

BIOLOGY 333

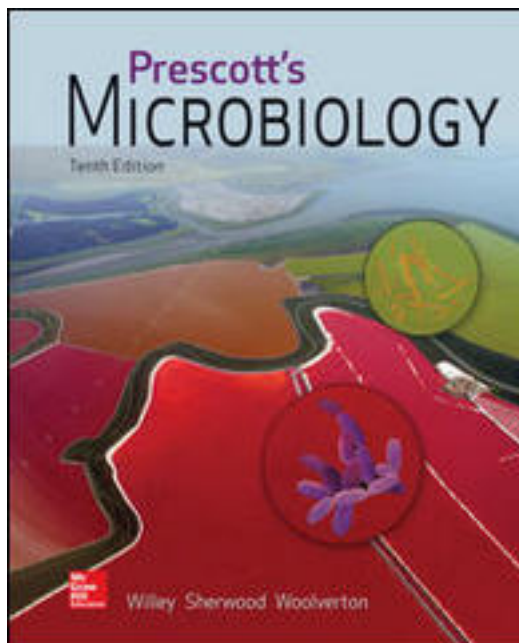
SYLLABUS and SCHEDULE

General Microbiology
Spring Semester 2019

Dr. Terese Barta
Office CBB 346
715-346-4241
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Lecture:
Tues/Thurs 3:00-3:50 pm
CBB 131

Labs:
L1: 10:00-11:50 T/R
L2: 1:00-2:50 T/R
CBB 366



Textbook: Prescott's *Microbiology*,
Willey, Sherwood & Woolverton. 10th
Edition. Wm. C. Brown Publishers.

Course description:

This course is designed to introduce you to the study of microorganisms. Although it will focus heavily on bacteria, other topics will be introduced including fungi, non-cellular infectious entities such as viruses, eukaryotic parasites, the immune system, and epidemiology. **Pre-reqs:** **Biology 101, 130 or 160, and Biol 201; Chem 106 or 117.**

Main Learning Objectives:

- Ask science-based questions and use critical thinking skills to investigate how and where microbes grow and interact with their physical and biological environment.
- Compare and contrast structural and biochemical features of prokaryotic cells, eukaryotic cells, and acellular infectious agents.
- Explain the physiological processes that are unique to microbial organisms.
- Describe the application of microbial genetics to biotechnology.
- Describe the impact of microbial processes to humans and the environment.

Office hours: Tuesdays and Thursdays 4:00-5:00 pm or by appointment.

Required Materials

- Lab Manual: *Microbiology Lab Manual* Spring 2019 edition. T. Barta. (Purchase in DUC Bookstore). Do not use a manual from a previous semester. Required on the first day of class.
- Safety goggles with covered vents. Bring to all lab sessions.
- Black permanent marker (such as a Sharpie®)

Recommended Supplement: *A Photographic Atlas for the Microbiology Lab*, by Leboffe and Pierce. (DUC bookstore or other sources like Amazon)

Other: Peer tutoring may be available. Watch your email for specific information.

A course site on Canvas will be used in this course.

