Angelo State University
BIO 1407 - Principles of Biology I
Fall 2017

INSTRUCTOR CONTACT INFORMATION:
Dr. Russell Wilke
Office: CAV 102-R
Phone: 325-486-6638
Email: rwilke@angelo.edu (preferred contact) type 1407 in subject line
Office hours: TR 2-3:30, WF 9-10, W 1:30-3:30 and by special appointment. To make an appointment send a business professional email requesting an appointment that includes your full name, class day and time, and your ASU ID#.

LEARNING OBJECTIVES AND NATURE OF THE COURSE:
This course introduces the integration between structure and function of biological organization. You will be asked to use processes of science to apply principles of evolution, genetics, diversity, and ecology to living systems. Observation, experimentation, and investigation are emphasized. Biology 1407 requires a conceptual understanding of the material rather than the simple memorization and regurgitation of facts. This course will challenge you to analyze and apply information, solve problems, and make connections different from the context in which they were learned. These are critical skills in biology.

This course is intended for Biology majors and minors or those for which it is a degree requirement. It is not recommended for non-majors to fulfill a general education requirement for a laboratory course.

Lecture Course Materials (required):

  - Options for purchasing the Book with Connect Access Card From the ASU Bookstore or online
      ($116.00 ASU Bookstore price may vary of purchasing online)
  - NOTE: with this option, when you set up your Connect Access through BlackBoard you will be given the option of purchasing a loose leaf copy of the textbook for an additional fee. This will allow you to bring only the chapter or pages from the chapter you need to class with you.
  - You may also purchase a hardback version of the textbook online: ISBN10: 007802420X | ISBN13: 9780078024207
    NOTE: You will ALSO need the Connect Access card from Option 2 above if you choose to purchase the textbook.
- TopHat Access: Information concerning purchasing this service will be provided during the first week of classes. For this REQUIRED program you will need:
  - TopHat Access ($32.75 for 1 semester access from ASU Bookstore. May be purchased online directly from TopHat for 1 year unlimited (as many classes as necessary) use OR 1 semester unlimited OR Lifetime. Each of these options are priced depending on how long you will use it. There are several courses at ASU that use this same service. The online purchase will be more economical over the long run.
  - A Digital device with wireless capability (cell phone, tablet, laptop).
    - If you do not have texting capability on your phone or do not own a tablet or laptop with wireless capability, please contact Dr. Connie Heimann (cheimann@angelo.edu) so that she can assist you. ASU provides wireless service to you for no additional charge.

Note: We will be using this same book and service for BIO 1406 in the Spring...so those of you taking both semesters of the course will be able to use the same book and services for both semesters.

Lab Course Materials (required):
- Heimann C.P. and D.P. French. 2017. Investigating Biology. FountainHead Press: Southlake TX. This book may not be available in the bookstore until after the first week of classes. Any lab materials you will need prior to the arrival of the lab manual in the bookstore will be provided to you as a free download from BlackBoard.
- Access to your ASU P: drive OR Flash (USB) drive
COURSE IDEA OBJECTIVES:

- Gain factual knowledge (terminology, classifications, methods, trends)
- Learn fundamental principles and theories
- Learn to apply course material (to improve thinking, problem solving, and decisions)
- Acquire skills in working with others as a member of a team

To achieve course objectives (see additional objectives on the last page of the syllabus) and help maximize your learning, it is vital that you attend class, come prepared, and study the material every day (more about this under student responsibilities).

METHODS OF ASSESSING OBJECTIVES: The student learning outcomes will be assessed by exams, tutorials, lecture activities, and the laboratory.

