PubH 6390
Vaccines
Spring 2018 (1st Half of Semester 1/17 – 3/5)

Credits: 2
Meeting Days: Monday and Wednesday
Meeting Time: 2:30-4:25 pm
Meeting Place: Mayo D199
Instructor: Nicole E. Basta, PhD MPhil
Office Address: WBOB 300
Office Phone: 612-625-6616
E-mail: nebasta@umn.edu
Office Hours: By Appointment

I. Course Description

Vaccines are one of the most successful public health interventions ever developed. Yet, fundamental misconceptions about how and why vaccines work and how their efficacy and safety is evaluated limit the ability of public health professionals to control the spread of vaccine-preventable diseases.

Vaccinology is the branch of infectious disease epidemiology that can address these issues. In this graduate level course, we will focus on critical concepts and methods in epidemiology, infectious diseases, vaccinology, and public health communication needed to:

1) Understand the principles of infectious disease transmission dynamics that determine how and why vaccines reduce the burden of disease

2) Utilize epidemiologic methods and study designs to assess both individual and population-level vaccine efficacy

3) Develop and implement strategies to address the challenges of achieving and maintaining high vaccine coverage in diverse communities across the US and globally.

More than 25 human diseases can be prevented by vaccination and dozens of novel and next-generation vaccines are currently under development. From ongoing efforts to eradicate polio worldwide to measles outbreaks in the US where the disease had once been eliminated to the development of fast-tracked Ebola vaccines during the West African outbreak, vaccines have taken center stage in the field of infectious diseases over the past several decades. Communities in the US simultaneously express disinterest and distrust in routine vaccinations of children against once-common diseases such as polio and measles while
at the same time demanding rapid development of vaccines for newly emergent diseases such as Zika and West Nile. Globally, vaccine-preventable diseases (pneumonia and diarrheal diseases including rotavirus) still account for the top causes of death in children under 5 years old. Yet vaccine access continues to be a challenge. The field of vaccinology allows us to examine, from an epidemiologic methods perspective, how and why vaccines protect individuals and populations and how and why we face challenges to achieving and maintaining high vaccine uptake among at-risk populations worldwide. In doing so, we gain the knowledge needed to develop strategies that can successfully protect all individuals from vaccine-preventable diseases.

From the perspective of researchers, public health practitioners, and medical professionals, we will learn about study designs to assess vaccine efficacy, effectiveness, and safety, and we will apply communication skills needed to translate evidence about vaccines to the public. Specifically, we will discuss key concepts in infectious disease transmission dynamics, herd immunity, maternal immunity, and waning/boosting of immune responses. These concepts will set the foundation for understanding how and why vaccines protect both individuals and populations and how individuals interact with populations in complex ways. Throughout this course, we will apply principles of epidemiology to understand how vaccines have successfully reduced the burden of disease in many different settings across the globe and to examine how the challenges of vaccine hesitancy, vaccine refusal, and lack of access threaten the advances that have been made in reducing the burden of infectious diseases. Students from many different disciplines who are interested in vaccines will gain a clear understanding of the essential role that they play in minimizing the spread of vaccine-preventable diseases.

II. Course Prerequisites

One graduate course in Epidemiology and one graduate course in Biostatistics or permission of the instructor. All students must be registered to attend class.

III. Course Goals and Objectives

At the end of this course, students will be able to:

1. Describe key concepts in immunology and population dynamics that underlie the principles by which vaccines protect individuals and populations.
2. Explain the stages of vaccine development from pre-clinical to licensure and the regulatory process for evaluating vaccine candidates in the US.
3. Understand and interpret key quantitative measures in infectious disease transmission dynamics including the concepts of herd immunity, $R_0$, and the critical vaccination fraction.
4. Calculate and interpret epidemiological measures including direct and indirect vaccine efficacy.
5. Describe the methods needed to implement specialized epidemiologic study designs including challenge studies, test-negative designs, and stepped-wedge designs to assess the direct of vaccines on individuals and indirect effects of vaccination programs in populations and understand when to implement such designs. Evaluate the quality of studies utilizing these designs.
6. Summarize the schedule of recommended vaccinations for pregnant women, infants, adolescents, and adults and understand how maternal immunity, waning and boosting of immunity and other concepts shape these recommended schedules.
7. Recognize the controversies surrounding vaccines that contribute to vaccine hesitancy and vaccine refusal in the US and globally.
8. Describe barriers to achieving and maintaining high vaccine uptake in diverse settings among diverse populations in the US and globally.
9. Characterize the health disparities that result in limited access to vaccines in low-income settings and how these disparities shape the global epidemiologic patterns of infectious disease morbidity and mortality.
10. Communicate evidence-based messages to the public to promote health and address misinformation and misconceptions.