<p>Attendance Policies</p>	<p>It is expected that you will <u>attend</u> and be <u>on time</u> for all the lecture and laboratory sessions. Attendance in lecture will improve your performance on exams. Although no formal attendance taking mechanism will be used in lecture, there will be unannounced quizzes that are worth points, and for which there are no make ups allowed. If you miss lecture for any reason, you will not be able to make up those points.</p> <p>Because of scheduling issues and the preparation time involved in setting up labs, there will be no make-ups for missed labs even if you are sick. If you know you must be absent, please check with me ahead of time about the possibility of sitting in during another lab section. If you miss a lab, you will be responsible for getting the material on your own. If there are critical skills you miss, you should make an appointment for an individual session.</p> <p>Absences due to participation in academically sanctioned events such as athletic events, academic conferences, or music competitions will be considered excused absences if written documentation is provided in advance.</p>
<p>Student Behavior Expectations</p>	<p>In order to keep the course running smoothly, and to ensure that all students have a good learning environment, I have the following expectations of students in this course:</p> <ul style="list-style-type: none"> • Arrive on time, and take your seat promptly, so that the lecture can begin on time. It is rude and disruptive to others to arrive late. • Please silence your phones and keep them put away during class unless needed for an in-class activity. • Please keep computers/tablets put away during lecture. • Please refrain from talking or having side conversations during lecture, unless part of an organized activity. • If you have a question during lecture, please raise your hand and wait to be called on. <p>Cell phones. Use of cell phones without permission is not permitted in lab. Repeated warnings may result in excusal from that day's class.</p>
<p>Exams</p>	<p>The following policies will be enforced during exams. Students must sit in alternate seats. Students must stow backpacks, books, and other personal items in the front of the room or side aisles. All materials must be put away before any exams will be distributed. Students must refrain from wearing hats, hoodie sweatshirts with pockets, and bringing water bottles or other beverages. Students may not leave the lecture hall until their exam is turned in (be sure to make use of the rest room before coming in to the exam). Students with wandering eyes will be asked to change their seat, and may be asked to surrender their exam.</p>

<p>Make-up exams and quizzes</p>	<p>Attendance at exams is required. Make-up lecture exams will be permitted ONLY for unavoidable emergencies provided that you have <u>notified me in advance</u>. <u>If you cannot call, please have someone else call as soon as possible</u>. Acceptable excuses for missing an exam include:</p> <ul style="list-style-type: none"> • personal injury, dental emergency, extreme illness or hospitalization, or that of an immediate family member for which you are responsible • death in the immediate family • verifiable court appearance or jury duty <p>Oversleeping is not a valid excuse for missing class, a lab test, or any exam. Neither is purchase of a plane ticket. Please do not ask me to allow you to take an exam early so that you can leave early for a trip or family vacation. In general, the reasons that you miss an exam should be the same as those for which you would miss a job interview or your best friend's wedding. Make-up exams are difficult to administer, and students usually do poorly on them. Make-up exam format may differ from the original exam. Because of this, it is best to avoid make up exams if you can. However, if you have a valid reason, you can take a make-up exam. In order to qualify for a make-up exam, you must provide a written, verifiable excuse from an authorized party (doctor, dentist, minister, etc.) within five school days of the missed exam. This excuse should clearly articulate that you were UNABLE to make it to class for the exam, including a timetable for restriction from work or school.</p> <p>Make-ups for exams will be held at noon on the Friday immediately following the exam. If you have an unavoidable conflict with this time, please inform me in advance in writing so that alternative arrangements can be made. As with the original exams, exemptions will made only in extreme cases. (Just because you planned to travel home early on Friday for the weekend does not constitute an acceptable "conflict" with the make-up time.)</p>
<p>Late policies</p>	<p>Late assignments will receive a 10% point reduction per day unless a written excuse (and a valid reason) is provided. After 5 days, assignment will not be accepted.</p>
<p>Academic Misconduct</p>	<p>You are encouraged to work and study with each other in order to get the most out of the course. Lab experiments also involve working in groups. However, you are expected to work independently on assignments, quizzes, and examinations. All acts of dishonesty in any work constitute academic misconduct. This includes, but is not limited to, cheating, plagiarism, fabrication of information, misrepresentations of a student's academic performance, and abetting any of the above. This includes submitting papers or reports that reflect the work of a group rather than the work of an individual. (Be very careful about this. Although you may work in groups in lab, the written work you submit to me MUST BE YOUR OWN INDEPENDENT COMPOSITION.) I will be using Turnitin.com to check for originality. The Academic Standards and Disciplinary Procedures of the University of Wisconsin will be followed in the event that academic misconduct occurs. Students should refer to Dean of Students website for more information (http://www.uwsp.edu/dos/Pages/Academic-Misconduct.aspx). I take academic integrity seriously. So should you. Sanctions for academic misconduct are likely to result in one or more of the following: repeating the test, receiving a zero on the test, a letter of reprimand in your academic file, or a failing grade in the course</p>
<p>Safe Learning Environment</p>	<p>UWSP values a safe, honest, respectful, and inviting learning environment. In order to ensure that each student has the opportunity to succeed, we have developed a set of expectations for all students and instructors. This set of expectations is known as the Rights and Responsibilities document, and it is intended to help establish a positive</p>

