GLOBAL HISTORY OF HEALTH
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Instructor: Dr. Monica Green
Department of History
4568 Lattie F. Coor Bldg.
office phone: 480-965-4762
(main History phone: 480-965-5778)
office hours: Mo, Tu, We 10:30am-noon (or by appt.)
e-mail: Monica.Green@asu.edu

TA: John Horan
office: 4511 Coor Hall
office hours: We 2-4pm
e-mail: jhoran3@asu.edu

Note: The continuing spread of Ebola Virus Disease in West Africa this summer makes it pressing that we pay close attention to this medical emergency as it unfolds. Therefore, the announced focus on our eight paradigmatic diseases (see below) will be supplemented this term by on-going analysis of the Ebola epidemic. Please see the special section of Blackboard for background on Ebola, news updates, and information about an Extra Credit option.

COURSE DESCRIPTION: In the early 1990s, Mary Fisher, a middle-class mother of two children from Utah, was brought to awareness of the global HIV/AIDS pandemic by her own recent infection with the disease. In a famous speech she delivered, she reminded her fellow Americans and the world that infectious disease knew no boundaries of class, race, or nationality. “HIV asks only one thing of those it attacks. Are you human?” In the past two decades, studies have shown that pathogens such as the TB and leprosy bacilli have undergone exceptionally low levels of evolutionary change because they have become so comfortable in their hosts that they have virtually stopped evolving. Again, “Are you human?” is the only question the pathogen asks.

It is that common humanity of Homo sapiens globally, and the common threats we face, that lays the premise for “Global History of Health.” Recent developments in genetics, combined with the traditional techniques of paleopathology and History, now make it possible to create a unified narrative of the threats to health that humans have shared throughout the vast sweep of time since Homo sapiens evolved. Eight paradigmatic infectious diseases—tuberculosis (TB), malaria, leprosy, smallpox, plague, syphilis, cholera, and HIV/AIDS—will serve as our “tracer elements.” Rather than looking for the differences between human cultures, this course looks globally at what has tied human populations together. Several diseases—TB, malaria, and leprosy—have been with human populations ever since our origins in Africa. Others have more recently evolved, yet now are distributed globally.

The central question we will ask is: why have certain human populations in certain times and places been subject to particular diseases? Using the framework of the Three Epidemiological Transitions (major shifts in the types and prevalence of disease in human societies), we will emphasize infectious diseases because these most dramatically show how incessant biological factors always combine with human social factors to determine the manifestations of disease. How have human migrations into new regions or continents affected disease susceptibility? What role do new technologies (farming, irrigation, railroads, planes) play in the proliferation of disease? What responses—acceptance, exclusion,
environmental intervention, scientific research—have human societies adopted? How were public health measures developed that could control disease spread? Finally, how can a long-term historical perspective help us understand current health challenges and their possible solutions?

REQUIREMENTS: This course combines perspectives from the scientific methods of genetics and bioarchaeology with the interpretive methods of history. Students will be expected to master some basic principles of all three fields as we explore the long-term global history of human health. Class time will be devoted to both lecture and discussion. Conscientious preparation of the readings and active class participation are essential for the success of the course. We’ll be using clickers to make daily assessments of our progress. Quizzes will be taken online, but the midterm and final will be administered in class. Aside from the Timeline assignment, written assignments should be submitted via the “Assignments” function on Blackboard. Please note that papers will NOT be accepted via electronic mail. The final course grade will be assessed as follows:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>In-Class Assessments (Clicker Quizzes)</td>
<td>15%</td>
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<tr>
<td>Office Hours/Timeline Assignment</td>
<td>5%</td>
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<tr>
<td>Online Quizzes (3):</td>
<td>15% (5% each)</td>
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<tr>
<td>Ghost Map Assignment</td>
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<tr>
<td>Origin of AIDS Assignment</td>
<td>10%</td>
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<tr>
<td>Midterm Exam</td>
<td>20%</td>
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<tr>
<td>Final Exam</td>
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POLICIES:

Attendance – Regular attendance is crucial to success in this course; any more than three absences are likely to affect your grade adversely. Except for clicker quizzes, assignments because of absences must be made up by the next class period after the date due; thereafter, the grade will drop one full grade for each day late. In fairness to other members of the class, extensions cannot be granted.

