

UNIVERSITY OF TEXAS AT EL PASO
College of Health Science
Health Science Program
HSCI 3311 – Introduction to Epidemiology
Fall 2009

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Office hours: Wednesdays from 9:00 – 12:00, or by appointment.
Class period: Fridays 9:00 – 11:50 AM
Location: BUSN Room 301

TEXTBOOK:

Introduction to Epidemiology
By Ray M. Merrill & Thomas C. Timmreck
Publisher: Jones & Bartlett, 4th Edition

COURSE DESCRIPTION:

This course will provide the students with an understanding of the concept of epidemiology, the application of statistical tools and biomedical information, as well as the epidemiological basis of infectious, chronic, and other processes. Students interested or considering being involved public health, public health education, community service, policy-related jobs or pursuing a research-related career should enroll in this course. In order to register for this course, the student must have completed the following prerequisites: HSCI 3308 (Disease Characteristics, Prevention, and Control), MATH 1320 (Mathematics for Social Sciences), and PSYC 1303 (Statistical Methods). The teaching method is based on Problem based learning (PBL), which can include, but not be limited to:

1. Introductory lectures
2. Problem solving group work
3. Student discussions
4. Student presentations
5. Possible guest lecturers (to be announced)

Using this technique will enable the student to apply the gained knowledge to solve common and practical problems related to the research process. Handouts of presented materials will be posted and made available through Web CT.

COURSE LEARNING OUTCOMES:

After completing the course, the student will be able to:

1. Explain the importance of epidemiology
2. Identify and use data for epidemiologic purposes
3. Be critical on epidemiological information

4. Identify and address public health problems
5. Identify limitations of screening programs
6. Understand the importance of epidemiological information in decision making
7. Understand the importance of ethics in different epidemiological processes

COURSE REQUIREMENTS:

Completion of course will require that the student fulfills the following:

- a) Written examinations: Three (3), 2 partial, 1 final.
- b) Final group project report and presentation
- c) In-class assignments
- d) Homework
- e) Active participation

Written examinations

Two (2) two-hour partial examinations, and **one** (1) final examination will be given for the Fall Semester. The format of the examinations can have any of the following types of question: true/false, multiple-choice, matching, short answer, problem calculations. Each examination is worth **100 points** (3 X 100 = 300).

Examination Schedule	
Examination type	Date
First Partial written examination	October 2nd
Second Partial written examination	November 7th
Final written examination	

Final group project report and presentation

An additional **100** points can be granted by delivering a group project and presentation, according to the following:

1. Students will work in teams of **four (4) (the groups can be of less than, but NOT more than four)**
2. Teams must be designated during the first class meeting.
3. The team must complete semester project that consist on a report and an oral presentation about it. The team must prepare a report about a topic to be selected from a list provided by the instructor.
4. By the **second class** (2nd), each team must have a team name, and present in writing a project proposal that includes the following (two pages, including front page):
 - a. The selected topic.
 - b. Team name.
 - c. Team members.
 - d. The importance of your topic.
 - e. Where are you going to look for information
5. You must conduct research about the selected or assigned topic from peer reviewed professional journals. Please no electronic journals or Wikipedia. Based

on the research, each team must prepare report (10 pages, double space, minimum review of 12 sources), to be delivered at the time of presentation. Refer to the REPORT SPECIFICATIONS on the last pages of the syllabus.

- Each team will give a 20 minute power point presentation on their project report during the duration of the course. If your team does not select a date for presentation, it will to the discretion of the instructor to schedule the presentations.

Scoring procedure for final project report and presentation (one per team)

Activity	Points
Turn in proposal by second class (must comply with specifications):	15
Team’s project report based on reviewed literature	50
Format of report, appearance, spelling, grammar, typos, etc...	10
Oral presentation (you select the format of presenting; individual scoring).	25
TOTAL POSSIBLE POINTS	100

Final grading

The total that can be earned taking on account the three examinations and group project in this course is **400 points**. The translation of points earned to a letter grade is defined as follows:

- 361 points and aboveA**
- 321 – 360B**
- 281 – 320C**
- 241 – 280D**
- 240 or lessF**

A student can be awarded additional extra points for correct and complete homework and in-class assignments. Complete five CDC computerized based case studies (Available at: <https://www2a.cdc.gov/epicasestudies/classroom/>) for extra credit, print and turn in the original of your answers, and certificate with your imprinted name. The amount of extra points to be awarded will be notified by the instructor once the assignment is given.

