

ALHS 4320.001 - PRINCIPLES OF EPIDEMIOLOGY
Fall 2026

Instructor Name: William Sorensen, Ph.D.

Office Location & Times: PAC Rm #3095- schedule a time beforehand with the instructor for a meeting (send the instructor an e-mail to set up a time).

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Required Text: Gordis Epidemiology, by Celentano, Szklo, Farag; Elsevier Publishers, (copyright 2025), 7th edition; ISBN 978-0-323-87775-6

Prerequisites: None

Classroom Location: HPC room 3055

Course Time and Dates: Aug 25 – Dec 10 (or so)

3:30pm-4:50pm, Tuesday/Thursday (7 classes are online at this time: 8/27, 9/8, 9/22, 10/8, 10/20, 11/3, and 11/19)

Date to withdraw without penalty: Oct. 30th

Catalog Description: Study of the distribution and determinants of disease in human populations, morbidity, mortality and life expectancy measures, as well as research design concepts. Along with this subject is a primer in demographics.

Course Goal: The purpose of this course is to provide theoretical and practical information regarding the study of diseases in human populations. Therefore, we will take these ideas and collectively engage each other in learning, communicating, and solving problems regarding the study of diseases in human populations.

Course Objectives: The student will be able to:

1. Apply past contexts of epidemiology to current techniques and envision possible future situations. .
2. Apply and discuss theoretical concepts of epidemiology (disease, risk, causality, data limitations, etc.).
3. Analyze basic issues in demographics (birth, death, migration).
4. Apply graphing and mathematics skills to solve and interpret epidemiologic problems.
5. Apply research knowledge to create research designs in new situations.

Letter grade transcription

90-100 A, 80-89 B, 70-79 C, 60-69 D, <60 F

Grading Plan:

Projects	34% (4 projects in this order: 7, 8, 9, 10 points)
Exam	35% (2 parts)
Extra discussion	16% (4 discussions @ 4 pts each)
Participation	15% (attendance, punctuality, being vocal)

Course Format: This is a hybrid course where 75% of the classes are face-to-face and in-person, and 25% of the classes are online (the online classes are mandatory; see schedule). Both types of class-formats will consist of a mixture of lecture, class discussions and problem solving. Also, students must be prepared to discuss the assigned readings (including handouts). That is- READ beforehand! A gauge of your ability: Writing and speaking skills, organization of information, attending and being on time, being prepared.

Canvas Since this is a hybrid course, Canvas will be used actively, not just a document storage space; it will serve to instruct students during online “classes”; also, part of the exam may be delivered through Canvas.

Class Philosophy: This subject demands a comprehensive approach-- reading, writing, discussing, and a little math; you are expected to stretch yourself in each of these branches of learning.

Many questions raised during discussion may not have a single right or wrong answer. Decisions concerning the study design and interpretation of data may depend upon judgments such as “how big is big?” or “is it worth it?” As will soon be apparent, everyone in the class (including your instructor) is fallible and may not always have a “perfect” answer. But this is not a reflection of their lack of study or expertise, but of the complexity of many epidemiologic questions. IF A TOPIC POINT OR ANSWER SEEMS INCORRECT OR IMPLAUSIBLE TO YOU, YOU ARE ENCOURAGED TO BRING THESE ISSUES UP FOR DISCUSSION; go ahead, be heard.

Particular Formats:

Exam: This is given to assess knowledge, skill, memory. The questions are either multiple choice, short essay, true/false questions, or problem solving questions (including graph making and interpretation). There are two parts: Part A is done in the class room; Part B is done online. Students need a calculator for the exam. An unexcused, missed exam has no chance for make-up (plan ahead).

Projects: Projects are assignments that are more open, creative and individualized than exams, and require more time to let critical thinking mature. Students will have several days, if not weeks, to work on projects. Late projects will be penalized 50% if submitted within the first week of being late, after one week they will not be accepted at all. Most projects are printed out and the hard-copy handed to the instructor; the last project will be uploaded into Canvas.

Extra discussion: These are mostly longer discussions; perhaps 30 or more minutes, usually based on an article that is read beforehand. Instructions will be given when the time arrives.

Participation: Class notes are up to the student (information from Powerpoint presentations should be written down as notes; instructor's Powerpoint files will not be available separately). If the student misses a day and wishes to go over the material, he/she must find a classmate to get the notes. Students will be called upon during class and asked to provide insights into a particular question or problem. Students' attention and readiness in responding reflects on one's grade- this is participation. And it is not just about waiting for the instructor to ask, it is also an invitation for students to be leaders and initiate conversation. Also, attendance and lateness is a form of participation (points will be deducted for excessive absences or latenesses).

AI statement (starting in the fall of 2024, UT Tyler expects every course syllabus to include an AI statement): AI may be used in this course if it is acknowledged as a reference. Caution is needed however: Dr. Sorensen believes that AI is not needed, and in fact may gunk up some of your assignments. He thinks that you should be able to communicate on your own. His experience with AI is that it is a notoriously poor writer; it may write with no spelling errors, but the message may be missed with AI).

UT Tyler POLICIES

See Canvas module for University policies.