In addition, this course addresses the following Council on Linkages Competencies:

Communications Skills:
3.2.6 Communicates information to influence behavior and improve health (e.g., uses social marketing methods, considers behavioral theories such as the Health Belief Model or Stages of Change Model)
Public Health Sciences Skills:
6.2.3 Applies public health sciences (e.g., biostatistics, epidemiology, environmental health sciences, health services administration, social and behavioral sciences, and public health informatics) in the delivery of the 10 Essential Public Health Services

Leadership and Systems Thinking Skills:
8.2.1 Incorporates ethical standards of practice (e.g., Public Health Code of Ethics) into all interactions with individuals, organizations, and communities
8.2.5 Analyzes internal and external facilitators and barriers that may affect the delivery of the 10 Essential Public Health Services (e.g., using root cause analysis and other quality improvement methods and tools, problem solving)

IV. Methods of Instruction and Work Expectations
The course will consist of a mixture of lectures, case studies, group discussions, and in-class and take-home exercises. Students will learn epidemiologic concepts, study designs, and controversies central to understanding how and why vaccines work and the challenges to reducing and eliminating vaccine-preventable diseases, from a public health and population health perspective. Students will also be challenged to develop and demonstrate communication strategies to address controversies in vaccinology. In this course, students will be expected to evaluate and draw upon sound epidemiologic evidence to develop well-reasoned arguments to address key vaccine controversies with the instructor and their peers.

V. Course Text and Readings
All readings should be completed before attending the session for which they are listed. For example, students should reach “A short history of vaccination” and the NEJM paper before attending class on 1/17.

Note: All course readings (including textbooks) are available as e-books through the UMN Library. The course Moodle site will include links to these readings. Students are NOT expected to purchase these books, but, rather, to access and read them online:


Additional readings from the primary literature, which will also be available electronically, are listed below.
VI. Course Outline/Weekly Schedule

<table>
<thead>
<tr>
<th>Week 1 - Wednesday, Jan 17</th>
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<tbody>
<tr>
<td>1</td>
<td>2:30-3:25 Nicole Basta</td>
</tr>
<tr>
<td>2</td>
<td>3:30-4:25 Nicole Basta</td>
</tr>
</tbody>
</table>

Required readings:
- Vaccines, 7th Edition, Section 1.1 A Short History of Vaccination, pp 1-15

<table>
<thead>
<tr>
<th>Week 2 – Monday, Jan 22</th>
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</thead>
<tbody>
<tr>
<td>3</td>
<td>2:30-3:25 Nicole Basta</td>
</tr>
<tr>
<td>4</td>
<td>3:30-4:25 Nicole Basta</td>
</tr>
</tbody>
</table>

Required readings:
- Epidemiology and Prevention of Vaccine-Preventable Diseases. Chapter 1: Principles of Vaccination
- Epidemiology and Prevention of Vaccine-Preventable Diseases. Chapter 4: Vaccine Safety

Recommended reading/for more information:
- Vaccines, 7th Edition, Section 79 Regulation and Testing of Vaccines, pp 1547-1565
- Review these interactive infographics to learn how vaccines are made and to become familiar with different types of vaccines: [https://www.historyofvaccines.org/content/how-vaccines-are-made](https://www.historyofvaccines.org/content/how-vaccines-are-made) and [https://www.historyofvaccines.org/content/types-vaccines](https://www.historyofvaccines.org/content/types-vaccines)

<table>
<thead>
<tr>
<th>Week 2 – Wednesday, Jan 24</th>
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<tbody>
<tr>
<td>5</td>
<td>2:30-3:25 Kristina Burrack</td>
</tr>
<tr>
<td>6</td>
<td>3:30-4:25 Kristina Burrack</td>
</tr>
</tbody>
</table>

Required readings:
- The Human Immune System and Infectious Disease
  [https://www.historyofvaccines.org/content/articles/human-immune-system-and-infectious-disease](https://www.historyofvaccines.org/content/articles/human-immune-system-and-infectious-disease)
- Test your knowledge: [https://www.historyofvaccines.org/content/how-vaccines-work](https://www.historyofvaccines.org/content/how-vaccines-work)