Classroom Etiquette – Because we are gathered as a group to engage both in lectures and class discussion, it is vital that we maintain an atmosphere conducive to total participation. Therefore, the following rules will be observed in class:

1) No eating during class.
2) Cell phones should be switched off. No texting!!
3) Computers and notebooks/tablets are allowed only for active note-taking. Persons using their computers for other purposes will be asked to turn them off.
4) Private conversation disturbs other students’ ability to concentrate on the lectures; disruptive talkers will be asked to leave the lecture room.
5) Bathroom trips and early departures are equally disruptive. People who need to leave early are asked to notify the instructor prior to the beginning of lecture.

Computer Etiquette – Many students wish to bring laptops, notebooks, or smart phones to class to take notes and consult readings as we are discussing them. Note-taking is always a good thing! However, some students abuse the Wi-Fi capabilities in the classroom to check e-mail, browse the Web, and in other ways distract themselves while in lecture. Unfortunately, such practices are also distracting for others in the classroom. Students who do not seem to be actively taking notes and engaging with discussion will be asked to put away their computers/notebooks. A hint: studies show that taking notes by hand is the best way to enhance retention of what you’re learning!

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10% of the lowest scores will be dropped when calculating the semester grade. Since an absence (non-response) will count as an ‘E’ in the gradebook, and since you will always be given partial credit just for responding to in-class quizzes, “just showing up” is always going to be a good idea.
E-mail Etiquette – We always spend a few minutes at the beginning of class taking care of “business” issues. Questions about assignments, etc., should be asked then. (If you’re late to class, ask one of your fellow students what you missed.) This syllabus and the fuller information on our Blackboard have been designed precisely to give you as much information about the structure and expectations of the course as possible. So, before you zap off an e-mail to the instructor or the TA, ask yourself: (1) Did I check the syllabus first? (2) Did I check the Blackboard? (3) Have I asked a fellow classmate? (4) Can this wait to be asked in the next class meeting? By not overloading the instructor or TA with excessive e-mails, you help insure that we’ll have time to answer urgent or personal matters when we need to. A final point: remember that all e-mails to the instructor or the TA should be considered “professional correspondence.” Monitor your language, check your spelling and grammar, and strive to conform to all standards of professional discourse. And remember to say “Thank You!”

Written Work – All papers should conform to basic guidelines of neatness, orthography, standardized formatting (including numbered pages), etc. We do not accept submission of papers via e-mail; all work should be submitted via the “Assignments” function on Blackboard. ALWAYS keep a copy as backup.

Academic Honesty – Here’s the ASU Provost’s statement: “Academic honesty is expected of all students in all examinations, papers, laboratory work, academic transactions and records. The possible sanctions include, but are not limited to, appropriate grade penalties, course failure (indicated on the transcript as a grade of E), course failure due to academic dishonesty (indicated on the transcript as a grade of XE), loss of registration privileges, disqualification and dismissal. For more information, see http://provost.asu.edu/academicintegrity.”

And here’s my statement: No ethic is more important to the scientist’s or historian’s integrity than scrupulous use of, and documentation of, sources used. Improper use of others’ work (whether obtained from printed, electronic, or oral sources) is a violation of academic standards and will result in an automatic failing grade for the course. We will spend class time discussing the nature of plagiarism and proper methods of citation. Additional information can be found on Blackboard under “Academic Honesty.” Students are encouraged to bring their questions about this matter to the instructor or the TA.

Late Papers – See under “Attendance” above.

Student Support and Disability Accommodations – ASU offers support services through Counseling (http://students.asu.edu/counseling), the Learning Resources Center (www.asu.edu/lrc), and the Disability Resource Center (http://www.asu.edu/studentaffairs/ed/drc/). If you are a student in need of special arrangements we will do all we can to help, based on the recommendations of these services. For the sake of equity for all students, we cannot make any accommodations without formal guidance from these services.

