

# School of Public Health

## Syllabus and Course Information



UNIVERSITY OF MINNESOTA  
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### PubH 6182-001 - Emerging Infectious Disease: Current Issues, Policies, and Controversies Spring 2016

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**Credits:** 3  
**Meeting Days:** Mondays  
**Meeting Time:** 10:10 a.m. to 1:10 p.m.  
**Meeting Place:** Section 001, Mondays 10:10-1:10 p.m.  
Location: WDH 2-110  
and online at <https://moodle.umn.edu>

**Instructor:** Dr. Michael Osterholm  
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**E-mail:** [mto@umn.edu](mailto:mto@umn.edu)  
**Office Hours:** By Appointment

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#### I. Course Description

Today, the epidemiology of infectious diseases on a worldwide basis is growing increasingly complex with the many emerging social, political and demographic changes in our population, as well as dynamic changes in animal and vector populations and the environment. As a result, the rapidly growing problem of emerging infections requires new and creative means for prevention and control. Of particular concern are those infectious diseases of pandemic potential or of regional critical importance. These diseases have the potential to greatly impact the social, political and economic stability of country, region or even the world.

Since the incidence of emerging infectious disease is related to many of the above-mentioned factors, activities to reduce their occurrence are often complex and controversial. This course will review a series of current issues and controversies in the prevention and control of infectious diseases. It will also serve as a forum for students to debate the merits of these issues and controversies. Finally, we will develop a framework for considering realistic and innovative science and policy solutions to these problems. The course will use a combination of lecture, discussion and student presentation format to encourage broad participation. Sessions will usually be introduced by lectures from Professor Osterholm that will serve as a point of reference for class discussion. There will be two distinguished expert guest lecturers addressing aspects of both the

problems and solutions of infectious diseases in the 21<sup>st</sup> century. Students will be asked to summarize and critique assigned readings, and to bring information from their own reading to class discussion.

## II. Course Prerequisites

Public Health or Medicine or Dentistry or Pharmacy or Nursing or Vet Med student and instructor consent.

## III. Course Goals and Objectives

As a result of this course, students will be able to:

1. Demonstrate a critical understanding of selected current issues and controversies surrounding the prevention and control of infectious diseases;
2. Describe how current elected and policy leaders, public health officials and other involved parties have responded to the prevention and control aspects of these issues and controversies;
3. Create/determine action plans (identification of appropriate steps) to address complex infectious disease science and policy challenges facing the world;
4. Identify key collaboration partners and leaders (in multiple disciplines and levels of management) in the implementation science and policy solutions to a pressing infectious disease challenges.

## IV. Methods of Instruction and Work Expectations

Lecture and discussion

## V. Course Text and Readings

Emphasis will be placed on the use of internet-based resources, including current news articles and government-generated documents. Also, students will have access to extensive resources on the Center for Infectious Disease Research and Policy (CIDRAP) Web site ([www.cidrap.umn.edu](http://www.cidrap.umn.edu)).

***Microbial Threats to Health: Emergence, Detection, and Response.*** Institute of Medicine, National Academy of Sciences, 2003

<http://www.nap.edu/read/10636/chapter/1>

***The Compelling Need for Game-Changing Influenza Vaccines: An Analysis of the Influenza Vaccine Enterprise and Recommendations for the Future.*** CIDRAP, University of Minnesota, 2012

<http://www.cidrap.umn.edu/ongoing-programs/cidrap-comprehensive-influenza-vaccine-initiative-ccivi>

***Recommendations for Accelerating the Development of Ebola Vaccines - Team B Report***

<http://www.cidrap.umn.edu/recommendations-accelerating-development-ebola-vaccines-0>

***World Health Organization (WHO): Final Report of the Ebola Interim Assessment Panel (July 2015)***

<http://www.who.int/entity/csr/resources/publications/ebola/report-by-panel.pdf>

**Report landing page:** <http://www.who.int/csr/resources/publications/ebola/ebola-panel-report/en/>

***WHO: Final Report of the Ebola Interim Assessment Panel: Correction***

<http://www.who.int/entity/csr/resources/publications/ebola/correction-interim-assessment-en.pdf>

***WHO Secretariat Response to the Report of the Ebola Interim Assessment Panel (August 2015)***

<http://www.who.int/entity/csr/resources/publications/ebola/who-response-to-ebola-report.pdf>

**Moon S, Sridhar D, Pate MA, et al. Will Ebola change the game? Ten essential reforms before the next pandemic: the report of the Harvard-LSHTM Independent Panel on the Global Response to Ebola. Lancet 2015 Nov 28;386(10009):2204-21**

[http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736\(15\)00946-0.pdf](http://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(15)00946-0.pdf)

**National Academies of Medicine: The Neglected Dimension of Global Security: A Framework to Counter Infectious Disease Crises (2016)**

<http://www.nap.edu/catalog/21891/the-neglected-dimension-of-global-security-a-framework-to-counter>

Other handouts will be provided by the instructor on the course website.

