

SYLLABUS

BIOL 1408 – Contemporary Biology

Meeting Times: MWF 9:00 AM – 9:50 AM

Instructor: Jim Harper, Ph.D.

Office Hours: MWF 10 AM – 11:45 AM

Office Location: Lee Drain Building (LDB) 134

Phone: 936-294-1543

Email: jmharper@shsu.edu

Recommended Course Text

Any introductory textbook geared toward non-majors is sufficient, but Simon's biology: the core (2nd ed.; ISBN: 978-0-134-15219-6) is a good choice.

Course objectives

- To gain factual knowledge that improves your biological literacy
- To learn key concepts in biology
- To learn how biology affects your everyday life

What this course is:

- An overview of biology whose focus is on topics that are significant for the day-to-day life of the average person. The background necessary to understand each topic is provided.

What this course is not:

- A scaled down version of an introductory biology course intended for science majors. A basic understanding of specific topics (e.g. What does a gene do?) will be sufficient to succeed in class.

Particulars (also see Sam Houston State University Student Handbook and Appendix)

- Lecture: You are adults now (like it or not) so act as such
 1. Be courteous and respectful to your classmates and myself
 - Be on time: walking in late disrupts class
 - I will bar you from the classroom if it becomes a habit
 - Do not get up and walk out of lecture
 - It's rude and disruptive
 2. Note your attendance on the roster
 - This is mandated by the university and has no bearing on your grade
 3. Devices
 - You may use laptops to take notes
 - You may record my lectures if you like
- Lecture Notes: I will make lecture material available on Blackboard within 1– 2 days of each lecture period

Topics

	Monday	Wednesday	Friday
Week 1 (8/21 – 8/25)	No Class	Course Overview What is life?	The Scientific Method
Week 2 (8/28 – 9/1)	The Scientific Method (cont.)	Starting small: Cell Structure	Proteins, Carbs and Lipids: Cellular Fuel
Week 3 (9/4 – 9/8)	No Class (Labor Day)	Not Breathing: Respiration and energy utilization	Small but Significant: Organelles and human health
Week 4 (9/11 – 9/15)	Moving on Up: Animal Structure & Function	Give Me the Green: Without Plants There is Nothing	Energetics & Metabolism: Nutrition & Health
Week 5 (9/18 – 9/22)	Intercellular Communication: Receptors and cell signaling	That's Not Supposed to Happen: Endocrine Disruption	Guest Lecturer Rick Lewis CJ
Week 6 (9/25 – 9/29)	Nucleic Acids: Structure, Function and Mutation	No Class (COHS Dean Search)	Genetic Engineering: The Power of Bioreactors
Week 7 (10/2 – 10/6)	Genetic Engineering: Genetically Modified Organisms (GMOs)	Reproductive Cloning & Stem Cell Biology: A fountain of youth?	Molecular Evolution: Genetic mutation and its consequences
Week 8 (10/9 – 10/13)	Darwinian Evolution: Making the most babies wins	Cell Division: What happens when it goes bad?	Chemotherapy & Radiation Oncology: Is the cure just as bad?
Week 9 (10/16 – 10/20)	Cancer is contagious?	Fighting Back the Enemy: Immunological Principles	Let's Get Vaxxed: The biology of vaccines
Week 10 (10/23 – 10/27)	Too Much of a Good Thing: Allergies and Autoimmunity	Hidden World of Prokaryotes: What are they?	Hidden World of Prokaryotes: Significance to Humans
Week 11 (10/30 – 11/3)	You, I and Everything Else: Eukaryotes	Exploiting the Differences: Biological Basis for Antimicrobial Therapy	When the System Fails: Antibiotic Resistance
Week 12 (11/6 – 11/10)	Viral Mutation: Why hasn't AIDS been stopped?	Bacteria vs Bacteria: Probiotics	Zoonotics: Not a Fun Day at the Zoo
Week 13 (11/13 – 11/17)	When our brethren misbehave: Parasitic Infections	What's Your Vector Victor?	Ecological Disasters: Invasive species
Week 14 (11/20 – 11/24)	TBD	No Class (Thanksgiving)	No Class (Thanksgiving)
Week 15 (11/27 – 12/1)	Ecological Disasters: Things that go boom	It's Getting Hot in Here: Global Warming and Its Implications	Overflow
Finals Week (12/4 – 12/7)		FINAL EXAM 9:30 – 11:30 AM	

