St. Gregory's University
Course Syllabus
Special Topics: Introduction to Life Science (NS 2904)
Spring 2014

Prerequisite(s): None
Instructor: Donald Winslow, Ph.D.
Email: dew@donaldwinslow.info
Phone: (405)558-1855
http://donaldwinslow.info

Office Hours: I can be available to meet by appointment on evenings and week-ends. Since I have no office, we can meet in an empty classroom or the library.

Class Meets: Lecture 6-9 P.M. on Tuesdays in BH 406a
Laboratory 6-8 P.M. on Thursdays in BH 401

Course Description (from the 2011-2012 course catalog): This course will cover a wide range of topics in Life Science at a pace and level appropriate for non-science majors. This course provides the student with the basic principles of biology, including cellular organization and function, genetics, reproduction and development, natural selection, classification of living organisms, representative taxa, ecology, and environmental and conservation issues. This course will meet for three hours of lecture and two hours of lab per week. This course fulfills the Core Curriculum requirement for Laboratory Science and will NOT count toward major in LS or KI.

Learning Objectives (from the Common Core Curriculum):

Apply critical thinking and problem solving skills, quantitative reasoning, and the scientific method appropriately to questions arising from multiple areas of human inquiry.

Learning Objectives (for the Bachelor's Degree in Life Science):

Apply standard laboratory methods safely and accurately.

Explain the fundamental principles and concepts in the life sciences, including genetics.

Required Textbook and Materials:

What is Life: A guide to Biology, 2nd edition by Phelan (2013). W. H. Freeman and Co. ISBN (13): 978-1-4641-0720-7. ISBN (10): 1-4641-0720-3.

You will also need a notebook for recording sketches and observations. This should be separate from the notes you keep for lecture, because you will turn in your laboratory notebook at the end of the semester. You will want to hold on to your lecture notes to prepare for the final exam.

Course requirements and evaluation:

Assignment	Points
Participation	30
Quizzes	30
Homework	40
Exam 1	30
Exam 2	30
Exam 3	30
Exam 4	30
Final exam	40
Lab reports	30
Lab practical	30
Final lab practical	40
Lab notebook	40
Total	400

Grading Scale: A 360-400; B 320-359.5; C 280-319.5; D 240-279.5; F 0-239.5

Participation--Your grade includes 30 possible points for participation. This is based on my subjective assessment of how completely you participate in lectures and discussions.

Quizzes--You should be prepared for a quiz every time you attend lecture. Quizzes provide you an incentive to prepare for class and opportunities to earn points. They will also help me assess how much we need to review before moving on.

Homework--I will provide you with homework assignments to complete outside of class. These may include questions that challenge your problem-solving skills.

Exams--Lectures and readings do not repeat each other perfectly; students are responsible for material from both. Exams are designed to assess students' ability to apply biological principles, as well as knowledge of the taxonomy, morphology, and ecology of various groups of organisms. The final exam will be comprehensive; i.e., it will include material from lectures and reading assignments covered by earlier exams.

Lab reports--For some laboratory exercises I will ask you to complete reports or worksheets. These will help demonstrate your ability to apply the scientific method, as well as your knowledge of specific biological systems.

Lab practicals--During the lab practicals you will be shown specimens and will answer questions about them. Most questions will involve classification and morphology. I will grade practicals based on the correctness and completeness of answers.

Lab notebook--During every lab you should record observations and sketches in your lab notebook. Make sure to include the date, observers, times of observations, measurements, data, notes, sketches of specimens, and answers to important questions. I will grade notebooks based on completeness and neatness.

Course schedule (tentative):

This schedule is likely to change. Check Blackboard or http://donaldwinslow.info for updates. I will be out of town the week of 9-15 March. You will be expected to work on course assignments during this time.

