

Course Syllabus: Contemporary Biology (BIOL 1408.02 Lecture)

Important Note: This syllabus is subject to change at the discretion of the instructor.

INSTRUCTOR: Volha Minich Phone: 936.294.3244 Office Hours:
Office: Lee Drain Bldg. 147 Email: vxm050@shsu.edu Mon and Wed: 2-4; Tue and Thur: 10-12

COURSE LOCATION & TIME: Lee Drain Bldg. 214, MWF 12 – 12:50

COURSE DESCRIPTION: 4 Credit hours. *Contemporary Biology* is an introductory biology course for non-science majors. Students will gain an understanding of important and relevant biological concepts as well “science as an approach to understanding our natural world.”

COURSE OBJECTIVES: Learn and understand the principles of biology through the acquisition of:

1. A basic working vocabulary regarding biology,
2. The ability to ask a question and formulate a hypothesis,
3. The ability to design a scientific experiment to examine the merit of a hypothesis,
4. An understanding that life on earth is complex and diverse,
5. An understanding that the complexities of life begin at the cellular level and are not only the result of an organism's genes but are profoundly influenced by an organism's environment.

REQUIRED TEXT: *What is Life? A Guide to Biology, 3rd edition* by Jay Phelan, W. H. Freeman Publishing. ISBN 978-1-464-13595-8. There will be additional study help and/or an ebook available on the publisher's website, www.whfreeman.com/phelan3e.

REQUIRED RESPONSE SYSTEM: We will be using the Top Hat (www.tophat.com) classroom response system in class. You will be able to submit answers to in-class questions using smartphones and tablets, laptops, or through text message. It is required for both, lab and lecture. You can visit the Top Hat Overview (<https://success.tophat.com/s/article/Student-Top-Hat-Overview-and-Getting-Started-Guide>) within the Top Hat Success Center which outlines how you will register for a Top Hat account, as well as providing a brief overview to get you up and running on the system. In order to register, an email invitation will be sent to you by email.

The subscription you will get for the lab, will work for me and any other class using TopHat this semester.

Should you require assistance with Top Hat at any time, due to the fact that they require specific user information to troubleshoot these issues, please contact their Support Team directly by way of email (support@tophat.com), the in app support button, or by calling 1-888-663-5491.

GRADING: Lecture grade will be determined: The average of 4 lecture exams = 80% In-lecture quizzes, H/Ws = 20%
Overall course grade will be based 75% on lecture grades and 25% on the lab grade. So, the **overall course grade** formula is: Overall Lecture % x 0.75) + (Overall Lab % x 0.25)

The letter grade will be determined: 90-100% (A), 80-89% (B), 70-79% (C), 60-69% (D), <60% (F)

ATTENDANCE: In accordance with University policy, I expect regular and **punctual** attendance of each of you. No extra points will be awarded or subtracted based on your attendance. Missing the quizzes will have a powerful effect on your grade, though.

MAKE-UP: No quizzes will be made-up, only the tests. You will have **5 business days** to make up your test. A valid documentation **MUST** be provided (a doctor's note, a legal notice, a note from the athletic director, etc...)

CLASSROOM RULES OF CONDUCT: Students are expected to assist in maintaining a learning environment. Students are to treat faculty and students with respect. Students are asked to use their cell phones **ONLY** for the TopHat Response System in class. Under no circumstances are any electronic devices to be out during the exam times. If I see your cell phone during an exam, I will assume that you are cheating and award you a zero.

ACADEMIC DISHONESTY: All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused in any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.

VISITORS IN THE CLASSROOM: Unannounced visitors to class must present a current, official SHSU identification card to be permitted in the classroom. They must not present a disruption to the class by their attendance. It is at the instructor's discretion whether or not the visitor will be allowed to remain in the classroom.

RELIGIOUS HOLY DAYS: University policy states that a student who is absent from class for the observance of a religious holy day must be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence. Students must be excused to travel for observance of a religious holy day. A student who wishes to be excused for a religious holy day must present the instructor with a written statement describing the holy day(s) and the travel involved. The instructor will provide the student with a written description of the deadline for the completion of the missed exams or assignments.

STUDENTS WITH DISABILITIES POLICY: It is the policy of SHSU that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should register with the Office of Services for Students with Disabilities located in the Lee Drain Annex (phone 936-294-3512, TDD 936-294-3786, and disability@shsu.edu). They should then make arrangements with their individual instructors so that appropriate strategies can be considered and helpful procedures can be developed to ensure that participation and achievement opportunities are not impaired.

SHSU adheres to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations for students with disabilities. If you have a disability that may affect adversely your work in this class, then I encourage you to register with the SHSU Services for Students with Disabilities and to talk with me about how I can best help you. All disclosures of disabilities will be kept strictly confidential. NOTE: No accommodation can be made until you register with the Services for Students with Disabilities. For a complete listing of the university policy, see: <http://www.shsu.edu/dept/academic-affairs/documents/aps/students/811006.pdf>

	Tentative schedule. Subject to change.
Week 1: Aug 23-25	Classes started on Wed Science, Scientific method (...ways to test a hypothesis) Rules of a valid experiment. Data analysis and Conclusions
Week 2: Aug 28–Sept. 1	Classes Cancelled (hurricane Harvey)
Week 3: Sept 6-8	Sept 4: Labor Day Biology. Characteristics of living things. THQ 1 (took 30 min). Atom stability. Intro to ions
Week 4: Sept 11-15	Ionic vs. Covalent bonding. Intermolecular attractions. THQ 2. Organic molecules intro. Carbohydrates. Proteins and Nucleic acids.
Week 5: Sept 18-22	THQ 3. Energy. Chemical reactions. Enzymes Intro Controlling Enzymes. Respiration and ATP. Friday Sept 22: Test 1
Week 6: Sept 25-29	Intro to cells. Cell boundaries. Membrane structure. THQ 4. Membrane tr-t: Passive (diffusion and facilitated diffusion) Membrane transport: osmosis and pumps
Week 7: Oct 2-6	Cytoplasm. Nucleus and DNA. Protein synthesis. THQ 5. Case study "Insulin"
Week 8: Oct 9-13	TPQ 6. Biotechnology Cell cycle. Replication. Mutations THQ 7. Mitosis phases. Cell death.
Week 9: Oct 16-20	Monday Oct 16: Test 2 Mitosis vs. Meiosis. Meiosis steps Intro to genetics. Different cases of gene interaction.
Week 10: Oct 23-27	THQ 8. Genes? Not only Classification THQ 9. Viruses
Week 11: Oct 30-Nov 3	Prokaryotes THQ 10. Protista Fungi
Week 12: Nov 6-10	Wednesday Nov 8: Test 3 Ecology Levels of interaction. Classification of org-sms. Food chains and pyramids
Week 13: Nov 13-17	Community interactions. Adverse scenarios. Ecological succession. Human impact.
Week 14: Nov 20	Populations Nov 22-24 Thanksgiving holiday
Week 15: Nov 27-Dec 01	Changes in Populations Change is Everywhere