Time and Place:
Tuesday / Thursday from 12:30 – 1:45 PM, Exercise and Nutritional Sciences (ENS) 280

Introduction:
Biology 203 (BIOL 203), "Principles of Cell and Molecular Biology," is one course of a two-semester sequence for biology majors, Biology 203 and 204. Note: this course is not a GE course; it is a required course for all biology majors. In BIOL 203, we introduce principles that apply to all living organisms. The underlying theme is the unity of life, while Biology 204 covers the diversity of life. Some of the biological disciplines that are touched on include biochemistry, cell biology, classical genetics, and molecular biology. Consequently, BIOL 203 provides a foundation for much of your upper division coursework in biology, particularly Genetics and Evolution (Biol. 352) and Biochemistry, Cell, and Molecular Biology I, II, and III (Chemistry 365, Biology 366, and Biology 567).

Instructors

Dr. Desirée Salazar
Office: Geology, Mathematics, Computer Science 321C
Phone: (619) 594-6518
Email: dsalazar@mail.sdsu.edu
Office Hours: by appointment only

Dr. Ralph Feuer
Office: South Life Sciences 358
Phone: (619) 594-7377
Email: rfeuer@mail.sdsu.edu
Office Hours: Tues 3:30pm-4:30pm or by appointment

If you must contact the instructor, make sure to put “BIOL 203” at the beginning of the subject line in order to properly pass email spam filters.

Enrollment Information / Obtaining Add Codes:
Add codes will be given by Biology 203 Laboratory (BIOL 203L) Teaching Assistants after students are signed up for the laboratory course. If a student has previously taken the BIOL 203L laboratory course and would like to repeat the BIOL 203 lecture course, please contact Dr. Andrew Bohonak (Vice-Chair and Director of Undergraduate Advising and Curriculum– bioundergrad@sunstroke.sdsu.edu) regarding enrollment.

Prerequisites:
Although BIOL 203 is introductory in nature, we have a lot of ground to cover. Therefore, as a minimum background you should have all of the following:
1. A college-level chemistry course such as Chem. 200 is required as a prerequisite. You should not take BIOL 203 course without Chem. 200 or its equivalent. You face possible course failure for lacking prerequisites.
2. A working knowledge of algebra (graphing, interpreting graphs, simple equations, logs, exponents, etc.).

Biology 203 Course Information:
All information for this course will be posted on Blackboard. The BIOL 203 Blackboard site contains course information including the lecture schedule, lecture notes if they are available, and a bulletin board for course announcements. Students can obtain a free email account if they do not already have one; check in the Student Computing Center in the Love Library.

Course Organization:
BIOL 203 is a team-taught course as are many courses for Biology majors. There are two lecturers who cover topics in their particular fields of expertise, and graduate teaching assistants who handle the laboratory sections. The course is divided into 4 unequal segments:

- Cell Structure and Function
- Energy Metabolism
- Classical Genetics
- Molecular Biology
**Textbook Required:**
*Campbell and Reece, Biology 9th Edition;* Pearson/Benjamin Cummings, 2011
Publisher Website: [www.campbellbiology.com](http://www.campbellbiology.com)

“Mastering Biology”, the on-line tool which accompanies the text, is required for access to many study guides and all homework assignments.

Assigned reading from the text accompanies each lecture and is indicated on the lecture outline. You are responsible for all text material assigned with emphasis on material that relates directly to the lectures. You need not bring the text to lecture or to lab meetings. There is a Lecture Notebook and/or CD that may be packaged with the textbook; this contains figures from the text and space for lecture notes. Some of you may have acquired the 8th edition of Campbell. The information in the two editions is similar, but the course will rely on the information contained within the 9th edition of the textbook. Access to Mastering Biology comes with new copies of the text. It can be purchased separately if you purchased a used textbook or are renting a text.

**Clicker2:** You are required to purchase an i>clicker2 remote for in-class participation for the 2nd half of the course. i>clicker2 is a response system that allows you to answer questions posed during class. You will be graded on your feedback and your in-class participation. In order to receive scores, you need to register your i>clicker2 remote on your SDSU Blackboard course, not the i>clicker company site. i>clicker2 will be used every day during the 2nd half of the course. You are responsible for bringing your remote daily. Clicking for other students who cannot attend class or allowing others to click for you is considered cheating and will be reported to the Center for Students Rights and Responsibilities. For further information on Clickers- check this website. [http://clicker.sdsu.edu/studentFAQ.html](http://clicker.sdsu.edu/studentFAQ.html)

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**Biology 203 Laboratory Course (BIOL 203L):**
Starting in the fall of 2009, the associated laboratory course (BIOL 203L) has been detached from the lecture course (BIOL 203).

**Learning Objectives:**
In this course you will learn the fundamentals of Cell and Molecular Biology - principles that apply to all living organisms.