## VI. Course Outline/Weekly Schedule

**Attendance:** This is a discussion-based class and attendance is required. If you are not able to attend a lecture, please contact the instructor. Readings will be posted online at <http://webct.umn.edu> prior to each class; students should come prepared to discuss the topic of the day.

**Weekly Assignment:** Following each class, students will be given a short weekly assignment. The assignments will vary from week to week. For all weeks students shall bring an article related to emerging infectious diseases from a newspaper, magazine or other media source. Students shall write a brief summary of the importance or meaning of the article as it relates to science policy. Throughout the semester students are strongly encouraged to follow the news and literature on infectious diseases.

**Midterm Paper due March 7, 2016:** 4 pages double-spaced, 12-point font. Topic: Students will be asked to discuss a topic presented in the first half of the course. Details will be provided in class.

**Final Paper due May 2, 2016:** 8 pages double-spaced, 12-point font. Topic: Students will write a position paper discussing a public health issue addressed in the course. Details will be provided in class.

**Note: - Weekly reading assignments will be given the week before in class as discussion will be about current news and journal articles, etc. All information will be available online with no additional expense incurred by students.**

### Week 1 (Jan 18) No class

### Week 2 (Jan 25)

- Course overview
  - Emerging infectious disease model for the 21<sup>st</sup> century (the who, what, when where and why)
  - Science policy: a framework
  - The science policy interface: what this class is all about
  - Critical factors for disease emergence/reemergence and prevention and control
  - Pathogens of pandemic potential and pathogens of critical regional importance

### Week 3 (Feb 1)

- Course overview from Week 2 continued

**Week 4 (Feb 8)**

- Global governance and public health preparedness and response
  - Lessons learned from the West Africa Ebola experience and 2009 H1N1 influenza pandemic
  - Anticipating the infectious disease issues that global implications

**Week 5 (Feb 15)**

- International efforts to prevent and control infectious disease: the reality of a modern world (Guest lecture Christy Hanson)

**Week 6 (Feb 22)**

- The compelling need for game-changing influenza vaccines: An analysis of the influenza vaccine enterprise and recommendations for the future.

**Week 7 (Feb 29)**

- Pathogens of critical regional importance
  - Ebola
  - MERS
  - Zika

**Week 8 (Mar 7)**

- Dual use research of concern (DURC); a moving target of hope and fear
- **Midterm Paper Due**

**Week 9 (Mar 14)**

- **No class Spring Break**

**Week 10 (Mar 21)**

- Responding to antibiotic resistance (student presentations)

**Week 11 (Mar 28)**

- Vectorborne disease prevention and control (student presentations)

**Week 12 (Apr 4)**

- Geopolitical challenges for infectious disease prevention and control
  - Polio, HIV, other emerging infections and climate change

**Week 13 (Apr 11)**

- TBD

**Week 14 (Apr 18)**

- TBD

**Week 15 (Apr 25)**

- Media and infectious diseases: The public and policy makers' perceptions of infectious disease. "How do we tell the story?" (Guest lecture, Don Shelby.)

**Week 16 (May 2)**

- **Final Paper Due and Class Review**

## VII. Evaluation and Grading

1. **Grading Criteria** – Students will be evaluated on weekly written assignments (5%), group and class participation (35%), a midterm paper (30%) and a final paper (30%). Weekly assignments will be graded S/N with full credit given for completion of all weekly entries. Details will be provided in class.

Inquiries regarding any changes of grade should be directed to the instructor of the course; you may wish to contact the Student Dispute Resolution Center (SDRC) in 107 Eddy Hall (612-625-5900) for assistance.

Students are responsible for all information disseminated in class and all course requirements, including deadlines and examinations.

A student is not permitted to submit extra work in an attempt to raise his or her grade, unless the instructor has specified at the outset of the class such opportunities will be afforded to all students.

2. **Grading Option** – Both A-F and S-N grading options are available. The S grade does not carry points but the credits will count toward completion of the student's degree program. S/N option must complete all assignments to a C level. Students may change grading options during the initial registration period or during the first two weeks of the semester. **The grading option may not be changed after the second week of the term.**

3. **Course Withdrawal** – School of Public Health students may withdraw from the course through February 1, 2016, without permission. No “W” will appear on the transcript.

