

FUNDAMENTALS OF EPIDEMIOLOGY PH 6325 SPRING 2022



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Office Hours: MW from 1.30 PM – 2:30 PM

Course Information

Course Description

This an overview course intended to familiarize students with the basic principles and applications of epidemiological concepts and methods in the study of public health problems in populations. The focus of the course is on the interpretation and assessment of epidemiologic research, both descriptive and analytic, and its application to public health practice and relevance to the key disciplines of public health.

Course Credits

3 Advanced Credit Hours

Prerequisite and Co-requisite Courses

None

Prerequisite Skills

Accessing Internet websites, using ASU Library resources, and proficiency with Microsoft Word and/or PowerPoint are expectations of the Health Science Professions. Computer access requirements are further delineated in the Undergraduate Handbook. Tutorials for ASU Library

and for Blackboard are available through RamPort. The ASU Undergraduate/Graduate Student Handbook should be reviewed before taking this course.

Program Outcomes

Student Learning Outcomes

Upon completion of the program of study for the Fundamentals of Epidemiology, the graduate will be prepared to:

1. Distinguish between the different types of epidemiology and role of epidemiology in public health practice in developing different models in disease prevention.
2. Assess the common sources and modes of disease transmission for chronic diseases and infectious diseases and evaluate immunity and immunizations against infectious diseases.
3. Distinguish between the different types of descriptive epidemiology and calculate, interpret, and apply selected health status measures.
4. Distinguish between observational and experimental analytic epidemiologic studies and investigate the effect modification and confounding in epidemiological studies.
5. Evaluate the role of randomization in experimental studies and the advantages of controlled trials to using a run-in design, a factorial design, a randomized matched-pair design, or a group-randomized design.
6. Evaluate the potential influences of chance, bias, and confounding on measures of association and assess the steps in field epidemiology and the process for investigating clusters.
7. Examine the chronic and acute diseases and conditions and identify multiple risk factors associated with common chronic diseases and conditions and evaluate prognosis.

Student Learning Outcomes

Distinguish between the different types of epidemiology and role of epidemiology in public health practice in developing different models in disease prevention.	Discussion Board Assignments 1,2,3. Quizzes 1,2,3,
Assess the common sources and modes of disease transmission for chronic diseases and infectious	Discussion Board Assignments 4,5 Quizzes 4,5

diseases and evaluate immunity and immunizations against infectious diseases.	
Distinguish between the different types of descriptive epidemiology and calculate, interpret, and apply selected health status measures.	Discussion Board Assignments 6,7 Quizzes 6,7
Distinguish between observational and experimental analytic epidemiologic studies and investigate the effect modification and confounding in epidemiological studies.	Discussion Board Assignment 8. Quiz 8
Evaluate the role of randomization in experimental studies and the advantages of controlled trials to using a run-in design, a factorial design, a randomized matched-pair design, or a group-randomized design.	Discussion Board Assignments 9,10 Quizzes 9, 10
Evaluate the potential influences of chance, bias, and confounding on measures of association and assess the steps in field epidemiology and the process for investigating clusters.	Discussion Board Assignment 11 Quiz 11, Final Project
Examine the chronic and acute diseases and conditions and identify multiple risk factors associated with common chronic diseases and conditions and evaluate prognosis.	Discussion Board Assignment 12 Quiz 12,

Course Delivery

This is an online course offering. The course will be delivered via the Blackboard Learning Management System. The course site can be accessed at [ASU's Blackboard Learning Management System](#)

Required Texts and Materials

Introduction to Epidemiology: Eighth Edition

Ray M. Merrill, PhD, MPH. Jones & Bartlett Learning Navigate 2

Print ISBN-13: 9781284170702 © 2021

e-text ISBN: 9781284203073 ©2021 (Access code subscription length: 365 Days)

e-text SBN: 9781284375930 ©2021 (Access code subscription length: 135 Days)

See Supplemental Readings included in Blackboard.

Recommended Texts and Materials

Friis RH (2018) Epidemiology 101, Second Edition. Jones & Bartlett.

