

EPI 2110 – Principles of Epidemiology

Summer 2021 (CRN 15756)

Graduate School of Public Health, University of Pittsburgh

Primary Instructor:

Thomas Songer, PhD, MSc, MPH, Dept. of Epidemiology
Office: 5118 Public Health Email: tjs@pitt.edu

Purpose:

Epidemiology, as a scientific discipline, seeks to identify and describe patterns of disease occurrence, identify determinants of disease, and develop and evaluate disease prevention and health care treatment efforts. With its focus of study in human populations, epidemiology contributes important evidence-based information to public health research, policy, and practice. This core course is designed to introduce students to the fundamental definitions, terminology, concepts, methods, and critical thinking used in epidemiology. Particular attention will be given to the descriptive epidemiology activities that identify health patterns and their distributions in populations and analytical epidemiology activities that examine factors affecting health and health outcomes in populations. The material presented in this course will provide students with foundational knowledge to support future study and practice.

Course Objectives:

The content of this course will permit students to apply epidemiology methods appropriately by developing specific knowledge and skills in epidemiology. More succinctly, students will be able to:

1. Apply and interpret the basic terminology and definitions of epidemiology.
2. Calculate and interpret basic epidemiology measures.
3. Identify key sources of data for evaluating a health issue in an epidemiologic context.
4. Describe a health issue in terms of its public health significance, and the patterns that characterize its occurrence in the community.
5. Identify the principles and limitations of basic public health based screening programs.
6. Describe the process of examining determinants of health problems or health care interventions.
7. Draw appropriate inferences from the results of epidemiologic studies investigating the determinants of disease, disability, injury, or health care interventions.
8. Recognize the role of age, gender, racial, ethnic, and cultural variability in epidemiologic data.
9. Describe how epidemiologic evidence is used for planning and decisions on health issues.

CEPH MPH Competencies:

Content and instruction in this course are designed to allow students to attain competency and knowledge in two aspects of practice in public health and community organizations identified by the Council on Education in Public Health (<https://ceph.org/assets/2016.Criteria.pdf>). Specifically, these include:

- C1. Apply epidemiologic methods to the breadth of settings and situations in public health practice.**
K4: List major causes and trends of morbidity and mortality in the US or other communities relevant to the school or program.

Course Structure:

The structure of the course is built around multiple modes of asynchronous instruction and synchronous review to enhance understanding of the concepts of epidemiology and their application.

Asynchronous materials:

- The course is organized around 21 lecture modules to introduce key epidemiology concepts.
- Each module will include lecture slides and slide notes. The slide notes will detail key points conveyed in each individual lecture slide. Students are encouraged to review these posted notes prior to the synchronous recitation session.
- Video recordings of the lecture discussion will be available to review material in further detail.
- Audio recordings of lecture slides will also be available. It is not a requirement to listen to this recording. Note: These recordings are from an earlier course offering. In some instances, the material will differ, as new content has been added.
- In many modules, external videos (from YouTube) or a scientific paper will be posted to highlight a key lecture concept or concepts.
- Practice questions will be posted in most, but not all lectures to provide further examples relevant to the lecture material. Students are encouraged to review this material and the posted answers to identify their strengths and weaknesses on the related concepts.
- Assigned lecture questions will be provided for most lectures to provide a short assessment of your understanding of the lecture material. Completion of these questions is a course requirement. Feedback will be provided upon completion of the questions.
- Homework assignments will be used in the course to support key lecture principles. Assignments will vary from case studies, quantitative problems, and a critique of a current epidemiologic issue.
- A lecture quiz will be posted at the end of each lecture module. Completion of these questions is a course requirement. Feedback will be provided after the due date for each quiz.

Synchronous materials:

- On Tuesday and Thursday evenings from 5-6:20pm, an in-person/zoom session will be held to review key lecture content, answer questions, and work through practice problems and related discussion. Attendance is not required, but strongly encouraged, particularly to hear further discussion and practice on the lecture concepts. Students are expected to review the lecture slides prior to class to be aware of the fundamental objectives and material. Note: all material on the lecture slides is available for assessment.
- Each recitation will be held using the Zoom meeting software application. The link to enter each meeting will be <https://pitt.zoom.us/j/99113597172>, passcode: epiclass.
- The Audience Retrieval System app called “TopHat” will be used in most lecture sessions. This system is available to students free of charge. You can login to TopHat through my.pitt.edu using your Pitt username and password (identify University of Pittsburgh as the site, and use the SSO bypass to login). You can also access TopHat through a mobile phone app.