Grading

- **IMPORTANT:**
 1. All assignments (except the Final Exam, see below) will be available via Blackboard
 - Find the appropriate link (Quizzes, Readings) on the sidebar
- Lecture grades will be assigned based on ***your cumulative point total*** amassed from the following:
 1. **Weekly Reading & Writing Assignment**
 - a. Each week you should complete the assigned reading:
 - i. For each article you need to submit a brief (500 – 600 word) essay that:
 1. Summarizes the article
 2. Indicates how you feel it's relevant to your everyday life
 3. Poses 2 questions that came to mind while reading the article
 - a. **You must include questions to receive full credit**
 - ii. Essays need to be submitted via Turnitin in the Blackboard "Essays" folder
 1. **Essays are due every Saturday by 11:59 PM**
 2. **Quizzes**
 - a. Each week there will be a quiz that covers that covers what we have discussed
 - i. Each will consist of 10 questions and will be made available at 5:00 PM each Friday

1. They will remain open until the following Wednesday at 11:59 PM
 - a. So you have **5 days!** to take the quiz
 - ii. You are allowed multiple attempts (2) for each question
 1. Once the quiz has begun you will have 30 minutes to complete it
 2. The highest score will be recorded into the gradebook automatically
3. **Final Exam**
- a. The final exam will consist of short answer/essay questions.
 - i. ***It is not*** a comprehensive exam and will not test you over the course content *per se*.
 1. The final exam will be during finals week at the scheduled time
 - a. **Wednesday December 6, 2017 @ 9:30 AM**
4. **Extra Credit**
- a. You may submit *up to 3* essays for extra credit
 - i. You may not submit more than 1 essay in any given week; each is worth up to **10 points**
 1. Each essay should be ***about any topic in biology***
 - a. It does not need to be something we discussed in class
 2. Articles must be current and come from one of two sources:
 - a. *NY Times Science Times* (<http://www.nytimes.com/pages/science>)
 - b. *Science Daily*
(https://www.sciencedaily.com/news/plants_animals/biology)
 - i. **Note:** The article ***must be from the same week that you submit your synopsis***. Include the URL for the article as confirmation.
 - ii. Each essay should be a 1 page synopsis of the article that includes:
 1. Pertinent background information
 2. **Your opinion** about the significance of article's subject to everyday life

Lecture Points Breakdown

Category	Number	Points Each	Points (possible)
Quizzes	14	20	280
Discussion articles	14	10	140
Final Exam	1	50	50
		Course total	470

Final Grade

- Final grades in the course will be a composite of your lecture and laboratory grades as follows:
 1. Lecture = 75%
 2. Laboratory = 25%

A note about the laboratory: The lab is conducted as an entirely separate entity from the lecture. I have no role in the material covered, the lab's organization or the grades assigned to students for the laboratory portion of the course. Any questions or concerns regarding the laboratory should be directed to Miss Lori Rose.

APPENDIX – ACADEMIC CALENDAR/CLASS POLICIES/STUDENT CONDUCT

ACADEMIC CALENDAR:

The calendar is available via the following link:

http://www.shsu.edu/~reg_www/academic_calendar/index.php?semester=fall&year=2015&Submit=View+Calendar

Please make a note of important dates (holidays, deadlines, *et cetera*)

RESIGNATION NOTE:

Students may resign with a "W" grade from the 5th class day through the last class day, but prior to any final exams being taken or course completion.

