

**Biology 1406 – A3 &A6**  
**Blinn College – Bryan Campus**  
**Course Information Sheet**  
**Fall 2009**

**Instructor:** *Linda R. Richardson*

**Office Hours:** Mon: 3:00 - 4:00 pm, Tues: 10:00-11:00 am, Thurs: 1:30 pm - 2:30pm or by apt.

**Office:** S-232

**Tel:** 209-7412

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**Course Description:**

An introductory survey of contemporary biology that includes the chemical basis of life, structure and function of cells, energy transformation, and genetics.

**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: [www.blinncol.edu/corecurriculum.htm](http://www.blinncol.edu/corecurriculum.htm)

**Student Learning Outcomes:**

After successfully completing Biology 1406, students will be able to:

**Lecture**

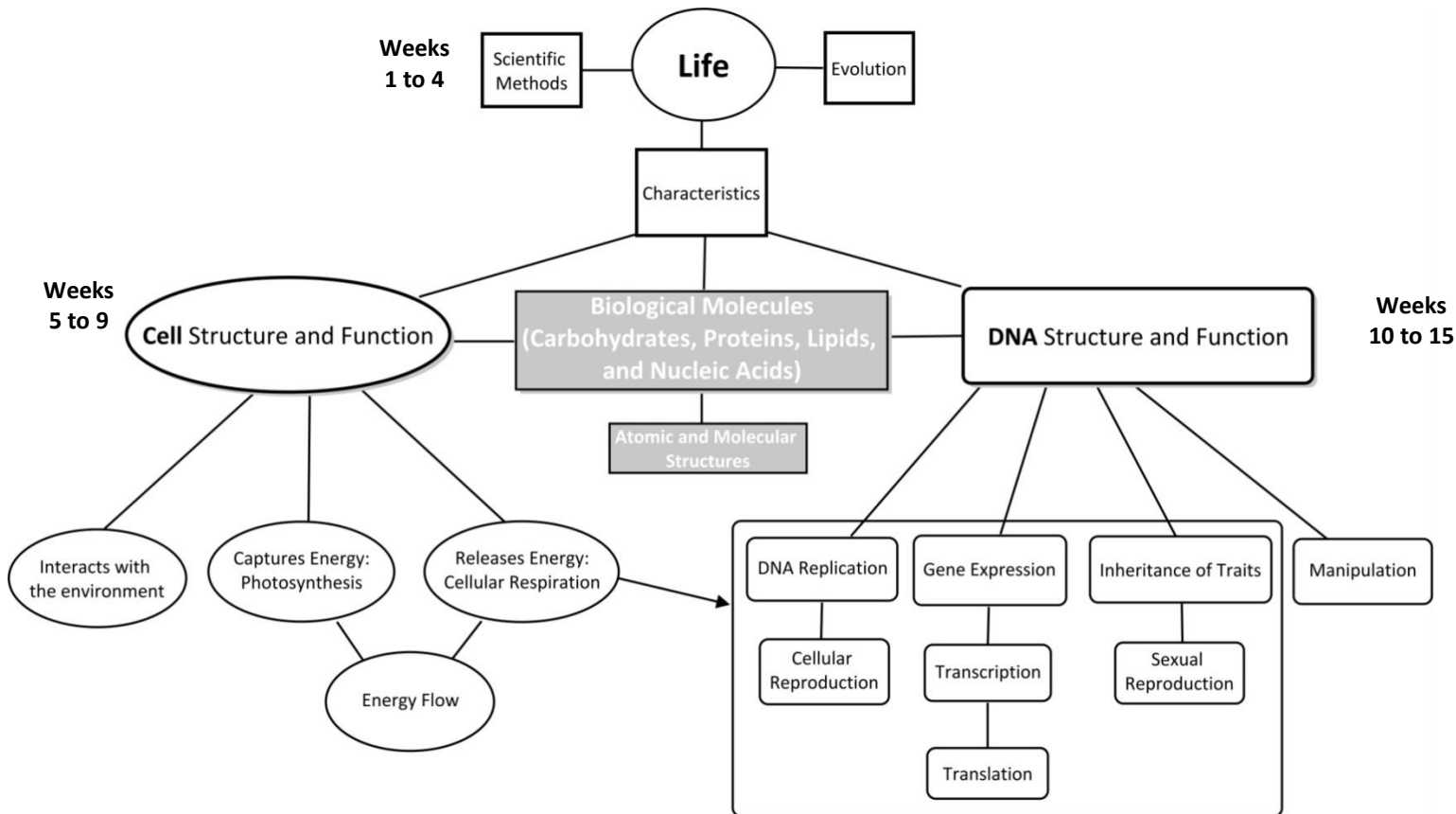
- Describe the process by which scientific knowledge is acquired.
- Identify characteristics common to all cells as well as the major differences that are used to distinguish between the broadest taxonomic groups of living organisms.
- Evaluate the role that natural selection plays in evolutionary change.
- 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.

