PHS 801 EPIDEMIOLOGY OF INFECTIOUS DISEASES (3 credits)

COURSE DESCRIPTION and OBJECTIVES

This course is designed to provide an introduction to the principles and practice of infectious disease epidemiology. It will focus on the etiology, distribution and determinants of infectious diseases of major public health importance and describe prevention and public health control efforts undertaken locally, nationally and internationally. Student learning objectives for this course include a greater appreciation and understanding of:

- Main epidemiologic characteristics of the major infectious diseases of humans.
- Host, organism and environment relationship as they relate to infectious disease epidemiology.
- Application of epidemiological methods to study infectious diseases
- How epidemiologic characteristics of infectious diseases are utilized to prevent and control their spread.
- Causes and distribution of current epidemics including newly emerging and reemerging infectious diseases.
- Impact of infectious diseases on populations and communities locally and globally.

COURSE ORGANIZATION

Course Director: Ajay K. Sethi, PhD, MHS
Associate Professor
Department of Population Health Sciences
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608-263-1756
aksethi@wisc.edu

Office Hours: Please email for an appointment

Course time and place: January 20 – May 7, 2013
Tuesdays and Thursdays, 9:30 – 10:45 AM
Clinical Sciences Center, G5/122
Reading: The following textbook is recommended for this course:


The text is recommended and not required. There are many textbooks and references on infectious disease and infectious epidemiology (some are listed after the course schedule). Feel free to access and/or purchase texts that suit your needs.

Other reading may be assigned for specific lectures. These will be listed on the course website. Please complete any reading prior to lecture to maximize your learning in class and to promote a didactic learning environment.

Learn@UW: The course is administered through Learn@UW (https://learnuw.wisc.edu/). Copies of the readings, with exception to chapters from the textbooks, and links to websites are available on the course website. Handouts for individual lectures may or may not be available online prior to class.

Student Evaluation: You will be evaluated on completion of and performance on in-class exercise(s) and two exams, which will comprise your total grade for the course based on the following breakdown: 40% for in-class exercises, 30% for Exam 1, and 30% for Exam 2.

Out of respect to the many lecturers who are contributing their time and expertise and because the lectures are an essential component of the class, all students are expected to attend class. If you are unable to attend in-class exercises, please let the Course Director know the reason well in advance of the date of your absence. Only certain reasons (e.g., religious holidays, illness, or required commitments) will be considered valid reasons for your absence.

Your final course grade will be calculated using the following 100-point scale:

• A 93+ (outstanding)
• AB 88-92 (excellent)
• B 83-88 (very good)
• BC 78-82 (fair)
• C <78 (poor)

Nondiscrimination Policy. The UW Madison is committed to creating a dynamic, diverse and welcoming learning environment for all students and has a nondiscrimination policy that reflects this philosophy. Disrespectful behaviors or comments addressed towards any group or individual, regardless of race/ethnicity, sexuality, gender, religion, ability, or any other difference is deemed unacceptable in this class, and will be addressed publicly by the professor.

Disability Reasonable Accommodation Policy. If you qualify for accommodations because of a disability, please submit a letter to the course director that outlines your request in a manner that is timely and consistent with established university policies for making such request so that your needs may be addressed. Policies for accommodating disabilities are available through the McBurney Disability Resource Center, 903 University Ave., 608-263-2741(phone), 263-6393 (TTY), 265-2998 (Fax), mcburney@uwmadmail.services.wisc.edu. For additional information, please see http://www.mcburney.wisc.edu/
Religious Reasonable Accommodation Policy. Every effort shall be made to reasonably and fairly accommodate all students who, because of religious obligations, have conflicts with scheduled exams, assignments, or required attendance, provided advance notification of the conflict is given. Whenever possible, students should give at least one week advance notice to request special accommodation.

Student Honesty and Rules of Conduct. Academic honesty requires that the course work (e.g., quizzes, papers, exams) a student presents to an instructor honestly and accurately indicates the student's own academic efforts. These policies are available at http://www.studentaffairs.wisc.edu/. UWS 14 is the chapter of the University of Wisconsin System Administrative code that regulates academic misconduct. UW-Madison implements the rules defined in UWS 14 through our own "Student Academic Misconduct Campus Procedures." UWS 14.03 defines academic misconduct as follows: "Academic misconduct is an act in which a student: seeks to claim credit for the work or efforts of another without authorization or citation; uses unauthorized materials or fabricated data in any academic exercise; forges or falsifies academic documents or records; intentionally impedes or damages the academic work of others; engages in conduct aimed at making false representation of a student's academic performance; assists other students in any of these acts."

