



**Division:** Science  
**Course name:** Biology 3B  
**Section:** 0402 / **Semester:** Summer 2014

<b>Instructor Name:</b> Vered Mirmovitch	<b>School Website:</b> <a href="http://www.wlac.edu">www.wlac.edu</a>
<b>Class Hours:</b> M,T,W & TH	<b>Address:</b> 9000 Overland Ave., Culver City, CA 90230
<b>10:20 a.m. – 12:25 p.m.</b>	<b>Location:</b> MSA 309
<b>Office Hours:</b> M,T,W & TH	<b>Instructor E-mail:</b> <a href="mailto:MirmovV@wla.edu">MirmovV@wla.edu</a>
<b>12:30 p.m. – 1:30 p.m.</b>	<b>Location:</b> MSA 309
<b>or by appointment</b>	

## **BIOLOGY 3-B LAB**

**Course Description:** This is a course in general biology designed to fulfill a laboratory science requirement and will also provide a foundation for advanced courses in biology, including human anatomy, physiology, and microbiology. The lecture portion of the course emphasizes the basic principles in biology, cell structure and function, and the levels of organization in the human body. Lecture topics include the scientific method, an introduction to biological chemistry, heredity, evolution, the genetic control of cellular processes, ecology, and the organ systems of the body.

This laboratory portion of the Biology course emphasizes the diverse types of organisms and their anatomy and physiology. Laboratory topics include an introduction to the microscope, study of the cell, study of enzyme activity, a survey of the microorganisms, plants, and animals that comprise the 5 Kingdoms of life, and the anatomic study of the earthworm, grasshopper, and fetal pig.

Students will perform lab manual exercises which incorporate completion of brief lab reports, mathematical computation, analytic techniques, and laboratory skills. Completion of the laboratory manual exercises requires written short answer observations, logical analysis of experimental results, and careful preparation of drawings to document observations.

**Student Learning Objectives:** A student who completes this class will be able to explain:

- (1) how to measure using the metric system
- (2) the parts, use, & care of the light microscope
- (3) the appearance of prokaryotic & eukaryotic cells when viewed through the microscope
- (4) how to test for sugars, starch, and protein
- (5) diffusion & osmosis and expression of solution concentration
- (6) the phases of mitosis and meiosis
- (7) the appearance of mammalian tissues in the microscope
- (8) how concentration, temperature, and pH affect enzymes
- (9) taxonomic classification
- (10) the key characteristics and the classification of bacteria, fungi, protista, plants, and animals
- (11) the structure and function of the major organs of the fetal pig

**Required Books & Materials:**

**S.A. Fink; BIOLOGY LABORATORY; BioBooks Pub.; 2008**

**S. Mader; Biology; Inquiry Into Life; McGraw-Hill Publishers; 14<sup>th</sup> edition (older editions - 12<sup>th</sup> or 13<sup>th</sup> are OK)**

Rubber gloves for dissections

**Laboratory Resources:**

**<http://www.professorfink.com>**

**Virtual fetal pig dissection & review:**

**<http://www.biologycorner.com/pig/review.html>**

**[http://www.mhhe.com/biosci/genbio/maderbiology7/student\\_index.mhtml](http://www.mhhe.com/biosci/genbio/maderbiology7/student_index.mhtml)**

**Laboratory Examination Schedule (Tentative):**

**Lab Examination 1..... JUNE 30 (MON)**  
**Lab Examination 2..... JULY 10 (THU)**  
**LAB FINAL EXAMINATION..... JULY 23 (WED)**

**Computation of the Course Grade:**

Lab exercises and Quizzes .....	10% of Course Grade
2 Laboratory Examinations.....	50% of Course Grade
LAB FINAL EXAM.....	40% of Course Grade

The average of the 2 “midterm” exams will count 50% towards your Course Grade. The Final will count 40% of your Course Grade. About 1/4 of the questions on the Final Lab Exam will come from the previous 2 lab exams, and 3/4 from information presented after the 2<sup>nd</sup> Mid-term Exam. Lab exercises will be checked during each exam. Pop quizzes will be given at the beginning of some labs. Be prepared!

Lab exams will consist of identification questions, as well as objective-type questions (ex: True/False; Multiple Choice; and Matching) that will be answered on **SCAN-TRON (882) forms**. You will be expected to provide SCAN-TRON 882 forms (available at the bookstore) and a **soft lead no. 2 pencil with a good eraser** for each examination for computer scoring. **THERE WILL BE NO LATE OR MAKE-UP LAB EXAMS GIVEN!!**

**Grading Policy:**

89 - 100%	A
77 - 88%	B
62 - 76%	C
50 - 61%	D
below 50%	F

**Attendance Policy:**

Roll will be taken. There is a strong correlation between poor attendance and poor grades. **You are responsible for information, exam announcements, date changes, etc. presented in class, whether or not you are present!**

Students who are given add slips must complete the process by the 3rd class meeting (June 19). No replacement add slips will be signed.