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<thead>
<tr>
<th>Component</th>
<th>Maximum Points</th>
<th>Grading Scale</th>
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<tbody>
<tr>
<td>Class participation Activities &amp; Homework</td>
<td>255 pts from many 1 to 20 pt activities/homework/quizzes</td>
<td>A = 90 to 100% (900-1000 pts)</td>
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<tr>
<td>Exam 1</td>
<td>70</td>
<td>B = 80 to 89.9% (800-899.9 pts)</td>
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<tr>
<td>Exam 2</td>
<td>80</td>
<td>C = 70 to 79.9% (700-799.9 pts)</td>
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<tr>
<td>Exam 3</td>
<td>80</td>
<td>D = 60 to 69.9% (600-699.9 pts)</td>
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<tr>
<td>Final Exam</td>
<td>175</td>
<td>F = &lt;60% (0-599.9 pts)</td>
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<tr>
<td>Laboratory</td>
<td>350</td>
<td></td>
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<tr>
<td>Total Points***</td>
<td>1000</td>
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Lecture Activities & Homework: A maximum of 255 points is allowed from lecture activities and both online and offline homework; however, there will be opportunities to earn 265-300 of these points. Lecture Activities are NOT attendance points, but you must be present to earn them–there are no make-ups. Participation is expected. If you do not earn points on a given assignment, you will have an opportunity to earn them on another, but are still responsible for the material covered in the assignment. Many homework assignments are on-line so that you can work on them at your convenience and get immediate feedback on your learning.

All exams, including the final exam are cumulative (i.e. questions on Exam 3 will include material covered on previous exams). Questions typically require interpretation of data and application of concepts rather than rote memory. While emphasis will be placed on material specifically discussed in lectures, exams also include questions covered in other assigned materials, readings and lab. Exam questions will be all objective questions (multiple choice).

Make-Up Exams:

- No make-up Exams will be given.
- If you miss one of the first four exams, the final exam will be used to determine a substitute grade for the missed exam. For example, if exam scores are 55, 0, 64, and 122.5. The missed exam score will be adjusted to “make-up” the missed points. To calculate this, your score on the final exam is divided by the number of points available on the final multiplied by 100. For example, 122.5/175 *100=70%. 70% of 80 (the # of points available on exam 2) is 56 points which would be substituted for your score on exam 2.
- You will only be allowed to “make-up” one exam during the semester by substituting it with a percentage from your final exam. If you miss more than one exam, for any reason, you will not pass this course.
- Everyone MUST take the final exam. You WILL NOT pass this course if you miss the final exam.
- If you have taken exams 1, 2, 3, & 4, the grade on your final exam (if higher than your lowest test score) will be used to replace your lowest exam score as calculated above. You may replace only one exam score. If you have missed an exam, you do not have this option.

See the Exam Re-grading Procedure on Blackboard if you believe your score is in error or have found an answer that has been misgraded.

The deadline for requesting any recalculating or re-grading is 5pm 48 hours following the return of the exam. No exceptions.

Remember that 1 point change in a grade is at best on 1/4th of a point on your final course average. Remember that the exams are photocopied before being returned to you (I will know if an answer has been changed after it was graded).
***What do you do if you miss a lecture activity, homework assignment, or group exam assessment?
In the lecture portion of the course, 265-300 points for lecture activities and homework will be offered, although only 255 points will be used in calculating your grade. We use this as a way for students to accumulate points even if they have to miss a class for ANY reason. Use every opportunity early and throughout the semester to complete these activities to be sure that you will have 255 points by the end of the semester. **No last-minute offers of extra-credit are made in this course, so please don’t ask.** It wouldn’t be fair to your classmates that have done all the work to earn their grade. Pay your premiums - use the extra-credit opportunities early in the semester!

All grades will be calculated in the same way, regardless of extenuating circumstances or any reason not related to your actual performance in the course. However much I may sympathize with your personal circumstances, I never consider them to be a basis for grade assignments. The activity and homework points serve as an extremely generous, built-in curve. I strongly encourage you to take advantage of them when they become available because once assigned they cannot be made up. Therefore you should always attend class and strive to do your best, so that you may **earn** the grade you want. It is your responsibility to keep up with your point total. **Don’t worry I will help you, if you just ask!**

**Laboratory:** This portion of the course offers you the opportunity to explore and apply concepts to answer research questions. Success in the laboratory involves teamwork in designing and conducting experiments, performing pre-lab and lab activities and report writing. In addition, you will conduct activities designed to develop and improve critical thinking and problem-solving skills related to the topics discussed in lectures. **You must earn a minimum of 60% of the lab points (210 out of 350) to pass the course!!**

**You WILL NOT pass the class if you fail the lab!!**

**STUDENT RESPONSIBILITIES:**

**Attendance:** You are expected to attend all scheduled class meetings. You are expected to arrive on time and stay for the entire period. Missed lecture activity points CANNOT be made up. Attendance will be checked at each class meeting via the Top Hat system at random. Please inform me well ahead of time if you will need to be absent for any reason including religious holidays. **NOTE:** You are **NOT** automatically dropped if you stop attending class. **November 3** is the last day to drop a course.

