Course Description

My name is Mark Cooper and I will be the instructor for this course. Your study of biology will be an exciting and rewarding experience. This course is designed for science majors and will be taught at that level. My teaching philosophy is to make the class entertaining and fun. However, do not make the mistake of taking your studying in this course too lightly. Although this class is the introductory course into the biological sciences, it is not easy. If you are a science major looking to transfer to a four year institution, be aware my goal is to get you ready for higher level courses. I expect you to get, at the least, an equivalent course to those at a four year university and in many ways I expect more from you because of our smaller class sizes. For you to succeed in this course, you must attend class regularly, study often and effectively, and live a life that is conducive to learning (for example, you need to sleep, eat, work, etc. within your means!). Failure to meet these basic requirements will make success difficult for most. Again, Biology is an exciting but challenging class. DO NOT just memorize your notes. I expect you to understand biology. To understand biology, you need to ask questions, think, and analyze the material I give you. I suggest you read ahead in the textbook. I will be lecturing daily on what I feel is important, but having an awareness of the topic before lecture is extremely helpful. Also, reviewing your notes before class will also be very helpful. I am here to help you succeed. Do not hesitate to ask about topics you don’t understand. Some of the best help can actually come from other students. Forming study groups is often a beneficial method of study as long as the group is really serious about studying.

Supplies Needed

Authors: Reece, et al.

Required Extras:
5 - Form # 882 Scantrons
1 - Form # 884 Scantron
8 - Form # 815 Scantrons
These scantrons are to be brought in by 1/08/15. Failure to do so will result in you not being able to take quizzes and tests until they are received.

Pencils and pens for notes, tests and quizzes
Paper for notes
Calculator for labs, tests, quizzes
Enthusiasm
Thirst for Knowledge
Lecture Schedule

1) Jan. 5th (M) - Ch. 1-2 Introduction, Chemistry
2) Jan. 6th (T) - Ch. 3 Water
3) Jan. 7th (W) - Ch. 4-5 Macromolecules
4) Jan. 8th (Th) - Ch. 8 Metabolism & Enzymes
5) Jan. 12th (M) - Ch. 6 & 11 Cytology & Cell Communication
6) Jan 13th (T) - Exam 1 (Ch. 1-6, 8, 11) Lecture on Ch. 7 & Ch. 44 (pp. 953-959) - Membrane Structure & Function
7) Jan. 14th (W) - Ch. 10 - Photosynthesis
8) Jan. 15th (Th) - Ch. 9, Ch. 40 (pp. 860-872) - Cellular Respiration & Homeostasis
9) Jan. 19th (M) - Holiday: Martin Luther King Day
10) Jan. 20th (T) - Ch. 16 - The Molecular Basis of Inheritance
11) Jan. 21st (W) - Ch. 17, Ch. 18 (pp. 351-357), Ch. 20-21 - Protein Synthesis, Biotechnology & Genomes & their Evolution
12) Jan. 22nd (Th) - Ch. 12-13 The cell Cycle & Meiosis
13) Jan. 26th (M) - Exam 2 (Ch. 7, 9-10, 16-18, 20-21, 44) Lecture on Ch. 14 Mendelian Genetics
14) Jan. 27th (T) - Ch. 15 Chromosomal Basis of Inheritance & Genomes
15) Jan. 28th (W) - Ch. 46-47 Animal Reproduction & Development
16) Jan. 29th (Th) - Ch. 22 - Ch. 24, Descent With Modification & The Origin of Populations & Species
17) Feb. 2nd (M) - Ch. 25 The History of Life on Earth
18) Feb. 3rd (T) - Ch. 52 - Ecosystems
19) Feb. 4th (W) - Exam 3 (Ch. 12-15, 22-25, 46-47) - Lecture on Ch. 54 Community Ecology
20) Feb. 5th (Th) - Ch. 55 Restoration Ecology
21) Feb. 9th (M) - Ch. 53 Population Ecology
22) Feb. 10th (T) - Exam 4 (Ch. 23, 52-56)
23) Feb. 11th (W) - Ch. 56 Conservation Biology, Notes
24) Feb. 12th (Th) Lecture Final

Attitude and Success

This is a college level biology course and it is a difficult course. The study of biology, even at a general level, is very complex. I teach this class at a college level and I expect that you will study and prepare at a college level. I will not lower my standards just to make the class easy for you. If you have the attitude that this class (or the professor) is “not fair” or it is “too hard”, then your negative attitude will probably prevent you from passing this class. I also believe, if you a ways work hard, show up every day, come to my office hours if you need help, etc., you will pass this class without much of a problem. Remember, if nobody is passing the class, then it is probably my fault. But if YOU are not passing (but a lot of other people are) then it is probably your fault!