	living and learning environment at UWSP. More information is available at: http://www.uwsp.edu/stuaffairs/Pages/rightsandresponsibilities.aspx .
Lab Safety	You will be asked to read and sign a safety agreement the first day of lab. Your signature indicates your willingness to abide by the safety policies of this university. Please be aware that no eating or drinking is allowed in the lab. Also, students must wear closed-toed/closed-heeled shoes in the lab. Even in warm weather, students should also wear clothing that covers the legs to the ankles (unintentional spillage of cultures and chemicals can and does occasionally happen). Students must obtain eye protection (goggles) and bring them to all labs. Gloves will be provided. Lab coat or protective shirt recommended but students must be willing to leave it in lab for the semester.
General Safety	See the UWSP Emergency Management Plan at www.uwsp.edu/rmgt for details on how to respond to emergencies including fire, weather, or active shooter situations. Sign up for Pointer Alerts to receive information about active credible campus emergency situations that pose a threat and require immediate action. Sign up on the Risk Management page.
Disability and Assistive Technology Center	The Americans with Disabilities Act (ADA) is a federal law requiring educational institutions to provide reasonable accommodations for student with disabilities. For more information about UWSP's policies, visit: http://www.uwsp.edu/stuaffairs/Documents/RightsResps/ADA/rightsADAPolicyInfo.pdf . If you are registered with the Disability and Assistive Technology Center, please contact me as soon as possible to plan any course accommodations that may be necessary. If you have a disability but have not contacted the DATC, please call 715-346-3365 or visit 609 LRC to register for services.
Personal Emergencies	If you anticipate receiving an important call (for reasons like family health issues), please notify me before class. If your family needs to contact you during class in an unanticipated emergency, they should call the biology office at 715-346-4524 or Campus Protective Services, 715-346-3456 (especially after hours).
Communication	Please check email regularly for announcements. It is the primary way I will communicate with the class. If you need to email me, please be aware that I check email during normal working hours, but infrequently in the evening or weekends. Some issues are better discussed face to face instead of email. Email is not an appropriate or constructive way to complain about grades or other issues. Please come see me personally to discuss things.
Privacy issues	If you have questions on the way your exams or assignments are graded, please make an appointment to meet with me privately. I will not discuss your exam in front of other students. This includes mathematical errors. Point challenges must be made within a week or getting the exam back.

Students who are pregnant, may become pregnant, are immune-compromised, care for someone who is immune-compromised, or live with someone who is immune-compromised should consult with their physician about working with microorganisms. If your physician suggests alternative accommodations for working in the microbiology laboratory, please let me know. The following is a list of microorganisms/samples that you may be working with this semester. Some of these will only be demonstrations.

Bacillus subtilis
Clostridium butyricum
Corynebacterium xerosis
Enterobacter aerogenes
Escherichia coli
Klebsiella pneumoniae
Lactococcus lactis
Micrococcus luteus
Neisseria perflava
Proteus vulgaris

Pseudomonas aeruginosa
Pseudomonas fluorescens
Saccharomyces cerevisiae
Salmonella typhimurium
Serratia marcescens
Staphylococcus aureus
Staphylococcus epidermidis
Streptococcus gallolytica
Streptococcus pyogenes
Vibrio anguillarum
Raw ground meat and vegetable products

