

BIOL 1406 CIS (Fall 2009)

BIOL 1406- General Biology I, Sections A7 & D2 Blinn College – Bryan Campus Course Information Sheet

INSTRUCTOR: Michelle McNeil

E-mail: michelle.mcneil@blinn.edu or via eCampus mail (preferred)

Tel: 209-7402

Office: S234, Science Building

Office Hours: MW & TR 4:15-5:15 pm, F by appointment

Section A7: MW 1:25 pm – 2:40 pm (Lecture: S-225), MW 2:50 pm – 4:05 pm (Lab: S-224)

Section D2: TR 10:35 am – 11:50 am (Lecture: S-225), TR 12:00 pm – 1:15 pm (Lab: S-224)

COURSE DESCRIPTION:

General Biology 1 is an in-depth introductory survey of contemporary biology for students majoring in the biological sciences. Topics that will be emphasized include the chemical basis of life, the structure and function of cells, energy transformations, and molecular biology and genetics. Course consists of three class hours and three laboratory hours per week. Credit: Four semester hours.

CORE CURRICULUM COURSE:

This is a course in the 42-hour Core Curriculum of Blinn College. As such, students will develop proficiency in appropriate intellectual competencies, exemplary educational objectives and general perspectives. The URL of the Blinn College core curriculum web site is: <http://www.blinn.edu/corecurriculum/42hourcore.htm>

COURSE OBJECTIVES AND STUDENT LEARNING OUTCOMES:

After successfully completing Biology 1406, you should be able to:

- Describe the process by which scientific knowledge is acquired.
- Identify characteristics common to all cells as well as the major differences that are used to distinguish between the broadest taxonomic groups of living organisms.
- Evaluate the role that natural selection plays in evolutionary change.
- Describe the role organic molecules play in the structure and function of cells.
- Discuss the major metabolic processes carried out by cells and how these processes are essential in sustaining life.
- Distinguish between the methods by which cells divide in association with the cell cycle.
- Demonstrate an understanding of inheritance by solving basic Mendelian genetics problems.
- Interpret technological applications utilized in modern biology.

The following skills will also be demonstrated in laboratory:

- Use the scientific method to design and carry-out an experiment.
- Apply critical thinking skills to the presentation and interpretation of experimental data.
- Recognize biological concepts associated with laboratory activities.
- Demonstrate proficiency in using the compound light microscope

COURSE REQUIREMENTS:

Textbook: *Biology: Life on Earth*, 8th ed., Audesirk, Audesirk, and Byers. 2008. Pearson Education, Inc. OR *Biology: Life on Earth with Physiology* (recommended if taking Biology 1407)

Laboratory Manual: Biology 1406 Laboratory Manual. Blinn College. Fall 2009.

Available at the University Copy Center located in the G Building next to the Blinn College Bookstore.

BIOL 1406 CIS (Fall 2009)

CPS_{RF} Response Key Pad: A remote keypad and an enrollment code for the e-Instruction Classroom Performance System (CPS_{RF}) are **REQUIRED** and available at the Blinn Bookstore. You have 2 class periods – until Monday, September 7th (Section A7) or Tuesday, September 8th (TR classes) before your keypads are required.

Register your keypad by logging on to www.einstruction.com and following the instructions that I have made available on our eCampus course page. CPS response pads should be brought to **EVERY** class. They will be used to take attendance and to administer in-class quizzes. You will not be allowed to take an in-class quiz if you forget your response pad.

Section A7 Class Key for Fall 2009: **J54236D938** (case sensitive)

Section D2 Class Key for Fall 2009: **N54237K635** (case sensitive)

eCampus: Access to the Internet is **REQUIRED**. Internet access at home would certainly be a plus, however, all students at Blinn College and/or Texas A&M have computing resources available to them. The Open Computer Lab at Blinn College is located in Room H-225. If you are not familiar with these, see me or inquire at the Learning Center in the Library Building, Room 258, for more details, ASAP. eCampus is an online course tool. It is in essence a virtual classroom through which I will be posting course related materials and information. You will also be able to contact me with questions and or problems you might be having and have the ability to contact your classmates. It will be your responsibility to check this site regularly: <http://ecampus.blinn.edu/>.