If you are accused of misconduct, you may have questions and concerns about the process. If so, you should feel free to call Student Advocacy & Judicial Affairs (SAJA) in the Offices of the Dean of Students at (608) 263-5700 or send an email to dos@bascom.wisc.edu.

Civility Policy. Members of the University of Wisconsin-Madison community are expected to deal with each other with respect and consideration. The civility policy for this course promotes mutual respect, civility and orderly conduct among the faculty, teaching assistants, and students. We do not intend this policy to deprive any person of his or her right to freedom of expression. Rather, we seek to maintain a safe, harassment-free workplace for the students, faculty, and teaching assistants. Positive communication is encouraged and volatile, hostile, or aggressive actions and language will not be tolerated. If the civility policy for this course is violated, the individual is subject to removal from the class and possibly the course altogether. In addition, the proper authorities at the UW Departmental, School, and University levels will be notified of such behavior accordingly and further action may be taken if necessary.
## COURSE SCHEDULE

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<thead>
<tr>
<th>Date</th>
<th>Lecture topic:</th>
<th>Lecturer:</th>
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<tbody>
<tr>
<td>Jan 19</td>
<td>Introduction and classification of infectious diseases</td>
<td>Sethi</td>
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<tr>
<td>Jan 21</td>
<td>Host susceptibility and response to infectious diseases</td>
<td>Sethi</td>
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<td>Jan 26</td>
<td>Outbreak investigation</td>
<td>Klos</td>
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<td>Jan 28</td>
<td>Surveillance</td>
<td>Sethi</td>
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<td>Feb 2</td>
<td>Laboratory methods in the study of infectious diseases</td>
<td>Warshauer</td>
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<td>Feb 4</td>
<td>Enteric Diseases</td>
<td>Davis</td>
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<td>Feb 9</td>
<td>Statistical methods in surveillance</td>
<td>Gangnon</td>
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<td>Feb 11</td>
<td>Exercise 1</td>
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<td>Feb 16</td>
<td>HIV/AIDS</td>
<td>Sethi</td>
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<td>Feb 18</td>
<td>Epidemiologic study design and causality</td>
<td>Sethi</td>
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<td>Feb 23</td>
<td>Models to study infectious diseases</td>
<td>Sethi</td>
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<td>Feb 25</td>
<td>Applied mathematical models for health and disease</td>
<td>Döpfer</td>
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<td>Mar 1</td>
<td>Exercise 2</td>
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<td>Mar 3</td>
<td>Hepatitis</td>
<td>Striker</td>
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<td>Mar 8</td>
<td>Zoonotic Disease</td>
<td>Kazmierczak</td>
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<td>Mar 10</td>
<td>Malaria</td>
<td>Bartholomay</td>
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<td>Mar 15</td>
<td>West Nile Virus</td>
<td>Goldberg</td>
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<td>Mar 17</td>
<td>Exam 1</td>
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<td><strong>Spring Break March 19 – March 27</strong></td>
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<td>Mar 29</td>
<td>Evidence for an infectious cause of Crohn's disease</td>
<td>Collins</td>
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<td>Mar 31</td>
<td>Infection Control</td>
<td>Safdar</td>
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<td>Apr 5</td>
<td>Sexually transmitted diseases</td>
<td>Hunter</td>
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<td>Apr 7</td>
<td>Exercise 3</td>
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<td>Apr 12</td>
<td>Vaccine preventable diseases</td>
<td>Conway</td>
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<td>Apr 14</td>
<td>Influenza vaccination</td>
<td>Belongia</td>
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<td>Apr 19</td>
<td>HIV in people who use drugs</td>
<td>Westergaard</td>
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<td>April 21</td>
<td>Brucellosis</td>
<td>Poulsen</td>
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<td>April 26</td>
<td>Exercise 4 presentations</td>
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<td>Apr 28</td>
<td>Exercise 4 presentations</td>
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<td>May 3</td>
<td>Exercise 4 presentations</td>
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<tr>
<td>May 5</td>
<td>Exam 2</td>
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GENERAL RESOURCES

Websites of interest

Centers for Disease Control and Prevention (http://www.cdc.gov/)

World Health Organization (http://www.who.int/en/)

National Institute of Allergy and Infectious Diseases (http://www3.niaid.nih.gov/)

Journals

The Journal of Infectious Diseases (http://www.journals.uchicago.edu/JID/home.html)

Clinical Infectious Diseases (http://www.journals.uchicago.edu/CID/home.html)

Emerging Infectious Diseases (http://www.cdc.gov/ncidod/eid/)

Infection Control & Hospital Epidemiology (http://www.sheaonline.org/JournalNews/ICHEJournal.aspx)

Morbidity & Mortality Weekly Report (http://www.cdc.gov/mmwr/)

Books


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