COURSE POLICIES

Attendance

Attendance is an important component of this course since information not contained in the textbook will be presented during class through lectures and discussions. So, you are expected to attend all classes and to be punctual. You are expected to sign the attendance sheet at the beginning of each class. Students are discouraged from coming to class late or leaving early since this is disruptive to the instructor and more importantly to classmates. If you are late, please sign in after class. Being absent will affect your final score/grade. **You are allowed three excused absences; a fourth absence means that**

you will be dropped from the course. You will not be able to make up for activities, exams, or assignments (scheduled or unscheduled) if you are late or absent unless in the case of University excused absences (sponsored activities approved by the Dean of students). Furthermore, three tardies will equal one absence.

Class disruptions

Avoid the use of cell phones (even for text messaging), headphones in any manner during class. Laptop computers can be used if needed for in-class assignments. Students who are continuously talking during lectures are showing disrespect for their classmates who are serious about learning. Disruptive students will be asked to leave the lecture and will only be invited to return at the discretion of the instructor.

Active participation

Students are encouraged to actively participate in the learning process. This includes attentive listening. A second component of active participation is asking questions for clarification of confusing information and expressing opinions.

Policy on examinations

When examinations are administered, students will turn examination papers into the exam monitor before leaving the room for any reason; once a student has left the room, he/she may not continue with the examination. If a student misses the final exam, a make-up exam may be taken only if the student has informed the instructor of the absence *prior* to the beginning of the examination, and only if the absence is approved by the instructor. Only in rare instances will a student be excused from the examination.

Policy on late assignments

Homework and other assignments must be turned in when scheduled in order to be awarded extra points. No late assignments will be accepted.

Notice on dropping the course, withdrawals, and incomplete.

Students may drop individual courses or completely withdraw from the University as described below. Refer to the on-line Academic Calendar at www.utep.edu/calendar or to the *Class Schedule* to identify the dates during which adds, drops, withdrawals, and pass/fail registration changes may occur.

a) Student-initiated Drops

It is the student's responsibility to officially drop a course that s/he no longer wishes to take. Failure to do so may result in a grade of "F" on the student's academic record. Athletes must receive permission from the Miner Athletic Advising Center before dropping a course. International students with F or J visas must receive permission from the Office of International Programs before dropping a course.

b) Administrative Drops

During registration periods for upcoming semesters, students will be dropped from registered courses for failure to meet prerequisites or corequisites after final grades have

been posted for the current semester and before the beginning of late registration for next semester. A student may petition the department chair of the course in question for a prerequisite or corequisite waiver.

At the discretion of the instructor, a student may be dropped from a course because of excessive absences or lack of effort. Students may also be administratively withdrawn from a course during the semester for other reasons, with the concurrence of the academic dean or department chair. A grade of “W” will be assigned before the course drop deadline and a grade of “F” after the course drop deadline. A grade of “F” received due to disciplinary action imposed by the University overrides a grade of “W” received through a student-initiated or faculty drop. Students will be notified of their drop through their UTEP e-mail account.

c) Grade Assignment for Drops and Withdrawals

Grades will be assigned as follows when a student drops a course or completely withdraws from the University:

1. If a student drops a course before the official census date of a semester, neither the course nor a grade will appear on the student’s academic record.
2. If a student drops from a course after the census date but before the student-initiated course drop deadline listed in the *Class Schedule*, a grade of “W” will be assigned.
3. If the student drops after the student-initiated course drop deadline, instructors will determine a grade of “W” or “F” for each course. A grade of “W” is considered only under exceptional circumstances and must be approved by the instructor and department chair for the course. A student may petition for a grade of “W” in writing with the necessary supporting documentation.

d) Incomplete course work

If eligible, the student may receive a grade of Incomplete (I) that will appear on the academic transcript; or receive an appropriate final grade or credit if and once the instructor determines that a substantial amount of coursework has been satisfactorily completed and sufficient mastery of the course material has been demonstrated.