DROP NOTE:

Courses may be dropped without a grade of "F" through the last class day, but prior to any final exams being taken or course completion. Students wishing to drop courses after the term's online drop deadline must submit a drop request form, signed by the professor, to the Registrar's Office. To process a "Q" drop after the online drop closes, students must come to the Registrar's Office, Estill Building Rm. 331 between the hours of 8:00 a.m. and 5:00 p.m. No schedule changes may be made after the deadline specified in the Academic Calendar.

I take violations against the Sam Houston State University Code of Student Conduct very seriously and will pursue all available options in the event of a violation. Students are expected to engage in a manner that is above reproach and 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 **at my discretion**. The university and its official representatives may initiate disciplinary proceedings against a student accused of 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.

SAM POLICY: <http://www.shsu.edu/students/guide/>

Academic Honesty: 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 of 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: Only registered students may attend class. Exceptions can be made on a case-by-case basis by the professor. In all cases, visitors must not present a disruption to the class by their attendance. Students wishing to audit a class must apply to do so through the Registrar's Office.

Students with Disabilities: It is the policy of the university that no otherwise qualified disabled student shall, solely by reason of his/her handicap, be excluded from participation in, or denied benefits of, or be subject to discrimination under any academic or Student Life program or activity. Disabled students may request help with academically related problems stemming from individual disabilities by contacting their instructor, school/department chair, or by contacting the university Chair of the Committee for Continuing Assistance for Disabled Students/ Director of Counseling Center. A student with a disability is encouraged to register with the university Counseling Center, as well as contacting their instructor about assistance needs. Accommodation cannot be made until the student has initiated the request with the Counseling Center. Every semester that the student desires accommodations, it is the student's responsibility to complete a Classroom Accommodation Request Form at the Counseling Center and follow the stated procedure in notifying faculty. Accommodations for disabled students are decided upon documentation and need on a case-by-case basis by the Counseling Center. All requests are handled with confidentiality according to university procedures.

Religious Holy Days Policy: Section 51.911(b) of the Texas Education Code requires that the university excuse a student from attending classes or other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. A student whose absence is excused under this subsection may not be penalized for that absence and shall be allowed to take an examination or complete an assignment from which the student is excused within a reasonable time after the absence. University Policy 861001 provides procedures to be followed by the student and instructor. A student desiring to absent himself/herself from a scheduled class in order to observe (a) religious holy day(s) shall present to each instructor involved a written statement concerning the religious holy day(s). This request must be made in the first 15 days of the semester or the first 7 days of a summer session in which the absence(s) will occur. The instructor will complete a form notifying the student of a reasonable timeframe in which the missed assignments and/or examinations are to be completed.

Disruptive Behaviors: You are expected to adhere to the Sam Houston University Code of Student Conduct. See below, or your handbook for details. Violations include but are not limited to:

- a. talking out of turn in lecture,
- b. obscene language,
- c. reading the newspaper,
- d. working on outside material,
- e. cell phones ringing,
- f. answering cell phones,
- g. text messaging,
- h. playing games,
- i. cheating,
- j. and plagiarism.

Violations will result in your immediate removal from classroom and/or dismissal from the class with a failing grade. Please do not test my patience.

Class Attendance (Sam Houston Code of Conduct):

1. Regular and punctual class attendance is expected of each student at Sam Houston State University.
2. Each faculty member will keep a record of student attendance.
3. Each faculty member will announce the policies for accepting late work or providing makeup examinations. Students are expected to show appropriate cause for missing or delaying major assignments or examinations.
4. A student shall not be penalized for three or fewer hours of absences when examinations or other assigned class work has not been missed; however, at the discretion of the instructor, a student may be penalized for more than three hours of absences.
5. Each instructor is obligated to clarify in writing to each student enrolled in class at the beginning of the semester or summer session the instructor's classroom policy regarding absences.
6. Class absences will be recorded and counted only from the actual day of enrollment for the individual student in that specific class.

FINAL NOTE

The Sam Center (http://www.shsu.edu/~sam_web/) is an outstanding resource available to students to assist with a host of academic and personal issues.