

**Steven A. Fink; Instructor**  
**MSA 005**  
**MW 1:00 - 2:25**  
**sec. #0398**  
**OFFICE HOURS: 2:25-2:35 [MSA 005]**

**SPRING 2015**  
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## **BIOLOGY 3-A LECTURE**

**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, biological chemistry, cellular respiration, photosynthesis, heredity, molecular genetics, evolution & ecology.

The laboratory portion of the course includes an introduction to the microscope, detailed study of cells and tissues, a survey of the microorganisms, plants, and animals that comprise the 5 Kingdoms of life, and a detailed dissection and study of the fetal pig. Emphasis is on critical analysis and the diversity of life.

**The Biology 3-A Lecture meets 3 hours per week and is a 3-unit course.**

**The Biology 3-B Lab meets 3 hours per week and is a 1-unit course.**

**You will receive a separate grade for each.**

**It is not necessary to have the same instructor for both.**

**We recommend that you take both the same semester.**

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

- (1) the scientific method, its applications & limitations
- (2) the principal characteristics of living organisms
- (3) the levels of organization of matter, from atoms to biomes
- (4) the mechanisms of evolutionary adaptation
- (5) the principal categories of chemicals that both make-up living organisms
- (6) the production of energy by cells and how it is used
- (7) interrelationships of organisms with each other and the environment
- (8) how cells reproduce and how organisms reproduce
- (9) the inheritance & transmission of different genetic traits
- (10) the structure & action of genes
- (11) the structure & function of the different organ systems in the body

**Required & Recommended Books:**

S.A. Fink; **Biology Lecture Outline**; BioBooks Pub.; 2014

S. Mader; **Biology; Inquiry Into Life**; McGraw-Hill Publishers; 2014 (14th ed) [ISBN 07-352552]

**Lecture Examination Schedule (Tentative):**

EXAMINATION 1.....	March 4 (Wed)
EXAMINATION 2.....	March 30 (Mon)
EXAMINATION 3.....	May 4 (Mon)
FINAL EXAMINATION..... (comprehensive)	June 3 (Wed)

**Computation of Course Grade:**

2 (of 3) Examinations.....	60% of Course Grade
Final Examination.....	40% of Course Grade

Assuming you take all 3 lecture examinations, the lowest one will be dropped, and the average of the 2 highest will count 60% towards your Course Grade. . About 55% of the questions on the Final Exam will come from the previous 3 lecture exams.

All examinations will consist of objective-type questions (ie., True/False; Multiple Choice; and Matching questions) 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. 1 pencil with a good eraser** for each examination for computer scoring. The Final Examination is comprehensive for the entire semester. **There are no make-up examinations.**

**Grading Policy:**

89 - 100%	A
78 - 88%	B
62 - 77%	C
50 - 61%	D
below 50%	F

**Practice Quizzes & Exams & Videos:**

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

**[http://highered.mcgraw-hill.com/sites/007340344x/student\\_view0/index.html](http://highered.mcgraw-hill.com/sites/007340344x/student_view0/index.html)**

**[http://www.uwgb.edu/markerj/P\\_QZ/Humbio\\_QZ/QZ\\_PAGE.HTM](http://www.uwgb.edu/markerj/P_QZ/Humbio_QZ/QZ_PAGE.HTM)**

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

**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. 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 Friday, May 8.**

(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 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. Increase your studying 1 week before a scheduled Exam!!**
- 7. Anything you turn-in (exams, lab reports) should look neat.**

**TENTATIVE SCHEDULE OF TOPICS**

(schedule subject to change)

<b>Week</b>	<b>Day</b>	<b>Date</b>	<b>Lecture Topic</b>	<b>Mader Textbook 14<sup>th</sup> ed</b>
<b>1</b>	<b>M</b>	<b>Feb 9</b>	<b>Introduction Scientific Method</b>	<b>chapter 1</b>
	<b>W</b>	<b>Feb 11</b>	<b>Scientific Method Characteristics of Living Organisms Evolution by Natural Selection</b>	<b>chapter 1 chapter 1 Chapter 27 Pages 534-544; 546-551 p. 558</b>
<b>2</b>	<b>M</b>	<b>Feb 16</b>	<b><u>NO CLASS</u> PRESIDENT'S DAY</b>	
	<b>W</b>	<b>Feb 18</b>	<b>Characteristics of Living Organisms Evolution by Natural Selection  Atoms  <u>[FRIDAY Feb 20: Last Day to Avoid a "W" on Permanent Record]</u></b>	<b>Chapter 1  Chapter 27 Pages 534-544; 546-551 p. 558  chapter 2</b>
<b>3</b>	<b>M</b>	<b>Feb 23</b>	<b>Atoms &amp; Molecules Radioactive Dating Thyroid Gland</b>	<b>chapter 2 page 21 &amp; page 538 page 393</b>
	<b>W</b>	<b>Feb 25</b>	<b>Atoms &amp; Molecules Radioactive Dating Thyroid Gland  Organic Compounds</b>	<b>chapter 2 page 21 &amp; page 538 page 393  chapter 2 pages 496-498</b>

