

Washington University School of Medicine

Digital Commons@Becker

Teaching Materials

Master of Population Health Sciences

2012

Intermediate Epidemiology - Course Syllabus 2011-2012

Follow this and additional works at: https://digitalcommons.wustl.edu/mphs_materials



Part of the [Medicine and Health Sciences Commons](#)

Recommended Citation

"Intermediate Epidemiology - Course Syllabus 2011-2012" (2012). *Teaching Materials*. Paper 13 Master of Population Health Sciences, Washington University School of Medicine.
https://digitalcommons.wustl.edu/mphs_materials/13

This Syllabus is brought to you for free and open access by the Master of Population Health Sciences at Digital Commons@Becker. It has been accepted for inclusion in Teaching Materials by an authorized administrator of Digital Commons@Becker. For more information, please contact vanam@wustl.edu.

M19-502
INTERMEDIATE EPIDEMIOLOGY

Fall 2 (10/25/11 to 12/15/11)

Tuesdays & Thursdays, 9 am to noon
Room: Kingshighway Bldg, 7th Floor, Room 7326

INSTRUCTOR

Jenifer E. Allsworth, PhD
Assistant Professor
Dept of Obstetrics & Gynecology
Washington University in St. Louis School of Medicine

Email: allsworthj@wudosis.wustl.edu

Tel: 314-747-6434

Office: 4533 Clayton Ave, Room 307

Office hours: By appointment

COURSE DESCRIPTION & OBJECTIVES

The second course in the Epidemiology series, this course builds upon the basic principles and methods of epidemiology and introduces additional tools and concepts that are critical to a comprehensive study design. Topics include: risk and association, sampling strategies, interaction, confounding, adjustment, causal inference, validity and reliability and approaches to data analysis. Upon exiting this course, students will be prepared to approach the study design portion of a protocol, as required by the final course in the Epidemiology series.

COMPETENCIES

- Describe a public health problem in terms of magnitude, person, time and place.
- Explain the importance of epidemiology for informing scientific, ethical, economic and political discussion of health issues.
- Comprehend basic ethical and legal principles pertaining to the collection, maintenance, use and dissemination of epidemiologic data.
- Apply the basic terminology and definitions of epidemiology.
- Calculate basic epidemiology measures.
- Communicate epidemiologic information to lay and professional audiences.
- Draw appropriate inferences from epidemiologic data.
- Evaluate the strengths and limitations of epidemiologic reports.

COURSE EXPECTATIONS

The instructor will prepare and deliver course material, be available to students during and after class and by appointment; and provide clear, timely feedback on student performance. The instructor retains the right to change the content and order of the lectures and exercises to meet the needs of the students who are enrolled in the course.

The instructor expects the students to attend each class on time; complete all assignments in a timely manner; come to class prepared, having read all assignments; participate in class discussions; seek any necessary clarification regarding course expectations; and provide feedback on the effectiveness of the course. Any issues with attendance, meeting deadlines, or completing assignments should be discussed promptly with the instructor. Email is the best way to contact me: allsworthj@wudosis.wustl.edu.

CLASSROOM ETIQUETTE

- Please turn all cell phones and pagers to silent or vibrate
- If you need to answer a call or page, please leave the room quietly to do so
- **Do not use the internet, social media sites, BJC clinical sites or check email during class time**
- We will have at least one 10-15 minute break during each class session

COURSE EVALUATION

Students will be evaluated on the basis of their class participation, problem sets, article critique, quiz and final exam.

Class Participation (10%): The participation portion of your grade is based upon regular and timely attendance, as well as active, meaningful contributions to class discussions and in-class exercises.

Problem Sets (25%): Four problem sets (10 points each) to practice epidemiologic methods will be assigned.

Article Critique (15%): Critically reading the epidemiologic literature is an important skill for any researcher. For this assignment, you will read and critique one peer-reviewed journal article from a list provided. On your due date for your critique (to be determined; possible dates include 11/29, 12/1 or 12/6) you will be expected to lead a journal club style discussion for 20-30 minutes on the strengths and weaknesses of the reviewed research and public health importance/implications.

Although 1 student will submit a written critique and lead discussion of each article, all students are expected to read all critiqued articles and come prepared to participate fully in the journal club discussion.

Additional information on the format for the written critiques will be posted on Blackboard.

Quiz (25%): A one hour in class quiz will be given on 11/22. Information from lectures, text and supplemental readings for Class Sessions 1-8 will be eligible for inclusion.

Final Exam (25%): The final exam is scheduled for the last day of class (12/15). The exam will be cumulative, but will concentrate on material presented during Class Sessions 9-15. Information from lectures, text, and supplemental readings will be eligible for inclusion. Material presented in critique articles will not be specifically included, but hopefully the discussion of critiqued articles will cover important themes that may appear on the final.