Date	Topic
14 January	Introduction to course, the scientific method, matter and energy, life
16 January	Introduction to lab, measurement, microscopy (lab)
21 January	Biochemistry, cell structure and function, membranes and cell walls
23 January	Cells and tissues (lab)
28 January	Photosynthesis and cellular respiration
30 January	Cell function, diffusion and osmosis, cellular respiration (lab)
4 February	Exam 1
6 February	Mitosis, meiosis, and development (lab)
11 February	Mitosis and meiosis, gametogenesis, fertilization, development
13 February	Genetics (lab)
18 February	Genetic analysis, human genetic disorders, molecular genetics
20 February	Bacteria (lab)
25 February	Gene regulation, recombinant DNA and genetic engineering
27 February	Protists (lab)
4 March	Exam 2
6 March	Fungi (lab)
11 March	Winslow gone--work on genetics homework
13 March	Winslow gone--work on genetics homework
18 March	Spring Break (no class)
20 March	Spring Break (no class)
25 March	Biological diversity, quasi-organisms, evolution, prokaryotes
27 March	Plants (lab)
1 April	Natural selection and evolution, origin and diversification of life
3 April	Lab practical exam

Date	Topic
8 April	Exam 3
10 April	Invertebrate animals (lab)
15 April	Protists, fungi, plants, animals
17 April	Triduum (no class)
22 April	Animal organ systems
24 April	Vertebrate animals (lab)
29 April	Animal behavior, ecology and conservation
1 May	Tree community ecology exercise (meet in lab and we'll go outside)
6 May	Exam 4
8 May	Final lab practical exam
	Final exam

Course policies:

Exams and assignments--Ordinarily practicals will not be rescheduled for individual students. Assignments should be turned in on time. I will deduct 10% for each day a paper is late. If I do not have sufficient time to read a late paper, it will not receive a grade.

From the Student Handbook (2011-2012):

Student Academic Policies

Classroom Academic Integrity

St. Gregory's University expects its students to demonstrate integrity in their academic work. Acts violating academic honesty include:
1. Cheating on examinations, quizzes or other written work;
2. Giving assistance to or receiving assistance from another during an examination or quiz;
3. Plagiarism, defined as:
    -The use of another's published work (either through a full quotation, partial quotation, paraphrase, or summary of an author's ideas) without proper citation;
    -The use of another student's work as one's own;
    -The purchase, use or provision of an already prepared paper;
4. Obtaining, or attempting to obtain, copies of uncirculated examinations or examination questions; and
5. Falsifying any academic record.

Responses to violations of policy
Students found to have committed one or more of acts 1-4 will receive an F for the examination, written work or quiz in question, and (if deemed appropriate by the instructor) for the course. The

instructor must then provide written notification of the incident to the Provost. If the Provost determines that it is not the first incident of academic dishonesty by the student, the matter will be referred to the Academic Council. After reviewing the incident, the Academic Council will recommend to the Provost an appropriate penalty, which may include academic probation for up to one year, suspension for up to one year, or expulsion**.** An alleged violation of act 5 will be adjudicated by the Provost.

The accusing party will provide written notification accompanied by any documentation to the Provost, who investigates and makes a recommendation to the Academic Council. The Council will review the case and recommend an appropriate penalty. Appeals may be submitted to the President, whose determination is final.

Class Attendance Policy

Students are expected to attend every class session of the courses in which they are enrolled. Instructors are required to keep records of student attendance. Each absence impacts a student's grade, either directly or indirectly. Students are ordinarily expected to make up any work missed as a result of an absence.

The University's minimum standard is that absences of more than 20% ordinarily will lower the course grade one letter for each absence beyond this threshold or, after issuing a warning through the Registrar's Office, faculty may drop the student from the course. Faculty may have more restrictive attendance policies stated in individual course syllabi. Co-curricular activities are ordinarily excused, as long as the total number of absences does not exceed the University's minimum attendance standard. Arriving late for a class or leaving early from a class may be counted as an absence or partial absence (in accord with the instructor's attendance and tardiness policy as published on the course syllabus).

Classroom Etiquette

A university education is a privilege afforded to a very small segment of the human family. Classroom behavior ought to manifest a profound awareness and appreciation of this privilege. Both instructors and students have the responsibility to ensure that the classroom provides an optimal environment for learning.

Behavior that violates this responsibility includes (but is not limited to) failure to purchase the required textbooks or bring them (and other course materials, such as a notebook, pens, etc.) to each class session, talking to other students except when invited to do so by the instructor as part of a class discussion or exercise, eating or drinking in class, making rude comments or gestures, failure to turn off cell phones or pagers upon entering the classroom, using a laptop computer for any purpose besides taking notes for the class, reading material unrelated to this course during class sessions, dressing inappropriately for class, and sleeping during class. Engaging in any of these or other disruptive behaviors will result in the violating student being marked "absent" for that class session and/or being asked to leave the classroom. The instructor reserves the right to drop a student from the course for repeatedly engaging in disruptive and/or inappropriate classroom behavior.