IMPORTANT DATES:
WEEK 1: Monday, August 25 – Chronology and Terminology Quizzes open on Blackboard
Wednesday, August 27 – Experimental use of clickers…bring your clickers today and make sure that they work; this is your only chance before they become mandatory every day

WEEK 2: Monday, September 1 – Labor Day: NO CLASS
Wednesday, September 3: clickers must be operational by today

WEEK 3, all week: individual appointments to discuss Timeline

2 Historians and anthropologists have different citation conventions, which themselves differ from usages in other disciplines. Depending on your major, please learn to use one or the other consistently. For History, the standard format is Chicago Manual of Style or Turabian.

3 See also Charles Lipson, Doing Honest Work in College: How to Prepare Citations, Avoid Plagiarism, and Achieve Real Academic Success (Chicago: University of Chicago Press, 2004).
Wednesday, September 10: Chronology and Terminology Quizzes close at midnight
WEEK 4: all week, September 14-20: Phylogenetic Trees Quiz (online)
WEEK 6, Wednesday, October 1: Chronology and Terminology Quizzes re-open; automatic 5 pts extra credit on midterm for 100% score, 4 pts for 90-99%, 3 pts for 80-89%
WEEK 7, Wednesday, October 8: MIDTERM EXAM
WEEK 8, Monday, October 13: no class today (Fall Break)
WEEK 10, Tuesday, October 28: Ghost Map Assignment (due by midnight)
WEEK 11, Tuesday, November 5: Course Withdrawal Deadline
WEEK 15, Tuesday, December 2: Origin of AIDS Assignment (due by midnight)
Wednesday, December 10, 7:30 - 9:20 AM: FINAL EXAM

TEXTS AND EQUIPMENT:
Required – for purchase:
TurningPoint compatible clicker
Required – e-book (available through ASU Library):
Anne F. Grauer, ed., A Companion to Paleopathology (New York: Wiley-Blackwell, 2012) (hereafter cited as “Grauer, Companion”); you are, of course, welcome to purchase the hardbound copy of this book if you prefer, but it’s expensive! We’ll be reading about eight chapters in it.
Recommended:
All other readings will be available via the “Weekly Readings” button on our course Blackboard.

BLACKBOARD: This course has a Blackboard site that functions as a supplement (but not a substitute!) to the work we do in class. All materials discussed in class—syllabus, announcements, quiz questions, lecture slides, study guides—will be posted on Blackboard within 24 hours of class meetings, if not before. The Blackboard also has links to numerous websites, dictionaries, and other resources that can help you out when you’re doing your class or exam preparation. They can also lead you to more information about topics that we do not have time to discuss in class. Finally, we have added an “At the Movies!” button and a “Book Club” with information on movies and non-academic books that dramatize major moments or themes in the history of human health. So on a Saturday night when you’re too tired to study, load up a video or pull out a book, throw some popcorn in the microwave, and kick back for some fun!

WEEKLY READINGS: Under “READINGS” every week, there are listed all the readings you will be responsible for on the exams. Those that are starred (*) will be the subject of in-class clicker quizzes, so be sure to prioritize those, having them done by the first day of lecture every week. But be sure to go over the other readings as well, since they will be the subject of lectures and you’ll be responsible for them on the exams. Items listed under “Supplemental Readings” are not required; they are provided for those seeking further information about topics discussed in lecture.

HONORS CREDIT: Given my other obligations this semester, it is regretted that individualized Honors projects cannot be supervised.