**Academic Honesty and the ASU Honor Code:** Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding the Academic Honor Code and the ASU policies on academic dishonesty, which is contained in both print and web versions of the Student Handbook. The penalty for ANY act of dishonesty in this class, including any form of cheating or plagiarism: 1) is a grade of ZERO on the assignment and, 2) disciplinary action as warranted in accordance with university guidelines. Please do NOT jeopardize your career; it’s not worth it.

**Accommodations for students with disabilities:** All students at Angelo State must have the capacity to undertake, with reasonable assistance from the faculty and administration, the academic challenges necessary to fulfill the academic requirements for the degree for certification programs that they are pursuing. If you have a disability and need special accommodations of any nature, you should contact the Student Life Office (Garden Level, University Center, (325) 942-2191 or Student-Life@angelo.edu). I will be happy to make accommodations for you based on the recommendations from the Student Life Office. Please make your request early in the semester to allow time for appropriate arrangements.

**Religious Holy Day:** A student who intends to observe a religious holy day during the semester should make that intention known in writing to the instructor during the first week of the semester and one week prior to the absence. If this submission is completed, a student who is absent from classes for the observance of a religious holy day shall be allowed to take make up missed exams or assignments scheduled for that day in accordance with syllabus policy.

**Class Preparation Blackboard (Bb) and Connect Plus:** Much of your learning about biology must take place outside of the formal class meetings. You should be a frequent visitor to the course Blackboard site ([http://blackboard.angelo.edu](http://blackboard.angelo.edu)). Please check Bb regularly. All of the material you need to prepare for class is available from the Bb site: reading assignments for each unit, lecture presentations, homework assignments, in-class activity handouts, helpful handouts (for some concepts), and links to outside review materials (for some concepts). If you are a first time Bb user, your password is your ASU PIN (usually your 6-digit birth date unless you have changed it). You can change your password and update your personal information by adding your email address and a telephone number where you can be reached this semester. Many of the homework assignments are available through Bb and link directly to the online homework system Connect Plus.

**TopHat:** TopHat is a web based platform that allows you to answer questions in class that are projected on your personal device (cell phone, laptop, or tablet). It allows you to check on how you are learning and helps your instructor identify when the class may be doing great or struggling a bit with a concept. We use TopHat because it lets us see how students are doing with a particular concept or idea--in real time! We use TopHat in class so that you can answer questions and see the results. If the class is doing great, we
move on to the next subject for the day. If not, it lets us help you learn what you might be struggling with before we move on to the next activity or topic. We also will use it for quizzes in class.

Please register before the end of the first week of classes. You should have received an email from your instructor with instructions for enrolling in their specific TopHat course. If you did not receive this email, please contact your instructor IMMEDIATELY to request the link to the TopHat website. Otherwise, complete the information to pay with a credit card. It is important that you sign up for your lecture instructors website or you will not be able to participate (and earn points) in class.

Class Preparation ASU email: Since class announcements will be routinely distributed via email, you will need to regularly check your ASU email account. Please check you ASU email daily. All course correspondence will be through your ASU email only (I will not respond to email from other accounts). Please see the email policy in Bb for more details. ASU provides Internet and email services to you at any of the computer labs on campus. Call 942-2911 to set this up if necessary.

Lecture: A typical class meeting will combine mini-lectures, discussions, group activities, multimedia presentations, and other demonstrations and activities to give you an opportunity to learn biological concepts in as active a manner as possible. Each segment of the course is structured around one or more conceptual units that can be interpreted or solved by applying selected biological concepts. You can accumulate up to 255 points toward your final semester grade from unannounced group or individual in-class activities (no make-ups) or homework assignments. We will also use Top Hat questions for in class activities.