Student E-mails: Students are assigned an E-mail address that must be checked regularly for official Blinn communications and course information. The address is of the form:
Firstname.Lastname.Last2digitsBlinnID@buc.blinn.edu

Information about accessing this account can be found at: www.blinn.edu/acadtech/studentemail/

CRITERIA FOR GRADING:

Grades are based on a total point system. The maximum number of points that can be earned in this course is 1000.

Lecture Exams: There will be four lecture exams each worth 100 points. Out of the 4 exams given, only 3 will be counted. I will drop your lowest exam score. Lecture exams may consist of a combination of true/false, multiple choice, fill in the blank, and short answer/essay questions. **Make-up exams will only be offered to those with excused absences, no exceptions.** Excused absences include: Illness with Dr's note, official Blinn College activity, Religious Holiday (see Attendance Policy) or death of a close family member with appropriate documentation. Students must contact me during the following class period or via e-mail to be able to schedule a make-up. If you know that you will need to miss an exam prior to the test date, contact me ASAP so that I may plan accordingly.

Laboratory Exams: There will be two common lab exams each worth 100 points. Laboratory exams will consist of short answer, problem solving, or fill-in-the-blank. There will be **NO MAKE-UP EXAMS** for the lab. No exceptions.

Final Exam: The Final is a comprehensive common exam worth 200 points. It will consist of 100 multiple choice questions, fill in the blank, and short answer questions. All students must take the final examination. If you miss the final exam, contact me immediately. Otherwise, a final exam grade of zero will be recorded for any student who has missed the final exam and not contacted me by 12:00 pm on the day immediately following their final examination. No exceptions.

Section A7 Final Exam will be on **Monday, December 14th, 12:45-2:45 pm** in room S225

Section D2 Final Exam will be on **Tuesday, December 15th, 10:15 am – 12:15 pm** in room S225

Lecture Quizzes and Assignments:

Throughout the semester there will be lecture quizzes, in-class assignments, or homework assignments that will be used to measure your understanding of material that is being presented in lecture, or that will cover material from a previous lecture or assigned readings. In most instances, quizzes will be answered in multiple choice format using your

BIOL 1406 CIS (Fall 2009)

CPS response pads. If you forget your CPS response pad on the day of a quiz, you will not be allowed to take the quiz. These assignments will be worth a total of 100 points.

Laboratory Exercises and Assignments: Part of your class participation grade in this course will consist of lab assignments and group evaluation activities that total 200 points.

Laboratory Exercises: There are a total of 18 Lab Exercises, and the lowest Lab Exercise grade will be dropped. Lab Exercises will count for a total of 170 points at 10 points an assignment. Lab Exercises and homework assigned in the previous lab are to be turned in at the beginning of each lab period (i.e. turned in on the instructor's desk **before** lab begins). In order to receive full credit for lab assignments, students must stay for the entire lab session and check out with the instructor before leaving the lab. Failure to turn assignments in on time will automatically result in a grade of zero for that assignment. Late assignments will not be accepted. If you missed a lab and therefore missed turning in an assignment, that assignment will not be accepted upon your return (unless your absence was an official Blinn excused absence.) Also, assignments will not be accepted from your lab partners and/or classmates if you aren't present. There will be no exceptions.

Group Activity Quizzes: There will be three quizzes to assess the understanding obtained from 3 lab group activities. Each quiz will be worth 10 points for a total of 30 points.

Bonus Assignments: Throughout the semester, there will be opportunities for bonus points in the form of in-class assignments, tutoring sessions or eCampus quizzes. Take advantage of them when they are offered. **DO NOT ASK ME AT THE END OF THE SEMESTER FOR EXTRA CREDIT!!!!!!** Bonus points will be available to every member of the class uniformly. These bonus opportunities will be used to generate extra points that will be added to your point total at the end of the semester. Since I do not curve individual exam scores, these bonus activities will help generate a curve. Multiple opportunities will arise to earn bonus points; however, each student will be capped at a total of 50 points that can be added overall to their final grade.

Other bonus opportunities will arise in the form of exam questions and these bonus points will not be capped, so the opportunity for bonus points actually totals 100 points.