SOME USEFUL LINKS:
◦ Blackboard Help for Students: http://asu.force.com/kb/articles/Informational/Blackboard-Help-for-Students/
◦ Blackboard Test Survival Guide: http://asu.force.com/kb/articles/Informational/Blackboard-Test-Survival-
Guide


LECTURE TOPICS


Chronology and Terminology Quizzes open this week (online); both close at midnight on Wednesday, September 10

TOPICS:
- methods for studying disease in the past: paleopathology, genomics, ancient DNA, History
- a global framework and “deep time”

READINGS:

* Piers Mitchell, “Integrating Historical Sources with Paleopathology,” in Grauer, Companion, chapter 17, pp. 310-23

SUPPLEMENTAL READINGS:

- David Quammen, Spillover: Animal Infections and the Next Human Pandemic (New York: W. W. Norton, 2013)
- Masatoshi Nei and Sudhir Kumar, Molecular Evolution and Phylogenetics (Oxford: Oxford University Press, 2000)
- Michel Tibayrenc, ed., Genetics and Evolution of Infectious Diseases (Amsterdam: Elsevier, 2011)
- Tony Waldron, Palaeoepidemiology: The Measure of Disease in the Human Past (Walnut Creek, CA: Left Coast Press, 2007)
WEEK 2 (9/1 & 9/3): The Beginnings of Human Disease: Late Pleistocene Health

**No class on Monday, September 1: LABOR DAY**

**TOPICS:**
- overview of the three epidemiological transitions
- interrelation between subsistence, population size, and disease
- health and disease in the Late Pleistocene
- case studies: Upper Paleolithic Europe and Late Pleistocene Australia

**READINGS:**

**SUPPLEMENTAL READINGS:**
* Jeffrey D. Wall and Montgomery Slatkin, “Paleopopulation Genetics,” *Annual Review of Genetics* 46 (Dec 2012), 635-49

WEEK 3 (9/8 & 9/10): How Old is Tuberculosis? A Disease of Both Old World and New

**Chronology and Terminology Quizzes close at midnight, Wednesday, September 10**

**Timeline/Office Hours assignment this week; sign up for appt on Google Docs**

**TOPICS:**
- evolution of *Mycobacterium tuberculosis* Complex
- biology and paleopathology of tuberculosis
- case study: TB in pre-Columbian America

**READINGS:**

**SUPPLEMENTAL READINGS:**


“Molecular Evolution, Epidemiology and Pathogenesis of *Mycobacterium tuberculosis* and Other Mycobacteria,” special issue of *Infection, Genetics and Evolution* 12, no. 4 (June 2012)


WEEK 4 (9/15 & 9/17): Malaria and the Beginnings of Agriculture

**all week, September 14-20: Phylogenetic Trees Quiz (online)**

**TOPICS:**

- biology and paleopathology of malaria
- sedentism, intensification of agriculture, deforestation, and the origins of malaria
- case studies: Neolithic Africa, ancient Rome, and the prehistoric Pacific Islands

**READINGS:**


*James L. A. Webb Jr., “Malaria and the Peopling of Early Tropical Africa,”* *Journal of World History*, 16, No. 3 (Sep., 2005), pp. 269-91


**SUPPLEMENTAL READINGS:**


R. Sallares, “Role of Environmental Changes in the Spread of Malaria in Europe during the Holocene,” *Quaternary International* 150 (2006), 21-27


WEEK 5 (9/22 & 9/24): Leprosy: The Insidious Scourge

**TOPICS:**
- biology and paleopathology, origins and spread of leprosy
- social meaning and consequences of the disease
- case study: leprosy in medieval Europe

**READINGS:**
* Martin C J Maiden, “Putting Leprosy on the Map,” *Nature Genetics* 41, no. 12 (December 2009), 1264-66
Aretaeus of Cappodocia (1st cent. CE) and Rufus of Ephesus (late 1st cent. CE), excerpts on leprosy; and Luke Demaitre, trans., medical certificates of leprosy examinations

**SUPPLEMENTAL READINGS:**

WEEK 6 (9/29 & 10/1): The Dangers of Urban Civilization: Smallpox and Plague

**TOPICS:**
- biology of smallpox, and the impact of urbanization on human health
- case study: smallpox in Europe and the Middle East prior to the discovery of the New World
- biology of *Yersinia pestis* and its vectors; origins of plague in ancient Central Eurasia
- case study: the Justinianic Plague (the First Plague Pandemic)