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<b>4</b>	<b>M</b>	<b>March 2</b>	<b>Atoms &amp; Molecules Radioactive Dating Thyroid Gland</b>  <b>Organic Compounds</b>	<b>chapter 2 page 21 &amp; page 538 page 393</b>  <b>chapter 2 pages 496-498</b>
	<b>W</b>	<b>March 4</b>	<b><u>EXAMINATION 1</u></b>	
<b>5</b>	<b>M</b>	<b>March 9</b>	<b>Organic Compounds</b>  <b>Hormones Structure of ATP Structure of DNA</b>	<b>chapter 2  pages 395-396 page 41 &amp; page 102 pages 40 &amp; 504-506</b>
	<b>W</b>	<b>March 11</b>	<b>Organic Compounds</b>  <b>Hormones Structure of ATP Structure of DNA</b>	<b>chapter 2  pages 395-396 page 41 &amp; page 102 pages 40 &amp; 504-506</b>
<b>6</b>	<b>M</b>	<b>March 16</b>	<b>Cell Structure</b>  <b>Transport Across the Cell Membrane</b>  <b>Autolysis (Apoptosis)</b>	<b>chapter 3</b>  <b>chapter 4</b>  <b>pages 82-83</b>

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	<b>W</b>	<b>March 18</b>	<b>Cell Structure</b> <b>Transport Across the Cell Membrane</b> <b>Autolysis (Apoptosis)</b>	<b>chapter 3</b> <b>chapter 4</b> <b>pages 82-83</b>
<b>7</b>	<b>M</b>	<b>March 23</b>	<b>Cell Structure</b> <b>Transport Across the Cell Membrane</b> <b>Autolysis (Apoptosis)</b> <b>Endosymbiont Theory</b> <b>Biochemical (Metabolic) Reactions &amp; Enzymes</b>	<b>chapter 3</b> <b>chapter 4</b> <b>pages 82-83</b> <b>page 63</b> <b>chapter 6</b>
	<b>W</b>	<b>March 25</b>	<b>Biochemical (Metabolic) Reactions &amp; Enzymes</b> <b>Coenzymes</b> <b>Photosynthesis</b>	<b>chapter 6</b> <b>pages 266-273</b> <b>chapter 8</b>
<b>8</b>	<b>M</b>	<b>March 30</b>	<b><u>EXAMINATION 2</u></b>	
	<b>W</b>	<b>April 1</b>	<b>Biochemical (Metabolic) Reactions &amp; Enzymes</b> <b>Coenzymes</b> <b>Photosynthesis</b>	<b>chapter 6</b> <b>pages 266-273</b> <b>chapter 8</b>

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<b>Week</b>	<b>Day</b>	<b>Date</b>	<b>Lecture Topic</b>	<b>Mader Textbook 14<sup>th</sup> ed</b>
	<b>M</b>	<b>April 6</b>	<b>No Class: SPRING BREAK</b>	<i>“Celebration of the Vernal Equinox”</i>
	<b>W</b>	<b>April 8</b>	<b>No Class: SPRING BREAK</b>	<i>“Celebration of the Vernal Equinox”</i>
<b>9</b>	<b>M</b>	<b>April 13</b>	<b>Biochemical (Metabolic) Reactions &amp; Enzymes  Coenzymes  Photosynthesis</b>	<b>chapter 6  pages 266-273  chapter 8</b>
	<b>W</b>	<b>April 15</b>	<b>Cellular Respiration  Regulation of the Blood Sugar level</b>	<b>chapter 7  page 405</b>
<b>10</b>	<b>M</b>	<b>April 20</b>	<b>Cellular Respiration  Regulation of the Blood Sugar level</b>	<b>chapter 7  page 405</b>
	<b>W</b>	<b>April 22</b>	<b>Cellular Respiration  Regulation of the Blood Sugar level</b>	<b>chapter 7  page 405</b>
<b>11</b>	<b>M</b>	<b>April 27</b>	<b>Ecosystems Biomes Fossil Fuels</b>	<b>chapter 7  page 405</b>



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Week	Day	Date	Lecture Topic	Mader Textbook 14 <sup>th</sup> ed
	W	April 29	Ecosystems Biomes Fossil Fuels	chapter 34 chapter 35 pages 715-716
12	M	May 4	<u>EXAMINATION 3</u>	
	W	May 6	Reproductive System  <u>[LAST DAY TO DROP: FRIDAY MAY 8</u>	chapter 21 pages 416-425
13	M	May 11	Reproductive System	chapter 21 pages 416-425
	W	May 13	Reproductive System	chapter 21 pages 416-425
14	M	May 18	Reproductive System  Cell Division Chromosome Anomalies  Genetics	chapter 21 pages 416-425 pages 82-96 chapter 24 pages 492-495  chapter 23 pages 478-482
	W	May 20	Genetics  Molecular Genetics	chapter 23 pages 478-482  chapter 25 & 26

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<b>Week</b>	<b>Day</b>	<b>Date</b>	<b>Lecture Topic</b>	<b>Mader Textbook 14<sup>th</sup> ed</b>
<b>15</b>	<b>M</b>	<b>May 25</b>	<b><u>NO CLASS:</u> Memorial Day [Shavuoth]</b>	<b>chapter 23 pages 478-482  chapter 25 &amp; 26</b>
	<b>W</b>	<b>May 27</b>	<b>Genetics  Molecular Genetics</b>	<b>chapter 23 pages 478-482  chapter 25 &amp; 26</b>
<b>16</b>	<b>M</b>	<b>June 1</b>	<b>Viral Infections  Cancer  The Immune System</b>	<b>pages 590-695  pp. 515-518  chapter 13</b>
	<b>W</b>	<b>June 3</b>	<b><u>FINAL EXAM</u></b>	