Point Distribution:

| | |
|------------------------------|-------------|
| Lecture Exams (Top 3 of 4) | 300 |
| Lab Exams | 200 |
| Comprehensive Final Exam | 200 |
| Class Participation | |
| Lecture Quizzes/ Activities | 100 |
| Lab Exercises | 170 |
| Group Activity Quizzes | 30 |
| TOTAL POSSIBLE POINTS | 1000 |
| Bonus Assignments | 50 |

Grading Scale:

| | |
|-----------------|-----|
| 900-1000 points | = A |
| 800-899 points | = B |
| 700-799 points | = C |
| 600-699 points | = D |
| 0-599 points | = F |

Your Course Average = [(Your Total Points)/1000] x 100% = _____%

BIOL 1406 CIS (Fall 2009)

| Grade | Absolute Scale, Criterion-referenced | Relative Scale, Norm-referenced |
|-------|---|------------------------------------|
| A | <ul style="list-style-type: none"> • Firm command of knowledge domain • High level of skill development • Exceptional preparation for later learning | Far above class average |
| B | <ul style="list-style-type: none"> • Command of knowledge beyond minimum • Advanced development of most skills • Has prerequisites for later learning | Above class average |
| C | <ul style="list-style-type: none"> • Command of only the basic concepts of knowledge • Demonstrated ability to use basic skills • Lacks a few prerequisites for later learning | At the class average |
| D | <ul style="list-style-type: none"> • Lacks knowledge of some fundamental ideas • Some important skills not attained • Deficient in many of the prerequisites for later learning | Below class average |
| F | <ul style="list-style-type: none"> • Most of the basic concepts and principles not learned • Most essential skills cannot be demonstrated • Lacks most prerequisites needed for later learning | Far below class average |

From: Yolanda Estes, "GRADING: AN INSTRUCTIONAL MANUAL", 2006
http://www.cs.iit.edu/~cs560/fall_2006/research_paper_on_grading/yolanda_grading.pdf

Instructor's Expectations and Suggestions: A lot of material is covered in this course and done so at a fast pace. I EXPECT you to come to class prepared and to read the assigned chapters *before* coming to class. I also expect you to read the lab covered each day *before* coming to lab.

Additional suggestions to succeed far above average in this class are:

- ABSOLUTELY DO NOT wait until the night before an exam to BEGIN studying!!! Do the exam study guides at the end of each chapter, not the night before the exam. All-nighters statistically do not help your grades and only decrease your concentration ability during the exam.
- Attend class! "A" students miss on the average one-half of one class per long semester. "C" students miss on the average 4.5 classes per long semester. I strongly suggest that you don't miss any classes!
- Immediately after lecture, go back and highlight any parts of the chapters that were emphasized in class.
- Re-write your notes from previous lectures *before* the next lecture. Doing so forces you to concentrate on the material and also reinforces what was covered in lecture. You can also locate your weak points and this will give you time to strengthen those weak points by re-reading the text, supplementing your notes with a classmate's, or asking me about the topic during the next class period.
- Study any hand-outs or diagrams that I emphasize in lecture.
- Automatically do any extra credit offered. Those extra points may make all of the difference between letter grades.
- Visit me during office hours! This is your time to use me as your personal tutor. I can also offer suggestions on how to study better. But this is only effective if you make use of my office hours throughout the entire semester, NOT the week before finals!
- Get a personal tutor. The learning center offers free tutoring, see them for scheduled hours.
- Academic dishonesty is never worth it. This includes plagiarism or copying another's work on lab assignments. The consequences are severe.

BIOL 1406 CIS (Fall 2009)

CLASS POLICIES:

Attendance: The College District believes that class attendance is essential for student success; therefore, students are required to promptly and regularly attend all their classes. Each class meeting builds the foundation for subsequent class meetings. Without full participation and regular class attendance, students shall find themselves at a severe disadvantage for achieving success in college. Class participation shall constitute at least ten percent of the final course grade. It is the responsibility of each faculty member, in consultation with the division chair, to determine how participation is achieved in his or her class. Faculty will require students to regularly attend class and will keep a record of attendance from the first day of class and/or the first day the student's name appears on the roster through final examinations. If a student has one week's worth of unexcused absences (2 classes for TR class and 3 classes for MWF class) during the semester, he/she will be sent an e-mail by the College requiring the student to contact his/her instructor and schedule a conference immediately to discuss his/her attendance issues. Should the student accumulate two weeks' worth of unexcused absences (4 classes for TR class and 6 classes for MWF class), he/she will be administratively withdrawn from class.