As a member of the class you are also invited to:
• Ask questions, no matter how naive they seem to you. I will do my best to offer you a satisfactory answer. The only stupid question is one that isn’t asked.
• Ask for help and/or clarification. Don’t suffer in silence. I can’t help you learn if I don’t know you’re confused or if my instructions are unclear.
• Use your group members as study partners! Review exam review questions (on Bb) or notes together. Group learning can be powerful and is often beneficial in a course like biology.

Course Groups: While taking exams is an individual activity, almost all other activities will require your participation with other class members. We will form groups the first week of class. Many of the lecture exercises will be solved collaboratively.

A successful student in Principles of Biology should be able to achieve the following course and state core related learning outcomes:
- describe, explain, and predict natural phenomena using the scientific method = CT1, EQS1, EQS2 – Assessment = In class activities, lecture exams, embedded test questions, lab quizzes, and lab activities/reports
- design an experiment and complete a written description of their design, collaboratively conduct the experiment and analyze data generated to answer some component of a given causal question and defend the reasoning for conclusions drawn in the form of a laboratory report. CS1 – Assessment = In class activities, lab quizzes, and lab activities/reports
- collect and analyze data to evaluate relevant biological/ecological scenarios/problems (i.e. apply information you have learned). EQS1 – Assessment = In class activities, lecture exams, embedded test questions, lab quizzes, and lab activities/reports
- work effectively with others to support and accomplish a shared goal = CS1, TW2 – Assessment = In class activities, lecture exams, embedded test questions, lab practical exams, and lab activities/reports
- connect what she/he is learning to her/his own field (i.e. to make biology relevant to your own academic endeavors). Assessment = In class activities, lecture exams, embedded test questions, lab practical exams, and lab activities/reports

For State, and Accreditation purposes this course will assess your ability to:
- CT1: Gather, analyze, evaluate, and synthesize information relevant to a question or issue
- CS1: Develop, interpret, and express ideas through effective written communication.
- aEQS1: Manipulate and analyze numerical data and arrive at an informed conclusion.
- EQS2: Manipulate and analyze observable facts and arrive at an informed conclusion.
- TW2: Work effectively with others to support and accomplish a shared goal.
<table>
<thead>
<tr>
<th>Week/ Date (approx)</th>
<th>Unit Concepts</th>
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<tbody>
<tr>
<td>1 Aug. 28-Sept 1</td>
<td><strong>Unit 1- The origin and history of life:</strong> What is life? When (and how) did life on earth begin?</td>
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<tr>
<td>2 September 4-8</td>
<td><strong>Unit 1 – Diversity of life introduction/Biological Classification Systems:</strong> An introduction to Biodiversity. Why is biodiversity important? History of Classification of organisms (brief), Speciation, An introduction to taxonomy, Classification and Systematics. <strong>[NOTE: Classes will not meet MONDAY September 4 due to the Labor Day holiday]</strong></td>
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<tr>
<td>3 September 11-15</td>
<td><strong>Unit 1 – Biological Classification Systems:</strong> How do scientists classify organisms? How do they determine which characteristics are important? How have Mass Extinctions impacted Diversity?</td>
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<td>4 September 18-22</td>
<td><strong>Unit 2 – Diversity of Life – Prokaryotes</strong> How do you distinguish among Prokaryotes? How do Prokaryotic cells differ from Eukaryotic cells? Why are bacteria and archaea important to human life?</td>
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<tr>
<td>5 September 24-29</td>
<td>Learning Reinforcement Activities 1: Exam 1 Friday for MWF classes, Thursday for TR classes. Putting it all together - Exam debriefing activities and concept application assessments.</td>
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<td>6 October 2-6</td>
<td><strong>Unit 2 – Diversity of Life – Eukaryotes 1</strong> Kingdom Protista. Is it “better” to be multicellular?</td>
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<tr>
<td>7 October 9-13</td>
<td><strong>Unit 2 – Diversity of Life – Eukaryotes 2</strong> How do you know what it is? Kingdoms Animalia, Plantae, and Fungi</td>
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<td>8 October 16-20</td>
<td><strong>Unit 3 – Ecology of Life:</strong> Genetics, Population Dynamics and Immunity.</td>
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<tr>
<td>9 October 23-27</td>
<td>Learning Reinforcement Activities 2: Exam 2 Friday for MWF classes, Thursday for TR classes. Putting it all together - Exam debriefing activities and concept application assessments.</td>
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<td>10 October 30-Nov. 3</td>
<td><strong>Unit 3 – Ecology of Life:</strong> Natural Selection, Hardy-Weinberg Equilibrium, competition, and controls on population growth</td>
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<td><strong>November 3</strong></td>
<td>Last Day to Drop a Class or Withdraw from the University.</td>
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<tr>
<td>11 November 6-10</td>
<td>Learning Reinforcement Activities 3: Exam 3 Friday for MWF classes, Thursday for TR classes. Putting it all together - Exam debriefing activities and concept application assessments.</td>
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<tr>
<td>12 November 13-17</td>
<td><strong>Unit 4 – Ecology of Life:</strong> Kin selection, altruism, learning and mating behaviors</td>
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<tr>
<td>13 November 20-21</td>
<td><strong>Unit 4 – Ecology of Life:</strong> Communities and Ecosystems and Chemical Cycling <strong>[NOTE: Classes will not meet November 22-24. Happy Thanksgiving.]</strong></td>
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<tr>
<td>14 Nov. 27- Dec. 1</td>
<td><strong>Unit 4 – Ecology of Life:</strong> Biomes and Succession</td>
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<tr>
<td>15 December 4-8</td>
<td>Putting it all together – Final Exam Review Quizzes</td>
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</table>
| **December 11-15**  | **FINAL EXAMS WEEK:** Final Exams will be held in the same classroom as class on the following dates:  
|                     | Section 010 - Wednesday, December 13 - 8:00am-10:00am  
|                     | Section 020 - Monday, December 11 - 10:30am-12:30pm  
|                     | Section 030 - Wednesday, December 13 - 10:30am-12:30pm  
|                     | Section 040 – Tuesday, December 12 - 8:00am-10:00am  
|                     | Section 050 – Tuesday, December 12 - 10:30am-12:30pm  
|                     | Section 060 – Thursday, December 14 - 8:00am-10:00am |
WHAT YOU NEED TO DO TO EARN AN A (OR THE GRADE YOU WANT): The fact that you’re reading this shows that you have the potential to be an “A” student. In fact, I would like for every student in this class to earn an A. Read that again….Shocking isn’t it? Yes, believe it or not I want you to do well and if you’re reading this, I sincerely believe you have the potential to do so in this class. I will do everything in my power to help YOU EARN the grade you want, but you’ll have to do your part too which means studying for complete understanding everyday, attending class and lab, and learning beyond just memorizing the facts.

