Department: Life Sciences (Biology)

|  |
| --- |
| General Biology IISummer 2, 2012Biol 1407 Crn # 82779  |

|  |  |
| --- | --- |
| Course location and times: | Stafford Campus, ScarcellaMoWeFr: 8:00 am - 11 :50 pm; Room W119 TuTh: 8:00 am - 11 :50 pm; Room S102  |
| Course semester credit hours: | 4 Semester Credit hours |
| Course contact hours: | 96 total hours; 48 hrs lecture, 48 hrs laboratory/activities |
| Course length: | 5 weeks |
| Instruction type: | In-person, Lecture and Lab |

|  |  |
| --- | --- |
| Instructor: | Dr. Brian C. Mahon, PhD. |
| Phone: | 713-718-7771 |
| Email address: | brian.mahon@hccs.edu |
| Office location / hours: | Stafford Campus By appointment.  |

Course Description:

It includes a study of the broad diversity of organisms in the five kingdoms, evolution, animal behavior, and basic ecology. This course is designed to give basic knowledge of life sciences to students going for biology major or applied health sciences.

Course Prerequisites:

This course has a prerequisite of BIOL 1406 (General Biology I).

**Course Objectives:**

  1.  To establish an understanding of the major historical events in evolutionary biology and their impact on the formulation of evolutionary and ecological principles.

    2.  To describe basic cell physiology as it relates to biochemistry, metabolism, nutrition, and gas exchange.

    3.  To demonstrate knowledge of the basic principles of taxonomy, and of taxa.

    4.  To demonstrate knowledge of basic plant and animal structure at the level of the cell, of tissue/organ systems and of the organism as a whole.

    5.  To demonstrate skill in basic laboratory methodology, and the careful analysis of laboratory data and results.

You are spending a good deal of time, energy and money on this course – please, make the most of your investment! It takes approximately **2-3 hours of study time for each hour of class time to master the material**. This class will have around 96 contact hours (4 hr. credit).

The **class and study time necessary to succeed in this class will be close to 300 hours!**

Instruction Methods:

The primary focus of the course will be on instructor lectures including illustrations, powerpoint presentations, animations, group activities and assigned textbook readings.

Lecture material will correspond to the topics covered from textbook, but your instructor may include more detail on certain topics. Lecture may be included during lab sessions to clarify or detail concepts.

Topics and concepts covered during lecture or included in the assigned reading will be included in exams.

Laboratory sessions will include exercises from the laboratory manual and/or posted to the Learning Web.

Course Student Learning Outcomes: Being developed for my new summer format.

Course Calendar: Detailed schedule with dates and times will be updated weekly or as needed.

|  |  |  |
| --- | --- | --- |
| **Week** | **Lecture Schedule** | **Laboratory Schedule \*** |
| 1 | Ch. 22 Decent with modification Ch. 52 An Introduction to Ecology and Biosphere \* | \*Labs may include being outdoors for a portionof the time. |
|   | Ch. 23 The Evolution of Population | Lab. 2 Evolutionary Observations |
|  | Ch. 24 The Origin of Species | Lab. 1 Population Genetics |
|   | Ch. 25 The History of Life on Earth |   |
|  | Ch. 26  Phylogeny and the Tree of Life  | Phylogentic Tree Activity \* |
| 2 | **Lecture Exam 1**  |  |
|  | Ch. 27  Bacteria and Archaea / Ch. 19 Viruses \* | Lab. 3 Prokaryotes |
|  | Ch. 28  Protists  |  |
|  | Ch. 31  Fungi | Lab. 4 Kingdoms Protista and Fungi |
|   | Ch. 29  Plant Diversity I: How Plants Colonized Land |  |
|  | Ch. 30  Plant Diversity II: The Evolution of Seed Plants | Lab. 5 Kingdom Plantae |
|  3 | Lecture Exam 2  |   |
|  | Ch. 32 An Introduction to Animal Diversity | Laboratory Exam 1 |
|  | Ch. 33 Invertebrates | Lab. 6 Invertebrates  |
|  | Ch. 34 Vertebrates |  |
|  | Primate Evolution \* | Lab. 7 Animal Tissues |
|  | Ch. 40 Basic Principles of Animal Form and Function |  |
| 4 | **Lecture Exam 3** | Lab. 12 Pig Dissection  |
|   | Ch. 51 Animal Behavior |  |
|   | Ch. 53 Population Ecology | Hominid Evolution Lab \*   |
|  | Ch. 54 Community Ecology |   |
|   | Ch. 55 Ecosystems | Caterpillar Feeding Preference Lab \* |
|  | Ch. 56 Conservation |  |
|  | **Oral Presentations** | Ecology Lab \*  |
| 5  | Unfinished Business |  |
|  | Lecture Exam 4 (Final) | **Laboratory Exam 2** |
|  |  |  |
|  |  |   |
|   |  |  |