There are three forms of excused absence officially designated by Blinn College: (1) Observance of religious holy days: The student should notify his/her instructor(s) no later than the 15th day of the semester concerning the specific date(s) that the student will be absent for any religious holy day(s); and (2) Representing Blinn College at an official institutional function and (3) official involvement in a high school activity for "dual credit" students.

All other absences will be treated as unexcused unless you (the student) present me with documentation of an illness, family emergency, or accident. You must present me with your documentation the first day you return to class from being absent. If you are too sick to come to class, you are sick enough to see a doctor. In this case, you **MUST** bring me a doctor's note stating why you were absent. If a family emergency exists, you must provide documentation (obituary, doctor's note from the family member, etc.). If an accident occurs, I must receive documentation that you were involved (police report, photos from accident, a flat tire from your car, etc.).

Missing lecture or lab or both will count as one absence.

Dropping: If a student chooses to drop the course, it is that student's responsibility to complete a drop order at the Office of Enrollment Services. Failure to do so could result in a grade of F in the course. The last day to **withdraw with a "W" is Friday, November 20th.**

Preparation: Please see the lecture and lab schedule containing a list of the topics and chapters to be covered on each exam. The exact date of the examinations will be announced in class at least two class periods prior to the examination date, but will follow the course schedule as closely as possible. Because of the quantity of material to be covered please do not fall behind in your readings. Please read the assigned chapter in the lab manual and in the textbook before coming to lab and lecture. I will always try to be available before and after class to answer any questions you may have.

Honor System: Blinn College does not tolerate cheating, plagiarism, or other acts of dishonesty. Definitions of these acts and procedures for dealing with them are described in "Scholastic Dishonesty" in the Blinn College Student Handbook, copies of which are available at the information desk in the administration building. All tests will be closed book and notes. All students will remove hats and sunglasses before tests. In my classes, we are on a student honor system which we will talk about the first day. Plagiarized work will be automatically given a zero and may be reported for disciplinary action.

Civility Statement: Members of the Blinn College community, which includes faculty, staff and students, are expected to act honestly and responsibly in all aspects of campus life. Blinn College holds all members accountable for their actions and words. Therefore, all members should commit themselves to behave in a manner that recognizes personal respect and demonstrates concern for the personal dignity, rights, and freedoms of every member of the College community, including respect for College property and the physical and intellectual property of others. Civility

BIOL 1406 CIS (Fall 2009)

applies to attire as well as language and behavior. Please dress appropriately for the academic classroom and laboratory.

If a student is asked to leave the classroom or have access to the online classroom denied because of uncivil behavior, the student may not return to that class until he or she arranges a conference with the instructor. It is the student's responsibility to arrange for this conference.

Eating and drinking are not allowed during class or laboratory work. Not only is this a Blinn policy, but there are safety reasons for not eating, drinking, or smoking around a Biology laboratory.

Electronic devices: Blinn policy states that all cell phones, laptops, MP3 players, etc. should be turned OFF in class. Failure to honor this policy is a breach of the civility statement (see above) and the student will be asked to leave the room. There may be cases where you must have a phone on in class (sick child, emergency worker, pregnant wife, etc.) If these scenarios occur, please discuss this with me prior to class and I will be happy to allow their use.

ADA Statement: Reasonable accommodations for students with documented learning or physical disabilities will be made upon presentation of a formal request by the student. An official request form is supplied and completed by the Center for Student Development (Counseling/Academic Advising Center, room 157 Science Bldg). The URL to the Counseling Services webpage is <http://www.blinn.edu/counseling/>. Accommodation is not retroactive from the time of concluding agreement for accommodation.

If you need individual accommodations to meet course objectives because of a documented disability, please make an appointment with me to discuss your needs as soon as possible so that we can ensure your full participation in class and fair assessment of your work.

