxonomy. Laboratory activities are designed to enhance student learning of the lecture component of this course. This Core Course is intended for biology and biology-related majors. As such, it is my goal to see that you are prepared in the best way possible to move through your biology major courses at the university level.

**About the Webpage:** You will need to have internet access to utilize my Biology 101 webpage. Important information on my site changes weekly – *you need to check this site regularly* or you will miss important information. You will find the current Class Activity Schedule there that will keep you informed as to what is happening in lecture and lab each week. Assignments and quizzes are also often posted to this site. In addition, I also post lecture notes, helpful videos, and news articles on this site. Warning: while this site has much of the course content, if you want to do well in the course you will need to attend the lectures. There is a profound difference between simply gathering information, and gaining knowledge that leads to learning. My job (which I greatly enjoy) is to align, deliver and connect the information in a way that tells the story of Biology. I love doing this and strive to make your attendance enjoyable and worthwhile. You can access the internet from most locations on campus and in the Library if needed.

## BIOLOGY 101 SYLLABUS

FALL 2017

### Required Course Materials:

#### Text Book:

Campbell Biology, by Jane B. Reece, Lisa A. Urry, Michael L. Cain, Steven A. Wasserman, Peter V. Minorsky, Robert B. Jackson. 10<sup>th</sup> Edition (ISBN: 13: 978-0-321-77565-8). This text is required. Available at campus bookstore

#### Laboratory Manual:

Biology 101 Laboratory Activities and Manual Worksheets: Dennis Gervin – Fall 2017.

This text is required and available at the Pirate's Bookstore and costs \$6 or \$7.

**Class Activity Schedule:** You will need to consult the Class Activities Schedule to keep up-to-date with text reading assignments, lab assignments, quizzes and exams. In order to effectively meet the learning objectives for this course, this schedule will likely be modified as the semester progresses. You can always access a current version of the Class Activities Schedule at the following link. <http://gervind.faculty.mjc.edu/default.html>. From there, follow the Biology 101 link and check at the bottom left corner of the page)

**Recommended Course Materials:** Aside from the required texts, the following materials are recommended. Notebook/Binder: A notebook with sleeves or a ring binder to contain your lecture notes & materials as well as your lab notes, drawings, & materials. Colored pencils are also helpful for drawing components in the lab.

**Assigned Reading:** You are responsible for the material in each chapter covered on the Class Activity Schedule. Always make sure cover the figures, charts and tables within each of the assigned reading chapters. We move quickly in this class and cover a wide range of content – there is simply not enough time to sufficiently cover all content in lecture alone, so your text is essential to provide critical examples and information needed to grasp the concepts we will be covering. Be sure to cover the “Review” sections at the end of each chapter as well. The lectures are structured around your textbook and I draw heavily from it for lecture, quizzes and exams.

**Lecture Exams:** There will be 4 Lecture Exams (150 pts. each). These exams will cover lecture material, concepts from lab and assigned reading. Your lowest Lecture Exam Score will be automatically dropped from your total course score. Do not come late to exams. After the first person is done you will not be able to start the exam.

**Final Exam:** On the last day of the class, there will be a cumulative final exam that will be worth **100 pts.**

**Lecture Quizzes:** There will be about 12 (short) lecture quizzes given during the semester. These short quizzes will be given during lecture or lab and will cover material from previous lectures or assigned reading. These quizzes will help you prepare for the exams. The lowest lecture quiz score will automatically be dropped.

## BIOLOGY 101 SYLLABUS

FALL 2017

**Lab Practicals:** There will be a **lab exam** (Lab Practical) that will be given during one lab period this semester – check your class activity schedule for the specific date. This exam will cover information, skills or concepts from lab assignments for the class.

**Lab Worksheets:** Lab Worksheets (exercises) will be completed each week and submitted for scoring. There will be about **12** lab exercises during the semester, some of these will extend over a number of weeks. See the lab manual for more information regarding lab worksheets and how the lab will operate. Only Lab Worksheets from the published workbook (see above) will be accepted. No exceptions.