[http://onestop.umn.edu/calendars/cancel\\_add\\_refund\\_deadlines/spring\\_2016.html](http://onestop.umn.edu/calendars/cancel_add_refund_deadlines/spring_2016.html). After February 2, 2016, students are required to do the following:

1. The student must contact and notify their advisor and course instructor informing them of the decision to withdraw from the course.
2. The student must send an e-mail to the SPH Student Services Center (SSC). The e-mail must provide the student name, ID#, course number, section number, semester and year with instructions to withdraw from the course, and acknowledgment that the instructor and advisor have been contacted.
3. The advisor and instructor must email the SSC acknowledging the student is canceling the course. All parties must be notified of the student's intent.
4. The SSC will complete the process by withdrawing the student from the course after receiving all e-mails (student, advisor and instructor). A “W” will be placed and remain on the student transcript for the course.

After discussion with their advisor and notification to the instructor, students may withdraw up until the eighth week of the semester. There is no appeal process.

### Incomplete Grade

A grade of incomplete “I” shall be assigned at the discretion of the instructor when, due to extraordinary circumstances, the student was prevented from completing the work of the course on time. The assignment of an incomplete requires a written agreement between the instructor and student specifying the time and manner in which the student will complete the course

requirements. In no event may any such written agreement allow a period of longer than one year to complete the course requirements.

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

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

A 4.000 - Represents achievement that is outstanding relative to the level necessary to meet course requirements

A- 3.667

B+ 3.333

B 3.000 - Represents achievement that is significantly above the level necessary to meet course requirements

B- 2.667

C+ 2.333

C 2.000 - Represents achievement that meets the course requirements in every respect

C- 1.667

D+ 1.333

D 1.000 - Represents achievement that is worthy of credit even though it fails to meet fully the course requirements

S Represents achievement that is satisfactory, which is equivalent to a C- or better.

### **For additional information, please refer to:**

<http://policy.umn.edu/Policies/Education/Education/GRADINGTRANSCRIPTS.html>.

### **Course Evaluation**

The SPH will collect student course evaluations electronically using a software system called CoursEval: [www.sph.umn.edu/courseval](http://www.sph.umn.edu/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 in SPHGrades: [www.sph.umn.edu/grades](http://www.sph.umn.edu/grades). All students will have access to their final grades through OneStop 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 an 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.

### **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 official 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 SPHGrades at: [www.sph.umn.edu/grades](http://www.sph.umn.edu/grades).

**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 Office of Admissions and Student Resources at [sph-ssc@umn.edu](mailto:sph-ssc@umn.edu) for further information.

### **Student Conduct Code**

The University seeks an environment that promotes academic achievement and integrity, that is protective of free inquiry, and that serves the educational mission of the University. Similarly, the University seeks a community that is free from violence, threats, and intimidation; that is respectful of the rights, opportunities, and welfare of students, faculty, staff, and guests of the University; and that does not threaten the physical or mental health or safety of members of the University community.

As a student at the University you are expected adhere to Board of Regents Policy: *Student Conduct Code*. To review the Student Conduct Code, please see:

[http://regents.umn.edu/sites/default/files/policies/Student\\_Conduct\\_Code.pdf](http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf).

Note that the conduct code specifically addresses disruptive classroom conduct, which means "engaging in behavior that substantially or repeatedly interrupts either the instructor's ability to teach or student learning. The classroom extends to any setting where a student is engaged in work toward academic credit or satisfaction of program-based requirements or related activities."

### **Use of Personal Electronic Devices in the Classroom**

Using personal electronic devices in the classroom setting can hinder instruction and learning, not only for the student using the device but also for other students in the class. To this end, the University establishes the right of each faculty member to determine if and how personal electronic devices are allowed to be used in the classroom. For complete information, please reference:

<http://policy.umn.edu/Policies/Education/Education/STUDENTRESP.html>.

### **Scholastic Dishonesty**

You are expected to do your own academic work and cite sources as necessary. Failing to do so is scholastic dishonesty. Scholastic dishonesty means 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; altering, forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis. (Student Conduct Code: [http://regents.umn.edu/sites/default/files/policies/Student\\_Conduct\\_Code.pdf](http://regents.umn.edu/sites/default/files/policies/Student_Conduct_Code.pdf)) If it is determined that a student has cheated, he or she may be given an "F" or an "N" for the course, and may face additional sanctions from the University. For additional information, please see: <http://policy.umn.edu/Policies/Education/Education/INSTRUCTORRESP.html>.

The Office for Student Conduct and Academic Integrity has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty: <http://www1.umn.edu/oscai/integrity/student/index.html>. If you have additional questions, please clarify with your instructor for the course. Your instructor can respond to your specific questions regarding what would constitute scholastic dishonesty in the context of a particular class-e.g., whether collaboration on assignments is permitted, requirements and methods for citing sources, if electronic aids are permitted or prohibited during an exam.

