

Biology 121 Syllabus and Statement of Course Policy

Section A - Fall, 2009 – Dr. Barnhart

PURPOSE OF THE COURSE

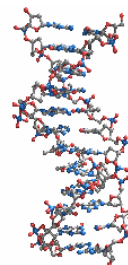
Bio 121 is the first half of a two-semester introduction to the science of Biology. Bio 121 introduces molecular and cellular biology, genetics, and evolution. The second semester course, Bio 122, covers biological diversity, physiology and ecology.

Biology 121 and 122 are designed for students who intend to take further coursework in the life sciences, including biology majors and minors, premedical students, wildlife majors, and others. *Most other students who want a 1-semester course with lab for General Education only should take Biology 102, Survey of Biology, not Biology 121.* Don't take this course just because it fits your schedule. However, some non-biology majors do require Bio 121 (Computer Science, for example). If you are unsure whether you should be in this course, please consult with your academic advisor.

I feel that Biology is the most interesting and important of all human endeavors. I'm here because I think that helping you to learn is important and rewarding. I hope that you are here because you want to learn. You should know that, for many students, this is not an easy course. I hope that you will find it challenging. If you are not challenged by your coursework, you are probably not learning very much. On the other hand, this should not be a terribly difficult course, provided that you make an effective effort. "Effective" means that you spend enough time studying, and that you use the time wisely. Some specific suggestions for study habits are listed in the "how to succeed" section.

LECTURE:

Section AMeets MWF at 9:00-9:50 AM in Temple 3.
Lecture Instructor:Dr. Chris Barnhart
Office:Temple 219
Office Telephone:836-5166
Conference Hours:M, T, W 1-2 and by appointment.



LABORATORY:

Laboratory attendance is mandatory. Check your registration and **make certain that you attend the correct lab section.** For your reference, please complete the following from your registration records:

Lab Section: _____
Day: _____
Time: _____
Room: TEM 255



TEXTBOOKS AND WEB PAGES

1. Sadava et al. 2008. Life, the Science of Biology, 8th Edition. This text is used for both Biology 121 and 122.
2. Barnhart. M. C. & T. M. Tamme. Laboratory manual for General Biology 121. Both the text and the lab manual are available at the MSU Bookstore.
3. The Biology 121 Home Page for Section A is at <http://courses.missouristate.edu/ChrisBarnhart/Bio121/>
The course website is NOT on Blackboard.

ATTENDANCE

Lecture: Attendance will be recorded daily from a seating chart. Seats are assigned during the first week and students are expected to occupy those seats thereafter. Students who are not in their assigned seat when role is taken are considered absent. Good attendance will be rewarded with "bonus points" (see "Extra Credit" section below). Lecture exams are written from the lectures as well as the text and you are much more likely to do well in the course if you come to lecture regularly.

Laboratory: Attendance in lab is mandatory. If a lab meeting is missed and not made up, the points for the lab assignment and quiz will be lost. If more than two labs are missed and not made up, an "F" grade will normally be assigned for the course. Under extenuating circumstances the student may request an "I" (incomplete) grade for the course (see the MSU catalog for details). An "I" grade is not automatic and is assigned only at the discretion of the lecture instructor.

A missed lab can be "made up" only with permission of the lab instructor. If the absence was for a legitimate reason (to be determined by the lab instructor), it may be possible to make up a missed lab during another section or open laboratory time. Make-ups are by permission only and must be completed during the week of the missed lab.

LAB ASSIGNMENTS & QUIZZES

The lab manual should be purchased at the campus bookstore. Occasionally handouts will be distributed in lab. Each week (including the first week) you should bring your lab manual to class. Prior to class, you must study the lab exercise for that week in order to prepare. There will be a quiz at the beginning of each lab session except the first one, and the two exam periods. A laboratory report or homework assignment over the material will be due at the beginning of the following lab period. Your lab instructor will provide a syllabus and explain details of your responsibilities.

EXAMINATIONS

Lecture exams: Lecture exams: There are five "segmental" lecture examinations, each covering a specific portion of the course, and a comprehensive final. The lowest score of the first 4 lecture exams will be dropped. Lecture exam #5 and the comprehensive final are given together during the finals period and may not be dropped. Practice examinations will be placed on the course website. Study these so that you will know what sort of questions to expect.

