

BIOLOGY 1320

Zombie Apocalypse: Biology of Disease

University approved for either Core or STEM requirements

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Scheduled meeting times: TBD

Course Description:

This course is intended for non-science majors. This course will use the model of zombie outbreaks to introduce students to fundamental biology concepts, including enzymes, cells, systems, pathogens, and disease outbreaks, as relating to human disease. This course will be run as a hybrid course, with online lectures and scheduled smaller group (lab) meetings for experiential learning activities.

Course Objectives:

1. Students will learn how cellular metabolism, energy requirements, and enzyme activity govern living cells & organisms. (“Dead vs. Alive”)
2. Students will learn the difference between correlation and causation in scientific research, and understand how researchers and physicians design scientific experiments to elucidate the difference between correlation & causation. (“What’s making zombies?”)
3. Students will learn how genes control protein function, and how hereditary disease occurs and can be treated (“Are they mutant zombies?”)
4. Students will learn how the environment plays a role in human health, and how stewardship of the environment protects human health (“Are they toxic zombies?”)
5. Students will learn about pathogens and how we treat the diseases they cause. They will learn the difference between bacteria and viruses, and how we treat them. They will also learn about natural selection and antibiotic resistance (“Are they contagious zombies?”)
6. Students will learn how the specific immune system works in general terms, and how vaccines work to protect individuals and populations (“Fighting zombies!”)
7. Students will synthesize what they have learned through guided experiments in the laboratory into a lab experiment of their own design and present a poster on the outcome.

Required Textbook: Zombie Human Biology, Kendal Hunt Press, S. Fischer and C. Green. ISBN: 978-1-5249-0364-0.

Examinations & Coursework:

- A quiz will be given at the end of each course section (approximately every 1 weeks) during lecture hours, over lecture and experiential learning material (20% of grade)
- Online or textbook reading assignments will be completed with concept questions (10% of grade)
- Discussion questions will be given during class and completed online; students will receive feedback on their answers as preparation for the exams. (Participation 5% of grade, quality of answers 10% of grade)
- A poster style lab report will be turned in for every guided laboratory experiment (Participation 5% of grade, partner evaluation 5% of grade, poster completion & quality 10% of grade)
- One final exam will be given, including critical thinking questions based on discussion questions above (15%)
- A final zombie scenario will be completed in small groups using scientific concepts learned. (Participation 5% of grade, team evaluation 5% of grade, scenario completion & quality 10% of grade.

If a student misses a class or exam due to a documented emergency, a make up assignment or exam will be determined by consultation with the instructor. If a student misses a class or exam without contacting the instructor, no make up assignment or exam need be offered.

Lab Safety

All students will sign a safety contract, which will be kept on file in the instructor's office. All students **MUST** follow all safety rules and recommendations.

ABSOLUTELY NO FOOD OR DRINKS ARE ALLOWED IN THE LABORATORY.

If you choose to act irresponsibly in the laboratory, including horseplay or other behavior that may put others at risk, you may forfeit your right to finish the course. All appropriate department heads will be notified of the problem. Tobacco and e-cigarettes are not permitted in the laboratory or the classroom. Anything that goes into the mouth (cough drops, candy, etc) is not permitted in the laboratory.

UT Tyler Policies:

Academic Honesty

UT Tyler maintains strict standards of academic integrity. All forms of subtle or overt dishonesty, including (but not limited to) copying another student's work, plagiarism of published literature (including internet content), and using extra devices or notes during an exam will not be tolerated. All instances will result in the student **FAILING THE ENTIRE COURSE** and will be reported to the College of Arts and Sciences, the student's major department, and the Dean.

Students Rights and Responsibilities

To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link: <http://www.uttyler.edu/wellness/StudentRightsandResponsibilities.html>

Grade Replacement/Forgiveness

Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (ADM 230) on or before the Census Date of the semester in which the course will be repeated. Grade Replacement Contracts are available in the Enrollment Services Center or at <http://www.uttyler.edu/registrar>. Each semester's Census Date can be found on the Contract itself, on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar.

Failure to file a Grade Replacement Contract will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates are eligible to exercise grade replacement for only three course repeats during their career at UT Tyler; graduates are eligible for two grade replacements. Full policy details are printed on each Grade Replacement Contract.

The Census Date is the deadline for many forms and enrollment actions that students need to be aware of. These include:

- Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, approvals for taking courses as Audit, Pass/Fail or Credit/No Credit.
- Receiving 100% refunds for partial withdrawals. (There is no refund for these after the Census Date)
- Schedule adjustments (section changes, adding a new class, dropping without a "W" grade)
- Being reinstated or re-enrolled in classes after being dropped for non-payment
- Completing the process for tuition exemptions or waivers through Financial Aid

State Mandated Course Drop Policy

Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2 year or 4 year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the 12th day of class (See Schedule of Classes for the specific date). Exceptions to the 6 drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Registrar's Office and must be accompanied by documentation of the extenuating circumstance.

Please contact the Registrar's Office if you have any questions.

Disability Services

In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University offers accommodations to students with learning, physical and/or psychiatric disabilities. If you have a disability, including non-visible disabilities such as chronic diseases, learning disabilities, head injury, PTSD or ADHD, or you have a history of modifications or accommodations in a previous educational environment you are encouraged to contact the Student Accessibility and Resources office and schedule an interview with the Accessibility Case Manager/ADA Coordinator, Cynthia Lowery Staples. If you are unsure if the above criteria applies to you, but have questions or concerns please contact the SAR office. For more information or to set up an appointment please visit the SAR office located in the University Center, Room 3150 or call 903.566.7079. You may also send an email to cstaples@uttyler.edu<<mailto:cstaples@uttyler.edu>>

UT Tyler is a Tobacco-Free University

All forms of tobacco will not be permitted on the UT Tyler main campus, branch campuses, and any property owned by UT Tyler. This applies to all members of the University community, including students, faculty, staff, University affiliates, contractors, and visitors.

Forms of tobacco not permitted include cigarettes, cigars, pipes, water pipes (hookah), bidis, kreteks, electronic cigarettes, smokeless tobacco, snuff, chewing tobacco, and all other tobacco products.

There are several cessation programs available to students looking to quit smoking, including counseling, quitlines, and group support. For more information on cessation programs please visit www.uttyler.edu/tobacco-free.

Student Absence due to Religious Observance

Students who anticipate being absent from class due to a religious observance are requested to inform the

instructor of such absences by the second class meeting of the semester.

Student Absence for University-Sponsored Events and Activities

If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

Social Security and FERPA Statement:

It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

Emergency Exits and Evacuation:

Everyone is required to exit the building when a fire alarm goes off. Follow your instructor's directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services.