**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.

## BIOL 1406 COURSE ORGANIZATION AT A GLANCE

You will also find a weekly lecture and lab schedule on page 7.



### Required Materials:

- **Textbook:** *Biology*, 8<sup>th</sup> ed., 2008. Audesirk, Audesirk, and Byers. Pearson Education Inc.
- **Laboratory Manual:** *Blinn College Biology 1406 Lab Manual*, 1<sup>st</sup> ed., Richardson et al., 2009. University Copy Center.
- **CPS<sub>RF</sub> Response Key Pad:** Remote keypad (clicker) and enrollment code for the e-Instruction Classroom Performance System (CPS). The clicker and enrollment code can be purchased at the Blinn College Bookstore however; it is highly recommended that you purchase your enrollment code directly through e-instruction (\$5-\$8 savings). Register your keypad online at <http://www.einstruction.com/>. Specific information on how to register will be provided in class. CPS Response pads should be brought to class **EVERY** day. They will be used to take attendance and to administer in class quizzes.

## **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 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 her/her attendance issues. Should the student accumulate two weeks' worth of unexcused absences, 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) not later than the 15<sup>th</sup> 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. Other excuses will be considered and may be considered excusable at the instructor's discretion, with documentation. **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 November 20<sup>th</sup>, 2009.** IT IS YOUR RESPONSIBILITY TO WITHDRAW FROM THE CLASS.

**Health Concerns:** Eating and drinking are **not** allowed in classrooms or laboratories.

**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. Use of electronic devices (cell phones etc.) in class by non-emergency personnel is now classified by the Board as a violation of the civility protocol. Turn them off before entering class. 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.

***Dishonesty Statement:*** 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.

***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). Accommodation is not retroactive from the time of concluding agreement for accommodation.

## **COURSE REQUIREMENTS AND CRITERIA FOR GRADING:**

***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 Labs at Blinn College are located in Rooms H-225 and L-258, and the Library. If you are not familiar with these, see me or inquire at the Learning Center in the Library Building, L-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: <https://ecampus.blinn.edu/default.asp>.

***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.LastnameLast2digitsBlinnID@buc.blinn.edu . Information about accessing this account can be found at: <http://www.blinn.edu/acadtech/studentemail/>

## **GRADING (tentative breakdown of assignments and scores)**

### **Exams:**

***Lecture Exams:*** There will be four lecture exams each worth 100 points. Lecture exams may consist of a combination of true/false, multiple choice; fill in the blank and short answer 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 lab exams worth 100 points each. Laboratory exams will test student's ability to carry out specific tasks or techniques that relate to lab activities performed and/or the overall student learning outcomes for the laboratory. Additional short answer, problem solving, or fill-in-the-blank questions may also be administered. There will be **NO MAKE-UP EXAMS** for the lab.

**Final Exam:** The final is a common comprehensive final worth 200 points.

### **Quizzes:**

**Lecture:** Daily quizzes or activities will be given to help students gauge their progress in learning the material. These quizzes and activities worth a total of 100 points will cover material from the previous or current days lecture, the textbook, or assigned outside readings. In many cases, your CPS response pad will be required to take these quizzes so make sure you have them every day. These quizzes will take on many different formats however.

