Instructor: Bettina F. Drake, PhD, MPH  
Office: Taylor Avenue Building, 2nd Floor, RM 308W  
Phone: 314-747-4534  
Email: drakeb@wustl.edu

Course Meetings: Tuesday & Thursday 9 AM – 12 Noon  
Course Location: Taylor Avenue Building 2nd Floor, Doll and Hill Rm  
Office Hours: By arrangement

Teaching Assistant:  
Ana Salazar Zetina  
a.salaza@wustl.edu

Course Overview:  
This is the second course in the Epidemiology series which builds upon the basic principles and methods of epidemiology and introduces additional tools and concepts that are critical to a comprehensive understanding of epidemiologic methods. Students are expected to complete assigned reading, participate in lectures, work in groups and complete all assignments in a timely manner.

Course Format:  
Classes will include interactive presentations by the course instructors and guest lecturers. There will be assigned readings for every class, in-class assignments, homework, exams and a class presentation. Class participation by students is essential to the success of the course.

Course Objectives:  
At the end of this course, students will be able to:  
✓ Calculate and interpret measures of disease occurrence and association  
✓ Understand the appropriate methods to use when assessing confounding and effect modification  
✓ Design an epidemiological study for any given research question  
✓ Write a methods section for a study proposal

Textbook:  

Additional assigned readings will be listed on Blackboard.
COURSE REQUIREMENTS
Class participation and attendance (5%)
All students are expected to actively engage in classroom discussions. Students should be prepared to ask questions, raise concerns and interact with fellow students during each class.

Debate topics (10%)
Debate topics will be assigned throughout the course on the Tuesday before the debate is to take place on the following Thursday. The theme of each debate will be on current research topics in the literature. The students will be given a general research question and differing study design approaches to address that research question. They will be responsible for presenting the source of the study sample, data source(s), appropriate analysis methods including the strengths of weaknesses of their approach, and describe a situation why the opposing method may not be the best choice.

Discussion among classmates not presenting is expected.

Problem Sets (15%)
After lecture and class discussion, students will complete a short assignment covering the reading material and the lecture for that day. If time does not permit, it may be taken home as a homework assignment and submitted before the next course meeting.

Class Project (20%)
One of the course objectives is to be able to write a methods sections for a study proposal. Students will form groups of 2-3. The class project should be no more than 3 pages, single spaced, 0.5 inch margins. The project should include a brief background section (no more than 1 page) which explains why the research question is important and the research question(s). The methods should include the study design and study rationale; main exposure and outcome variables, additional variables of interest and how they will be measured; potential confounders and effect modifiers should be described along with an explanation of why they are being considered and how they will be considered; measures of frequency, association and statistical analyses to be used and why; and discussion of potential biases, how it may or may not affect the results and how they should be handled.

Exams (50%)
- Midterm (20%)
- Comprehensive Final (30%)

COURSE EXPECTATIONS
The instructor will prepare and deliver course material; be available to students by appointment; and provide timely and clearly explained feedback on student performance. The instructor expects 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 about the effectiveness of the course. Any issues with attendance, meeting deadlines, or completing assignments should be discussed promptly with the instructor. E-mail is the best way to contact me.

Academic Honesty:
Students are expected to complete exams and assignments in accordance with Washington University’s academic rules and regulations regarding honesty and integrity. Any evidence of academic misconduct,
including cheating, failure to cite sources, and plagiarism will result in appropriate action as dictated by Washington University. 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 to the MPHIS Director and Program Committee. Any hint of violation during exams/assignments will result in no grade for the exam/assignment. For more information, see the University’s Student Academic Integrity Policy: www.wustl.edu/policies/undergraduate-academic-integrity.html

Special Needs: Per University policy, students with a learning, sensory, or physical disability or other impairment, should contact the Washington University Center for Advanced Learning Disability Resources (DR) at 935-4062 (tel) 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, may contact the University Writing Center at 935-4981 or visit http://artsci.wustl.edu/~writing/home.html