Notice of Policy on Scholastic Dishonesty

Students are expected to the above reproach in all scholastic activities. Students who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and dismissal from the University. “Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, and 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 the student or the attempt to commit such acts. Regent’s Rules and Regulations, Part One, Chapter VI, Section 3.2, Subdivision 3.22” Since scholastic dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced.

Notice on Students with Disabilities

Students with disabilities needing accommodations must present to the professor a “Request for Accommodations” letter from DSSO verifying that they have provided documentation and are eligible for services

COURSE CALENDAR:

Note: The course calendar is subject to modification. It is the student’s responsibility to read the scheduled assigned materials before class.

DATE	TOPIC	ASSIGNMENT - READ
Aug 28	Syllabus review; team building; Basic statistics refresher Part I.	- - -
Sept 4	Foundations of epidemiology; Historic developments in epidemiology. Basic statistics refresher Part II.	Chapter 1 & 2; Case study I
Sept 11	Practical disease concepts in epidemiology. Basic statistics refresher Part III.	Chapter 3; Case study II
Sept 18	Design strategies and statistical methods in descriptive epidemiology;	Chapter 4
Sept 25	Descriptive epidemiology, according to person, place and time	Chapter 5
Oct 2	First 2 -hour examination	Read “Panic in Level 4: Cannibals, Killer Viruses, and Other Journeys to the Edge of Science” by R. Preston, and turn in a 2 page synopsis for extra credit
Oct 9	General health and population indicators	Chapter 6
Oct 16	Design strategies and statistical methods in analytical epidemiology	Chapter 7
Oct 23	Experimental studies in epidemiology	Chapter 8
Oct 30	Statistical and causal association	Chapter 9
Nov 6	Field epidemiology	Chapter 10; Case study III
Nov 13	Chronic and infectious disease epidemiology Environmental, disaster, and forensic epidemiology	Chapter 11; Case study IV Case study V
Nov 20	Second 2 -hour examination. Proposal presentations (begin)	Read “The Cobra Event” by R. Preston, and turn in a 2 page synopsis for extra credit
Dec 4	Proposal presentations (end)	Turn in report
Dec 11	Final comprehensive examination, 4:00 – 6:45 pm, room TBA	Turn in corrections (if necessary)

REPORT SPECIFICATIONS

1. Your group must decide on a disease/condition from the list below.
2. Write an original report using sources from peer reviewed professional journals
3. Cite your references using JAMA (Journal of the American Medical Association) format
 - The report must include the following about your topic:
 - How was the disease discovered?
 - What is the biological cause for the disease?
 - What is the infectious agent (if any)?
 - What is the reservoir?
 - What is the mode of transmission?
 - What is the length of the incubation period?
 - What are the main control measures used for the condition?
 - Occurrence (person-which populations, place-geographic, time-seasonal or lifespan)
 - What was/is the epidemiologic case definition?
 - What were/are the disease distribution, determinants, and frequency?
 - Was/is the disease considered to be endemic, epidemic, or pandemic?
 - What were some of the original hypothesis about the cause(s) of this disease?
 - What is the currently accepted scientific hypothesis about the cause(s) of this disease?
 - What impact did this disease have historically on the course of world events?
 - How does this disease affect the life of the person who has it? (Medically, economically, psychologically, socially, etc).
 - **Display visual aids used in an epidemiologic report about this disease that summarizes data (tables; bar, line, curve graphs, etc).**

List:

- Malaria
- Botulism
- Pertussis
- Cholera
- River blindness
- Dengue fever
- Black plague
- Creutzfeld-Jacob disease
- Poliomyelitis
- SARs
- Bird flu
- Helycobacter pylori infection
- Shigellosis
- Giardasis

- Hansen's disease
- Buruli ulcer
- Syphilis
- Leishmaniasis
- Tuberculosis
- Influenza
- Typhoid fever
- Legionellosis
- Tourette's syndrome
- Bacterial meningitis
- Genital herpes
- West Nile virus
- Pelvic inflammatory disease
- Toxic shock syndrome
- Tularemia
- Septic shock
- Monkeypox
- Listeriosis
- African sleeping sickness
- Chaga's disease
- Pellagra
- Hanta virus
- Smallpox
- Anthrax

Team	Members	Topic	Scheduled date