Laboratory exams: Laboratory exams: The laboratory exams consist of a midterm and final, each worth 50 points. The questions will include "practicals" that test your ability to use the methods and techniques that you have learned.

Exam make-up policy:

1. Because of the policy of dropping the lowest lecture examination score, **makeup lecture examinations will not be given except by special permission.** A missed exam will be given a zero and that will count as the score to be dropped.

2. **A student who has the LAB instructor's permission for missing a lab midterm or final exam may take a makeup examination ONLY during another lab period during the test week.** Make-up is available only for those students who have a bona fide, documented reason for missing the exam. No student will be permitted to take the exam in another section without written permission from their lab instructor.

3. Students who fail to complete the exams for a legitimate reason will be given an incomplete ("I") grade for the course and must take those examinations during the next semester in which they are enrolled.

"EXTRA CREDIT"

There are two ways to get extra points. First of all, you will receive 1/2 point "attendance bonus" for each lecture that you attend. Over the whole semester this can add up to about 20 points. The purpose is simply to encourage and reward attendance. This is a carrot, not a stick. Don't expect to get a carrot if you don't attend or if you arrive late or leave early. The second way to get extra points is to correctly answer "bonus questions" on the exams. Details will be provided in lecture. *NO other forms of extra credit are available for the lecture portion of the course.*

GRADING

Total possible course points = 750 (500 lecture + 250 lab) as follows:

1	The highest four scores from the five lecture exams (up to 100 points @)	400
2	Comprehensive lecture final exam	100
3	Laboratory reports and homework	125
4	Laboratory midterm	50
5	Laboratory final	50
6	Laboratory quizzes	45
	TOTAL POSSIBLE POINTS	770

Letter grades will be assigned based upon point totals as follows:

A = 693 - 770 points (90 - 100%)
B = 616 - 692 points (80 - 89.9%)
C = 500 - 615 points (65 - 79.9%)
D = 424 - 499 points (55 - 64.9%)
F = below 424 points (below 55%)

Please note that the difference between an "A" and a "B" (or a "B" and a "C," etc.), may be only a single point. Make certain that you are given all of the points that you deserve. If you know that you are on the border line, put forth the extra effort to increase your score on the finals.

ACADEMIC INTEGRITY

Any student cheating on an exam, helping someone else cheat, or participating in any other form of academic dishonesty, will receive a failing grade ("F") for the course. In cases of serious violations, academic probation or suspension is possible. It is your responsibility to read and fully understand the *Student Academic Integrity Policies and Procedures*, available at <http://www.missouristate.edu/provost/academicintegrity.htm>, and in abbreviated form in the *MSU Undergraduate Catalog*. Academic dishonesty includes but is not limited to the following:

- Looking on another student's answer sheet during a test, or allowing another student to look on your answer sheet during a test.
- Use of notes in any form during a test.
- Removing a test from the lecture room. (Practice tests are available and these may be studied, copied etc.).
- Describing laboratory exams to other students who have not yet taken the test.

HOW TO SUCCEED IN BIOLOGY 121

1. Get a good seat. If you want an advantage, arrive early and get a seat in front when assignments are made at the end of the first week. You can hear and see better, there is less distracting noise, you can ask questions without shouting, and so on. Perhaps for these reasons, "A" students tend to sit in the first 6 rows.

2. Attend lecture and pay attention. Most test questions are taken from lecture. You cannot do well in the course without understanding the lecture material.

3. Don't visit with friends during lecture- it is distracting to other students and to me. If you are distracted by others talking during class, please note their seat numbers and report the problem to me. You may do this anonymously if you wish.

4. Make use of resources and opportunities. I will do several things to make life easier for you, but you have to take advantage of them. Use the practice exams. Visit the course web-site and download the lecture outlines, if you want these as an aid to note-taking. Later in the course, there will be extra-credit readings available to get bonus points on the final.

5. Don't fall behind. Science courses require that you learn a lot of new words. It's like learning a foreign language, only more difficult, because the ideas that the words describe are also new. If you fall behind, soon you can't understand what the instructor is talking about. Don't let this happen to you. Read ahead in the book to prepare for lecture. If you miss a lecture, be sure to get notes from a classmate and get caught up as soon as possible. Don't let a word go by without finding out what it means- your vocabulary is the measure of your education.