By the end of the course, students will be able to:
- Describe the importance of water to biological systems
- Understand the basic principles of organic (carbon-based) chemistry as it relates to life
- Describe and understand the structure and function of large biological molecules
- Describe and understand the basic structures and properties of cells
- Understand and explain membrane structure and function
- Describe and understand the principles and processes of cellular metabolism and respiration
- Understand the process of photosynthesis
- Compare and contrast the similarities and differences between mitosis and meiosis
- Describe the principles of Mendelian genetics
- Describe and understand the principles and major features of the chromosomal and molecular basis of inheritance
- Understand the flow of genetic information from DNA to RNA to Protein and will be able to describe those processes at the molecular level
- Understand and describe the basic properties of gene regulation and cell communication

**Grading:**

<table>
<thead>
<tr>
<th>Exam I material</th>
<th>100 points</th>
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</thead>
<tbody>
<tr>
<td>Exam II material</td>
<td>100 points</td>
</tr>
<tr>
<td>Exam III material</td>
<td>100 points</td>
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</tbody>
</table>
We use a point system and your grade will be based on a percentage basis. **No grading curve will be implemented.** The point values of the lecture exams are shown on the lecture outline. Consult the lecture schedule for exam dates. **There will be no comprehensive final exam.**

Grades are earned on a straight percentage basis as shown below:

<table>
<thead>
<tr>
<th>Scale</th>
<th>B+: 87-89.9%</th>
<th>C+: 77-79.9%</th>
<th>D+: 67-69.9%</th>
<th>F: &lt;59.9%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A: 93-100%</td>
<td>83-86.9%</td>
<td>73-76.9%</td>
<td>63-66.9%</td>
<td></td>
</tr>
<tr>
<td>A-: 90-92.9%</td>
<td>80-82.9%</td>
<td>70-72.9%</td>
<td>60-62.9%</td>
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The Exams will be objective (mostly multiple choice questions). Some short-answer problems/essays (a sentence or two up to a couple of paragraphs) may also be included in the Exams. These Exams will assess your knowledge of both lecture and reading assignments. **Questions will be drawn from both the lecture and reading assignments.** If you have a legitimate excuse, be sure to notify the appropriate lecturer by the day after the exam/homework assignment and be prepared to provide written confirmation (letter from your doctor etc.). Job-related excuses are not acceptable; you are responsible for arranging your work schedule around your classes.

- During the lecture course, there will be opportunities to earn extra credit – these opportunities will be explained in lecture. **Attendance during lectures may be necessary to earn extra credit points.**

- The **MasteringBiology** CD and website is a valuable online tutorial and assignment/quiz assessment activity site. There will be up to 10 homework assignments in MasteringBiology during the course. Each homework assignment will be available for a limited time only and announcements, including the password needed, will be made on in class as to when the assignments are available and for how long they can be accessed. **IMPORTANT:** log on to MasteringBiology BEFORE the first assignment to verify your account works and you won’t have technical problems. Technical problems must be addressed through the MasteringBiology website and may result in the loss of valuable points if they occur during an assignment. Be sure to include your Blackboard name and valid Student Red ID number when registering for MasteringBiology.

- A series of self-study quizzes for each chapter may be provided on Blackboard or through MasteringBiology. You should take advantage of these quizzes if they are available as they will help you to understand the material in this course.

- If you are having difficulties in the course and you would like our assistance with suggestions on how to improve your grade, please contact us as soon as you begin having difficulties. If you have an issue that is affecting your performance, contact us immediately. **Do not wait until the end of the course or contact us about difficulties after the course is over.**

- **Once you have earned a grade in the class, there is NOTHING we can do for you!** So let us work with you during the semester – we will help in anyway we can (for example, explain material, answer questions, go over concepts you are struggling with, advise you how to study and prepare, etc.). Please remember, however, that no student will be offered opportunities not offered to the entire class. Take advantage of the opportunities you
have: attend lecture, read the book, use the on-line tutorials, complete the homework assignments, ask questions, take advantage of extra credit opportunities, and use office hours!

**Cheating, Class Etiquette, and Special Accommodations:**
Any offences of cheating, including plagiarism, will result in the student being reported to the judicial office. Cell phones must be turned off during class. If you must be available via cell phone for potential emergencies, set your phone to vibrate mode. Please be considerate of your neighbors and avoid distractions such as carrying on conversations or entering and exiting during lectures. **NO cell phones or ear phones of ANY kind will be allowed during exams!** To request disability accommodations, please make an appointment to speak with the instructor early in the semester.

**Lectures:**
Both instructors will post PDF versions of lectures on BlackBoard – print them and use them to take notes during lectures.

**Final Note:**
BIOL 203 covers a lot of material. In order to pass the course, you should **keep up with the material on a daily basis. Attend lectures, take detailed notes of your reading and the lecture (this involves more than copying down what the lecturer writes on the board!) either annotate or recopy your notes while the lecture is still fresh in your mind, and use the text to fill in gaps and correct ambiguities. Try to answer questions at the end of the text chapters or use the "Interactive Study” guide which comes with your text. Take advantage of the online resources provided by the textbook publisher. These are all proven mechanisms for obtaining command of the subject matter, but it requires time. If you need assistance for any reason (for example to clarify a confusing concept or explain what the instructor expects, etc.), please contact the course instructors by email for clarifications.

Finally, be sure you understand the material as we go. Memorizing facts without understanding the conceptual framework is like trying to memorize 100 telephone numbers. Use the text and/or the instructor's office hours to sort out difficulties in understanding the material when these problems arise, not the day before the exam! **Most students find that the exams are hard!** They will test your understanding of concepts as well as the facts that support them. We will ask you to use your knowledge, not just spit it back. One method many students find successful is to study in small groups, but also leave time to study on your own. You should plan on devoting 10-12 hours per week study time (outside of class time).