**Lecture Exam Follow-up Assignments:** This assignment is scored and is *not optional* - It is important that you understand and can apply the concepts presented in each exam (even after you have taken the exams). You will be expected to recall and apply previous material throughout the course. After each of the first **3** Lecture Exams, you will be given an assignment that is designed to improve your understanding of the material presented in the exams. In addition to reinforcing critical content, these assignments will help you to develop skills to improve performance on future exams. If you do not turn in the assignment, you will not receive any points

**Attendance Policy:** Regular attendance is critical for success in this course. Be active in your education! You will not likely meet the learning objectives, keep up with course content (or earn an acceptable grade in the class) if you are not attending lectures or labs. There is a great deal of content associated with the breadth of information we will be covering. Attending lectures will help you to focus on important concepts and information. It will also help you to understand what is expected from you to successfully complete the course. Whether you are present or not, you are responsible for all information presented during lecture. This includes additional assignments or changes to the Class Activity Schedule.

Missed exams, quizzes or lab worksheets will not be accepted unless you have contacted me prior to the absence and we have made other arrangements. Please note that excessive absences without prior notification will result in your being dropped from the course. Four consecutive absences without contacting me will likely result in you being dropped from the class.

**Lab Attendance:** *All lab meetings are required.* If you miss a lab, you will not be able to perform essential activities and earn the points associated with the lab exercise. To earn credit for each lab exercise you must attend to participate in the specified activities and discussions. Additionally, you will need to work with unique materials, specimens and experimental outcomes that are only made available during lab meeting times. While it is sometimes possible to complete the assigned activities prior to the scheduled end of the lab, be very cautious about rushing through the assignments. Individuals that rush through the assignments do not do well in the class.

## BIOLOGY 101 SYLLABUS

FALL 2017

### **How to be successful in this class:**

Attend all lectures and lab sessions, read all materials in advance, find others to study with as a small group, and take advantage of my office hours or contact me by email if you have questions, concerns or are struggling in the class. There are also exceptional tutors in the West Campus Learning Center (Library). Pay particular attention to material that is brought up multiple times in lecture, and to figures that I spend considerable time on or point out as critical to concepts for the course. Also, be sure to go over the Review sections at the end of each chapter in your text. If you attend lecture and labs, you should have a very good understanding of what will be expected from you on quizzes and exams. Finally, one of the most important ways for you to succeed is to invest your time and become engaged in the course material and topics. In addition, do not forget to enjoy yourself in this class – it really does make a difference!

### **I Need Your Feedback!**

Tell me what is working well in lecture and lab, and possibly more important – let me know if something I am doing or a way I am presenting material could be more helpful. I appreciate receiving this kind of feedback because adjusting my teaching style and approaches helps to keep my material fresh and more enjoyable to present.

### **Code of Academic Integrity:**

Standards of Conduct: Modesto Junior College under the Yosemite Community College District Board Policy has specified those standards of student behavior, which it considers essential to its educational mission and its campus life. These regulations are designed to represent reasonable standards of conduct. The Standards of Conduct governs the behavior of students and guests on campus and at college-sponsored activities. Violations of the codes may subject individuals to disciplinary action, which is consistent with the requirements of due process. Academic dishonesty in any form will result in no score for the given assignment. Additionally, any students participating in acts of academic dishonesty will be removed from class for the maximum days allowable and all incidents will be reported to the Dean of Science, Mathematics and Engineering and the Vice President of Student Services. *Please note that use of **any** non-approved electronic device during an assessment is considered an act of academic dishonesty.*

For more information, reference the Student Handbook at the following web link:

[http://www.mjc.edu/student-services/enrollment/documents/14-15\\_student\\_handbook.pdf](http://www.mjc.edu/student-services/enrollment/documents/14-15_student_handbook.pdf)