Additional Information for Quiz and Final Exam: **Students with a scheduling conflict or in need of special accommodations must notify the instructor in advance.**

The quiz and final exam will be closed book and closed notes. **Each student will be allowed to bring into the exam with them a single sheet of paper with formulae, concepts, and helpful information. This sheet may be hand- or type-written and can be double-sided if the student prefers.** No additional supplemental sources of information (phone, internet) are allowed during the examination periods. The instructor will be present and available to answer any questions during the examination period.

Scientific calculators will be allowed. Mobile phones that have scientific calendars may be used for the purposes of calculation only. Use of a mobile phone during an exam for any other purpose will be considered academic misconduct.

Overview of Course Grading:

- 10% Class Participation
- 25% Problem Sets
- 15% Article Critique
- 25% Quiz
- 25% Final Exam

Grading scale:

A	94-100	B+	88-89	B-	80-83	C	74-77	F	<70
A-	90-93	B	84-87	C+	78-79	C-	70-73		

Information on Assignments: Descriptions of and instructions for each assignment will be posted the week before they are due on Blackboard. **Assignments are due at the beginning of class on the due date.**

All written assignments must be submitted electronically through Blackboard before the start of class on the due date. Written assignments must have a minimum of 1 inch margins and be completed in 11- or 12-point font.

Policy on Late Assignments: Late assignments will result in a deduction of five percentage points for each day late (including weekends) unless prior approval is obtained from the instructor or a compelling

situation prevents prior approval. The instructor will allow for documented family emergencies, such as birth or death in the family. Health-related issues must be documented by a physician.

REQUIRED TEXTBOOK

Modern Epidemiology, 3rd Edition
Rothman, Greenland and Lash
Lippincott Williams & Wilkins
©2008

SUPPLEMENTAL REQUIRED READINGS

Articles have been selected to complement the readings from the primary textbook. Links to articles will be provided in this syllabus or posted on Blackboard.

DRAFT

	Date	Topic	Readings	Assignment
1	10/25	Course overview Measures of occurrence, effect, association	Chapters 3, 4	
2	10/27	Causation Theoretical frameworks	Chapter 2	
3	11/1	Sampling strategies		Problem Set #1
4	11/3	Statistical methods in epidemiology		
5	11/8	Validity	Chapter 9	Problem Set #2
6	11/10	Effect modification & interaction	Chapter 5	
7	11/15	Study accuracy	Chapter 11	Problem Set #3
8	11/17	Causal diagrams	Chapter 12	
9	11/22	Advanced observational study designs		Quiz #1
--	11/24	Thanksgiving	--	--
10	11/29	Bias analysis	Chapter 19	Article Critique
11	12/1	Risk prediction & prognostic models		Article Critique
12	12/6	Intervention effects – Propensity score-based models		Article Critique
13	12/8	Intervention effects – Marginal-structural models		Problem Set #4
14	12/13	Ecologic studies Multilevel models		
15	12/15	Final exam	--	--

ACADEMIC HONESTY

Students are expected to complete the problem sets, article critique, quiz and final exam in accordance with Washington University in St. Louis' academic rules and regulations regarding honesty and integrity. Any evidence of academic misconduct, including **cheating, failure to cite sources, and/or plagiarism** will result in appropriate action as dictated by Washington University in St. Louis. Violations of academic honesty will result in notification to the Associate Dean of Academic Affairs at the Washington University School of Medicine, as well as the to MPHS Director, Assistant Director(s), and Program Committee. Any hint of violation during an examination or in a written assignment will result in no grade for the exam/assignment. For more information see the [University's Student Academic Integrity Policy](#).

SPECIAL NEEDS

Per University policy, students with learning, sensory, or physical disability or other impairment should contact the Washington University Center for Advanced Learning Disability Resources (DR) at 314-935-4062 or visit <http://disability.wustl.edu/DisabilityResources.aspx>. The DR Office is located in Cornerstone on the Danforth Campus.

Students whose second language is English and/or those in need of assistance in lectures, reading or writing assignments, and/or testing, should contact the University Writing Center at 314-935-4981 or visit <http://artsci.wustl.edu/~writing/home.html>.

BLACKBOARD

We will use Blackboard to manage our class, access assignment instructions and problem sets, post course-related questions and submit written assignments. Blackboard can be accessed at <https://bb.wustl.edu>. Login with your WUSTLKey and Intermediate Epidemiology should appear on the homepage.

All updates of the Syllabus will be posted on Blackboard and mentioned at the beginning of the next Class Session.

Important updates and reminders will be posted in the Announcements section on Blackboard.

Lecture notes will be posted on Blackboard approximately 24 hours before class. Guest lecturers will post materials at their discretion. Problem sets and assignment instructions will be posted on Blackboard throughout the semester.

We will utilize the Discussion threads for general questions related to lectures and assignments. Students should post all general questions that may be relevant to others in class to the Discussion thread. The instructor will monitor questions once a day (with the exception of weekends) and post answers. **Student-specific questions (e.g. related to a grade or exam conflict) should be emailed directly to the instructor.** Every effort will be made to answer student emails within 24-hours (excluding weekends). **Students are encouraged to post materials related to class (e.g. link to a news story) on Blackboard for the rest of the class to access.**