The above requirements and policies are discussed more fully in the Blinn College Student Handbook which, by reference, is incorporated into this information. Blinn College Student Handbook is available online at <http://www.blinn.edu/student%20handbook.pdf>. Please obtain and read.

BIOL 1406 CIS (Fall 2009)

TENTATIVE LECTURE AND LAB SCHEDULE*

| Week | Date | | Chapter | Lecture Period | Laboratory Period |
|-------------|-------------------------------|-------|---------|---|---|
| | MW | TR | | | |
| 1 | 8/31 | 9/1 | 1 | General Introduction | Lab 1 - Safety in the Laboratory |
| | 9/2 | 9/3 | | Introduction to Life on Earth | Lab 2 - The Process of Science |
| 2 | 9/7 | 9/8 | 2 | Atoms, Molecules, and Life | Lab 3 - The Scientific Method |
| | 9/9 | 9/10 | | | Lab 4 - Experimentation and Experimental |
| 3 | 9/14 | 9/15 | 3 | Biological Molecules | Biological Molecules cont. |
| | 9/16 | 9/17 | | Organic Molecules Group Activity | Lab 5 - Metric Measurement |
| 4 | 9/21 | 9/22 | | Exam I: Ch 1-3 | Metric Measurement Cont. |
| | 9/23 | 9/24 | 4 | Cell Structure and Function | Lab 6 - Organic Molecules |
| 5 | 9/28 | 9/29 | 4 | Cell Structure and Function | Lab 7 - Microscopy |
| | 9/30 | 10/1 | 5 | Cell Membrane Structure and Function | Lab 8 - Scientific Illustration & Lab 9 - Cells |
| 6 | 10/5 | 10/6 | 5 | Cell Membrane Structure and Function | Cells cont. |
| | 10/7 | 10/8 | 6 | Energy Flow in the Life of A Cell | Lab 10 - Membrane Transport |
| 7 | 10/12 | 10/13 | 6 | Energy Flow in the Life of A Cell | Membrane Transport cont. |
| | 10/14 | 10/15 | | Exam II: Ch 4-6 | Lab Exam 1 Review |
| 8 | 10/19 | 10/20 | 7 | Capturing Solar Energy: Photosynthesis | LAB EXAM 1 |
| | 10/21 | 10/22 | | | Lab 11 - Spectrophotometry |
| 9 | 10/26 | 10/27 | 8 | Harvesting Energy: Cellular Respiration | Lab 12 - Enzyme Kinetics |
| | 10/28 | 10/29 | | | Cellular Respiration Concept Maps |
| 10 | 11/2 | 11/2 | | Exam III: Ch 7-8 | Enzyme Kinetics Cont. |
| | 11/4 | 11/4 | 9 | DNA: The Molecule of Heredity | Lab 13 - Chromatography and |
| 11 | 11/9 | 11/9 | 9 | DNA: The Molecule of Heredity | Lab 14 - Photosynthesis |
| | 11/11 | 11/11 | 10 | Gene Expression and Regulation | Photosynthesis cont. |
| 12 W | 11/16 | 11/16 | 10 | Gene Expression and Regulation | Lab 15 - DNA Isolation |
| | 11/18 | 11/18 | 11 | Cellular Reproduction | Lab 16 - RFLPs and Gel Electrophoresis |
| 13 | 11/23 | 11/23 | 11 | Cellular Reproduction | Lab 17 - Mitosis |
| | 11/25 | 11/26 | | | Thanksgiving Holiday |
| 14 | 11/30 | 12/1 | 12 | Patterns of Inheritance | Patterns of Inheritance cont. |
| | 12/2 | 12/3 | 12 | Exam IV: Ch 9-12 | Lab 18 - Mendelian Genetics |
| 15 | 12/7 | 12/8 | 13 | Biotechnology (13.1-13.3) | Lab Exam 2 Review |
| | 12/9 | 12/10 | | Review for Final Exam | LAB EXAM 2 |
| 16 | Monday, December 14th | | | Section A7 Final Exam | 12:45-2:45 PM in S225 |
| | Tuesday, December 15th | | | Section D2 Final Exam | 10:15 AM-12:15 PM in S225 |

* In case of course schedule changes, updates will be posted on eCampus and notified in class.

W The last day to withdraw with a “W” is Friday, November 20, 2009.