\* Project topics and due dates will be discussed in class.

\* Indicates activities / lab handouts that will be posted on Learning Web for download.

**Note that your instructor reserves the right to change the schedule as needed at any point during the course.**

|  |  |
| --- | --- |
| Student Assignments: | Students are required to read assigned chapters. Additional announced and unannounced quizzes during lecture or lab may be conducted throughout the semester. |
| Student Assessments: | Students will be assessed via lecture and laboratory examinations, project oral report, lab manual and final lecture and lab examinations.   |
| Instructional Materials: | **Text Book**: BIOLOGY: Ninth Edition by Neil A. Campbell & Jane B. Reece. (Sold as Biology Volume II)**Laboratory Manual**: Biology 1407: Laboratory Manual, HCCContributing Authors: David Schwartz, Ndu Dikeocha**Web resources:**My Learning Web Page |

|  |  |
| --- | --- |
| HCC Policy Statement: ADA | Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact the Disability Services Office at the respective college at the beginning of each semester. Instructors are authorized to provide only the accommodations requested by the Disability Support Services Office. If you have any special needs or disabilities that may affect your ability to succeed in college classes or participate in any college programs or activities, please contact the DSS office for assistance. Southwest College, contact: Dr. Becky Hauri5407 GulftonHouston, Texas 77081Phone: 713-718-7909Fax: 713-718-7781TTY: 713-718-7909 |
| HCC Policy Statement: Academic Honesty | Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. Disciplinary proceedings may be initiated by the college system against a student accused of scholastic dishonesty. Penalties can include a grade of "0" or "F" on the particular assignment, failure in the course, academic probation, or even dismissal from the college. Scholastic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion. |
| Student Success Policy | **Tutoring (if available in Summer)**The college will provide tutoring for the students. More information will be available later. **Early Alert process** To help students avoid having to drop/withdraw from any class, HCC has instituted an **Early Alert process** by which your professor will “alert” you that you might fail a class because of excessive absences and/or poor academic performance. The counselors with work with you to learn about what, if any, HCC interventions might be available to assist you – online tutoring, child care, financial aid, job placement, etc. – to stay in class and improve your academic performance.  |
| HCC Policy Statement: Student attendance, repeaters, withdrawal deadline | **Attendance**Students are expected to attend classes regularly. Students are responsible for materials covered during their absences, and it is the student's responsibility to consult with instructors for make-up assignments. Instructors check class attendance daily. A student may be dropped from a course for excessive absences after the student has accumulated absences in excess of 12.5% of the hours of instruction (including lecture and laboratory time). Note that 12.5% is approximately 3 - 4 classes and/or labs for a 4-semester hour course. Habitual tardiness will not be tolerated. Students are expected to be in attendance for the entirety of the scheduled class and are responsible for completing assignments scheduled during their absence/s. It is the responsibility of each student to amend their professional/personal schedule to meet the class schedule **Repeaters**Students who repeat a course for a third or more times may soon face significant tuition/fee increases at HCC and other Texas public colleges and universities. Please ask your instructor / counselor about opportunities for tutoring / other assistance prior to considering course withdrawal or if you are not receiving passing grades.**Withdrawals** Withdrawal from the course after the official day of record (see current catalog) will result in a final grade of “W” on the student transcript and no credit will be awarded. It is the student’s responsibility to initiate and complete a request for withdrawal from any course. Students will be required to formally request a drop from their instructors prior to the administrative drop date deadline (**July 30th 2012)**. Abandoning the course or failing to formally drop, will result in a grade being given based on the work completed for the entire course (including missed exams). The State of Texas has begun to impose penalties on students who drop courses excessively. For example, if you repeat the same course more than twice, you have to pay extra tuition. Beginning in fall 2007, the Texas Legislature passed a law limiting first time entering freshmen to no more than SIX total course withdrawals throughout their educational career in obtaining a certificate and/or degree. **International Students**Receiving a "W" in a course may affect the status of your student Visa. Once a W is given for the course, it will not be changed to an F because of the visa consideration. Please contact the International Student Office at 713-718-8520 if you have any questions about your visa status and other transfer issues. |