Biology is conceptually easy to understand, but learning it will require much effort on your part. Many students after an exam say, “but I knew the material,” or “I even studied for 8 hours,” and are truly bewildered by a grade lower than they anticipated. The problem is that there’s a big difference between understanding something you hear and/or read and knowing it. Understanding is what has to come first, but knowing is beyond even that. Knowing requires being able, without reference, to (1) repeat what you hear/read, accurately and completely, AND (2) use what you’ve heard/read to figure out things you’ve never seen before at all! In other words using what you know. Don’t let time dictature your studying; let learning. Study until you “learn” the material, no matter how much time it takes.

Also consider that knowing requires a degree of familiarity and usefulness of the material that cannot occur overnight. Cramming doesn’t work. I suggest you spend “quality time” with biology everyday. Also don’t be deceived by the large amounts of free time in your schedule. They simply do not exist. The general rule of 3 hrs of outside study a week for each hour of course credit is no joke. Such experiences have led to the classification of a person carrying 12 semester hours as a full-time student.

Here are some examples:

- 3 hours of outside study/hr of class x (12 class hours) = a 36 hour work week outside class + 12 hours in class = a 48 hour week (i.e., College is a full time job!).
- Or to put it differently 75% of what you accomplish is done on your own. This may be vastly different from your experience in high school or other courses. Please believe me when I tell that studying for just 30 minutes before an exam or practical will not work in this course. You therefore must accept responsibility for much of your own learning.
- This means for biology, you need to study 12 hours a week! Read that again…Yep, that’s what it takes.
- If you have a part time job, you are just doubling your work week. Time management is critical. To study 12 hours a week we suggest getting a calendar, marking all your exam dates on it, and preparing a weekly schedule of study/play/work time.