**Withdrawal from Class:**

**You are responsible** for your credit and enrollment status. Any student withdrawing from class must inform the admissions office of this decision. **Students failing to follow the correct procedure for withdrawals will receive a grade of "F" for the semester. No withdrawals are permitted after Thursday, July 17.** (see Schedule, page 1).

**Cheating/Academic Dishonesty:**

Each student is expected to do his/her own work on all assignments, reports, examinations, etc. **CHEATING ON AN EXAM WILL RESULT IN AN "F" FOR THE COURSE.**

Here is a list of some actions that are considered cheating:

**NO TALKING DURING THE EXAM.**

**KEEP YOUR EYES ON YOUR OWN EXAM.**

**USING NOTES OF ANY KIND (ON CARDS, STRIPS OF PAPER, DESK TOP, ETC.) DURING AN EXAM IS NOT PERMITTED.**

Showing a fellow student your exam, or passing information in any way is not permitted.

Place your answer sheet(s) directly in front of you.

If you have a question, quietly walk up to the instructor and whisper your question.

Translation dictionaries are not permitted.

Changing the answers on a returned Exam & claiming it was scored wrongly.

**All of these demonstrate a lack of Honesty & Integrity which is ESSENTIAL in all jobs, all relationships, & in all Areas of Life.)**

**Recommendations for Succeeding in Class:**

- 1. Expect to Work. This is not supposed to be easy.**
- 2. Get to class on time, every time, and stay the whole time.**
  - Never miss class unless you're dead, & take good notes.
- 3. Find someone in the class to contact if you miss a meeting.**
- 4. Be organized! Use a daily calendar to set times for regular studying for each of your classes.**
- 5. Study & Review each night the class is given.**
  - Learning is easier if you schedule time daily to read, to think & review.
  - Every time you study. spend at least 10 minutes reviewing previous lessons.  
(These "refresher shots" are the secret for long-term memory.)
  - Focus your studying on the class Slide Shows and your lecture notes.

- Read the relevant chapters in your textbook; hi-lite pertinent lines, & add these notes to your class notes (never read without writing).
- Use the CD-ROM & Web-Sites.
- Use associations to help you remember things.
- Prepare note cards and carry them with you to review.

**6. Begin preparing for your exams at least 1 week in advance.**

**7. Anything you turn-in (exams, lab reports, quizzes) should look neat.**

**TENTATIVE SCHEDULE OF TOPICS**  
(schedule subject to change)

<b>DATE:</b>	<b>LAB</b>	<b>LABORATORY TOPIC:</b>	<b>Mader Textbook</b>
<b>WK 1</b> <b>Monday JUNE 16</b>		<b>Introduction to Lab</b>	
<b>Tuesday</b> <b>JUNE 17</b>	<b>A</b>	<b>Quantification in Biology</b>	<b>App. C in 13<sup>th</sup> ed</b>
<b>Wednesday</b> <b>JUNE 18</b>	<b>B</b>	<b>Introduction to the Microscope</b>	<b>Page 53</b>
<b>Thursday</b> <b>JUNE 19</b>	<b>D</b>	<b>The Cell</b> <b>[FRIDAY JUNE 20:</b> <b>Last Day to Avoid a "W" on</b> <b>Permanent Record]</b>	<b>Chapter 3</b>
<b>WK 2</b> <b>Monday</b> <b>JUNE 23</b>	<b>F</b>	<b>Cell Division – Mitosis</b>	<b>Chapter 5</b> <b>(esp. Pages 86-87)</b> <b>(&amp; Pages 92-93)</b>
<b>Tuesday</b> <b>JUNE 24</b>	<b>F</b>	<b>Cell Division:</b> <b>Mitosis &amp; Meiosis</b>	<b>Chapter 5</b> <b>(esp. Pages 86-87)</b> <b>(&amp; Pages 92-93)</b>