Accommodations based upon sexual assault: The University is committed to offering reasonable academic accommodations to students who are victims of sexual assault. Depending on the specific nature of the allegation, such measures may include but are not limited to: implementation of a no-contact order, course/classroom assignment changes, and other academic support services and accommodations. If you need to request such accommodations, please direct your request to Kim Webb (kim_webb@wustl.edu), Director of the Relationship and Sexual Violence Prevention Center. Ms. Webb is a confidential resource; however, requests for accommodations will be shared with the appropriate University administration and faculty. The University will maintain as confidential any accommodations or protective measures provided to an individual student so long as it does not impair the ability to provide such measures.

Bias Reporting: The University has a process through which students, faculty, staff and community members who have experienced or witnessed incidents of bias, prejudice or discrimination against a student can report their experiences to the University’s Bias Report and Support System (BRSS) team. See: diversityinclusion.wustl.edu/brss/

Mental Health: Mental Health Services’ professional staff members work with students to resolve personal and interpersonal difficulties, many of which can affect the academic experience. These include conflicts with or worry about friends or family, concerns about eating or drinking patterns, and feelings of anxiety and depression. See: shs.wustl.edu/MentalHealth

Blackboard
Blackboard will be used to communicate information. Please check the site regularly for class announcements and readings. Blackboard can be accessed at https://bb.wustl.edu. Login with your WUSTLKey. Important updates and reminders will be posted in the Announcements section on Blackboard.

Attendance
Class attendance is required. As a courtesy to other students, you are expected to arrive on time. More than one unexcused absence from class may result in a lowered grade. The value of the class stems from the quality of the input received from peers and course instructors.

Readings
You should complete the required readings before each class session.
Grading Scale:
A  94-100  B+  88-89  B-  80-83  C  73-77  F  ≤69
A-  90-93  B  84-87  C+  78-79  C-  70-72

Course assignments:
All written assignments should be delivered prior to class on the day of the deadline. Do not use email for submitting course assignments. Exceptions to due dates will not be granted.

Policy on Late Assignments: All late assignments will result in a deduction of five percentage points for each day late (including weekends) unless prior approval is obtained from the professor or a compelling situation prevents prior approval. The professor will allow for (documented) family emergencies (e.g. birth/death in the family). Health issues must be documented by a physician.

Classroom environment: This is a course where students bring research ideas in development. Ideally, everyone should be involved in classroom discussions. In order for everyone to feel comfortable presenting work and voicing opinions and suggestions, a climate of tolerance and respect is essential.

Course Syllabus Subject to Change: Every effort will be made to follow the syllabus content and schedule. If circumstances dictate, there may be modifications made during the semester and every effort will be made to notify students in a timely manner.
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<tr>
<th>TOPIC</th>
<th>DATE</th>
<th>ASSIGNMENTS</th>
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<td>Course overview Review Intro Epi</td>
<td>10/23</td>
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<td><strong>Case-control vs. Cross Sectional Cohort</strong>&lt;br&gt;- design&lt;br&gt;- data collection&lt;br&gt;- nested vs. case-cohort</td>
<td>10/25*</td>
<td>Reading: Chapter 1&lt;br&gt;&lt;br&gt;Debate:</td>
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<td><strong>Measures of Disease Occurrence</strong></td>
<td>10/30*</td>
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<td>11/1</td>
<td>Reading: Chapter 2&lt;br&gt;Project: Partner and Research Question Due&lt;br&gt;Debate:</td>
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<td><strong>Measures of Association</strong></td>
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<td><strong>Confounding</strong></td>
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<td>Reading: Chapter 5&lt;br&gt;Project: Study Design and Variable Definitions Due&lt;br&gt;Debate:</td>
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<td>Reading: Chapter 4&lt;br&gt;&lt;br&gt;Debate:</td>
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<td><strong>Presentations</strong></td>
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<td><strong>Final</strong></td>
<td>12/18</td>
<td>In-class Final&lt;br&gt;Final 12/18 In-class Final</td>
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