GRADING

Your grade is based on the following:

- 1) **Lecture exams** will cover lecture material and assigned readings. Exams will be held in the evenings, but exceptions will be made on a case-by-case basis for legitimate conflicts. The final exam will focus on the last unit of material but also there will be a 50-point cumulative portion of the exam. Final exam is Wednesday, 5/15, 2:45-4:45. Format for exams will consist of a combination of multiple choice, true-false, matching, and definitions/short answer questions.
- 2) **In-Class Quizzes.** Quizzes will be given during of some lectures on material from the previous and/or current lectures and/or reading. Quizzes will not be announced. In order to do well on these quizzes, it is essential that you STUDY EVERY DAY. You are also expected to skim the corresponding text chapter before coming to class, with an attempt to understand the material. Each quiz will usually be worth 3 points. Students absent for any reason will NOT be allowed to make up these points. There will be more than 40 points possible but the maximum possible score is 40 points. However, this will allow you some flexibility if you score less than a perfect score on some quizzes or have to miss one.
- 3) **Lab quizzes.** There are six lab quizzes, each worth 15 points plus a 10-pt quiz on lab math (last lab). Refer to the lab schedule for dates. These quizzes will cover theory and techniques from lab exercises, as well as actual and/or expected results. Lab quizzes cannot be taken early. The lowest lab score will be dropped. If you miss a lab quiz due to an absence, it will count as your dropped score.
- 4) **Lab Report on Koch's postulates (15 pts).** A report on a Koch's postulates experiment will be required. Directions will be provided separately. The assignment will be uploaded into D2L by a date to be determined.
- 5) **Practical lab exercises and assignments (PLEs).** There will be 4 practical lab exercises (PLEs) worth between 10 and 25 points each, for a total 60 points. The PLEs are explained in the lab manual. The due dates are listed on the Laboratory Schedule.
- 6) **Bacterial disease test (10 pts).** You need to know the full scientific name of about 45 bacterial disease agents covered in lecture or lab. The test will be part of the final exam. Start studying the list NOW.
- 7) **Pre-Lab and post-lab quizzes.** A pre-lab, or in some cases, post-lab quiz (3-5 points each for almost all labs) that covers introduction material will be taken on Canvas. The quiz is due prior to 10 am the day of lab. There are NO MAKE-UPS for these quizzes.

- 8) **Optional MMWR Report (25 pts).** This assignment will be optional but will count toward the total possible points in the course. Details will be explained in class.
- 9) **Extra Credit.** Because interesting opportunities for learning sometimes come up (visiting lecturers, seminars, special academic events, etc.), I may announce small assignments that will yield up to 5 points of extra credit. No more than 10 points extra credit will be added to your grade. However, I can not offer extra credit assignments to individual students as a means of grade improvement. Everyone's grade should be based on the same criteria. If you're having trouble with the material you're already expected to do, you should not be asking for additional work (especially if you want something "easy" to replace something "hard."). It is better to concentrate on your study habits and test-taking skills rather than look for an "easy fix." If you are having trouble in the course, don't wait-- GET HELP EARLY! Please come see me during office hours to discuss options for improving your grades other than doing "extra credit."

In addition to the point-generating activities described above, you are expected to have complete attendance and full attention and participation in class. You will also be evaluated on your ability to follow directions, practice safety, and properly use and care for the microscope and other equipment. Lack of attention to these things may result in deduction of points. I also reserve the right to add assignments or modify point values if they are to your benefit.

Sometimes, students get off to a rocky start. It's important to identify what is and is not working for you and to make corrections to your study habits if your performance indicates that you're not succeeding. To motivate you to do that, I will award bonus points for improvements in exam performance from Exam I to Exam II.

- a) For improvements greater than 5% of the total exam score, I will award additional bonus points totaling 50% of the difference between the two scores. For example, if you score 50/75 (67%) on Exam I and 60/75 (80%) on Exam II (13% improvement), you will receive 5 bonus points.
- b) For any improvement equal to or greater than 2 points, but less than 5% of the difference, you will receive 2 bonus points.

