Biology 3980  
History/Global Studies 3960  
*Disease and Society*

Fall 2013  
Tuesdays 12:50 to 3:50  
Robbins Science Center Room 11

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**Course Overview**  
Disease has profoundly shaped the development of human societies. Outbreaks and epidemics have also influenced the development of modern medicine and public health practices. This course seeks to place disease within a larger cultural and historical framework. We will explore how pathogens have affected the processes of civilization, war, conquest, and globalization, and the ways in which diseases in turn have been altered by contact and patterns of interaction among human beings, as well as with other organisms. At the beginning of the 21st century, our species faces the challenge of emerging “new” diseases as well as the resurgence of old ones. Global networks of travel, trade and communication promote the exchange of information and medical technology; they also facilitate the movement of the pathogens that accompany us as we board planes and load container ships. Disease is a universal phenomenon. However, neither disease nor medical treatment is equally distributed among the world’s populations. The course thus also examines disease as a biological expression of social and economic pathologies.

**Course Goals (general)**  

1. To understand the major connections between diseases and the development of social policies and medical practices throughout history  
2. To become familiar with multidisciplinary approaches used to study diseases and their social effects
Learning Outcome Goals (specific)

This course will help students learn to:

1. Recognize and define scientific terms commonly used when describing the causes and transmission of diseases

2. Identify and practice various disciplinary approaches to the study of how diseases affect human society

3. Gain working knowledge of the biological principles underlying the development and transmission of disease

4. Discuss examples of major diseases and explain their impact on the development of social policies and modern medical practices

5. Recognize and explain key mechanisms in the interrelationship between human actions and disease

6. Identify and critically engage current and past controversies regarding the treatment and management of disease among different social groups

7. Recognize and discuss the impact of novel medical therapies in society and modern medicine

8. Describe and discuss examples of the socio-economic conditions that influence the development and prevalence of disease.

Required Texts

The following texts are required for the course. They are available in the Hamline Bookstore. They have also been placed on reserve in Bush library.

- David Quammen, *Spillover: Animal Infections and the Next Human Pandemic*
- Rebecca Skloot, *The Immortal Life of Henrietta Lacks*
- Abraham Verghese, *My Own Country: A Doctor’s Story*

Other required readings for the course are posted on Blackboard. Occasionally we will distribute short readings in class to be read for the following week. Please note that all readings should be done before class meets on the day they are assigned so that we can discuss them in class on that day.
In addition to required texts for purchase in the Hamline Bookstore and assigned articles on Blackboard, the following reference books are available in the Reference section of Bush Library. They will be of use in completing some of the assignments in the class.


<table>
<thead>
<tr>
<th>Assignments</th>
<th>Due</th>
<th>Grade</th>
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<tbody>
<tr>
<td>‘Nerds vs. Twits’ response essay</td>
<td>Sept 16</td>
<td>ungraded*</td>
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<tr>
<td>Disease Biography (indiv. written)</td>
<td>Oct. 1</td>
<td>10%</td>
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<tr>
<td>Disease Biography paired oral presentation</td>
<td>weeks 5-9</td>
<td>10%</td>
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<tr>
<td>Debate Brief (indiv. written)</td>
<td>day of debate</td>
<td>10%</td>
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<tr>
<td>Debate (group oral)</td>
<td>weeks 4-12</td>
<td>10%</td>
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<tr>
<td>GapMinder /World mapper (in-class)</td>
<td>Nov. 5</td>
<td>5%</td>
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<tr>
<td>GapMinder (indiv. written)</td>
<td>Nov. 12</td>
<td>10%</td>
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<tr>
<td>“The Immortal Life of Henrietta Lacks”– Response Essay</td>
<td>Dec. 3</td>
<td>10%</td>
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<tr>
<td>Case study</td>
<td>Dec. 10</td>
<td>5%</td>
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<tr>
<td>Take-home final</td>
<td>Dec 16</td>
<td>15%</td>
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<tr>
<td>Participation</td>
<td>ongoing</td>
<td>15%</td>
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</tbody>
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*although ungraded, the response essay is required; failure to turn it in on time will affect your participation grade

Class participation will be measured by your attendance, by active participation in discussions, and by evidence of preparation for the class. Since the instructors are convinced that texting during class is detrimental to the learning environment, the mere hint of preoccupation with a cell phone may also adversely affect your participation grade.

Regular attendance in class and participation in all class activities is a requirement of this course. If circumstances beyond your control or of an
emergency nature mean that you will need to miss class, Please inform both the instructors in writing -- by email – to let us know as soon as possible (before the absence if you can). We will use our discretion as to whether your circumstances meet our criteria for an excused absence.

**Disability Accommodation**

Students with disabilities who believe that they may need accommodations in this class are encouraged to contact Disability Services at 523-2521 as soon as possible to better ensure that such accommodations are implemented in a timely manner. If you already have a letter from their office, please present it to one of the instructors so that we will be able to provide the needed accommodations in this class.

**Academic Integrity**

We expect students to maintain the highest standards of academic integrity in the work they do for this class. Coursework at Hamline is subject to an Academic Honor Code. You can access the Honor Code online on the CLA information site at [http://www.hamline.edu/Policy.aspx?id=2147487457](http://www.hamline.edu/Policy.aspx?id=2147487457) If you have not read the Honor Code, we urge you to do so. Penalty for plagiarism in this class is typically a 0 for the assignment. In accordance with Hamline policy, the instructors will also report the incident to the Dean’s Office. If you have any questions about what constitutes plagiarism in the context of this class, please talk to one of us.