Technology Requirements

• To participate in one of ASU's distance education programs, you need this technology:

- A computer capable of running Windows 7 or later, or Mac OSX 10.8 or later
- The latest version of one of these web browsers: internet Explorer, Firefox, or Safari
- Microsoft Office Suite or a compatible Open Office Suite
- Adobe Acrobat Reader
- High Speed Internet Access
- Ethernet adapter cable required (wireless connections can drop during tests and Collaborate sessions)
- Webcam

Technical Assistance

If you have any technical problems associated with the test (i.e. webcam problems, lock down browser problems) you should contact the IT Department. The IT Service Department is open M-F from 8-5 and the number is (325) 942-2911. If you call any time after 5 pm or on the weekend, most likely you will not be able to get assistance until the following weekday, so please plan accordingly.

Topic Outline

- Chapter 1 Foundations of Epidemiology
- Chapter 2 Historic Developments in Epidemiology
- Chapter 3 Practical Disease Concepts in Epidemiology
- Chapter 4 Design Strategies and Statistical Methods in Descriptive Epidemiology
- Chapter 5 Descriptive Epidemiology According to Person, Place, and Time
- Chapter 6 General Health and Population Indicators
- Chapter 7 Design Strategies and Statistical Methods in Analytic Epidemiology
- Chapter 8 Experimental Studies in Epidemiology
- Chapter 9 Causality
- Chapter 10 Field Epidemiology
- Chapter 11 Chronic Disease Epidemiology
- Chapter 12 Clinical Epidemiology

Communication

Faculty will respond to email and/or telephone messages within 24 hours during working hours Monday through Friday. Weekend messages may not be returned until Monday.

Written communication via email: All private communication will be done exclusively through your ASU email address. Check frequently for announcements and policy changes. In your emails to faculty, include the course name and section number in your subject line, a salutation in the body and sign your email with your full name.

Virtual communication: Office hours and/or advising may be done with the assistance of the telephone, Collaborate, Skype, etc.

Use Good "Netiquette"

- Check the discussion frequently and respond appropriately and on subject.
- Focus on one subject per message and use pertinent subject titles.
- Capitalize words only to highlight a point or for titles. Otherwise, capitalizing is generally viewed as SHOUTING!
- Be professional and careful with your online interaction. Proper address for faculty is by formal title such as Dr. or Ms./Mr. Jones unless invited by faculty to use a less formal approach.
- Cite all quotes, references, and sources.
- When posting a long message, it is generally considered courteous to warn readers at the beginning of the message that it is a lengthy post.
- It is extremely rude to forward someone else's messages without their permission.
- It is fine to use humor, but use it carefully. The absence of face-to-face cues can cause humor to be misinterpreted as criticism or flaming (angry, antagonistic criticism). Feel free to use emoticons such as :) to let others know you are being humorous.

(The "netiquette" guidelines were adapted from Arlene H. Rinald's article, The Net User Guidelines and Netiquette, Florida Atlantic University, 1994, available from Netcom.)

Grading

Evaluation and Grades

Course grades will be determined as indicated in the table below.

Assessment	Points of Total Grade
Weekly Quizzes (12 X 20)	240

Assessment	Points of Total Grade
Discussion Assignments (6 X 50)	300
Midterm Exam	200
Final Project	200
Final Exam	200
Total	1140

Grading System

Course grades will be dependent upon completing course requirements and meeting the student learning outcomes.

The following grading scale is in use for this course:

Course grades will be dependent upon completing course requirements and meeting the student learning outcomes.

The following grading scale is in use for this course:

A = 900.00-1000 points

B = 800.00-899.99 points

C = 0-700.00-799.99 points

Teaching Strategies

Students are expected to be “active learners.” It is a basic assumption of the instructor that students will be involved (**beyond the materials and lectures presented in the course**) discovering, processing, and applying the course information using peer-review journal articles, researching additional information and examples on the Internet, and discussing course material and clinical experiences with their peers.

This class is asynchronous, meaning you do not have to be on-line at a certain time. There are readings which you will have to complete to be able to adequately participate in individual and group assignments. In order to complete this course successfully, you do have to participate in all course activities i.e. discussion boards, course projects, reflective logs, etc. Students are expected to engage in course activities and submit work by due dates and times. The hope is that students will make substantive contributions which reflect integration of assigned materials as well as any outside readings as appropriate. Scholarly contribution is an

expectation. For planning purposes, this class will probably require a minimum of 6-9 study hours per week on average.

Assignment and Activity Descriptions

Exams: Access to the Midterm and Final Exam will be through Respondus Lockdown Browser and will be video recorded via Respondus Monitor [See Other Required Materials for a list of needed equipment]. Both will be timed at about 2 minutes per question. Use of any assistance or other electronic device is prohibited.