So how do you become an “A” student? Well it really is simple isn’t it? You must come to class and you must study…for learning. Seems easy enough to say, but is often more difficult to put into practice. The feeling of being lost or overwhelmed by the material is not uncommon. Neither are the feelings of uneasiness and frustration. A positive attitude is difficult to maintain when frustration rears up. But I am here to help you achieve those goals. Okay, okay So what’s the real way…the bottom line…the trade secret? Well to put it frankly, THE most important strategies you can do to ensure the grade you want are (1) REVIEW your lecture notes and lab material DAILY (2-3 hours) (2) KEEP UP with the coloring book plates and checklist questions, AND (3) POSSESS a proper ATTITUDE about learning. I’m not kidding…they are all that important to success in biology. Successful students tell me so and I have seen it time and time again. So please don’t be like Calvin in these cartoons 😒 He has a poor attitude. If you are unfamiliar with how to study for a science course, please see me for help or use the study tips posted on Blackboard. Here are just some more tips from those who have traveled this path before you.

STUDY STRATEGIES OF A and B STUDENTS in BIOLOGY

Based on the experiences of successful biology students of the past, we have prepared this handout to assist you in your studies. Listed below are the top study strategies of A and B students consistently reported to us in surveys. Please note Calvin’s is first 😒!

1. **Reread your lecture notes and lab material EVERY DAY after class.** Research shows if you read your notes for 10-15 minutes a day, you will absolutely do better on your exam than if you didn’t. Why? because you won’t have to cram in the end You will already be familiar with your notes. In addition, you will have discovered early on what you do not understand and can get help well before the exam. This is by far the most common strategy used by A and B students. Repetition simply works!

2. **Recopy/Reorganize your notes** - Some folks simply recopy their notes after lecture. Others will reorganize them and incorporate information from their text to supplement those taken in lecture. Still others take notes using the 3-column method. One large central column is used for notes. Two smaller peripheral columns are used for the actual reorganization. One column is used for generating questions, ideas, and comments, the other for the actual reorganization of the notes. People tell me it works. The idea is to spend as much time as possible with the material and to get help with concepts you do not understand early.

3. **Form study groups and go over material together.** If used properly, this is a great way to study. Schedule weekly meetings with your group to “go over the notes.” You can see if everyone else got the same thing out of lecture as you did. If things are not clear, you can make a list of
questions and ask your instructor for clarification. Likewise in lab having a consistent study partner quiz you can help you know early on whether you are retaining the material.

5. Develop the habit of asking questions to yourself and to your study group. For example, "What would be a good test question from this material? What don’t I understand about this? What is/are the main idea(s)/process(es)/application(s) of this topic? Why and When do they happen? etc." You’ll find that you will begin to anticipate the actual test questions! Good students always ask questions. This shows they are enveloping themselves in the culture of the course and constantly reviewing the material in their minds so that it makes since. Psychology tells us this is how most people learn...by asking questions.

6. Manage your time efficiently and prioritize/schedule your days to include school, work, family, fun, friends, health, and exercise. Calendars are wonderful things and no college student should be without one. We recommend writing down exam dates, etc., from all your courses so you’ll always know what’s coming. In addition its also helpful to write down your work schedule and or any other important dates. A and B students know how to prioritize and most tell us they do study 10-15 hours a week for biology alone. They break the material down into manageable chunks (i.e. a little everyday) and don’t ever procrastinate.

7. Attend lecture and lab. Some of the topics and specific examples we will use you will not be able to get unless you come to class or discussion. Attendance and participation are vital to your success in this course. Our statistics tell us that A and B students almost never miss class or lab. Those students who miss just one class or lab score on average 6-8% lower than the class average on exams.

8. Make a vocabulary sheet/or flashcards and keep them with you at all times. Yes this is just what you did in high school, but it works. Lots of students find that this helps them learn the vocabulary quickly and easily. You can pull them out anywhere and review. You’ll be surprised what you can learn waiting in line for 10 minutes. Remember you will learn as many new words this semester as you would in a beginning foreign language course (about 3500 or so).