**READINGS:**
*Procopius on the plague in 542: http://www.fordham.edu/halsall/source/542procopius-plague.asp*

**SUPPLEMENTAL READINGS:**
Giovanna Morelli, *et al.*, “Yersinia pestis Genome Sequencing Identifies Patterns of Global Phylogenetic Diversity,” *Nature Genetics* 42, no. 12 (December 2010), 1140-1145

WEEK 7 (10/6 and 10/8): The 2nd Plague Pandemic (The Black Death)

**WEDNESDAY, October 8: MIDTERM EXAM**

**TOPICS:**
- the 13th-century polytomy and the origins of the Afro-Eurasian pandemic
- idea of quarantine and the beginnings of public health; why pandemics end
- case study: comparative impact of the Black Death in the Muslim and Christian worlds

**READINGS:**
*The Black Death and the Jews 1348-1349 CE,* available online @ [http://www.fordham.edu/halsall/jewish/1348-jewsblackdeath.html](http://www.fordham.edu/halsall/jewish/1348-jewsblackdeath.html)

**SUPPLEMENTAL READINGS:**
Lester K. Little, “Plague Historians in Lab Coats,” *Past and Present* 213 (2011), 267-90
Yujuan Cui, Chang Yu, Yanfeng Yan, Dongfang Li, *et al.*, “Historical Variations in Mutation Rate in an Epidemic Pathogen, *Yersinia pestis*,” *PNAS*, 110, no. 2 (2013): 577-82
Monica H. Green, ed., *Pandemic Disease in the Medieval World: Rethinking the Black Death*, inaugural issue of *The Medieval Globe* 1, no. 1 (Fall 2014)

WEEK 8 (10/13 & 10/15): The Columbian Exchange: Smallpox (again) and Syphilis

**Monday, October 13: no class today (Fall Break)**

**TOPICS:**
- New World demography and pathocenosis before Contact
- biology and paleopathology of syphilis
- case studies: disease exchanges between Old World and New (smallpox and syphilis)

**READINGS:**
* R. McCaa, “Spanish and Nahuatl Views on Smallpox and Demographic Catastrophe in Mexico,” *Journal of Interdisciplinary History* 25, no. 3 (1995), 397-431

**SUPPLEMENTAL READINGS:**
* Noble David Cook, *Born to Die: Disease and New World Conquest, 1492-1650* (Cambridge: Cambridge University Press, 1998)

WEEK 9 (10/20 & 10/22): The 16th-18th Centuries: Slavery, Colonialism, and the Worldwide Distribution of Disease

**TOPICS:**
• the establishment of European colonialism and the rise of the slave trade
• case study: malaria and yellow fever in the Atlantic world

READINGS:
*Philip D. Curtin, “Epidemiology and the Slave Trade,” Political Science Quarterly 83, no. 2 (June 1968), 190-216

SUPPLEMENTAL READINGS:

WEEK 10 (10/27 & 10/29): The 18th-19th Centuries: Colonialism, Industrialization, and Cholera

Tuesday, October 28 (midnight): Ghost Map assignment due

TOPICS:
• the first global health network: smallpox inoculation/vaccination projects
• industrialization and urban growth in the context of European expansion
• the cholera pandemics of the 19th century
• case studies: globalizing Jenner; John Snow’s epidemiology

READINGS:
David Arnold, “The Indian Ocean as a Disease Zone, 1500-1950,” South Asia: Journal of South Asian Studies 14, No. 2 (1991), 1-21

SUPPLEMENTAL READINGS:
Richard J. Evans, “Epidemics and Revolutions: Cholera in Nineteenth-Century Europe,” Past and Present, No. 120 (August 1988), 123-146
Philip D. Curtin, *Disease and Empire: The Health of European Troops in the Conquest of Africa* (Cambridge: Cambridge University Press, 1998)

David Arnold, ed., *Warm Climates and Western Medicine: The Emergence of Tropical Medicine, 1500-1900* (Amsterdam: Rodopi, 1996)