"We all learn best in our own ways. Some people better studying one subject at a time, while some do better studying three things at once. Some people do best studying in a structured, linear way, while others do best jumping around, "surrounding" a subject rather than traversing it. Some people prefer to learn by manipulating models, and others by reading."

Bill Gates
### Lab Schedule

1. Jan. 5th - No lab
2. Jan. 6th - Microscope, Scientific Method and Hypothesis Testing
3. Jan. 7th - Macromolecules
4. Jan. 8th - Enzymes
5. Jan. 12th - Cytology
6. Jan. 13th - No Lab
7. Jan., 14th - Transport
8. Jan. 15th - No Lab
9. Jan. 19th - Holiday: Martin Luther King Day
10. Jan. 20st - Photosynthesis
11. Jan. 21st - Respiration & Metabolism
12. Jan. 22nd - DNA Replication, Protein Synthesis and Biotechnology
13. Jan. 26th - No lab
14. Jan. 27th - Meiosis / Genetics
15. Jan. 28th - Embryology
16. Jan. 29th - No lab
17. Feb. 2nd - Taxonomy
18. Feb. 3rd - Ecology
19. Feb. 4th - No lab
20. Feb. 5th - Evey Canyon
21. Feb. 9th - Evolution / Population Ecology
22. Feb. 10th - Wildlife Sanctuary
23. Feb. 11th - Lab Final

### Important Due Dates

#### Test Dates
- Jan. 13th—Exam 1
- Jan. 26th—Exam 2
- Feb. 4th—Exam 3
- Feb. 10th—Exam 4
- Feb. 12th—Lecture Final

#### Lab Test Dates
- Feb. 11th—Lab Final

#### Paper Due Dates
- Jan. 20th—Paper I Rough Draft
- Feb. 2nd—Paper I Final Draft
- Feb. 9th—Ecology Paper
- Feb. 12th—Lecture Final

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### Research Paper

On the first day of lab, we will discuss the scientific method and hypothesis testing. We will demonstrate how to analyze data using a two-sample t test. During the next class meeting, you will be asked to turn in an idea concept for your first research paper. You will be expected to collect data and analyze it and then write a formal scientific paper on your topic as discussed in the first lab of the lab manual. When choosing a topic, I suggest you think about a topic that interests you (it will make the background search easier). Other considerations should include ease of data collection, the ability to do a t-test on the data collected, cost, and the availability of background and support data. I would like you to turn in your ideas next class meeting in the following format:

- **Your Name:**
- **Your Hypothesis:**
- **How you will Collect Data:**
- **I actually suggest you come up with several ideas and turn them in which will give you more options and feedback from me. Often students have great ideas that can be tweaked to work. Other times the ideas are great but too difficult or too expensive to perform.**

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*If we knew what it was we were doing, it would not be called research, would it?*

**Albert Einstein**

*Money won't buy happiness, but it will pay the salaries of a large research staff to study the problem.*

**Bill Vaughan**
Policy on Attendance

Since many of the questions on the quizzes and tests come directly from the lecture material, it is critical that you attend all class meetings. We will have quizzes or assignments due everyday and you will lose points if you are late or absent. All assignments are due at the beginning of the class and points will be taken off for late work. (See last page) If you must miss a class, it is your responsibility to get the notes from a fellow student. If your number of absences exceeds the number of hours the class meets in 3 weeks, you will be dropped from the class. Poor attendance in lecture or lab will lower your grade. After Jan. 28th, you cannot officially be dropped from the course. This is the last day you can receive a “W” (Withdrawal). After this date, you must be given a grade in the course and there are enough points left in the semester, it would be impossible to get a passing grade. Walking into class late is disruptive to me and other students. I know there are times when things happen that are beyond your control. However, if you are habitually late I will ask you to drop this class and take a class at a time that works better with your schedule. Once class begins, it is also disruptive to me and other students when an individual wanders in and out of the classroom. This is a classroom not a movie theater. If you have to leave class while it is in session leave permanently for that class period. I will not allow you to reenter the room. If you know you will have to leave, notify me ahead of time.

Policy on Academic Integrity

Cheating and Plagiarism are violations of the college’s policy and are considered serious offenses. The Department of Biological Sciences takes all incidences of academic dishonesty seriously and acts accordingly. I reserve the right to give an “F” for the assignment, test and/or class and the matter will be brought up to the Director of Student Affairs as stated in the school’s current College Catalog. This policy states:

1. No dictionaries, reference materials, or notes, may be used during any exam or quiz unless authorized by the professor.
2. No electronic devices, of any type, may be used during any exam or quiz unless authorized by the professor.
3. No talking, signaling, sharing of note cards, calculators or other materials is allowed during any exam or quiz, unless authorized by the professor.
4. Only the materials required or authorized for an exam or quiz should be put away as instructed.
5. Students may not leave the classroom during an exam or quiz unless authorized by the professor. If a student leaves the room without permission, the test or quiz will be forfeited at that time.