Course Requirements:

Each lecture will contain **assigned lecture questions**. The purpose of these short assessments (3-5 questions) is to allow all participants to gauge their level of understanding and recognition of key lecture material. The assessment/responses will be graded upon their completion, and not the content of the answer. Students, however, should attempt to answer the questions on a “good faith attempt” basis. Completion of the assigned lecture questions is due by one week after the lecture date. Late or incomplete assessments will result in a reduction in grade by 0.5 points per assessment.

Completion of five **homework assignments** will be required in the course to provide additional practice on key concepts presented in the course. The assignments will pertain to lecture-specific topics and will generally cover issues that require either quantitative and critical thinking skills, or to gain knowledge of national and international data. Please consult the schedule at the end of this syllabus to identify the assignments and their due dates for receipt. You should return the homework assignments through Canvas by using the link provided with the assignment.

Homework exercises will be graded. Selected questions in each assignment will be checked in this grading process. Answer keys for the homework assignments will be posted after the assignment is due. It is your responsibility to review your assignment and the answer key to identify areas of strength and weakness in the assignments. Help to address an identified weakness can then be obtained in class discussions or office hours. A 0.5 point deduction penalty will be given if an assignment is turned in late (unless prior arrangements have been made).

A **lecture quiz** will be given at the end of each lecture module to formally assess your level of knowledge of components of the lecture material. The quizzes will be 4-5 questions in length and given through online quizzes in Canvas. Each quiz will be structured to include 2-3 questions of average rigor, and 1-2 questions of higher order thinking. Selected quizzes will have one additional extra credit question. Lecture quizzes are due by one week following the lecture date. Answers to the quiz questions will be posted after this due date. Quizzes submitted late will receive a 0.25 point deduction.

Three exams will be given during the course to evaluate the level of mastery of the material presented. Exams will be given on the following dates; June 15, July 15, and August 5. The exams and the format to complete the exams will be posted in a related Exam module in Canvas. The third exam will cover material from 2nd half of the course, but will largely focus on material from the last five lectures. Students will be allowed to use notes and lecture materials during all exams. A working calculator will be needed for in-person exams. There are no make-up exams except under limited circumstances.

The exams will be comprised of a variety of question formats. Essay-type questions will query your ability to problem solve and apply the lecture material to relevant health scenarios. Short answer and multiple choice questions will assess your recognition of key lecture topics and their application. In addition, some questions will also contain epidemiological problems requiring calculations. The purpose of each of the exams will be to evaluate how well the student understands the concepts of epidemiology, why certain actions are done in epidemiology, and specific details of epidemiologic approaches and methods. This means that, in many circumstances, you will be required to think and state how epidemiology applies to a given situation, or to identify which given example is the best representation of epidemiology principles. These exams are based on critical thinking and not on memorization. Students who are successful on the exams prepare as if these exams are closed book.

Grading Policy:

Course requirements will be weighted in the following fashion to determine the final course grade.

Assigned Lecture Questions	20%	(1% each)
Homework Exercises:	5%	(1% each)
Quizzes:	20%	(1% each)
Exams:	55%	(Exam 1:19%, Exam 2: 19%, Exam 3:17%)

Grades will be assigned using a letter grade as follows:	A:	90% or higher
	B:	80% to < 90%
	C:	70% to < 80%
	F:	< 70%

Students who withdraw from the course must verify that they have been removed from the class roster maintained by the University Registrar. Otherwise, students who remain on the roster and do not complete the designated work will be assigned a failing grade.

Course Expectations

As a student in this course, you can expect the following:

Epidemiology is a unique discipline that utilizes a blend of quantitative and qualitative reasoning to address important health issues in the community. In epidemiology, heavy emphasis is placed upon describing the importance of health issues through quantitative measures where there are correct and incorrect methods to identifying answers. However, in epidemiology, a professional must also be able to interpret this quantitative information in the context of the community and accepted practices. This interpretation involves the use of critical thinking skills. It is often the case that there can be more than one correct answer to the proper interpretation of a health related issue. However, a professional must choose among various options to identify a best response (i.e. a solution that is the most appropriate for the problem posed given the information available). **Acquiring the knowledge and skills to make reasoned judgments is one objective of this course.** Many students may not have extensive experience in making judgments where there is not one right or wrong answer. As a result, some students may become discouraged, especially if their interpretations are marked off on an assessment. Be patient and keep on trying. Making reasoned judgments takes time and practice.