Points Breakdown

Online Chemistry quiz	10 pts	10 points
Lecture Exams	2 x 100 and final, 150 pts	350 points
Lecture Quiz points	up to 30 pts	30 points
Lab Quizzes	5 highest x 15 pts	75 points
Math Quiz	10 pts	10 points
Koch's Lab Report	15 pts	15 points
Bacterial quiz	10 pts	10 points
Practical Lab Exercises	60 pts	60 points
Pre/Post lab quizzes	75 pts	75 points
(Optional Report	25 pts	25 points)

TOTAL

635-660 points*

Total may change slightly. I reserve the right to add additional short assignments (worth up to 10 points each) if they are to your advantage and aid in meeting learning objectives.

Grading Scale

> 92% = A	88-89.9% = B+	78-79.9% = C+	68-69.9% = D+
90-91.9% = A-	82-87.9% = B	72-77.9% = C	60-67.9% = D
	80-81.9% = B-	70-71.9% = C-	< 60 % = F

Your grade in this course is percentage of total points possible that you earn. Because of the bonus points available on quizzes and exams, there will be no “rounding” up of grades if you are below a point cut-off. The overarching principle in my grading philosophy is rewarding student learning, even if it occurs on a schedule that is different from my expectations. Therefore, there are elements built into this course that allow you to improve your grade.

I do not “curve” exams or grades because all students deserve to have achievement standards to that do not depend on the relative performance of classmates. Curving also forces students into certain grade categories (limiting who can get an "A" to only the top 7% of the class. (the next 24% must receive a "B," the next 38% must receive a "C," etc. This also means the bottom 7% must fail!) Curving also discourages cooperative learning. Finally, I cannot give you a higher grade if you tell me you “worked hard” because *I have no way to objectively measure anyone’s perceived level of effort.* Please realize that **there are no additional points that can be added after the final exam.**

FINAL EXAM: Wednesday, May 15, 2:45-4:45 pm. No exceptions unless student can document three exams scheduled on the same day.



“When observation is concerned, chance favors only the prepared mind.”
--Louis Pasteur

Grade record

You can use this to keep track of your percentage of points in the course.

EXAMS

Exam I	_____ /100	Online Chemistry Quiz	_____ /10
Exam II	_____ /100	Lecture Quiz total	_____ /30
Final Exam	_____ /150	Assignments:	_____ /_____
Total	_____ /350	Bonus points	_____
Bacteria Quiz	_____ /10	Optional report	_____ /25

LAB QUIZZES

Quiz 1	_____ /15
Quiz 2	_____ /15
Quiz 3	_____ /15
Quiz 4	_____ /15
Quiz 5	_____ /15
Quiz 6	_____ /15
TOTAL (5 highest)	_____ /75

PLEs/LAB REPORTS

Koch's Postulates	_____ /15
PLE 1	_____ /10
PLE 2	_____ /10
PLE 3	_____ /15
PLE 4	_____ /25
TOTAL	_____ /75

Pre/Post Lab Quizzes _____ /75

TOTAL _____ /635 (not included added assignments or optional report))

_____ /660 (if doing optional report, not including extra assignments)

Lecture Schedule (may be adjusted if needed)