**Instructor Requirements:**

**Basic requirements**

Students should be on time for class and be prepared with required materials including textbook and lab manual. Full class attendance is required including lecture and lab portions. Full attention during lecture and lab is required.

Student is expected to review the lecture and lab schedule sheet and accordingly prepared before the class begins.

**Lab policy**

Lab safety is stated in lab manual. Lab rules and regulations will be discussed during the first lab and will be adhered to at all times. Each student is responsible for cleaning up after labs, this includes glassware, utensils, specimens/models and other material used during lab time **(clean up is not covered by your lab fees).**

Each student should arrive at the laboratory on time, with his or her laboratory manual. Student should review the lab schedule sheet, read the lab exercise scheduled and prepared to start the experiment. Experiments may be performed in groups. Each student is responsible for completing the laboratory reports at the end of each lab.

**Phones/electronic devices**

Absolutely no phone or other personal electronic devices are to be used during class (lecture and lab). This includes making or taking a call, reviewing messages, texting, playing games, checking email, surfing the web, anything that involves a phone or other personal electronic device. If your work or family situation requires that you be available via phone, your phone can be on vibrate mode and you can take the call during our regular scheduled breaks or you can exit the class to review the call. Notify your friends, family, employers, and anyone else who regularly contacts you that you will be in class and that you should be contacted only when necessary. The taking of calls during class is not only disruptive but it is also discourteous to classmates and the instructor.

**Testing procedures**

Be sure to arrive early for your examinations. There are time limits for exams. You will not be given extended time for testing if you arrive late. Entering and exiting the lecture room or lab room is not permitted once exams have begun. Please be sure to use bathroom before or after.

**Examination format**

Lecture exams will include multiple choice questions and sometimes short answer questions or questions of other format when appropriate.

**Classroom conduct**

Students are expected to conduct themselves as adults. This includes courteous and respectful behavior towards instructor and classmates. Disruptive behavior or any behavior that interferes with any educational activity being performed by the instructor will not be allowed. Additionally, no student may interfere with his/her fellow students’ right to pursue their academic goals to the fullest in an atmosphere appropriate to a community of scholars. Disruptive behavior may result in removal from the class.

**Grades**

|  |  |
| --- | --- |
| HCC Grading Scale: | A = 90-100% B = 80-89% C = 70-79% D = 60-69% F = less than 60% |

**Instructor Grading Criteria:**

Students must adhere to testing schedule. Failure to take a test (lab or lecture) will result in a “0” for the missed exam. No makeup exams will be arranged except for work, family, or personal (health) emergency, and only if documented. You must present with your group on the scheduled date.

**Grade Calculation**

|  |  |  |  |
| --- | --- | --- | --- |
| Activity | Score calculation | Grade | Your Grade |
| 4 Lecture Exams  | Average of 4 scores, 50% | 50 |  |
|  |  |  |  |
| Lab. Exams  | Average of 2 scores 20% | 20 |  |
|  |  |  |  |
| 1 Group Lab Report \*  | 5% | 5 |  |
|  |  |  |  |
| 1 Group Oral Project \*  | 15% | 15 |  |
|  |  |  |  |
| Lab reports /Activities | 10% | 10 |  |
|  |  |  |  |
|  |  |  |  |
| Final Score | 100% | 100 |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**\*these grades depend on active participation in the project.**

**Have a Great Semester! & Enjoy Learning Biology!**