Final Project: Students will have a final project at the end of the course. This final project will be a 6-page double space and cited in proper APA format. The final project will test the student ability to use basic principles and applications of epidemiological concepts and methods in identifying and describing public health problems, formulate research hypotheses, select appropriate research study designs, manage and analyze epidemiologic data, interpret and apply results in preventing and controlling disease and health-related events.

Readings: You are responsible for the material covered in the book. Please note that the week's readings are specified in the class pacing schedule posted on Blackboard. In addition to these readings, the instructor may assign supplemental readings throughout the semester. These supplemental readings do not appear on the schedule, as these readings will be assigned at the instructor's discretion.

Weekly Quizzes: Students will have 12 Chapter quizzes to assess course knowledge. Quizzes are timed – 30 minutes per quiz and will consist of multiple choice and True/False questions.

Discussion Boards: There will be six task oriented discussion board assignments, one for each learning module. Discussion boards provide an avenue for synthesis of material / information. A Discussion Board is provided in this course as a way to help students process course materials, express thoughts, and engage the opinions and ideas of others in a healthy and productive learning environment.

Writing Center

The mission of the [Writing Center](#) is to help all students become better writers and readers. The Writing Center is a peer tutoring service where students help students. It is staffed by specially selected and trained graduate assistants and peer tutors who offer one-on-one conferences about writing and reading. The Writing Center serves all ASU undergraduate and graduate students. They work with students from any discipline, at any skill level, and on any stage of the writing or reading process.

The Writing Center tutors also provide feedback on scholarship, job, or graduate school applications. You can send writing questions via email to the Writing Center by completing and submitting the electronic draft submission cover sheet. In addition, email your paper as an attachment to writingcenter@angelo.edu. A tutor will respond to your questions and comment on your draft within 48 hours.

Citations

You must properly cite any work that is not completely your own. It is understood that you will build on the ideas of others through research, reading, and collaboration, but failure to acknowledge the scholarship of others is plagiarism and an honor code violation. It is also understood that you should use direct quotes sparingly. In this course, we would like you to use the Publication Manual of the American Psychological Association, Sixth Edition or higher.

A good resource is [Purdue's University OWL Lab](#). These OWL resources will help you learn how to use the American Psychological Association (APA) citation and format style. This section contains resources on in-text citation and the References page, as well as APA sample papers, slide presentations, and the APA classroom poster: [APA 6th](#).

Note on Wikipedia

You can use Wikipedia as a starting point for your research; however, it should not be used as a primary reference. Please use the online health science curated resources such as [Pubmed](#).

Assignment Submission

All assignments MUST be submitted through the Assignments link in the Blackboard site. This is for grading, documenting, and archiving purposes. Issues with technology use arise from time to time. If a technology issue does occur regarding an assignment submission, email me at babajide.sadiq@angelo.edu and attach a copy of what you are trying to submit. Please contact the IT Service Center at (325) 942-2911 or go to your Technology Support tab to report the issue. This lets your faculty know you completed the assignment on time and are just having problems with the online submission feature in Blackboard. Once the problem is resolved, submit your assignment through the appropriate link. This process will document the problem and establish a timeline. Be sure to keep a backup of all work.

Late Work or Missed Assignments Policy

Due to the nature of assignments, NO late/make-up assignments will be accepted nor will be allowed without prior approval from the instructor. The instructor will determine if a student will be allowed to make up the assignment in the rare cases of excused absences (documented medical emergencies or documented death in the family).

General Policies Related to This Course

All students are required to follow the policies and procedures presented in these documents:

- [Angelo State University Student Handbook](#)¹
- [Angelo State University Catalog](#)²

Student Responsibility and Attendance

Online: This class is asynchronous, meaning you do not have to be on-line at a certain time. There are readings which you will have to complete to be able to adequately participate in individual and group assignments. In order to complete this course successfully, you do have to participate in all course activities i.e. discussion boards, course projects, reflective logs, etc. Students are expected to engage in course activities and submit work by due dates and times. The hope is that students will make substantive contributions which reflect integration of assigned materials as well as any outside readings as appropriate. Scholarly contribution is an expectation. For planning purposes, this class will probably require a minimum of 6-9 study hours per week on average.

Academic Integrity

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Health and Human Services adheres to the university's [Statement of Academic Integrity](#).³

Accommodations for Students with Disabilities

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to

discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student's responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For more information about the application process and requirements, visit the [Student Disability Services website](#).⁴ The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dallas Swafford
Director of Student Disability Services
Office of Student Affairs
325-942-2047
dallas.swafford@angelo.edu
Houston Harte University Center, Room 112

Incomplete Grade Policy

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 [Grading Procedures](#)⁵ for more information.