WEEK 11 (11/3 & 11/5): From the Global to the Microscopic: International Commerce and Laboratory Science

**TOPICS:**
- Pasteur, Koch, and the success of germ theory
- case studies: Third Plague Pandemic, 1894-1930; 1918 Flu Pandemic

**READINGS:**
* Myron Echenberg, “Pestis Redux: The Initial Years of the Third Bubonic Plague Pandemic, 1894-1901,” *Journal of World History* 13, No. 2 (Fall 2002), 429-449

**SUPPLEMENTAL READINGS:**


**TOPICS:**
- public health campaigns and the “Gospel of Germs”
- why were the effects of the 2nd Epidemiological Transition so unequal?
- case studies: diphtheria in New York; TB in the U.S. and South Africa; the global leprosy “pandemic”

**READINGS:**

**SUPPLEMENTAL READINGS:**


WEEK 13 (11/17 & 11/19): Diseases of the Tropics: From Defense to Control to Eradication

**TOPICS:**
- “tropical medicine” as a concept and a practice
- discovering the etiology of insect-borne diseases
- the Rockefeller Foundation and the World Health Organization (WHO)
- case studies: the failure of eradication campaigns in Latin America vs. the success of the worldwide smallpox campaign
- **SUMMARY:** assessment of the 2nd Epidemiological Transition in global perspective

**READINGS:**


**SUPPLEMENTAL READINGS:**


Anne-Emmanuelle Birn and Gilberto Hochman, eds., special issue of *Canadian Bulletin of Medical History* 25, No.1 (2008) on History of Latin American International Health


Anne Hardy and Lise Wilkinson, *Prevention and Cure: The London School of Hygiene & Tropical Medicine, A 20th Century Quest for Global Public Health* (London: London School of Hygiene & Tropical Medicine, 2001)


**TOPICS:**
- biomedicine conquers disease: the case of syphilis
- the 3rd Epidemiological Transition: the end of the “golden age” of biomedicine
- the “4-H Club”: early epidemiology, science, and social reactions to HIV/AIDS in the U.S.
- the fifth “H”: HIV and women, or how a “gay disease” became global

**READINGS:**
*First U.S. case report of “AIDS,” available online @ [http://www.cdc.gov/mmwr/Preview/mmwrhtml/june_5.htm](http://www.cdc.gov/mmwr/Preview/mmwrhtml/june_5.htm)

**SUPPLEMENTAL READINGS:**
Mirko Grmek, *History of AIDS: Emergence and Origin of a Modern Pandemic*, trans. Russell C. Maulitz and Jaclyn Duffin (Princeton: Princeton University Press, 1990); this was first published in French in 1989 and remains a valuable witness to how the pandemic was seen in its early years by a historian-clinician

**WEEK 15 (12/1 & 12/3): HIV/AIDS, Part II: The Global Pandemic; A Global World of Disease**

**Tuesday, December 2 (midnight): Origin of AIDS assignment due**

**TOPICS:**
• case study: the HIV/AIDS pandemic in sub-Saharan Africa
• The 3rd Epidemiological Transition: emerging diseases (Ebola, SARS, avian flu, MERS, . . .), re-emerging diseases, drug resistance, and global philanthropy

READINGS:

SUPPLEMENTAL READINGS:
Peter Piot, No Time to Lose: A Life in Pursuit of Deadly Viruses (New York: W. W. Norton, 2013)
Carolyn Baylies and Janet Bujra, eds., AIDS, Sexuality, and Gender in Africa: The Struggle Continues (New York: Routledge, 2001)
Tamara Giles-Vernick and James L. A. Webb, Jr., eds., Global Health in Africa: Historical Perspectives on Disease Control (Athens, OH: University of Ohio Press, 2013)
Paul Farmer, Partner to the Poor: A Paul Farmer Reader, ed. Haun Saussy, foreword Tracy Kidder (Berkeley: University of California Press, 2010)

Friday, December 5 (optional): Review Session

Wednesday, December 10, 7:30 - 9:20 AM: FINAL EXAM