

Semester: Fall 2026

Instructor: Christian R. Alvarado

Office: H246

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Office Hours: By appointment (please email)

Format: Fully online – **Biweekly Lecture Recordings**

Course Overview: This core course in epidemiology is intended to introduce students to the discipline of epidemiology and its application to public health research and practice. It provides a conceptual foundation for further study of epidemiology, especially study design, quantitative concepts and methods, analysis, and interpretation.

Prerequisite: N/A

Co-requisite: N/A

Student Learning Outcomes:

By the end of the module students should be able to:

- Demonstrate understanding of the fundamental concepts and methods of the epidemiologic approach to the study of health states, including study design and analytic methods, and their application to research and public health settings.
- Demonstrate knowledge of and ability to apply both descriptive and analytic epidemiologic methods and the statistical procedures commonly used.
- Explain the relative strengths and limitations of epidemiological strategies for studying associations between risk factors or exposures in populations and rates of disease occurrence or death.
- Critically interpret and evaluate findings from various types of studies, noting strengths, weaknesses and making recommendations for improvement.
- Demonstrate a working knowledge of key current issues and problems in epidemiology and biostatistics.
- Demonstrate the fundamental knowledge required for the subsequent study of advanced epidemiologic concepts and competencies taught in intermediate and advanced epidemiology courses.
- Specific skills and methods covered include:
 - Concepts of disease variation in time, person and place.
 - Measures of morbidity in populations including incidence and prevalence; measures of mortality and standardization procedures.
 - Measures of association and impact including relative risk, odds ratio and attributable risk concepts.
 - Study designs (e.g., cohort, case-control, cross-sectional, ecological and intervention studies).
 - Sources of random and non-random error (e.g. bias, confounding, measures of reliability and validity).
 - Methods to evaluate confounding and effect-modification.
 - Basic methods for evaluating effectiveness of public health intervention programs.
 - Criteria for causal inference and evaluation of scientific evidence.

Course Assessments:

Discussion Board: Every student will be interacting using the discussion board. Each week a new discussion board topic will be made available. In the discussion board, you will have opportunities to post responses to this week's discussion question. You will also be posting a comment to someone else's response. You need to post a response and comment on someone's post to receive full credit for Participation for that week.

Homework: 6 homework assignments will be assigned to students in weeks 2, 4, 6, 9, 11, and 13. Each homework assignment will be worth 5% of your grade.

Midterm: The midterm consists of multiple choice, matching, and short answer questions and will test students on material from weeks 1-7.

Final: The final exam consists of multiple choice, matching, and short answer questions. This exam will test students on all material covered in this course but will focus on material covered in weeks 9-13.

Infographic Project: A detailed description of this project will be available on CANVAS later in the semester. The Infographic Project will be turned in via CANVAS on December 6th by 11:59pm.

Overall Grading Structure:

10% - Participation (Discussion Board)

30% - Homework

20% - Midterm exam

25% - Final exam

15% - Infographic Project

Textbook:

Celentano, David D., Szklo, Moyses, & Farag, Youssef [M.K.]. (2024). Gordis epidemiology (7th ed.). Elsevier.

Course Schedule:

Week	Dates	Readings	Assignments and Assessments	Meeting Dates
Week 1	08/24-08/30	Chapter 1	Discussion Board 1	Video Lecture 1 (Chapter 1)
Week 2	08/31-09/06	Chapter 2	Homework 1 & Discussion Board 2	N/A
Week 3	09/07-09/13	Chapters 3 & 4	Discussion Board 3	Video Lecture 2 (Chapter 2-4)
Week 4	09/14-09/20	Chapters 5 & 6	Homework 2 & Discussion Board 4	N/A
Week 5	09/21-09/27	Chapter 7	Discussion Board 5	Video Lecture 3 (Chapters 5-7)

Week 6	09/28-10/04	Chapter 8	Homework 3 & Discussion Board 6	N/A
Week 7	10/05-10/11	Chapter 9	Discussion Board 7	Video Lecture 4 (Midterm Exam Review & Chapters 8-9)
Week 8	10/12-10/18	No Required Readings	Midterm Exam (10/13-10/17)	N/A
Week 9	10/19-10/25	Chapters 10 & 11	Homework 4 & Discussion Board 8	Video Lecture 5 (Chapters 10-11)
Week 10	10/26-11/01	Chapters 12 & 13	Discussion Board 9	<i>Happy Halloween!</i>
Week 11	11/02-11/08	Chapters 14 & 15	Homework 5 & Discussion Board 10	Video Lecture 6 (Chapters 12-15)
Week 12	11/09-11/15	Chapters 17 & 18	Discussion Board 11	N/A
Week 13	11/16-11/22	Chapters 19 & 20	Homework 6 & Discussion Board 12	Video Lecture 7 (Chapters 17-20)
Week 14	11/23-11/29	No Required Readings	Thanksgiving Holiday	<i>Happy Thanksgiving!</i>
Week 15	11/30-12/06	No Required Readings	Infographic Project (Due 12/06)	Video Lecture 8 (Final Exam Review)
Week 16	12/07-12/13	No Required Readings	Final Exam (12/07-12/11)	<i>Happy Holidays and Happy New Year!</i>