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<b>DATE:</b>	<b>LAB</b>	<b>LABORATORY TOPIC:</b>	<b>Mader Textbook</b>
<b>Wednesday JUNE 25</b>	<b>F</b>	<b>Cell Division: Mitosis &amp; Meiosis</b>	<b>Chapter 5 (esp. Pages 86-87) (&amp; Pages 92-93)</b>
<b>Thursday JUNE 26</b>	<b>C</b>	<b>Identification of Organic Compounds</b>	<b>Chapter 2</b>
<b>WK 3 Monday JUNE 30</b>		<b><u>LAB EXAMINATION 1</u></b>	
<b>Tuesday JULY 1</b>	<b>E X</b>	<b>Diffusion &amp; Osmosis Graphing</b>	<b>Chapter 3 Pages 71-74</b>
<b>Wednesday JULY 2</b>	<b>CC</b>	<b>Enzymes</b>	<b>Chapter 2 Pages 37-39 Chapter 6 Pages 104-107</b>
<b>Thursday JULY 3</b>	<b>G H I</b>	<b>Taxonomy  Viruses  Kingdom Monera</b>	<b>Chapter 1 Pages 6-7 &amp; Chapter 28 Pages 590-596 Pages 569-576 Page 696</b>
<b>FRIDAY JULY 4</b>		<b>HAPPY 4<sup>TH</sup> OF JULY!!!</b>	

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<b>DATE:</b>	<b>LAB</b>	<b>LABORATORY TOPIC:</b>	<b>Mader Textbook</b>
<b>WK 4</b> <b>Monday</b> <b>JULY 7</b>	<b>J</b> <b>K</b>	<b>Kingdom Protista</b> <b>SYMBIOSIS</b> <b>Kingdom Fungi</b>	<b>Pages 577-583</b> <b>Pages 584-590</b>
<b>Tuesday</b> <b>JULY 8</b>	<b>L</b> <b>L</b> <b>M</b>	<b>Plant Kingdom: The Algae</b> <b>Plant Kingdom: Terrestrial</b> <b>Plants &amp; Trees</b> <b>Angiosperm Vegetative</b> <b>Organs</b>	<b>Chapter 29</b> <b>Chapter 9</b>
<b>Wednesday</b> <b>JULY 9</b>	<b>M</b> <b>N</b>	<b>Plant Kingdom:</b> <b>Angiosperm Vegetative</b> <b>Organs</b> <b>Angiosperm Reproduction</b>	<b>Chapter 9</b> <b>P. 612-615</b> <b>Chapter 10</b> <b>Pages 171-180</b>
<b>Thursday</b> <b>JULY 10</b>		<b><u>LAB EXAMINATION 2</u></b>	
<b>WK 5</b> <b>Monday</b> <b>JULY 14</b>	<b>O</b>	<b>The Animal Kingdom:</b> <b>Lower Invertebrates</b>	<b>Chapter 30</b>
<b>Tuesday</b> <b>JULY 15</b>	<b>P</b>	<b>The Animal Kingdom:</b> <b>Higher Invertebrates</b>	<b>Pages 629-648</b>
<b>Wednesday</b> <b>JULY 16</b>	<b>R</b>	<b>The Animal Kingdom:</b> <b>The Vertebrate Animals</b>	<b>Pages 650-660</b>

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<b>DATE:</b>	<b>LAB</b>	<b>LABORATORY TOPIC:</b>	<b>Mader Textbook</b>
<b>Thursday JULY 17</b>	<b>R S T</b>	<b>Vertebrates (cont.) Introduction to Histology Hematology  [<u>JULY 17 IS THE LAST DAY TO DROP</u>]</b>	<b>Pages 650-660 Pages 194-200 Pages 222-225</b>
<b>WK 6 Monday JULY 21</b>	<b>U</b>	<b>Fetal Pig Dissection &amp; Organ Systems  Digestive System Heart &amp; Circulation Hormones Male Reproductive System Female Repro. System</b>	<b>Chapter 11 Pages 202-203 Pages 207-209 Chapter 14 Pages 216-220 Pages 396-397 Pages 416-419 Pages 420-421</b>
<b>Tuesday JULY 22</b>	<b>U  V W</b>	<b>Fetal Pig Dissection &amp; Organ Systems  Digestive System Heart &amp; Circulation Hormones Male Reproductive System Female Repro. System  Skeletal System  Muscular System</b>	<b>Chapter 11 Pages 202-203 Pages 207-209 Chapter 14 Pages 216-220 Pages 396-397 Pages 416-419 Pages 420-421  Page 371  Page 379</b>
<b>Wednesday JULY 23</b>		<b><u>FINAL LAB EXAMINATION</u></b>	
<b>Thursday JULY 24</b>		<b><u>NO CLASS:</u> Have a Great Summer Vacation!</b>	