

## School of Public Health

PubH 6385  
 Section 001  
 Epidemiology and Control of Infectious Diseases,  
 Spring, 2009; Second Half of Term

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<b>Credits:</b>	<b>2</b>		
<b>Meeting Days:</b>	<b>Mondays and Wednesdays</b>		
<b>Meeting Time:</b>	<b>2:30 PM-4:25 PM</b>		
<b>Meeting Place:</b>	<b>Moos 2-520</b>		
<b>Instructor:</b>	<b>Alan Lifson, MD, MPH</b>	<b>Teaching Assistant:</b>	<b>Alicen Spaulding, MPH</b>
<b>Office Address:</b>	<b>WBOB 490</b>	<b>Office Address:</b>	<b>WBOB 497A</b>
<b>Office Phone:</b>	<b>612-626-9697</b>	<b>Phone:</b>	<b>612-750-2721</b>
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<b>Office Hours:</b>	<b>By appointment</b>	<b>Office Hours:</b>	<b>By appointment</b>

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**I. Course Description**

The purpose of this graduate level course is to learn more about the principles and practice of infectious disease epidemiology, including how communicable diseases and their control affects public health locally, nationally and internationally. We will explore infectious diseases from a variety of different perspectives, in different institutions, and as it affects different populations. Learning objectives for this course include greater appreciation and understanding of:

**II. Course Prerequisites**

PUBH 6320 Fundamentals of Epidemiology or PUBH 6341 Epidemiologic Methods I

**III. Course Goals and Objectives**

- General principles of infectious disease epidemiology, including: Introduction, Principles of Infectious Diseases; Outbreak Investigation; Role of the Public Health Laboratory; Disease Surveillance; Modeling Infectious Disease Data
- Major infectious diseases and modes of transmission, including: Food-borne Illness; Zoonotic Diseases; Tuberculosis; Influenza; Vector-Borne Diseases; Malaria; Other Parasitic Diseases; HIV/AIDS; Sexually Transmitted Diseases; Hepatitis; Antibiotic Resistant Bacteria
- Different control strategies for infectious diseases, including: Vaccine Preventable Diseases; Nosocomial Infections; Behavior Change and HIV/STDs; Screening and Blood Safety; Reading and Writing for the Medical Literature

#### **IV. Methods of Instruction and Work Expectations**

Methods of instruction include lectures, in-class discussion, readings, and take-home exercises. Because this is an integral part of the class, and out of respect to the many outside lecturers who are contributing their time and expertise, all students are expected to attend class.

Over the course of this semester, students will be exposed to a variety of perspectives, reflecting different cultures, lifestyles, personal beliefs, and experiences. Students are expected to be respectful of instructors and their fellow students, and have a right to expect such respect in return. Concerns in this regard should be discussed as soon as possible with either the Instructor or TA.

#### **V. Course Text and Readings**

Required reading is a very important component of the learning in this class. Students are expected to complete all assigned reading. The required texts for this course are

"Infectious Disease Epidemiology", Second Edition, edited by Kenrad E Thomas and Carolyn M. Williams. Jones and Bartlett, 2007.

"Control of Communicable Diseases Manual", 19th Edition, edited by David L. Heymann. American Public Health Association, 2008.

"Annual Summary of Communicable Diseases Reported to the Minnesota Department of Health". Minnesota Department of Health. Available at: [www.health.state.mn.us/divs/idepc/newsletters/dcn/2008/oct08.pdf](http://www.health.state.mn.us/divs/idepc/newsletters/dcn/2008/oct08.pdf)

Additional readings and handouts may be given out during the course of the class.

