

HS 395 (Sec 1 & 2) – Spring 2018
Fundamentals of Epidemiology,
CPS 116 (3:30 to 4:45)

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A. Course description

Fundamentals of Epidemiology (HS 395 – 3 credits)

Epidemiology is often referred to as “the basic science of public health”. This class provides an introduction to the principles and methods of epidemiology as it applies to health promotion and healthcare delivery. The course will cover a historical perspective of epidemiology, measures of disease occurrence and association, clinical epidemiology, major epidemiological study designs, disease screening, causal inference and common methods for identifying and controlling infectious disease outbreaks. Prerequisite: Math 355.

B. Format

Three hours lecture per week for sixteen weeks. *Hybrid format with out-of-class narrated lectures and in-class discussions.*

C. Textbook

Epidemiology (4th Edition) by Leon Gordis

D. General goals and objectives

At the conclusion of this course, students will be able to:

1. Articulate the basic epidemiologic study designs and statistics used for measuring risk factor/disease associations.
2. Apply knowledge of epidemiology to identify the strengths and weaknesses of published studies.
3. Demonstrate the importance of using epidemiologic data to design disease prevention programs.
4. Appreciate the scope of epidemiology and its potential application for health promotion and improving healthcare delivery.

E. Grading system

93 – 100	A	77 – 79	C+
90 – 92	A-	73 – 76	C
87 – 89	B+	70 – 72	C-
83 – 86	B	67 – 69	D+
80 – 82	B-	60 – 66	D
		Below 60	F

“A” reflects exceptional work (going beyond the basics, integrating material well, displaying professionalism in individual and group work, application and demonstration of knowledge and skills, showing initiative, using creativity, writing is reflective of multiple drafts).

“B” reflects good work (valuable teamwork skills, active in class, ability to grasp basic concepts and apply to new situations, some participation in class, completes all assignments with a degree of proficiency but may not demonstrate initiative, creativity or reflection consistently, writing contains errors or lacks conciseness and completeness).

“C” reflects average work (assignments are completed at the minimum, basic concepts are grasped but cannot be applied, some difficulty in group work, spelling and grammar mistakes are common, writing is conversational in tone with little attention paid to detail, word choices, organization (rough draft quality), little participation in class).

Student responsibilities for successful coursework:

Attendance: Students should plan to attend all classes and are responsible for all information presented in class. Notify the instructor in person, by telephone or email if an absence is anticipated. Class begins promptly at the scheduled times.

Reading Assignments: Additional readings will be posted in D2L. Students will be more successful in the class if the text and other handouts are read before the class period during which a given topic will be covered. The course is focused on discussion and analysis of topics. Readings will prepare you for participation in class.

Written work must be computer-printed (12 point font, double-spaced, 1 inch margins) and written in complete sentences with proper punctuation, spelling and grammar. Student names should be printed in the upper right hand corner of the paper. All assignments are due at class time on the day specified. Students must submit one copy of their homework in the drop box of D2L before class and also bring a copy for review in class. Late assignments may be accepted but these will receive a lower grade. *If you have any concern about meeting the requirements of this course, please see me.*

G. Derivation of course grade

Three 1-hour exams (15% each - multiple choice and short answer)	45%
Quizzes / Activities	20%
Final exam (comprehensive)	35%

H. Other class information

Cell phone policy - please don't use your cell phone during class!

No text messaging.

Email – please note that you are responsible for anything I send you via email.

Remember, class attendance is very important!

I. Communicating with your instructor via email

I check my email frequently during the day. However, I receive a lot of email and I sometimes delete emails that do not have the subject specified. If you have not received a response to your email within 24 hours, please resend your email. I do check email routinely at home and on weekends. Please remember that these are professional communications so please use full sentences and complete words.

J. Students with special needs

UWSP is committed to providing reasonable and appropriate accommodations to students with disabilities and temporary impairments. If you have a disability or acquire a condition during the semester where you need assistance, please contact the Disability and Assistive Technology Center on the 6th floor of Albertson Hall (library) as soon as possible. DATC can be reached at 715-346-3365 or DATC@uwsp.edu.

The contents of this syllabus are as complete and accurate as possible. The instructor reserves the right to make any changes necessary to the syllabus and course material. The instructor will make every effort to inform the students of changes as they occur. It is the responsibility of the student to know what changes have been made in order to successfully complete the requirements of the course. Any in-class announcement, verbal or written, is considered official addendum to this syllabus.

Tentative Course Calendar

Date	Topics
Tues, Jan 23 (In class)	Lesson 1: Course Overview / What is Epidemiology?
Thurs, Jan 25	Lesson 2: The Role of Chance: Probability, Fallacies and Monty Hall
Tues, Jan 30 (In class)	Lesson 1: Overview of Epidemiology (continued)
Thurs, Feb 1	Lesson 3: History of Epidemiology – from limes to pump handles
Tues, Feb 6 (In class)	Lesson 4: Descriptive Studies / case reports, case series and cross-sectional surveys: incidence and prevalence Discuss Levels of Prevention and study designs
Thurs, Feb 8	Lesson 5: Rates and Demography Lesson 6: Ecological Studies and Causality
Tues, Feb 13 (In class)	Discuss Lesson 5 age adjusted rates and Lesson 6
Thurs, Feb 15	Lesson 7: Case Control Studies
Tues, Feb 20 (In class)	Discuss Case Control Studies
Thurs, Feb 22	Lesson 8: Sampling Lesson 9: Cohort Studies
Tues, Feb 27 (In class)	Discuss Lesson 9: Cohort Studies and Lesson 10 Odds Ratios and Relative Risks
Thurs, Mar 1	Lesson 10: Odds Ratios and Relative Risks
Tues, Mar 6 (In class)	Exam 1
Thurs, Mar 8	Lesson 11: Randomized Controlled Trials (RCTs)
Tues, Mar 13 (In class)	Review Exam 1 and Discuss Randomized Controlled Trials Methods
Thurs, Mar 15	Lesson 12: Community Intervention Studies and Meta-Analysis and Evidenced Based Medicine
Tues Mar 20 (In class)	Lesson 13: Meta-Analysis and Evidenced-Based Medicine
Thurs Mar 22	Lesson 14: P-Values and 95% Confidence Intervals
Tues, Mar 27	<i>Spring Break – no class</i>
Thurs, Mar 29	<i>Spring Break – no class</i>
Tues, Apr 3 (In class)	Lesson 15: Screening: sensitivity and specificity Discuss: RCT paper
Thurs, Apr 5	Review for Exam 2
Tues, Apr 10 (In class)	Exam 2
Thurs, Apr 12	Lesson 16: Overview of Infectious Disease Epidemiology
Tues, Apr 17 (In class)	Review Exam 2 and Lesson 17: Outbreak Investigation Methods
Thurs, Apr 19	Lesson 18: Oswego Outbreak Investigation and

	Discussion: The great Milwaukee Crypto outbreak
Tues, Apr 24 (In class)	Lesson 18: Oswego Outbreak Investigation and Discussion: The great Milwaukee Crypto outbreak
Thurs, Apr 26	Review for exam 3
Tues, May 1 (In Class)	Exam 3
Thurs, May 3	Lesson 19: Diabetes Pandemic talk
Tues, May 8 (In Class)	Review Exam 3 and Review for Final
Thurs, May 10	Review for Final
Tuesday May 15 ^h	Final Exam (17:00-19:00)