This course is a required course for most students in the Graduate School of Public Health. As a result, it contains students from many different cultures and backgrounds and with many different levels of understanding and expertise. You may read or hear responses during the course that are not readily apparent to you. Be prepared to add to this discussion from your own area of background or to ask for clarification in these situations.

The graduate nature of this class also means that there is the expectation that students will monitor their academic progress and seek help when necessary. Suggested answers to practice exercises, assigned lecture questions, homework assignments and quizzes will be posted as part of the course material for each lecture. Students are expected to review this material and their own completed work to independently assess their level of understanding of the material. If questions still remain, students should seek input from the instructors using e-mail or office hour periods.

Path to Success in the Course:

In general, students should plan to spend approximately 8 hours per week on course material. For each lecture, students should mind the following path through the posted documents.

1. Read the lecture slides and slide notes (exam questions will be based on this content)
 - a. Review video and audio recording if parts of lecture are not fully understood
2. Review posted You Tube videos and papers to gain additional insight into lecture principles
3. Review key summary points from the lecture
4. Complete practice questions (where available)
5. Complete assigned lecture questions (course requirement)
6. Use e-mail, time after class, or office hours to ask questions for clarification on concepts
7. Complete lecture quiz questions (course requirement)
8. Complete homework assignments (course requirement)
9. Successful completion of the three exams. Exam questions will be modeled heavily on the parameters in the homework questions, discussion questions, and practice questions.

Recommended Text:

There is no required textbook for this course. It is most important that you provide attention to the instruction in the lecture, lecture slides, and supplemental material and discussions. If you rely upon textbooks to aid your learning, one of the following books is recommended.

Epidemiology, 4th edition, Gordis (2009), Elsevier (ISBN: 978-1-4160-4002-6).

Epidemiology, 5th edition, Gordis (2014), Elsevier (ISBN: 978-1-4557-3733-8).

Gordis Epidemiology, 6th edition, Celentano, Szklo (2018) Elsevier (ISBN: 978-0-3235-5229-5).

-available as an electronic book (no purchase required) at the Health Sciences Library website

<http://www.hsls.pitt.edu/resources/books/ebooks?s=Epidemiology>

Office Hours:

Instructor:

Dr. Songer: Fridays, 12noon, Zoom meeting

Teaching Assistants:

TBD: arranged by e-mail

Course Website:

All course materials can be accessed through the Canvas learning management system used at the University of Pittsburgh (<http://canvas.pitt.edu>). Lecture-related materials on this system can be accessed through the **Modules** link. There will be one module for each set of lecture content. Several different types of materials will be provided in each module, including lecture slides, video recordings, assigned lecture questions and quizzes, and homework assignments. All exams will be posted under a related exam module in Canvas. Grades for the course will be maintained in the Canvas Grade book. Finally, all announcements related to the course will be posted using the Canvas announcement system. You will be expected to monitor Canvas regularly for these announcements. If changes occur in the course, they will be broadcast through this mechanism.

Academic Integrity:

All students are expected to adhere to the school's standards of academic honesty. Cheating/plagiarism will not be tolerated. Any piece of individual work submitted by a student for evaluation must represent his/her own intellectual contribution and efforts. Students committing acts of academic dishonesty, including plagiarism, collaboration on exams, cheating on in-class exams, misrepresentation of data, and facilitating dishonesty by others, will receive sanctions appropriate to the violation(s) committed. Sanctions include, but are not limited to, reduction of a grade for an assignment or exam, failure of an exam, and failure of the course.

The Graduate School of Public Health's policy on academic integrity, which is based on the University policy, is available online in the Pitt Public Health Academic Handbook (<http://www.publichealth.pitt.edu/home/academics/academic-requirements>). The policy includes obligations for faculty and students, procedures for adjudicating violations, and other critical information. Please take the time to read this policy.

All student violations of academic integrity will also be documented and forwarded to the Graduate School of Public Health Office of Student Affairs. If a sanction for a violation is agreed upon by the student and instructor, then the document of violation will be expunged from the student file upon the student's graduation. If the sanction proposed by the instructor is not agreed upon by the student, then the violation will be referred to the GSPH Academic Integrity Hearing Board, where a final decision on the violation will be rendered. However, the document of the academic violation and the final decision of the Hearing Board will remain in the student's permanent record.