6. Ask questions. I really appreciate it when students ask questions during lecture. It helps me to know which points are confusing you, and it's good for my own attitude to know you are listening and thinking about what I'm saying. I don't mind telling you it's a little lonely to be the only person talking!

7. Use my conference hours. One of the things I like about teaching is the opportunity to talk with you (not just talk at you). Please feel welcome to come in and ask questions during my scheduled conference hours, or ask quick questions after class. Make an appointment with me after class if my scheduled hours don't fit your schedule. I'll be glad to see you at these times. However, please don't just "drop in" or call at other times. Professors have many responsibilities, including research, writing grant proposals and articles, writing and grading exams, and working with graduate students. Little interruptions during the day can add up to a major headache!

8. Study effectively. Everyone develops their own habits, but here are some suggestions for studying:

- Read the chapters assigned for each lecture before class. Lecture makes more sense if you read ahead. The examinations include questions taken from the text as well as lecture.
- Attend lecture, and take good notes- download the overheads before lecture as a start on your notes if you wish.
- Soon after lecture, review your lecture notes and add notes as necessary from the text. Rewriting and organizing your notes is one of the best ways to study.
- Before each exam, review your notes, and study the practice exams to test your knowledge. At this point, many students benefit from studying in pairs or small groups.

Affirmative Action:

Missouri State University is an equal opportunity/affirmative action institution, and maintains a grievance procedure incorporating due process available to any person who believes he or she has been discriminated against. At all times, it is your right to address inquiries or concerns about possible discrimination to Jana Long, Equal Opportunity Officer, Office of Human Resources, Carrington 128, (417) 836-4252. Concerns about discrimination

can also be brought directly to your instructor's attention, and/or to the attention of your instructor's Department Head.

Disability Accommodation:

To request academic accommodations for a disability, contact Katheryne Staeger-Wilson, Disability Services (<http://www.missouristate.edu/disability>), Plaster Student Union, Suite 405, (417) 836-4192 or (417) 836-6792 (TTY). Students are required to provide documentation of disability to Disability Services prior to receiving accommodations. Disability Services refers some types of accommodation requests to the Learning Diagnostic Clinic, which also provides diagnostic testing for learning and psychological disabilities. (A fee is charged for testing.) For information about testing, contact the Learning Diagnostic Clinic (417) 836-4787; <http://psychology.missouristate.edu/ldc/>.

Policy on Use of Cell Phones in Classes (Office of Academic Affairs)

When cell phones or pagers ring and students respond in class or leave class to respond, it disrupts the class. Therefore, use of cell phones, pagers, or similar communication devices during scheduled classes is prohibited. All such devices must be turned off or put in a silent mode and cannot be used during class. Sanctions for violation of this policy are determined by the instructor and may include dismissal from the class. In testing situations, use of cell phones or similar communication devices may lead also to a charge of academic dishonesty and additional sanctions under the Student Academic Integrity Policies and Procedures. There are two appeal processes available to students. A sanction for class disruption may be appealed using the appeal process stated in the Class Disruption policy; however, a violation that involves a charge of academic dishonesty must be appealed using the process described in the Student Academic Integrity Policies and Procedures. Students have the right to continue attending class while an appeal is in progress.

Dropping a Class:

It is your responsibility to understand the University's procedure for dropping a class. *If you stop attending but do not follow proper procedure for dropping, you will receive a failing grade and will be obligated to pay for the class.* To drop a class after the first week of classes, you must turn in a drop slip at an authorized registration center (see <http://www.missouristate.edu/recreg/chnsched.html>). You do *not* need to obtain any signatures on the drop slip, and it does *not* need to be signed by your instructor, your advisor, or a department head. If you wish to withdraw from the University (i.e., drop all your classes), contact the Registration Center, Carrington 320.

Prior to August 29: dropped courses will not appear on the transcript. After August 29 and before October 23 (week 2 through 9): students may withdraw from course and receive a grade of "W". After October 23 and before December 4: either a "W" or "F" grade will be assigned by the instructor. I generally give the W grade if it is clear that you continued to make an effort (attend class and take the exams). The last day that you can drop the class is December 4.

