

## MACOMB COMMUNITY COLLEGE - DIVISION OF ARTS AND SCIENCES

### BIOLOGY 1000 – C1617 (Fall 2015)

Location/Time: CJ – 107 MW 6pm – 7:55pm

CJ – 107 MW 8pm – 9:25pm

**INSTRUCTOR:** Professor T. Amann

Office J207

Office Hours: I will be available for a half-hour after class for any concerns/questions, or by appointment.

E-mail: [amannt@macomb.edu](mailto:amannt@macomb.edu) or [prof.amann@gmail.com](mailto:prof.amann@gmail.com)

Phone: 586-530-6433

Class Website <http://www.profamann.com>

Please leave a detailed message with your name, phone number and/or email and a brief description of your need.

### **TEXTBOOK RESOURCES AND REQUIRED MATERIALS**

- Textbook: Custom spiral **Mader “Biology, 11e” ISBN 9780078115851** (McGraw Hill)
  - Note: This version has a WOLF on the front. There is a version sold at the bookstore and online that is newer (and more expensive) You don't have to buy the newest version if you can find the “WOLF” edition (11<sup>th</sup> edition)
- Lab Manual: Custom loose-leaf Mader, “Lab Manual for Inquiry into Life, 14e” ISBN 9780078118999. This manual has a whale shark on its cover.
- 25 Scantron Forms (50 items per side-size)
- #2 pencils for quizzes and exams

(All of these are available @ MCC bookstore, Center Campus)

### **COURSE DESCRIPTION**

BIOL 1000 is an introductory lecture, discussion and laboratory course in basic biological principles aimed at the understanding of the life processes common to all living things. The major areas of emphasis include the physical and chemical basis of life, energy, reproduction, growth, development, heredity, evolution, and ecology. In the laboratory, the dissection of preserved specimens will be utilized to reinforce the learning of anatomical structures.

### **LEARNING OUTCOMES**

Students will demonstrate understanding of these major topics:

The scientific method and its application to problem analysis	Vertebrate body systems
Evolution as it applies to the unity and diversity of life	Organ systems and their role in homeostasis
Cell Theory	Cell division
The chemical basis of life	Mendelian genetics
Cell structure and function	Molecular genetics
Plant and animal organization	Biotechnology
Taxonomy	Common lab practices

**METHODS OF INSTRUCTION:** Lecture, Discussion, multimedia and laboratory.

**EVALUATION:** There will be eight **EXAMS** this semester. Four will be LECTURE exams and four will be LABORATORY exams. These will total 60% of your grade. Lecture exam format can be multiple choice, true-false, matching and short answer. You will have 1-hour and 40 minutes to complete each lecture exam. If you arrive to a lecture exam late, understand this is an interruption to everyone who has started the exam on time. You have until the last student starting the exam on time finishes.

Laboratory exams will be of a “lab practical” nature. Students will rotate from station to station with a time allowance at each station. Lab exams are therefore timed and everyone will finish at the same time. **If you arrive late to a lab exam, you will not be allowed into the exam and you will receive a zero.** They cannot be made up.

You may not leave the room during either type of exam and then re-enter to finish. Once you leave the room, it is assumed you are finished with the exam and you will not be permitted back into the classroom.

Exams will be returned to you in a timely manner for your own personal assessment at the next class period. However, both the scantron and the test must be returned to me after the allotted time. If I do not receive them back, you will receive a zero on your exam.

**QUIZZES AND ASSIGNMENTS:** There are 10 quizzes during the semester, which are worth 20% of your final grade. Your lowest quiz score will be dropped. There are also 10-12 random assignments given through the semester. These will be worth 20% of your grade. **You must be present in class to take part in quizzes and assignments. Assignments are not accepted late.**

The grading structure is as follows:

100-93% A	82-80%B-	69-67%D+
92-90%A-	79-77%C+	66-63%D
89-87%B+	76-73%C	62-60%D-
86-83%B	72-70%C-	Below 60% E

The final grade will be based on the weighted averages described above. No student will have their grades improved because they are close to a cut-off. Students who never attend class will receive an “NS” grade.

**MISSED EXAMS/QUIZZES:** Please do not miss an examination for lecture or lab. If you are not in attendance, a zero will be recorded as your grade.

Occasionally, there are some situations that are out of our control: A sudden illness, family death, accident, court appearance or other unexpected event may prevent you from taking an exam. Immediately contact me. If documentation can be provided, you may be allowed to take an alternate test. This exam will be essay-based and more time consuming than the original exam.

If a quiz is missed, the zero grade you earn will be the lowest quiz score. Therefore, it will be dropped and all others will then count. However, any further missed quizzes will result in zeroes for each one missed. They cannot be made up. Any “adjustment” points will not be credited to a student missing an exam.

In regard to “random” assignments, there will multiple types assigned. These must be done on time to receive credit and you must be in present in class to earn points for the due assignments and lab assessments.

If class is cancelled (i.e. snow storm, power outage, other) on a day with a scheduled exam/quiz, you can assume that the exam will take place on the next scheduled class date.