### **Makeup Work for Legitimate Absences**

Students will not be penalized for absence during the semester due to unavoidable or legitimate circumstances. Such circumstances include verified illness, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, and religious observances. Such circumstances do not include voting in local, state, or national elections. For complete information, please see: <http://policy.umn.edu/Policies/Education/Education/MAKEUPWORK.html>.

### **Appropriate Student Use of Class Notes and Course Materials**

Taking notes is a means of recording information but more importantly of personally absorbing and integrating the educational experience. However, broadly disseminating class notes beyond the classroom community or accepting compensation for taking and distributing classroom notes undermines instructor interests in their intellectual work product while not substantially furthering instructor and student interests in effective learning. Such actions violate shared norms and standards of the academic community. For additional information, please see: <http://policy.umn.edu/Policies/Education/Education/STUDENTRESP.html>.

### **Sexual Harassment**

"Sexual harassment" means unwelcome sexual advances, requests for sexual favors, and/or other verbal or physical conduct of a sexual nature. Such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creating an intimidating, hostile, or offensive working or academic environment in any University activity or program. Such behavior is not acceptable in the University setting. For additional information, please consult Board of Regents Policy: <http://regents.umn.edu/sites/default/files/policies/SexHarassment.pdf>

### **Equity, Diversity, Equal Opportunity, and Affirmative Action**

The University will provide equal access to and opportunity in its programs and facilities, without regard to race, color, creed, religion, national origin, gender, age, marital status, disability, public assistance status, veteran status, sexual orientation, gender identity, or gender expression. For more information, please consult Board of Regents Policy: [http://regents.umn.edu/sites/default/files/policies/Equity\\_Diversity\\_EO\\_AA.pdf](http://regents.umn.edu/sites/default/files/policies/Equity_Diversity_EO_AA.pdf).

### **Disability Accommodations**

The University of Minnesota is committed to providing equitable access to learning opportunities for all students. Disability Services (DS) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.

If you have, or think you may have, a disability (e.g., mental health, attentional, learning, chronic health, sensory, or physical), please contact DS at 612-626-1333 to arrange a confidential discussion regarding equitable access and reasonable accommodations.

If you are registered with DS and have a current letter requesting reasonable accommodations, please contact your instructor as early in the semester as possible to discuss how the accommodations will be applied in the course.

For more information, please see the DS website, <https://diversity.umn.edu/disability/>.

## **Mental Health and Stress Management**

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance and may reduce your ability to participate in daily activities. University of Minnesota services are available to assist you. You can learn more about the broad range of confidential mental health services available on campus via the Student Mental Health Website: <http://www.mentalhealth.umn.edu>.

## **The Office of Student Affairs at the University of Minnesota**

The Office for Student Affairs provides services, programs, and facilities that advance student success, inspire students to make life-long positive contributions to society, promote an inclusive environment, and enrich the University of Minnesota community.

Units within the Office for Student Affairs include, the Aurora Center for Advocacy & Education, Boynton Health Service, Central Career Initiatives (CCE, CDes, CFANS), Leadership Education and Development –Undergraduate Programs (LEAD-UP), the Office for Fraternity and Sorority Life, the Office for Student Conduct and Academic Integrity, the Office for Student Engagement, the Parent Program, Recreational Sports, Student and Community Relations, the Student Conflict Resolution Center, the Student Parent HELP Center, Student Unions & Activities, University Counseling & Consulting Services, and University Student Legal Service.

For more information, please see the Office of Student Affairs at <http://www.osa.umn.edu/index.html>.

## **Academic Freedom and Responsibility: for courses that do not involve students in research**

Academic freedom is a cornerstone of the University. Within the scope and content of the course as defined by the instructor, it includes the freedom to discuss relevant matters in the classroom. Along with this freedom comes responsibility. Students are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth. Students are free to take reasoned exception to the views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled.\*

Reports of concerns about academic freedom are taken seriously, and there are individuals and offices available for help. Contact the instructor, the Department Chair, your adviser, the associate dean of the college, or the Vice Provost for Faculty and Academic Affairs in the Office of the Provost.

**OR:**

## **Academic Freedom and Responsibility, for courses that involve students in research**

Academic freedom is a cornerstone of the University. Within the scope and content of the course as defined by the instructor, it includes the freedom to discuss relevant matters in the classroom and conduct relevant research. Along with this freedom comes responsibility. Students are encouraged to develop the capacity for critical judgment and to engage in a sustained and independent search for truth. Students are free to take reasoned exception to the views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled.\* When conducting research, pertinent institutional approvals must be obtained and the research must be consistent with University policies.

Reports of concerns about academic freedom are taken seriously, and there are individuals and offices available for help. Contact the instructor, the Department Chair, your adviser, the associate dean of the college, or the Vice Provost for Faculty and Academic Affairs in the Office of the Provost.

\* Language adapted from the American Association of University Professors "Joint Statement on Rights and Freedoms of Students".

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