Remember that there are 770 points possible in the course. After October 30, after 3 lecture exams and the lab to midterm, you still have about half of these points available to earn, plus bonus points. You should probably make your decision by that time. Dropping a course is something that you should try to avoid. However, if you are clearly in over your head, dropping one course can buy you time to work on your other courses. Talk to your advisor before making the decision.

SCHEDULE

Week	Date	Day	Topic	Text Reading Assignment
1.	8/24	M	Course introduction, scientific method	Chapter 1.3
	8/26	W	Nature of life	Chapter 1.1-1.2
	8/28	F	Structure of matter, chemical bonds	Chapter 2.1-2.3
			<i>LAB: Introduction, spectrophotometry</i>	
2.	8/31	M	Water	Chapter 2.4
	9/2	W	Organic chemistry	Chapter 3.1
	9/4	F	Carbohydrates and lipids	Chapter 3.3-3.4
			<i>LAB: Enzymes</i>	
3.	9/07	M	Labor Day- no lecture	
	9/9	W	Proteins and nucleic acids	Chapter 3.1, 3.5
	9/11	F	Energy and metabolism	Chapter 6.1, 6.2
			LAB: no lab this week	
4.	9/14	M	Energy and metabolism, continued	Chapter 6.3-6.5
	9/16	W	Cell structure	Chapter 4.1-4.5
	9/18	F	EXAM 1	
			<i>LAB: Microscopy & Cells</i>	
5.	9/21	M	Membranes	Chapter 5
	9/23	W	Transport processes	Chapter 5
	9/25	F	The Fire of Life	Chapter 7
			<i>LAB: Diffusion and osmosis</i>	
6.	9/28	M	Glycolysis and respiration	Chapter 7
	9/30	W	Photosynthesis	Chapter 8
	10/2	F	Photosynthesis, continued	Chapter 8
			<i>LAB: Respiration</i>	
7.	10/05	M	Information and DNA	Chapter 11
	10/07	W	Replication	Chapter 11
	10/9	F	EXAM 2	
			LAB: Lab Midterm	
8.	10/12	M	Transcription	Chapter 12.1-12.3
	10/14	W	Protein synthesis	Chapter 12.4-12.6
	10/16	F	Fall Holiday- no lecture	
			LAB: No lab this week	

9.	10/19	M	Chromosomes, mitosis	Chapter 9
	10/21	W	Meiosis	Chapter 9.4-9.5
	10/23	F	Mendelian Genetics	Chapter 10
			<i>LAB: Mitosis and Meiosis</i>	
10.	10/26	M	Genetics, continued	Chapter 10
	10/28	W	Chromosomes and inheritance	Chapter 10
	10/30	F	EXAM 3	
			<i>LAB: Genetics</i>	
11.	11/02	M	Viral and prokaryote genomes	Chapter 13
	11/04	W	Eukaryote genomes	Chapter 14
	11/06	F	DNA technology	Chapter 16
			<i>LAB: Electrophoresis</i>	
12.	11/09	M	Genome sequencing, molecular biology, medicine	Chapter 17
	11/11	W	Immunology	Chapter 18
	11/13	F	Catch up	
			<i>LAB: Evolution</i>	
13.	11/16	M	History of life	Chapter 21
	11/18	W	Mechanisms of evolution	Chapter 22
	11/20	F	EXAM 4	
			<i>LAB: Population genetics</i>	
14.	11/23	M	More on mechanisms of evolution	Chapter 22
	11/25	W	Thanksgiving Holiday - no lecture	
	11/27	F	Thanksgiving Holiday - no lecture	
			<i>LAB: No labs this week</i>	
15.	11/30	M	Species and speciation	Chapter 23
	12/02	W	Evolution of genes and genomes	Chapter 24
	12/04	F	Reconstructing phylogeny Last day to drop full-semester courses	Chapter 25
			<i>LAB: Phylogenetic Analysis</i>	
16.	12/07	M	More about phylogeny	Chapter 25
	12/09	W	T.B.A.	
	12/11	F	Study Day- no classes	
			<i>LAB: Final Lab Exam</i>	
Sec A	12/16	W	FINAL LECTURE EXAM 8:45-10:45 AM	