Plagiarism

Plagiarism is a serious topic covered in ASU's [Academic Integrity policy](#)⁶ in the Student Handbook. Plagiarism is the action or practice of taking someone else's work, idea, etc., and passing it off as one's own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality. Resources to help you understand this policy better are available at the [ASU Writing Center](#).⁷

Student Absence for Observance of Religious Holy Days

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for [Observance of Religious Holy Day](#)⁸ for more information.

Copyright Policy

Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.

Syllabus Changes

The faculty member reserves the option to make changes as necessary to this syllabus and the course content. If changes become necessary during this course, the faculty will notify students of such changes by email, course announcements and/or via a discussion board announcement. It is the student's responsibility to look for such communications about the course on a daily basis.

Title IX at Angelo State University

Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. In accordance with Title VII, Title IX, the Violence Against Women Act (VAWA), the Campus Sexual Violence Elimination Act (SaVE), and other federal and state laws, the University prohibits discrimination based on sex, which includes pregnancy, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination and unwelcome behavior of a sexual nature.

The term includes sexual harassment, nonconsensual sexual contact, nonconsensual sexual intercourse, sexual assault, sexual exploitation, stalking, public indecency, interpersonal violence (domestic violence or dating violence), sexual violence, and any other misconduct based on sex.

You are encouraged to report any incidents involving sexual misconduct to the Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator, Michelle Boone, J.D. You may submit reports in the following manner:

Online: www.angelo.edu/incident-form

Face to face: Mayer Administration Building, Room 210

Phone: 325-942-2022

Email: michelle.boone@angelo.edu

Note, as a faculty member at Angelo State, I am a mandatory reporter and must report incidents involving sexual misconduct to the Title IX Coordinator. Should you wish to speak to someone in confidence about an issue, you may contact the University Counseling Center (325-942-2371), the 24-Hour Crisis Helpline (325-486-6345), or the University Health Clinic (325-942-2171).

For more information about resources related to sexual misconduct, Title IX, or Angelo State's policy please visit: www.angelo.edu/title-ix.

Course Schedule

Module	Date	Reading	Assignment
Module 1/Week 1	January 18 th – January 21 st	Course Orientation Merrill Chapter 1	To Begin: <ul style="list-style-type: none">• Review Welcome! page• Review Course Syllabus and ASU Honor Code. Select “Mark Reviewed” to agree to terms of the course and ASU’s policies and access course content. DUE January 23 rd – @ 11:59pm <ul style="list-style-type: none">• Post to Self-Introduction Blackboard• Complete and Submit the Practice Quiz for Respondus Lockdown Browser

			<p>Related to Merrill Chapter 1:</p> <ul style="list-style-type: none"> • Self-Introduction Discussion Board Peer Responses (3) • Complete and Submit Quiz 1
Module 1/Week 2	January 24 th – January 28 th	Merrill Chapter 2	<p>DUE January 26th @ 11:59pm</p> <ul style="list-style-type: none"> • Group Discussion Board #1: Initial Response <p>DUE January 30th @ 11:59pm</p> <p>Related to Merrill Chapter 2:</p> <ul style="list-style-type: none"> • Group Discussion Board #1: Assignment Peer Responses • Complete and Submit Quiz 2
Module 1/Week 3	January 31 st - February 4 th	Merrill Chapter 3	<p>DUE February 2nd @ 11:59pm</p> <ul style="list-style-type: none"> • Group Discussion Board Initial Response <p>DUE February 6th @ 11:59pm</p> <p>Related to Merrill Chapter 3:</p> <ul style="list-style-type: none"> • Group Discussion Board Assignment #2 Peer Responses • Complete and Submit Quiz 3
Module 2/Week 4	February 7 th - February 11 th	Merrill Chapter 4	<p>DUE February 9th @ 11:59pm</p> <ul style="list-style-type: none"> • Group Discussion Board Initial Response <p>DUE February 13th @ 11:59pm</p> <p>Related to Merrill Chapter 4:</p> <ul style="list-style-type: none"> • Group Discussion Board Assignment #3 Peer Responses • Complete and Submit Quiz 4
Module 2/Week 5	February 14 th - February 18 th	Merrill Chapter 5	<p>DUE February 16th @ 11:59pm</p> <ul style="list-style-type: none"> • Group Discussion Board Initial Response <p>DUE February 20th @ 11:59pm</p> <p>Related to Merrill Chapter 5:</p> <ul style="list-style-type: none"> • Group Discussion Board Assignment #4 Peer Responses • Complete and Submit Quiz 5
Module 3/Week 6	February 21 st - February 25 th	Merrill Chapter 6	<p>DUE February 23rd @ 11:59pm</p> <ul style="list-style-type: none"> • Group Discussion Board Initial Response <p>DUE February 27th @ 11:59pm</p> <p>Related to Merrill Chapter 6:</p> <ul style="list-style-type: none"> • Group Discussion Board Assignment #5 Peer Responses • Complete and Submit Quiz 6