Disability Resources and Services:

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both Dr. Songer and Disability Resources and Services (DRS), 140 William Pitt Union, Phone: (412) 648-7890, drsrecep@pitt.edu, (412) 228-5347 for P3 ASL users, as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course. A comprehensive description of the services of that office can be obtained at <https://www.studentaffairs.pitt.edu/drs/>.

Students that require accommodations in the event of a building evacuation should e-mail the Office of Environmental Health and Safety (EHS) at safety@ehs.pitt.edu to request the development of an individualized evacuation plan. Dr. Songer should be informed of the finalized plan for evacuation.

Classroom Recording Policy:

Zoom/Panopto Video and Audio recordings of the lectures will be provided in Canvas under the respective lecture folders to assist students in reviewing course material. Note, the audio files pertain to lectures recorded in the fall of 2012. While the material in the recordings is similar to that presented this year, it will differ in some instances. You will be assessed on material as it is presented this year.

Given the availability of these recordings, and to ensure the free and open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor. Also, any properly approved recording can be used only for private use or for use by all other students enrolled in the class. Recordings may not be copied, distributed, published, or used in another fashion without the written consent of the instructor. A copy of any approved recording may also be requested by the instructor.

Sexual Misconduct, Required Reporting and Title IX Statement:

The University is committed to combatting sexual misconduct. Faculty are required to report any instances of sexual misconduct, including harassment and sexual violence, to the University's Title IX office so that appropriate resources and support options may be provided. What this means is that as your professor, I am required to report any incidents of sexual misconduct that are directly reported to me, or of which I am made aware.

There are two important exceptions to this requirement where disclosures are not required to be reported to the University's Title IX office:

1. An exemption to reporting exists for a disclosure about sexual misconduct that is shared as part of an academic project, classroom discussion, or course assignment.
2. An exemption to reporting exists for disclosures made to designated university employees who can maintain confidentiality related to the care of students. These employees primarily include counselors and medical professionals. A list of employees who do not have the reporting responsibility can be found at <https://www.titleix.pitt.edu/report/confidentiality>.

If you are the victim of sexual misconduct, you may reach out to these resources; the Title IX Office, Phone: 412-648-7860, or the Office of Sexual Harassment and Assault Response and Education (SHARE), Phone: 412-648-7930 (8:30 a.m. to 5 p.m.; M-F) or 412-648-7856 (after business hours). If you have a safety concern, please contact the University of Pittsburgh Police, Phone: 412-624-2121.

Diversity Statement:

The University of Pittsburgh Graduate School of Public Health considers the diversity of its students, faculty, and staff to be a strength and critical to its educational mission. Pitt Public Health is committed to creating and fostering inclusive learning environments that value human dignity and equity and promote social justice. Every member of our community is expected to be respectful of the individual perspectives, experiences, behaviors, worldviews, and backgrounds of others. While intellectual disagreement may be constructive, no derogatory statements, or demeaning or discriminatory behavior will be permitted. If you feel uncomfortable or would like to discuss a situation, please contact any of the following:

- the course director or course instructor;
- the Pitt Public Health Associate Dean responsible for diversity and inclusion;
- the University's Office of Diversity and Inclusion at 412-648-7860 or <https://www.diversity.pitt.edu/civil-rights-title-ix-compliance/make-report/report-form> (anonymous reporting form)

Lecture, Exam, and Assignment Schedule:

Date	Class Session/Topic and Assignments/Quizzes and Exams
May 18	<p>Introduction & Historical Overview of Epidemiology Reading: Textbook (Gordis, 4th Ed., 5th Ed., or 6th Ed.): Chapter 1 LaMorte WW. The Evolution of Epidemiologic Thinking. Available at: http://sphweb.bumc.bu.edu/otlt/mph-modules/ep/ep713_history/EP713_History3.html</p>
May 20	<p>Epidemiologic Approach to Disease I; Person, place, time/Host, agent, environment Reading: Textbook (Gordis, 4th Ed.): Chapter 2 (pgs. 19-20, 29-32) Textbook (Gordis, 5th Ed. or 6th Ed.): Chapter 2 (Introduction, Exploring Occurrence of Disease), Chapter 16 (Time Trends in Disease, Migrant Studies) World Health Organization. Health Equity through Action on the Social Determinants of Health. Available at https://www.who.int/social_determinants/thecommission/en/</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm)</p>
May 25	<p>Epidemiologic Approach to Disease II; Assessing disease in populations Reading: Textbook (Gordis, 4th Ed.): Chapters 2, 6 (pgs. 20-22, 109-110) Textbook (Gordis, 5th Ed. or 6th Ed.): Chapter 2 (Clinical and Subclinical Disease), Chapter 6 (Introduction), Chapter 18 (Natural History of Disease, Pattern of Disease Progression)</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm)</p>
May 27	<p>Heterogeneity in Populations and the Dynamics of Infectious Disease Reading: Textbook (Gordis, 4th Ed.): Chapter 2 (pgs. 19-20, 22, 26-27) Textbook (Gordis, 5th Ed. or 6th Ed.): Chapter 2 (Modes of Transmission, Incubation Period, Carriers)</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm)</p>
June 1	<p>Infectious Disease Prevention and Outbreak Investigation Reading: Textbook (Gordis, 4th Ed.): Chapter 2 (pgs. 22-28, 28-29, 32-35) Textbook (Gordis, 5th Ed. or 6th Ed.): Chapter 2 (Endemic, Epidemic, and Pandemic, Herd Immunity, Disease Outbreaks, Attack Rate, Outbreak Investigation) Torok M. Epidemic Curves Ahead. Focus on Field Epidemiology, Vol 1(5):pgs. 1-6. Available at: https://nciph.sph.unc.edu/focus/vol1/issue5/1-5EpiCurves_issue.pdf</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm) <u>Homework Assignment (due June 9 – 11:59 pm)</u></p>
June 3	<p>Epidemiology in Global Contexts/Epidemiologic Transition Reading: Textbook (Gordis, 4th Ed.): Chapter 1, 4 (pgs. 4-6, 79-81) Textbook (Gordis, 5th Ed. or 6th Ed.): Chapter 4 (Projecting the Future Burden of Disease) Omran AR. The Epidemiologic Transition. Excerpted in The Bulletin of the WHO, 2001, 79(2). Available at http://ocw.uci.edu/upload/files/v79n2a11.pdf</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm) <u>Homework Assignment (due June 12 – 11:59 pm)</u></p>

June 8	<p>Chronic Disease Epidemiology and Disease Causation</p> <p>Reading: Textbook (Gordis, 4th Ed.): Chapters 14, 19 (pgs 234-36, 333-335) Textbook (Gordis, 5th Ed. or 6th Ed.): Chapter 14 (Types of Causal Relationships), Chapter 19 (Epidemiology and Prevention)</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm)</p>
June 10	<p>Identifying Disease in the Community; Surveillance Approaches</p> <p>Reading: Textbook (Gordis, 4th Ed.): Chapters 3, 4 (pgs. 54-55, 70-73) Textbook (Gordis, 5th Ed. or 6th Ed.): Chapter 3 (Surveillance, Active and Passive), Chapter 4 (Problems with Mortality Data)</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm)</p>
June 15	Exam 1
June 17	<p>Measures of Disease Frequency; Incidence, Prevalence, Clinical Measures</p> <p>Reading: Textbook (Gordis, 4th Ed.): Chapter 3 (pgs. 37-54), Chapter 17 (pgs. 293-299) Textbook (Gordis, 5th Ed. or 6th Ed.): Chapter 3, Chapter 17 (Studies of Outcome, Efficacy, Effectiveness, Efficiency, Measures of Outcome, Outcomes Research)</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm) <u>Homework Assignment (due June 24 – 11:59 pm)</u></p>
June 22	<p>Measures of Disease Frequency; Mortality/Prognosis of Disease</p> <p>Reading: Textbook (Gordis, 4th Ed.): Chapters 4, 6 (pgs. 59-73, 109-13) Textbook (Gordis, 5th Ed. or 6th Ed.): Chapter 4 (Measures of Mortality) Textbook (Gordis, 5th Ed. or 6th Ed.): Chapter 6 (Case Fatality, Person Years)</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm)</p>
June 24	<p>Measures of Disease Frequency; Standardization/Survival</p> <p>Reading: Textbook (Gordis, 4th Ed.): Chapter 4 (pgs. 73-79), Chapter 6 (pgs. 112-129) Textbook (Gordis, 5th Ed. or 6th Ed.): Chapter 4 (Comparing Mortality in Different Populations) Textbook (Gordis, 5th Ed. or 6th Ed.): Chapter 6 (Survival, Life Tables, Kaplan-Meier)</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm)</p>
June 29	<p>Measures of Disease Association; Relative risk, Odds ratio</p> <p>Reading: Textbook (Gordis, 4th Ed. or 5th Ed.): Chapter 11 Textbook (Gordis, 6th Ed.): Chapter 12</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm) <u>Homework assignment (due July 6 – end of day)</u></p>