#### **VI. Course Outline/Weekly Schedule**

##### **Monday, 3/23/09**

Speaker: Alan Lifson

Topic: Introduction, Principles of Infectious Diseases

Time: 2:30 PM-4:25 PM

##### **Readings:**

Nelson and Williams, Chapter 2: "Epidemiology of Infectious Disease: General Principles"

Nelson and Williams, Chapter 13: "Emerging and New Diseases"

##### **Wednesday, 3/25/09**

Speaker: Alan Lifson

Topic: Outbreak Investigation

Time: 2:30 PM-4:25 PM

##### **Readings:**

Nelson and Williams, Chapter 5: "Outbreak Investigation"

Control of Communicable Disease Manual: "Botulism"

##### **Monday, 3/30/09**

Speaker: Kirk Smith <kirk.smith@health.state.mn.us>

Topic: Food-borne Illness

Time: 2:30 PM-3:25 PM

##### **Readings:**

Nelson and Williams, Chapter 20: "Diarrheal Diseases"

Control of Communicable Disease Manual: "Campylobacter", "Salmonella"

MDH Annual Summary: Campylobacteriosis, E. Coli O157, Listeriosis, Salmonella, Shigella, Cryptosporidiosis, Giardia

**Monday, 3/30/09**

Speaker: Alan Lifson

Topic: Disease Surveillance

Time: 3:30 PM-4:25 PM

**Readings:**

Nelson and Williams, Chapter 4: "Surveillance"

**Wednesday, 4/1/09**

Speaker: Deb Sodt <deb.sodt@state.mn.us>

Topic: Tuberculosis

Time: 2:30 PM-3:25 PM

**Readings:**

Nelson and Williams, Chapter 18: "Tuberculosis"

Control of Communicable Disease Manual: "Tuberculosis"

MDH Annual Summary: Tuberculosis

**Wednesday, 4/1/09**

Speaker: Alan Lifson

Topic: HIV/AIDS

Time: 2:30 PM-3:25 PM

**Readings:**

Nelson and Williams, Chapter 21: "HIV/AIDS"

Control of Communicable Disease Manual: "HIV/AIDS"

MDH Annual Summary: HIV/AIDS

**Monday, 4/6/09**

Speaker: Jeff Bender <bende002@umn.edu>

Topic: Zoonotic Diseases

Time: 2:30 PM-3:25 PM

**Readings:**

Control of Communicable Disease Manual: "Rabies"

**Monday, 4/6/09**

Speaker: Rich Danila <richard.danila@health.state.mn.us>

Topic: Influenza

Time: 3:30 PM-4:25 PM

**Readings:**

Nelson and Williams, Chapter 15: "Influenza"

Control of Communicable Disease Manual: "Influenza"

MDH Annual Summary: Influenza

**Wednesday, 4/8/09**

Speaker: Dave Neitzel <david.neitzel@health.state.mn.us>

Topic: Vector-Borne Diseases

Time: 2:30 PM-3:25 PM

**Readings:**

Nelson and Williams, Chapter 24: "Vector-Borne Disease", Chapter 25: "Lyme"

Control of Communicable Disease Manual: "Lyme"

MDH Annual Summary: Anaplasmosis, Arboviral disease, Babesiosis, Lyme

**Wednesday, 4/8/09**

Speaker: Alan Lifson

Topic: Malaria

Time: 2:30 PM-3:25 PM

**Readings:**

Nelson and Williams, Chapter 26: "Malaria"

Control of Communicable Disease Manual: "Malaria"

**ASSIGNMENT 1 DUE**

**Monday, 4/13/09**

Speaker: Lifson

Topic: Viral Hepatitis

Time: 2:30 PM-3:25 PM

**Readings:**

Nelson and Williams, Chapter 22: "Viral Hepatitis"

Control of Communicable Disease Manual: "Viral Hepatitis"

MDH Annual Summary: Viral hepatitis A, B, and C

**Monday, 4/13/09:**

**MIDTERM**

Time: 3:30 PM-4:25 PM

**Wednesday, 4/15/09**

Speaker: Alicen Spaulding

Topic: Screening and Screening Tests

Time: 2:30 PM-3:25 PM

**Readings:**

To be assigned

**Wednesday, 4/15/09**

Speaker: Alan Lifson

Topic: Sexually Transmitted Diseases

Time: 2:30 PM-3:25 PM

**Readings:**

Nelson and Williams, Chapter 23: "Sexually Transmitted Diseases"

Control of Communicable Disease Manual: "Chlamydia" "Herpes simplex", Syphilis

MDH Annual Summary: Sexually transmitted diseases (gonorrhea, chlamydia, syphilis)

**Monday, 4/20/09**

Speaker: Kris Ehresmann <kristen.ehresmann@health.state.mn.us>

Topic: Vaccine Preventable Diseases

Time: 2:30 PM-3:25 PM

**Readings:**

Nelson and Williams, Chapter 11: "Vaccines", Chapter 16: "Measles"