Attendance/ Participation: Attendance/Participation will be assessed based on your Discussion Board Posts. If a student misses a discussion post, deductions will be made accordingly.

Email Correspondence: All email correspondence will be through the UTTyler/UTHSCT email system. Personal email accounts will not be used for any classrelated matters (ex. assignments, absence notifications, grades, etc.). All students are responsible for checking their UT-Tyler/UTHSCT email accounts regularly.

Late Assignments/ Assessments: Students need to contact the Professor if they anticipate submitting an assignment late. Any late assignments will be subject to a 5% deduction each day for the first week (35% if submitted a week late) and an additional 10% for each day thereafter. Assignments turned in over 2 weeks late (14 days) will receive a grade of **0** for the assignment. This policy includes homework, discussion board posts, and the Infographic Project. Reasonable accommodations will be made under

special circumstances. If you need special accommodations, you must contact the Professor **BEFORE** the due date for the assignment. Late Exams will not be accepted except under extenuating circumstances (please try to contact the Professor before the Exam's due date).

Academic Integrity: Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

Cheating

Dishonesty of any kind involving examinations, assignments, alteration of records, wrongful possession of examinations, and unpermitted submission of duplicate papers for multiple classes or unauthorized use of keys to examinations is considered cheating. Cheating includes but is not limited to:

- Using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class.
- Falsifying or inventing any information, including citations, on an assigned exercise.
- Helping or attempting to help another in an act of cheating or plagiarism.
- Use of Artificial Intelligence (AI) software to complete Assignments/Exams.
 - No AI use is permitted

Plagiarism

Plagiarism is presenting the words or ideas of another person as if they were your own. Materials, even ideas, borrowed from others necessitate full and complete acknowledgment of the original authors. Offering the work of another as one's own is plagiarism and is unacceptable in the academic community. A lack of adequate recognition constitutes plagiarism, whether it utilizes a few sentences, whole paragraphs, articles, books, audio-visual materials, or even the writing of a fellow student. In addition, the presentation of material gathered, assembled, or formatted by others as one's own is also plagiarism. Because the university takes such misconduct very seriously, the student is urged to carefully read university policies on Misconduct in Research and Other Scholarly Activity 05.00. Examples of plagiarism are:

- Submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another.
- Submitting a work that has been purchased or otherwise obtained from an Internet source or another source.
- Incorporating the words or ideas of an author into one's paper without giving the author due credit.

Adding/Dropping:

The official deadline for adding and dropping courses is as published in the academic calendar (November 4th). However, students are strongly encouraged to meet with their graduate advisor or the Program Coordinator prior to adding/dropping courses. Each student is responsible for their own



enrollment status with the university. The link to the academic calendar 2025-2026 can be found using the following link: <https://www.uttyler.edu/academics/academic-calendar-25-26/academic-calendar-15-week-and-summer.php>

Disability Accommodations:

In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA), the University of Texas at Tyler offers accommodations to students with learning, physical, and/or psychological disabilities. If you have a disability, including a non-visible diagnosis such as a learning disorder, chronic illness, TBI, PTSD, ADHD, or a history of modifications or accommodations in a previous educational environment, you are encouraged to visit <https://hood.accessiblelearning.com/UTTyler/> and fill out the New Student application. The Student Accessibility and Resources (SAR) office will contact you when your application has been submitted and an appointment with the Assistant Director Student Accessibility and Resources/ADA Coordinator. For more information, including filling out an application for services, please visit the SAR webpage at <https://www.uttyler.edu/disability-services>, the SAR office located in the Robert Muntz Library, LIB 460, email saroffice@uttyler.edu , or call (903) 566-7079.

Student Absence for Religious Observance:

This course follows the practices related to [Excused Absences for Religious Holy Days as noted in the Catalog.](#)

Technical Support:

If you experience technical problems or have a technical question about this course, you can obtain assistance by emailing me at Christian.Alvarado@uthct.edu or calling the Help Desk at [903.877.7700](tel:903.877.7700).