Recommended reading/for more information:
- Vaccines, 7th Edition, Section 1.2 Vaccine Immunology, pp 16-34

**ASSIGNMENT 1 DUE MONDAY 1/29/18 at 12 noon**
### Week 3 – Monday, Jan 29

<table>
<thead>
<tr>
<th>7</th>
<th>2:30-3:25</th>
<th>Nicole Basta</th>
<th>How Vaccines Protect Individuals: Quantitative Methods for Measuring Vaccine Efficacy (VE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>3:30-4:25</td>
<td>Nicole Basta</td>
<td>How Vaccines Protect Populations I: Understanding Quantitative Concepts in Vaccinology: Susceptibility, R0, Contact Rate, Critical Vaccination Fraction</td>
</tr>
</tbody>
</table>

**Required readings:**

- Design and Analysis of Vaccine Studies. Concepts in Infectious Disease. Ch1.3-1.3.3, pages 10-14
- Design and Analysis of Vaccine Studies. Vaccine Effects. Chapter 2-2.6, pages 19-30

### Week 3 – Wednesday, Jan 31

<table>
<thead>
<tr>
<th>9</th>
<th>2:30-3:25</th>
<th>Ed Belongia</th>
<th>Case Study: Influenza Vaccination</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>3:30-4:25</td>
<td>Nicole Basta</td>
<td>How Vaccines Protect Populations II: Infectious Disease Transmission Dynamics and Community Immunity</td>
</tr>
</tbody>
</table>

**Required readings:**

- Epidemiology and Prevention of Vaccine-Preventable Diseases. Chapter 12: Influenza

### ASSIGNMENT 2 DUE MONDAY 2/5/18 at 12 noon

### Presentation Topics DUE MONDAY 2/5/18 at 12 noon

### Week 4 – Monday, Feb 5

<table>
<thead>
<tr>
<th>11</th>
<th>2:30-3:25</th>
<th>Nicole Basta</th>
<th>How Vaccines Protect Populations III: Indirect, Total, and Overall Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>3:30-4:25</td>
<td>Nicole Basta</td>
<td>Maternal and Infant Vaccination: Successes and Challenges</td>
</tr>
</tbody>
</table>

**Required readings:**

- Vaccines During Pregnancy - CDC. http://www.cdc.gov/vaccines/pregnancy/pregnant-women/index.html
- Birth - 6 yrs Vaccination Schedule CDC. http://www.cdc.gov/vaccines/schedules/easy-to-read/child.html

### Week 4 – Wednesday, Feb 7

<table>
<thead>
<tr>
<th>13</th>
<th>2:30-3:25</th>
<th>Nicole Basta</th>
<th>Adolescent and Adult Vaccination</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>3:30-4:25</td>
<td>Fareed Awan</td>
<td>Ethical Consideration for Vaccines</td>
</tr>
</tbody>
</table>

**Required readings:**

- Adolescent Vaccination Schedule. CDC. https://www.cdc.gov/vaccines/schedules/easy-to-read/preteen-teen.html
- Adult Vaccination Schedule. CDC. https://www.cdc.gov/vaccines/schedules/easy-to-read/adult.html
- Salmon DA et al. Compulsory vaccination and conscientious or philosophical exemptions: past, present, and future. The Lancet. 2006 Feb 4;367(9508):436-42

*Updated 01-01-18*
**ASSIGNMENT 3 DUE MONDAY 2/12/18 at 12 noon**

<table>
<thead>
<tr>
<th>Week 5 – Monday, Feb 12</th>
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<tr>
<td>15</td>
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<tr>
<td>16</td>
<td>3:30-4:25</td>
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Required readings:

<table>
<thead>
<tr>
<th>Week 5 – Wednesday, Feb 14</th>
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<tbody>
<tr>
<td>17</td>
<td>2:30-3:25</td>
</tr>
<tr>
<td>18</td>
<td>3:30-4:25</td>
</tr>
</tbody>
</table>

Required readings:
- Watch the NOVA Documentary “Calling the Shots” (55 minutes) https://www.youtube.com/watch?v=wqbH40Y9XJw

**ASSIGNMENT 4 DUE MONDAY 2/19/18 at 12noon**

<table>
<thead>
<tr>
<th>Week 6 – Monday, Feb 19</th>
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<tbody>
<tr>
<td>19</td>
<td>2:30-3:25</td>
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<td>20</td>
<td>3:30-4:25</td>
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</table>