<i>Week</i>	<i>Date</i>	<i>Topic</i>	<i>Text Reading</i>
1	T 1/22	Course Introduction; Scope of Microbiology	
	R 1/24	Evolution of Microorganisms History of Microbiology as a Science	Chap. 1: 2-9;11-17
2	T 1/29	Prokaryotic cell organization	Chap. 3
	R 1/31	Cell structure, continued	Chap. 3
3	T 2/5	Cell structure, continued	Chap. 3
	R 2/7	Endospores; Archaea Cell Structure	Chap 3 (3.9), Chap 4
4	T 2/12	Bacterial cell growth & mathematics of growth	Chap. 7: 132-137
	R 2/14	Intro to metabolism: Enzymes, Energy concepts	Chap. 10
5	T 2/19	Carbohydrate metabolism, Glycolysis; carbohydrates other than glucose	Chap. 11: 229-235; 248-249
	R 2/21	Aerobic & anaerobic respiration	Chap. 11: 236-245
6	T 2/26	Fermentation; catabolism of proteins & lipids	Chap. 11: 245-249
	R 2/28	Central Dogma: Gene expression in bacteria	Chap 13: 298-316
7	T 3/5	Bacterial gene regulation	Chap. 14: 321-328; 337-339
	R 3/7	Mechanisms of Genetic Variation: mutations, plasmids, transposable elements	Chap. 16: 370-377, 382-384
8	T 3/12	Mechanisms of Genetic Variation: conjugation, transformation, transduction	Chap. 16: 384-397
	R 3/14	Genetic Biotechnology: DNA cloning; Polymerase Chain Reaction	Chap. 17: 400-403; 406-410
10	M 3/18-24	SPRING BREAK – NO CLASS	
	T 3/25	Bacterial Diversity: Archaea	Chap. 20
	R 3/27	Bacterial diversity, cont. (Eubacteria)	Chaps. 22-24 (parts)
11	T 4/2	Bacterial diversity, cont. (Eubacteria)	“
	R 4/4	Intro to Viruses, other acellular infectious entities	Chap. 6
12	T 4/9	Virus reproduction strategies	Chap. 27, Chap. 38
	R 4/11	Normal Microbiota of the Human Body	Chap. 32
13	T 4/16	Immunology: innate defenses	Chap. 33
	R 4/18	Immunology: innate defenses, cont. to adaptive defenses	Chap. 33, 34
14	T 4/23	Immunology: adaptive defenses	Chap. 34: 736-759
	R 4/25	Pathogenicity & virulence	Chap. 35: 771-781
15	T 4/30	Antisera and Vaccines	739-40; Chap. 37: 818-822
	R 5/2	Antimicrobial Chemotherapy	Chap. 9
16	T 5/7	Epidemiology	818-822
	R 5/9	To be determined	

***Lecture Exams evenings, 6:00-7:30 pm, Thurs. 2/28 and 4/11 (Room to be announced).**

Spring 2019 Lab Schedule

Labs are designed to be completed within the 1 hour-50 minute period. Preparedness for lab and efficient work habits on your part are essential to making that a reality. You are expected to read through the lab exercise(s) in the manual before coming to lab. Experimental results will usually be recorded and discussed during the following lab session.

Proper safety precautions and respect for others in the lab is paramount. Careless or sloppy work in the laboratory will not be tolerated. Students who demonstrate careless work that endangers themselves or others in the lab will lose points in the course, and if the behavior continues, could be asked to withdraw from the course.

The **lab quizzes** are given at the beginning of the period (dates noted below).