July 1	<p>Analytical Epidemiology; Hypotheses, research designs and sequence, descriptive designs, ecologic designs Reading: Textbook (Gordis, 4th Ed.): pgs. 165-66, 227-30, 234-35, 333-35 Textbook (Gordis, 5th Ed.): Chapter 10 (Ecologic), Chapter 14 (Approaches to Study Disease Etiology) Textbook (Gordis, 6th Ed.): Chapter 7 (Case Reports and Case Series, Ecologic Studies), Chapter 14 (Approaches for Studying Disease Etiology) Farrugia P, Petrisor BA, Farrokhyar F, et al. Research questions, hypotheses, and objectives. Can J Surgery 53(4):278-81, 2010. Available at http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2912019/</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm)</p>
July 6	<p>Analytical Epidemiology; Cross-sectional/Case-control designs Reading: Textbook (Gordis, 4th Ed.): Chapter 10 (pgs. 195-98, 177-95) Textbook (Gordis, 5th Ed.): Chapter 10 (Case-Control, Cross-Sectional Studies) Textbook (Gordis, 6th Ed.): Chapter 7 (Cross-Sectional Studies, Case-Control Studies)</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm)</p>
July 8	<p>Analytical Epidemiology; Case-crossover/Cohort designs Reading: Textbook (Gordis, 4th Ed.): Chapter 9 Textbook (Gordis, 5th Ed.): Chapter 9, Chapter 10 (Case-Crossover Design) Textbook (Gordis, 6th Ed.): Chapter 7 (Case-Crossover Design), Chapter 8</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm)</p>
July 13	<p>Analytical Epidemiology; Randomized clinical trials Reading: Textbook (Gordis, 4th Ed.): Chapter 7 Textbook (Gordis, 5th Ed.): Chapter 7, Chapter 8 (Ethical Considerations) Textbook (Gordis, 6th Ed.): Chapter 10, Chapter 11 (Ethical Considerations)</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm)</p>
July 15	Exam 2
July 20	<p>Error in Epidemiologic Studies I; Chance, Bias Reading: Textbook (Gordis, 4th Ed.): Chapters 8, 10, 15 (pgs. 147-52, 187-88, 247-251) Textbook (Gordis, 5th Ed.): Chapter 8 (Sample Size), Chapter 10 (Bias in Case-Control), Chapter 15 Textbook (Gordis, 6th Ed.): Chapter 7 (Potential Biases in Case-Control Studies), Chapter 11 (Sample size, Generalizability of Results), Chapter 15 (Bias)</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm)</p>
July 22	<p>Error in Epidemiologic Studies II; Confounding, effect modification Reading: Textbook (Gordis, 4th Ed.): Chapters 14, 15 (pgs. 230-34, 251-261) Textbook (Gordis, 5th Ed.): Chapter 14 (Types of Associations), Chapter 15 (Confounding, Interaction) Textbook (Gordis, 6th Ed.): Chapter 14 (Types of Associations), Chapter 15 (Confounding, Interaction)</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm)</p>

July 27	<p>Assessing the Quality of Epidemiologic Research Reading: Vance DE, Talley M, Azuero A, et al. Conducting an Article Critique for a Quantitative Research Study. <i>Nursing: Research and Reviews</i> 3:67-75, 2013</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm) <u>Homework Assignment (due back August 3 – end of day)</u></p>
July 29	<p>Inference from Epidemiologic Studies/Causal Models Measures of Effect; Assessing Public Health Impact Reading: Textbook (Gordis, 4th Ed.): Chapter 12, Chapter 14 (pgs. 236-45) Textbook (Gordis, 5th Ed.): Chapter 8 (Expressing the Results of RCTs), Chapter 12, Chapter 14 (Types of Causal Relationships, Evidence for a Causal Relationship) Textbook (Gordis, 6th Ed.): Chapter 11 (Expressing the Results of RCTs), Chapter 13, Chapter 14 (Evidence for a Causal Relationship)</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm)</p>
Aug 3	<p>Epidemiology in Practice; Screening; validity, application and bias Reading: Textbook (Gordis, 4th Ed. or 5th Ed., or 6th Ed.): Chapters 5, 18</p> <p>Assigned Lecture Questions posted (due one week after lecture date at 11:59 pm) Lecture Quiz posted (due one week after lecture date at 11:59 pm)</p>
Aug 5	Exam 3