**BIOLOGY 101 SYLLABUS**  
**FALL 2017**

**Points and Grades:**

**SUMMARY OF TOTAL POSSIBLE POINTS**

FALL 2017

Lecture Exams	Lecture Quizzes	Lab Exam	Lab WK Sheets	Exam Corrections
1   150	1   25	1   50	1   30	1   20
2   150	2   25		2   30	2   20
3   150	3   25		3   30	3   20
4   150	4   25		4   30	
	5   25		5   30	
<b>Final Exam</b>	6   25		6   30	
1   100	7   25		7   30	
	8   25		8   30	
	9   25		9   30	
	10   25		10   30	
	11   25		11   30	
	12   25		12   30	

**Total Points**

<b>1470</b>	<b>700</b>	<b>300</b>	<b>50</b>	<b>360</b>	<b>60</b>	LEC 72.1%
47.6%	20.4%	3.4%	24.5%	4.1%	LAB 27.9%	

**Total Points** *(After dropped scores)*

<b>1295</b>	<b>550</b>	<b>275</b>	<b>50</b>	<b>360</b>	<b>60</b>	LEC 68.3%
42.5%	21.2%	3.9%	27.8%	4.6%	LAB 31.7%	

The table to the right indicates the percentage of the Total Points that you will need to earn to receive a specific letter grade in the class. The Maximum Possible Points for the class is subject to change as deemed appropriate. If such a change occurs you will be notified in lecture, but the percentages below will remain constant.

Earned Grade	Percentage
A	≥ 90%
B	≥ 80%
C	≥ 70%
D	≥ 60%
F	Below 60%

## BIOLOGY 101 SYLLABUS

FALL 2017

### **Special Needs:**

Students who need special accommodation or services should contact the instructor as soon as possible to the start of semester. There is a disabilities resource center on campus that disabled students are encouraged to contact as well.

<http://www.mjc.edu/studentservices/disability/>

### **Notification of Objectionable Materials and Classroom Behavior**

Please turn your cell phones and pagers to vibrate or silent during class. It disturbs not only the instructor, but also your fellow students.

### **Subject to Change Statement:**

Please note that this syllabus is subject to change as deemed appropriate. If this occurs, you will be notified of such changes. If changes are made an updated syllabus (with revision date) will be posted on my website.

## BIOLOGY 101 SYLLABUS

FALL 2017

### COURSE OBJECTIVES

**Course Objectives:** The student will be able to:

- Explain the concepts, facts, & evidence that form the foundations of general biology & their significance to humans.
- Improve their basic study skills.

### COURSE STUDENT LEARNING OUTCOMES

**Course Student Learning Outcomes:** The student will be able to:

- a. Describe biology and its role in society and culture.
- b. Explain the fundamental principles and generalizations of biology.
- c. Use the scientific method in problem solving.
- d. Interpret data from a scientific experiment and formulate conclusions.
- e. Review the historical background and relate this to modern biology.
- f. Describe chemical and physical reactions as they relate to biology and life's processes
- g. Use appropriate tools to study biological principles.
- h. Analyze and propose solutions for current topics, such as bioethics in biology.
- i. Use the laboratory to formulate ideas relating to a scientific experiment.
- j. Use the laboratory as a reinforcement of the principles described in the lectures.
- k. Describe adaptation and natural selection as evidenced in various aspects of biology.
- l. Cite the interactions of organisms with the biotic and abiotic environment in an ecosystem.
- m. Review the hierarchical structure and function as it relates to the organization of life from the atom to the biosphere.
- n. Cite the various types of reproduction and development in plants and animals.
- o. Diagram the principles of genetics and the various common types of inheritance.
- p. Describe the important energy forming and releasing processes of organisms.
- q. Compare and contrast eukaryotic and prokaryotic cells and life forms.
- r. Describe the principles of classification and phylogenetic systems.