Week	Dates	Day	Lab Exercises
1	Jan 22 Jan 24	T R	Lab Introduction; Scientific method (handwashing experiment) Microscopes & Measurement
2	Jan 29 Jan 31	T R	Culture Media Preparation Microbes in the Human Environment; Aseptic Technique & Culture Transfer Methods
3	Feb 5 Feb 7	T R	Quiz 1 ; Observing Growth and Colony Morphology; Start Koch's postulates experiment Simple Staining & Cell Morphology
4	Feb 12 Feb 14	T R	The Gram Stain Acid-fast, Endospore & Capsule Staining
5	Feb 19 Feb 21	T R	PLE 1: (Morphological unknown) ; Quantitation of Microbial Populations Quiz 2 ; Relationship of Oxygen to Growth; Bacterial Motility
6	Feb 26 Feb 28	T R	Environmental Parameters of Growth: Temperature, pH, Osmosis Control of Microbial Growth (Heat & UV); <i>PLE #1 due</i>
7	March 5 March 7	T R	Chemical Control of Growth Quiz 3 ; Selective/Differential Media
8	March 12 March 13	T R	Biochemical Characterization & Differentiation of Bacteria Complete Biochemical Characterization
9	March 19 March 21	T R	SPRING BREAK-No class
10	March 26 March 28	T R	Bacterial Genetics: pGLO Transformation Bacteriophage
11	April 2 April 4	T R	Quiz #4 ; Medically significant bacteria: The Enterics Medically Significant Bacteria: The Cocci
12	April 9 April 11	T R	Microbial Flora of the Mouth (Dental Microbiology); <i>Inoculate fungi for next week</i> Chemotherapeutic Agent Testing: Kirby Bauer Test and Minimum Inhibitory Concentration
13	April 16 April 18	T R	Quiz #5 ; The Fungi: Yeasts & Molds; PLE 2 (streak plate) Soil Microbiology
14	April 23 April 25	T R	Microbiology of Water Food Microbiology
15	April 30 May 2	T R	PLE4: The Final Unknown (Gram stain and inoculate media) Dichotomous key due Complete tests on final Unknown; PLE 3: Serial Dilution Plating
16		T R	Tracking Disease Outbreaks (ELISA); Complete PLE 3 Quiz #6 with Math Quiz ; Final unknown report due; Lab check out

SUCCESS IS A CHOICE!

- **Make learning your top priority.** Even if you have a job outside of school, college is a full-time job. It is your career. Make the most of your tuition dollars.
- **Come to class every day.** Be there in mind as well as body. Don't rely on someone else's notes to learn what was important.
- **Take good notes.** The quizzes and exams will be based on your notes, so taking good notes is important. Develop a good shorthand technique that works for you so you can concentrate on what's being said. Leave lots of space for adding and clarifying things during review. Don't try to get down every word on the slides. You can get that later. Takes notes on what is being explained.
- **Study every day.** Plan on spending at least 1-2 hours per day per hour of class time. Also, research has shown that people learn better by studying intensively for short intervals frequently, compared to longer periods on a less frequent basis.
- **Study your notes when they are fresh,** i.e., as soon as possible after class even if only briefly (to get material from short-term memory into long-term memory).
- **Study in an active manner.** Just re-reading notes gives you a false sense of familiarity. Analyze them; quiz yourself, make comparative tables, term lists, one-page summaries, etc. Practice information retrieval. I do not recommend note cards because they fragment information rather than connect it.
- **Put your cell phone away while you are studying.** Texting and calling while studying interferes with your ability to concentrate and learn. There is no such thing as "multi-tasking."
- **Study to LEARN, not to just to pass the test.** Trying to study what you think will be emphasized on the test is counterproductive. The more you understand, the better you will do.
- **Find a study group or study partner.** You can quiz each other and help each other learn.
- **Spend your time in lab wisely.** Really think about the material in class and try to understand it. Think about the experiment you are doing. Ask questions. Knowledge is something that is built upon, not just acquired. Don't rush through the experiments just to get out of lab early.
- **Study your lab notes as much as your lecture notes.** Many students mistakenly think lab is a "supplement" to lecture. It is equally important. Use the lab intro PowerPoints.
- **If you need help, get it *right away*.** One of the biggest mistakes students make is waiting too long to get help. Please see me right away if you are having trouble understanding the material. I will do whatever I can to help you find the best way to comprehend the subject.
- **Keep a regular schedule, exercise, get enough sleep, eat a sensible diet, and stay sober. Seriously.** An all too common consequence of alcohol use is the inability to keep up on academic responsibilities. Research shows a strong negative correlation between alcohol and grades. Students with D/F averages consume 6.4 more drinks per week than "A" students. And even "B average" students drink an average of 1.1 more drinks per week than A students.