Required readings:
- Design and Analysis of Vaccine Studies. Chapter 13.4, pp 291-295

*Updated 01-01-18*
## Week 6 – Wednesday, Feb 21

<table>
<thead>
<tr>
<th></th>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
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<tbody>
<tr>
<td>21</td>
<td>2:30-3:25</td>
<td>Nicole Basta</td>
<td>Epi Study Designs: Serological Surveys and Sero-Epidemiology</td>
</tr>
<tr>
<td>22</td>
<td>3:30-4:25</td>
<td>Julian Wolfson</td>
<td>Surrogate Endpoints for Evaluating Vaccines</td>
</tr>
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**Required readings:**
- Vaccines, 7th Edition, Section 3 Correlates of Protection, pp 35-40

## Week 7 – Monday, Feb 26

<table>
<thead>
<tr>
<th></th>
<th>Time</th>
<th>Students</th>
<th>Topic</th>
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<tbody>
<tr>
<td>23</td>
<td>2:30-3:20</td>
<td></td>
<td>Final Student Presentations</td>
</tr>
<tr>
<td>24</td>
<td>3:30-4:25</td>
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<td>Final Student Presentations</td>
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## Week 7 – Wednesday, Feb 28

<table>
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<tr>
<th></th>
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<th>Topic</th>
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<tbody>
<tr>
<td>25</td>
<td>2:30-3:20</td>
<td></td>
<td>Final Student Presentations</td>
</tr>
<tr>
<td>26</td>
<td>3:30-4:25</td>
<td></td>
<td>Final Student Presentations</td>
</tr>
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</table>

## Week 8 – Monday, Mar 5

<table>
<thead>
<tr>
<th></th>
<th>Time</th>
<th>Nicole Basta</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>2:30-3:25</td>
<td></td>
<td>Global Challenges in Vaccine Delivery: Disparities in Access</td>
</tr>
<tr>
<td>28</td>
<td>3:30-4:25</td>
<td></td>
<td>Vaccine Preventable Diseases Globally: Future Outlook</td>
</tr>
</tbody>
</table>

**Required readings:**

**Recommended reading:**
- WHO Report: State of Inequity Childhood Immunizations
VII. Evaluation and Grading

This course will be graded out of 1000 points. Points will be allocated according to the grading rubric outlined below.

Attending and contributing to the discussion is key to success in this course. Students will be asked to sign in at the start of each class session. Students will be required to submit a question prior to the beginning of each class session through the course website based on the reading. Students will be encouraged to ask questions throughout the lecture, including the question they submitted if it hasn’t been answered. Students will also be encouraged to engage in discussion with the instructor, guest lecturers, and their peers.

Assignments 1-4 will be handed out one week prior to the due date. Each assignment will consist of a written response that addresses a topic covered in class or one of the readings. Through these assignments, students will gain critical skills in assessing the primary literature, evaluating epidemiologic study designs, interpreting results, and applying concepts from the epidemiology of vaccines to issues of local and global importance.

For the final presentation, students will choose a specific vaccine (currently licensed or in development) that is not covered in the course from the list provided on the course moodle site. Students will apply concepts covered in the course to their chosen vaccine and present the results of their research on this topic during a 15-minute presentation followed by 5 minutes of questions and answers. Students will undertake the final project individually and will be graded according to the criteria below. Vaccines/topics must be submitted by email by Monday, Feb 5, 12 noon (assignments made on a first come/first served basis) for approval prior to beginning research. The aim of the presentation is to apply skills and methods covered in the course to reading and evaluating the primary literature and to demonstrate critical understanding of the key issues relevant to the epidemiology of a specific vaccine.