Control of Communicable Disease Manual: "Pertussis"

MDH Annual Summary: H. influenza, Measles, Meningococcal disease, Mumps, Pertussis, Strep. pneumoniae, Tetanus, Varicella/zoster

**Monday, 4/20/09**

Speaker: Ruth Lynfield <ruth.lynfield@health.state.mn.us>

Topic: Antibiotic Resistance

Time: 3:30 PM-4:25 PM

**Readings:**

Control of Communicable Disease Manual: "Staphylococcal Disease" "Pneumococcal Pneumonia"

MDH Annual Summary: Methicillin-resistant Staph (MRSA),

**ASSIGNMENT 2 DUE**

**Wednesday, 4/22/09**

Speaker: John Besser <john.besser@health.state.mn.us>

Topic: Role of the Public Health Laboratory

Time: 2:30 PM-3:25 PM

**Readings:**

Nelson and Williams, Chapter 8: "Microbiology Tools for the Epidemiologist" \*, Chapter 9: "Molecular Epidemiology" \* (\* technical material -- read as fits your background and understanding)

**Wednesday, 4/22/09**

Speaker: Simon Rosser <rosse001@umn.edu>

Topic: Behavior Research and HIV/STDs

Time: 3:30 PM-4:25 PM

**Monday, 4/27/09**

Speaker: Alan Lifson

Topic: Reading the Medical Literature I

Time: 3:30 PM-4:25 PM

**Readings:**

Nelson and Williams, Chapter 3: "Study Design"

Additional reading will be given before class

**Monday, 4/27/09**

Speaker: Susan Kline <kline003@umn.edu>

Topic: Nosocomial Infections

Time: 3:30 PM-4:25 PM

**Readings:**

Nelson and Williams, Chapter 14: "Nosocomial Infections"

**ASSIGNMENT 3 DUE**

**Wednesday, 4/29/09**

Speaker: Shalini L Kulasingam <kulas016@umn.edu>

Topic: Modeling HPV, Cost-Effectiveness

Time: 2:30 PM-3:25 PM

**Readings:**

Control of Communicable Disease Manual: "HPV"

Nelson and Williams, Chapter 6: "Mathematical Modeling" \*

(\* technical material -- read as fits your background and understanding)

**Wednesday, 4/29/09**

Speaker: Jeff McCullough <mccul001@umn.edu>

Topic: Screening and Blood Safety

Time: 3:30 PM-4:25 PM

**Readings:**

Control of Communicable Disease Manual: "Creutzfeldt-Jakob disease", "Chagas Disease"

**Monday, 5/4/09**

Speaker: Alan Lifson

Topic: Parasitic Diseases and International Health

Time: 2:30 PM-3:25 PM

**Readings:**

Nelson and Williams, Chapter 27: "Helminth Infections"

Control of Communicable Disease Manual: "Amebiasis" "Schistosomiasis" "Trypanosomiasis"

**Monday, 5/4/09**

Speaker: Alan Lifson

Reading the Medical Literature II

Time: 3:30 PM-4:25 PM

**Wednesday, 5/6/09**

Speaker: Pat Walker <patricia.f.walker@healthpartners.com>

Topic: Immigrant and Refugee Health

Time: 2:30 PM-3:25 PM

**Wednesday, 5/6/09**

Speaker: Alan Lifson (and NOVA video)

Topic: Ebola in Africa

Time: 3:30 PM-4:25 PM

**Readings:**

Control of Communicable Disease Manual: "Ebola"

**ASSIGNMENT 4 DUE**

**VII. Evaluation and Grading**

Below is a list of the activities by which you will be graded and their assigned weights:

<b>Activity</b>	<b>Date due</b>	<b>Percent of grade</b>
Midterm	March 5	25%
Assignment 1	March 26	15%
Assignment 2	April 9	15%
Assignment 3	April 23	15%
Assignment 4	May 7	15%
Participation	Everyday	15%

Final grades will be assigned as follows:

<b>Percent</b>	<b>Grade</b>
100.0 - 92.5	A
89.9 - 92.4	A-
87.3 - 89.8	B+
82.4 - 87.2	B
80.0 - 82.3	B-
77.5 - 79.9	C+
72.4 - 77.4	C
70 - 72.3	C-
69 or below	F

### **Incomplete Contracts**

A grade of incomplete "I" shall be assigned at the discretion of the instructor when, due to extraordinary circumstances (e.g., documented illness or hospitalization, death in family, etc.), the student was prevented from completing the work of the course on time. The assignment of an "I" requires that a contract be initiated and completed by the student before the last day of class, and signed by both the student and instructor. If an incomplete is deemed appropriate by the instructor, the student in consultation with the instructor, will specify the time and manner in which the student will complete course requirements. Extension for completion of the work will not exceed one year (or earlier if designated by the student's college). For more information and to initiate an incomplete contract, students should go to: [www.sph.umn.edu/grades](http://www.sph.umn.edu/grades).

### **Course Evaluation**

Beginning in fall 2008 the SPH will collect student course evaluations electronically using a software system called CoursEval. The system will send email notifications to students when they can access and complete their course evaluations. Students who complete their course evaluations promptly will be able to access their final grades just as soon as the faculty member renders the grade. All students will have access to their final grades two weeks after the last day of the semester regardless of whether they completed their course evaluation or not. Student feedback on course content and faculty teaching skills are important means for improving our work. Please take the time to complete a course evaluation for each of the courses for which you are registered.

### **University of Minnesota Uniform Grading and Transcript Policy**

A link to the policy can be found at [onestop.umn.edu](http://onestop.umn.edu).

## **VIII. Other Course Information and Policies**

### **Grade Option Change** (if applicable)

For full-semester courses, students may change their grade option, if applicable, through the second week of the semester. Grade option change deadlines for other terms (i.e. summer and half-semester courses) can be found at [onestop.umn.edu](http://onestop.umn.edu).

### **Course Withdrawal**

Students should refer to the Refund and Drop/Add Deadlines for the particular term at [onestop.umn.edu](http://onestop.umn.edu) for information and deadlines for withdrawing from a course. As a courtesy, students should notify their instructor and, if applicable, advisor of their intent to withdraw.

Students wishing to withdraw from a course after the noted final deadline for a particular term must contact the School of Public Health Student Services Center at [sph-ssc@umn.edu](mailto:sph-ssc@umn.edu) for further information.

**Student Conduct, Scholastic Dishonesty and Sexual Harassment Policies**

Students are responsible for knowing the University of Minnesota, Board of Regents' policy on Student Conduct and Sexual Harassment found at [www.umn.edu/regents/polindex.html](http://www.umn.edu/regents/polindex.html).

Students are responsible for maintaining scholastic honesty in their work at all times. Students engaged in scholastic dishonesty will be penalized, and offenses will be reported to the Office of Student Academic Integrity (OSAI, [www.osai.umn.edu](http://www.osai.umn.edu)).

The University's Student Conduct Code defines scholastic dishonesty as "plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; or altering, forging, or misusing a University academic record; or fabricating or falsifying of data, research procedures, or data analysis."

Plagiarism is an important element of this policy. It is defined as the presentation of another's writing or ideas as your own. Serious, intentional plagiarism will result in a grade of "F" or "N" for the entire course. For more information on this policy and for a helpful discussion of preventing plagiarism, please consult University policies and procedures regarding academic integrity: <http://writing.umn.edu/tww/plagiarism/>.

Students are urged to be careful that they properly attribute and cite others' work in their own writing. For guidelines for correctly citing sources, go to <http://tutorial.lib.umn.edu/> and click on "Citing Sources".

In addition, original work is expected in this course. It is unacceptable to hand in assignments for this course for which you receive credit in another course unless by prior agreement with the instructor. Building on a line of work begun in another course or leading to a thesis, dissertation, or final project is acceptable.

**Disability Statement**

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have a documented disability (e.g., physical, learning, psychiatric, vision, hearing, or systemic) that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities are encouraged to contact Disability Services to have a confidential discussion of their individual needs for accommodations. Disability Services is located in Suite 180 McNamara Alumni Center, 200 Oak Street. Staff can be reached by calling 612/626-1333 (voice or TTY).

*Date: 12/15/08*