Module 3/Week 7	February 28 th - March 4 th	Merrill Chapters 7	<p>DUE March 2nd @ 11:59pm</p> <ul style="list-style-type: none"> • Group Discussion Board Initial Response <p>DUE March 6th @ 11:59pm Related to Merrill Chapter 7:</p> <ul style="list-style-type: none"> • Group Discussion Board Assignment #6 <p>Peer Responses</p> <ul style="list-style-type: none"> • Complete and Submit Quiz 7
Module 3/Week 8	March 7 th - March 11 th	Merrill MIDTERM EXAM Chapters 1 - 7	<p>MIDTERM EXAM</p> <p>Due March 13th @ 11:59pm</p> <p>Midterm Exam opens Monday, March 7th @ 6:00 am and closes at March 13th @ 11:59pm.</p>
	March 14 th - March 18 th	Spring Break	Spring Break
Module 4/Week 9	March 21 st - March 25 th	Merrill Chapter 8	<p>DUE March 27th @ 11:59pm</p> <p>Related to Merrill Chapter 8:</p> <ul style="list-style-type: none"> • Complete and Submit Quiz 8
Module 4/Week 10	March 28 th - April 1 st	Merrill Chapter 9	<p>DUE April 3rd @ 11:59pm</p> <p>Related to Merrill Chapter 9:</p> <ul style="list-style-type: none"> • Complete and Submit Quiz 9
Module 5/Week 11	April 4 th - April 8 th	Merrill Chapter 10	<p>DUE April 10th @ 11:59pm</p> <p>Related to Merrill Chapter 10:</p> <ul style="list-style-type: none"> • Complete and Submit Quiz 10

Module 5/Week 12	April 11 th - April 15 th	Merrill Chapter 11	DUE April 17 th @ 11:59pm Related to Merrill Chapter 11: • Complete and Submit Quiz 11
Module 6/Week 13	April 18 th - April 22 nd	Merrill Chapter 12	DUE April 24 th @ 11:59pm Related to Merrill Chapter 12: • Complete and Submit Quiz 12
Module 6/Week 14	April 25 th - April 29 th	Merrill Final Exam Review	Final Exam Review
Module 6/Week 15	May 2 nd - May 6 th	Merrill FINAL PAPER DUE	FINAL PAPER DUE Due May 8 th @ 11:59pm
Module 6/Week 16	May 9 th - May 13 th	FINAL EXAM	FINAL EXAM Due May 11 th @ 11:59pm Final Exam opens Monday, May 9 th , 6:00 am and closes at May 11 th @ 11:59pm

Grading Rubrics

See My Grades in Blackboard course and View Rubrics.

Student Evaluation of Faculty and Course

Students in all programs are given the opportunity to evaluate their courses and the faculty who teach them. Evaluations are most helpful when they are honest, fair, constructive, and pertinent to the class, clinical experience, or course. Faculty value student evaluations, and use student suggestions in making modifications in courses, labs and clinical experiences. Angelo State University uses the IDEA (Individual Development and Educational Assessment) system administered through Kansas State University for all course evaluations. The Office of

Institutional Research and Assessment administers IDEA for the entire university, online and has established a policy whereby students can complete course evaluations free from coercion.

End of Syllabus

¹ <https://www.angelo.edu/student-handbook/>

² <https://www.angelo.edu/catalogs/>

³ <https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php>

⁴ <https://www.angelo.edu/services/disability-services/>

⁵ <https://www.angelo.edu/content/files/14197-op-1011-grading-procedures>

⁶ <https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php>

⁷ https://www.angelo.edu/dept/writing_center/academic_honesty.php

⁸ <https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of>