Biology Cheating Policy

WHAT IS CHEATING?

Some examples of cheating include, but are not limited to:

a. Plagiarism, which is the use of materials authored by another person or obtained from a commercial source or the use of passages without proper acknowledgment.
b. Having or using unauthorized materials during any exam or quiz.
c. Notes concealed in or written on clothing, hats, or skin (as examples).
d. Looking at another student’s work during any exam or quiz.
e. Changing answers on a returned exam in order to claim there had been a grading error.
f. Sharing any content of exams or quizzes with individuals who have not yet taken it.
g. Removing an exam or quiz from the classroom without the professor’s approval.
h. Taking photos of exams, quizzes, completed ScanTrons®, or exam keys.
i. Turning in work that was generated by other individuals or by the same individual but in a prior semester, including but not limited to: lab report data, lab report or homework questions, homework assignments, and extra credit assignments.
Policy on Cell Phone Use

Cell phones and cell phone etiquette has become a problem in the last several years. I am aware of different policies by different professors at this college, but I am informing you now that this is one policy in class I am adamant about. Ringing or vibrating cell phones in class have become a major distraction to your fellow students and to me. Texting or using apps in class is also a distraction and shows a lack of respect for me and your fellow students. I am now imposing a policy where if your cell phone goes off, you are found texting, or using apps during class, you will be asked to leave the room and will not be allowed to return until the next class break. If you must leave it on for emergency situations, you need to inform me before class. I will give you breaks during class. You may use your phone at that time. I expect your cell phones to be in your pocket, purse, or backpack at all other times. You are not allowed to have your cell phone out on the desk especially during a test. You must put in your backpack, purse, or on my front desk. If I see you with a cell phone on you during a test you will receive an F on that test.

TURN OFF YOUR PHONES!!!!

Grading

Final Grades:
- A = 810 points and above (90-100%)
- B = 720 - 809 points (80-89%)
- C = 630 – 719 points (70-79%)
- D = 540 - 629 points (60-69%)
- F = 539 points and below (0-59%)

Grades will be determined by a straight percentage of your final score. The point totals are a combination of both your lecture and lab scores.

GRADING: The semester grade will be determined by several factors: Midterm exams, quizzes, homework, article assignments and a comprehensive final exam. There will be one grade for both lecture and laboratory.

THERE WILL BE NO MAKE-UP QUIZZES OR EXAMS! Students who miss an exam will have that exam score replaced by the score on the final. Students who fail to take two exams will be dropped from the course.

Education seems to be in America the only commodity of which the customer tries to get as little as he can for his money

Max Forman

Point Values

Lecture Portion
- 4 Exams = 400 pts (100 pts each)
- 1 Final Exam. = 150 pts
- Lecture Quizzes & Homework = 26 pts
Total Lecture Points = 576 points

Laboratory Portion
- 13 Labs = 39 pts (3 pts each)
- 13 Lab Quizzes = 130 pts (10 pts each)
- Paper I (RD) = 15 pts
- Paper I (FD) = 35 pts
- Paper II = 50 pts
- 1 Lab Final = 55 pts
Total Lab points = 324 pts

*Class Total = 900 pts

*The total is approximate and can be changed if necessary.

You will be taking 4 lecture exams. The lowest exam can be replaced by the final. If you miss an exam that will be the grade replaced. The final is a comprehensive final and must be taken. I will drop the two lowest labs and the two lowest lab quiz scores. Any missed labs or quizzes will be among the dropped scores.
IMPORTANT DROP DATES AND HOLIDAYS

- Jan. 19th—Martin Luther King Day
- Jan. 6th—Last day to drop with a refund
- Jan. 12th—Last day to drop without a W
- Jan. 28th—Last day to drop with a W

Accommodations

If you feel that you have a disability that may prevent you from succeeding in this class please contact the DSP&S office. The office is located in the Student Services Building (9B).

http://www.mtsac.edu/dsps/

SLO Information

- http://www.mtsac.edu/instruction/outcomes/sloinfo.html

Late Assignments

I have been having an issue with students coming to class late and students turning in late work. I have found a need to develop a policy that is consistent and fair to all my students including those that get to class on time and those who turn in their work on time. A nonfunctioning printer is not an excuse. Work on your assignment early enough so if problems arise, you have time to deal with them. See the table to the right for my policy on assignments that are turned in after the beginning of the class the assignment is due.

On Time: Turned in at the beginning of class
100% - any missed questions

Turned in 5 minutes after class starts 80% - any missed questions

Turned in the day due but after class ends 70% - any missed questions

Turned in next class meeting 50% - any missed questions