## **FORMAT OF CLASS AND ATTENDANCE**

On class nights, the first block of class will be primarily lecture/discussion based. Coming to class daily is required as attendance will be taken and you must be present to take quizzes for credit. Because of the scope and quantity of material covered, attending lecture (and lab) should be of the utmost priority.

The second block of our class is lab-based. Labs tend to be hands-on and cooperative. There will be numerous, hands-on dissections that will be done throughout our semester.

In the rare occurrence that you happen to miss a class, you are responsible for the material missed. You may want to exchange contact information with labmates for additional information.

Withdrawal from the course must be done according to MCC withdrawal procedure. If withdrawn previous to final date, the student will receive a grade of “W”.

If you have any questions regarding course material, procedures or grades – see me. I can't help you unless I know the problem.

## **CLASS PREPAREDNESS AND CLASSROOM BEHAVIOR**

Bring your course books with you, as we will refer to them frequently.

### **DO NOT IMPEDE MY ABILITY TO TEACH OR ANOTHER STUDENT'S ABILITY TO LEARN WITH DISRESPECTFUL BEHAVIOR.**

Please put all cellphones on SILENT MODE (NOT VIBRATE) and put them away during class/lab time. Choosing to text message during class will be considered disruptive to the class and may result in the student's dismissal from class for the remainder of the scheduled class period. (There will be breaks during class where you can take care of any communication with others.)

Sleeping during class time will not be tolerated. Sleeping students will be asked to leave the classroom.

There will be no eating or drinking in the laboratory.

Any student found mistreating or damaging equipment will be asked to leave the lab immediately. The student will be disciplined according to the guidelines in the student handbook. Laboratory equipment is expensive and students who damage it can be prosecuted for purposefully damaging the equipment.

## **ACADEMIC MISCONDUCT**

Any form of cheating during a test or lab practical will result in a ZERO. I reserve the right to ask students to change their seats/station during a lab or practical.

## **ADA NOTIFICATION**

Students requiring special assistance, including those affected by the American with Disabilities Act, should contact the Special Services Department, CG -131. I will then be informed of any special conditions pertaining to your learning.

## Tentative Semester Schedule

DATE	LECTURE TOPICS	LABORATORY
8/24	C1 What is biology + Homeostasis	Lab Intro/Rules/Microscopes
8/26	C2/C3 Chemistry	2 Metric Measurement/ Microscopy
8/31	C3 Biomolecules	3 Chemical Composition of Cells
9/2	C4 Cells	4 Cell Structure
9/7	Labor Day – No Class	
9/9	C4/C5 Cells + Membranes C24 Plants	9, 11 Org. of flowering plants
9/14	C31/C7 Animal Organization/ Cell Respiration	11 and 6 Animal Organization/Enzymes
9/16	C8 Cellular Respiration Photosynthesis	7 and 8 Cell Respiration (Fermentation) 7 and 8 Photosynthesis
<b>9/21</b>	<b>LECTURE EXAM UNIT 1</b>	
<b>9/23</b>	<b>LAB EXAM UNIT 1</b>	
9/28	C34 Digestive System Nutrition	12 Basic mammalian anatomy (pig)
9/30	C32 Cardiovascular System	14 Cardiovascular System (pig)
10/5	C33/35 Immune System Respiratory System	14 + Heart Dissection (pig)
10/7	C36 Excretory System	15 Urogenital (pig)
10/12	C37 Nervous System C38 Sense Organs	16 Homeostasis (13 <sup>th</sup> edition lab provided)
10/14	C41 Reproductive Systems C42 Animal Development	17 Nervous System and senses (Brain/Eye)
<b>10/19</b>	<b>LECTURE EXAM UNIT 2</b>	
<b>10/21</b>	<b>LAB EXAM UNIT 2</b>	
10/26	C9, 12.1-12.2 Cell Cycle /DNA	5, 22 Meiosis/DNA topics
10/28	C11 C10 Meiosis	5 (meiosis chromosome beads) Video: "Why Sex?"
11/2	C11 Genetics	20, 21 Patterns and Inheritance/Human Genetics + Genetics Pack
11/4	12.3-12.5 Molecular biology of the gene	20, 21
11/9	12.3-12.5 Molecular biology of the gene	19 Development (13 <sup>th</sup> edition lab provided) * Video: "Life's Greatest Miracle"
11/11	C14 Biotechnology	22 (307-311) + Video: "DNA: the secret of life"
<b>11/16</b>	<b>LECTURE EXAM UNIT 3</b>	
<b>11/18</b>	<b>LAB EXAM UNIT 3</b>	
11/23	Systematics, phylogeny, viruses, bacteria, archaea,	DNA Fingerprinting (overview and practice loading gels)
11/30	Protists/Fungi/Plants	24-29 +DNA Fingerprinting
12/2	Invertebrates Vertebrates	24-29 Taxonomy + Read Gels
12/7 and 12/9	Community Dynamics/ Ecosystems	24-29 Taxonomy
<b>12/14</b>	<b>LECTURE EXAM UNIT 4</b>	
<b>12/16</b>	<b>LAB EXAM UNIT 4</b>	