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Points</th>
<th>% of Grade</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In Class Engagement</strong></td>
<td></td>
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<tr>
<td>- 4 points per session for attendance and engagement (max 56 points)</td>
<td>100 pts</td>
<td>10%</td>
<td>Daily for all class sessions</td>
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<tr>
<td>- 4 points per lecture for submitting a question about any of the readings prior to lecture (max 44 points)</td>
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<td></td>
<td>- Daily questions due at 12 noon before class (not required on first day 1/17 or student presentation days 2/26 or 2/28)</td>
</tr>
<tr>
<td>Assignment 1</td>
<td>100 pts</td>
<td>10%</td>
<td>Due 1/29/18 at 12 noon</td>
</tr>
<tr>
<td>Assignment 2</td>
<td>100 pts</td>
<td>10%</td>
<td>Due 2/5/18 at 12 noon</td>
</tr>
<tr>
<td>Presentation Topics DUE</td>
<td>-</td>
<td>-</td>
<td>Due 2/5/18 at 12 noon</td>
</tr>
<tr>
<td>Assignment 3</td>
<td>100 pts</td>
<td>10%</td>
<td>Due 2/12/18 at 12 noon</td>
</tr>
<tr>
<td>Assignment 4</td>
<td>100 pts</td>
<td>10%</td>
<td>Due 2/19/18 at 12 noon</td>
</tr>
<tr>
<td><strong>Final In-Class Presentation (15-minute presentation plus 5 minutes for questions)</strong></td>
<td></td>
<td>50%</td>
<td>Due 2/26/18 or 2/28/18 In Class</td>
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<tr>
<td>- Content (max 200 points)</td>
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<tr>
<td>- Clarity and effective use of communication skills to convey complex concepts (max 200 points)</td>
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<tr>
<td>- Responding to questions (max 100 points)</td>
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<tr>
<td>500 pts</td>
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Updated 01-01-18
Grading
The total out of 1000 points will be converted to the letter grade and GPA according to the scale below.
Point totals ending in 4 or lower will be rounded down to the nearest whole number and those ending in 5 and higher will be rounded up.

The University utilizes plus and minus grading on a 4.000 cumulative grade point scale in accordance with the following:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
<th>Percent</th>
<th>GPA</th>
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<tbody>
<tr>
<td>A</td>
<td>925-1000</td>
<td>93-100</td>
<td>4.000</td>
</tr>
<tr>
<td>A-</td>
<td>895-924</td>
<td>90-92</td>
<td>3.667</td>
</tr>
<tr>
<td>B+</td>
<td>865-894</td>
<td>87-89</td>
<td>3.333</td>
</tr>
<tr>
<td>B</td>
<td>825-864</td>
<td>83-86</td>
<td>3.000</td>
</tr>
<tr>
<td>B-</td>
<td>795-824</td>
<td>80-82</td>
<td>2.667</td>
</tr>
<tr>
<td>C+</td>
<td>765-794</td>
<td>77-79</td>
<td>2.333</td>
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<tr>
<td>C</td>
<td>725-764</td>
<td>73-76</td>
<td>2.000</td>
</tr>
<tr>
<td>C-</td>
<td>695-724</td>
<td>70-72</td>
<td>1.667</td>
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<tr>
<td>D+</td>
<td>665-694</td>
<td>67-69</td>
<td>1.333</td>
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<tr>
<td>D</td>
<td>595-664</td>
<td>60-66</td>
<td>1.000</td>
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<tr>
<td>F</td>
<td>0-594</td>
<td>0-59</td>
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</tbody>
</table>

Students may elect to take the class on a S/N basis, with satisfactory achievement equivalent to a grade of C or better.

S  695-1000  70-100  Represents achievement that is satisfactory, which is equivalent to a C- or better.

N  0-694  0-69  Represents achievement that is unsatisfactory

For additional information, please refer to:
http://policy.umn.edu/Policies/Education/Education/GRADINGTRANSCRIPTS.html.

Late Policy
Failure to submit assignments by the due date without documentation of a legitimate absence, as noted below, will result in a 10% reduction in points for each up to 24-hour period that passes between the original due date and the submission date.

Course Evaluation
The SPH will collect student course evaluations electronically using a software system called CoursEval: 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. 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.

University of Minnesota Uniform Grading and Transcript Policy
A link to the policy can be found at 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.

Course Withdrawal:
Students should refer to the Refund and Drop/Add Deadlines for the particular term at 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 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.

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) 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 Community Standards has compiled a useful list of Frequently Asked Questions pertaining to scholastic dishonesty: https://communitystandards.umn.edu. 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.

**Disability Accommodations:**
The University of Minnesota is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center Student Services 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 DRC at 612-626-1333 or drc@umn.edu 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 Community Standards, 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 https://osa.umn.edu/.

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, (Dr Kristin Anderson, SPH Dean of Student Affairs), 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".

Student Academic Success Services (SASS): http://www.sass.umn.edu:
Students who wish to improve their academic performance may find assistance from Student Academic Support Services. While tutoring and advising are not offered, SASS provides resources such as individual consultations, workshops, and self-help materials.

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