**Outline of Course topics and readings**

**Week 1: September 10**  **Introduction to the course**

- Overview of the scope and approach of the course
- Short article distributed in class today for next week: ‘Nerds vs. Twits’ (Also posted on Blackboard—content)

**Week 2: September 17**  **Major Epidemics in History**

- An overview of some major epidemics in history and their impacts

**Due on Monday Sept 16 by noon via Blackboard: Short response essay on ‘Nerds vs. Twits’ (ungraded but counts for participation)**

- Read: Margaret Drexler, “Disease in Disguise” and “Top 10 Terrible Epidemics (Time magazine); both articles are on Blackboard--content
Hand out in class: Guidelines for discussion questions on course readings
(Also posted on Blackboard: Assignments)

**Theme I: Environment and Disease**

Week 3: September 24  
**Zoonosis in History**

Approaches to studying zoonotic diseases

**Due on Monday by noon on Blackboard [Discussion Board]: discussion questions on the reading (one question on Spillover; one on Greger article)**

**Read:** Spillover, chaps. 1 & 2; and Greger “Zoonotic infectious diseases,” [Blackboard—content] Pages 14-124

In-class peer review of discussion questions

Week 4: October 1  
**Migration and Disease**

Trade, colonialism and other historical factors in disease spread

**Due on Monday by noon on Blackboard [Discussion Board]: discussion questions on the reading**

**Read:** Jared Diamond, “Arrow of Disease” and “Crossing Biological Boundaries” [Blackboard—content]

*In-class debate I: Hendra Virus*

**Due in class today: Disease Biographies**

**Theme: Socio-economics and Disease**

Week 5: October 8  
**Disease and Inequality**

Socio-economic factors and inequities in disease

**Read:** Verghese, My Own Country, chaps 1-4 (pp. 5-72); and “Poverty, global health, and infectious disease: lessons from Haiti and Rwanda,” [Blackboard]

* Disease Biography presentations today
*In-class debate II: Preserving stocks of smallpox virus*

Week 6: October 15 **Social Stigma and Disease**

Discrimination and Disease: Scientific Racism? Sexism?

**Read:** Verghese, *My Own Country*, pp. 73-207; and Skloot: *The Immortal Life of Henrietta Lacks*, introductory matter, prologue and chap 1 “The Exam”; also read: pp. 127-136, 158-169, and 268-278

* Disease Biography presentations

Week 7: October 22 **HIV/AIDS—History and Controversies**

Twentieth century epidemic: medical issues and social responses

**Read:** Verghese, *My Own Country*, finish the book; and Spillover, chap. 8, pp. 385-419;

*In-class debate III: In the interest of public health, HPV vaccinations should be required for girls.*

**Film**

* Disease Biography presentations

Week 8: October 29 **HIV—Global Dimensions**

HIV/AIDS continued; Global contexts and perspectives

**Read:** Spillover, finish chap. 8, pp. 420-489; and Paul Farmer, *Pathologies of power*, chap. 1 [Blackboard—content]

* Disease Biography presentations

Week 9: November 5 **Global Health Challenges**

Responses to Global Health Challenges

**Read:** ONE of the following (as assigned in class on Oct. 29); articles are posted on Blackboard; you do NOT have to read all four
• GLOBAL HIV/AIDS RESPONSE
   Epidemic update and health sector progress towards Universal Access by WHO


In-class activity: using Gapminder and World Mapper as Tools to Study Factors that Influence Global Health

* Disease Biography presentations

** THEME: NOVEL MEDICAL THERAPEUTICS AND THEIR SOCIAL IMPLICATIONS **

Week 10: November 12  Medicine, Globalization and Ethics

Ethical issues in the context of modern medicine and globalization

Read: Nancy Scheper-Hughes, "Global Traffic in Human Organs" [Blackboard]; and Skloot, The Immortal Life of Henrietta Lacks, rest of Part I “Life” (pp. 18-86); also read pp 199-206 (“Who told you you could sell my spleen?)

**Due in class: Individual GapMinder assignment

*In-class debate IV: Debate: It should be legal for people to voluntarily sell their organs for the medical benefit of other individuals who need them

Week 11: November 19  Novel Medical Therapies: promise and problems

Revolutionary therapies and their impacts in history

Read: Skloot, The Immortal Life of Henrietta Lacks, pp. 93-104;152-170 and all of Part III; also read “Slow Ideas,” New Yorker article [Blackboard]
Week 12: November 26  **Human Genome Project and Implications**

Genomics, therapies and social implications


**Film**

*Debate V: Medical ethics requires that medical professionals who have information about their patients must fully disclose that information to the patients.*

Week 13: Dec. 3  **Genome Privacy**

Individual Rights and Social Policy

In-class Case Study exercise

Week 14: December 10  **Disease and Society in 21 century**

Where do we go from here?

**Read:** *Spillover*, chap. 9, “It depends”

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**Take-home final exam is due by noon on Tuesday, Dec. 17. Please turn in your essay (hard copy) to Prof. Martinez-Vaz’s mailbox in the Science Faculty office in Robbins Science**