9. Internalize New Words. To internalize (learn) a new word, to make it truly part of your vocabulary, you must use the word and use it often. Write it and speak it at every opportunity. Make opportunities to do so. Yes, I just said this, but it is worth saying again. Don’t just stare at the diagrams and illustrations in your references; draw on your own...and label them! Test your comprehension and retention by discussing the material. Study in a group. Set up weekly meetings to “go over the notes.” But don’t permit anyone at any time to substitute words like “thingy,” “stuff,” “doodad,” or “dealie” for the proper words required. You’ll defeat the whole purpose of discussion if you do.

10. Read your text and lab materials before (or after) class. Reading can help solidify your understanding of the material and help you retain information. For example, if you’ve read material ahead of time and then hear it in lecture, you’ve just helped your brain make an association between the two sources of information. Conversely if you read your text after lecture and remember me lecturing about it, you’ve just made another connection. Psychologists tell us that’s the first step toward learning...making associations. Ask me about successful and efficient ways or reading your textbook assignments.

11. Same as number 1. This should tell you how important it really is. The single most important study strategy you can implement in biology is reviewing and recalling your lecture and lab material everyday, especially within 24 hours of each lecture class and lab. The figure below shows what happens if you review and recall your notes within 24 hours or not. For those students who review and recall their lecture and lab notes everyday within 24 hours, one can almost guarantee success in recalling material even after 63 days. There is such a drop in retention of material if you wait 24 hours to review that it becomes very difficult to master the course with the amount of material we have. This is especially true if you try to cram all the material in the night (or even several days) before a lecture exam or lab practical. Why does reviewing and recalling your notes and lab material within 24 hours of class work? Basically there are two causal explanations. One is that you won’t have to cram. You will already be intimately familiar with your notes when the exam arrives. In addition, you will have discovered early on what you do not understand and can get help well before the exam. Again this is by far the most common strategy used by A and B students. REPETITION works...and...it won’t get done by itself. It takes EFFORT and of course Calvin is a terrible example of a “good” student.
You are required to sign and return this sheet to me. By doing so you acknowledge that you have received, read, and understand the syllabus and what is required of you to be successful in this course.

The information contained in this syllabus is your guide to the rules of this course. If you do not understand what is expected of you or the impact of your actions (i.e. missing a class), you should come and see me ASAP (within the first week of class).

YOUR NAME (PRINT): ____________________________________________________________
(Note: If you prefer to go by your middle name or a nickname, please indicate that in parentheses. Ex. Joseph Student (Joe))

MAJOR: ________________________________________________________________________

ASU ID _______________________________________________________________________

I acknowledge that I have received and accept the responsibility for the information in the class syllabus. I also acknowledge that I have read and will abide by the ASU Honor Code.

NAME (signature): ____________________________________________ Date______________

The following questions will help me to better understand you, how you learn, and how to structure the course. Please answer as honestly and completely as you can. To receive 5 activity points you must (1) fill out the entire sheet, (2) answer every question some have multiple, (3) answer in complete sentences (4) spell correctly, (5) staple these 2 pages together, & (6) follow these instructions explicitly. Points will be awarded based on your ability to follow these instructions. Answers can be typed or written.

1. Tell me why you are here.

2. Name one thing you are passionate about and explain why.

3. Name one thing you are proud of and explain why.

4. What does “learning” mean to you? Who do you think is ultimately responsible for your learning? Why?

5. What concerns do you have about taking this course? How do you plan to overcome them?
6. What would you like to learn about in Biology this fall?

7. What goals have you set for yourself in Biology this fall? (Think of at least 3).

8. What strategies will you use or what steps will you take to make sure you achieve these goals?

9. What goals do you suppose your instructor has for you in this course?

Complete sentences not required for questions 10-16.

10. How many hours are you taking this semester? _________________________________.

11. How many hours a week do you work? _________________________________.

12. How many hours a week do you spend on extracurriculars, practicing sports, attending church, etc. _________________.

13. How many hours a week do you spend on other time commitments? _________________.

14. How many hours a DAY do you plan on studying for this course alone? _________________.

15. How many hours a WEEK do you plan on studying for this course alone? _________________.

16. Biology requires that you study 12 hours a week for this course alone. What will you do to ensure you have time (i.e. 12hrs/week) to study for biology? Remember there are only 168hrs in a week.