**Supplemental Instruction (SI) Quizzes:** There will be three quizzes to assess the understanding obtained from 3 group activities. Each of these activities targets a key student learning outcome from this course. Each quiz will be worth 10 points.

**Bonus Quiz or Assignment.** Each Friday, I will release a bonus assignment covering that week's material (lecture or lab). The assignment may be in the form of a quiz or short answer questions. These assignments are worth a total of 5 points (each) and will be used to generate bonus points that will be added to your point total at the end of the semester. You will have one week to complete them and only one attempt will be allowed, NO exceptions. They are intended to be completed individually. If duplicate work is turned in, no credit will be given. Since I do not curve individual exam scores, these assignments will help generate a curve. No additional bonus assignments will be offered so take advantage of these from the start.

### **Lab Homework:**

There will be 18 lab worksheets assigned worth 3-10 points each for a total of 10 points. Homework will be due the lab period or class following the lab activity unless otherwise stated. NO late assignments will be accepted.

### **Outside Assignment:**

An optional outside assignment will be made available. This is not a bonus activity. It will factor directly into your point total. More information to come.

**Point Distribution:**

Lecture and Lab Exams (top 5):	500 points
Comprehensive final exam:	200 points
Lecture Quizzes & Activities:	100 points
Group Activity Quizzes:	30 points
Lab Homework:	140 points
<u>Optional Outside Assignment:</u>	<u>30 points</u>

**TOTAL POSSIBLE POINTS: 970-1000**

## TENTATIVE LECTURE AND LAB SCHEDULE\* (Fall 2009):

Updated: 08/24/09

Week	Week of	Chapter	Lecture Topic	Laboratory Topic
1	08/31	- 1	Intro Intro to Life on Earth	Lab 1 – Safety in the Laboratory Lab 2 – The Process of Science
2	09/07	2	Atoms, Molecules, and Life	Lab 3 – The Scientific Method Lab 4 – Experimentation and Exp. Design
3	09/14	3 -	Biological Molecules Organic Molecules Activity	Biological Molecules cont'd Lab 5 – Metric Measurement
4	09/21	- 4	<b>Exam #1 (1-3)</b> Cell Structure and Function	Lab 5 – Metric Measurement cont'd Lab 6 – Organic Molecules
5	09/28	4 5	Cell Structure and Function Membrane Structure and Function	Lab 7 – Microscopy Labs 8 & 9 – Scientific Illustration and Cells
6	10/05	5 6	Membrane Structure and Function Energy Flow in the Life of A Cell	Lab 9 – Cells cont'd Lab 10 – Membrane Transport
7	10/12	6 -	Energy Flow in the Life of A Cell <b>Exam #2 (4-6)</b>	Lab 10 – Membrane Transport cont'd Lab Exam #1 Review
8	10/19	7	Capturing Solar Energy: Photosynthesis	<b>Lab Exam #1</b> Lab 11 – Spectrophotometry
9	10/26	8	Harvesting Energy: Cellular Respiration	Lab 12 – Enzyme Kinetics Cellular Respiration Concept Maps
10	11/02	- 9	<b>Exam #3 (7 &amp; 8)</b> DNA	Lab 12 – Enzyme Kinetics cont'd Lab 13 – Chromatography and Photosynthetic Pigments
11	11/09	9 10	DNA Gene Expression and Regulation	Lab 14 – Photosynthesis Lab 14 – Photosynthesis cont'd
12	11/16 <sup>W</sup>	10 11	Gene Expression and Regulation Cellular Reproduction	Lab 15 – DNA Isolation Lab 16 – RFLPs and Gel Electrophoresis
13	11/23	11 -	Cellular Reproduction <b>Thanksgiving Holiday</b>	Lab 17 – Mitosis <b>Thanksgiving Holiday</b>
14	11/30	12	Patterns of Inheritance <b>Exam #4 (9-12)</b>	Patterns of Inheritance cont'd Lab 18 – Mendelian Genetics
15	12/07	13 -	Biotechnology (13.1-13.3) Review	Lab Exam #2 Review <b>Lab Exam #2</b>
	<b>Final Exam</b>	<b>Section D1-</b> December 16, Wednesday, from 07:45 am to 09:45 am		

\* 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.