

BIOL 395/ PSYC 347
Microbes and Human Health and Behavior

Faculty:

Dr. Lisa Webb

Dr. Dorothy Doolittle

Texts and Readings:

Barry, J.M. (2004). *The Great Influenza: The story of the deadliest pandemic in history*. New York: Penguin Books.

Cantor, D. (2007). *Deadly companions: How microbes shaped our history*. London: Oxford.

Hays, J.N. (2009). *The burdens of disease: Epidemics and human response in western history*. New Brunswick, NJ: Rutgers University Press.

Johnson, S. (2007). *The ghost map: The story of London's most terrifying epidemic--and how it changed science, cities, and the modern world*. New York: Riverhead Books.

McNeill, W.M. (1998). *Plagues and peoples*. Garden City, NY: Anchor Books.

Papers:

Duncan, L., Schaller, M., & Park, J. (2009). Perceived vulnerability to disease: Development and validation of a 15-item self-report instrument. *Personality and Individual Differences*, 47, 541-546.

Murray, D., & Schaller, M. (2012). Threat(s) and conformity deconstructed: Perceived threat of infectious disease and its implications for conformist attitudes and behavior. *European Journal of Social Psychology*, 42, 180-188.

Schaller, M., & Park, J. (2011). The behavioral immune system and why it matters. *Current Directions in Psychological Science*, 20 (2), 99-102.
and others

Description:

This interdisciplinary course examines the effect of microbes on human health and human behavior as a result of disease or infection. Students will learn the basic mechanisms by which microbes evolve, infect, and travel between hosts. In addition, direct effects on human behavior by microbes and personal and group reactions to infection will be examined.

Objectives:

1. To learn the life cycle of specific microbes and basic epidemiological concepts.
2. To examine the altered behaviors of humans infected by microbes.
3. To explore the range of human responses to:
 - a. avoid infection
 - b. cope with personal infection
 - c. cope with infections on a massive scale (epidemics)

- d. interactions with others who are infected
- 4. To explore the major historical epidemics of pneumonic and bubonic plague, cholera, typhus, smallpox and Spanish influenza.
- 5. To use the culture and context of cities and villages in the United Kingdom and Ireland to understand human fears, suffering, and reactions to epidemics.

Requirements:

All requirements must be attempted for a course grade.

Pre-departure

Quizzes on reading material	15%
Student developed research learning module	10%

In United Kingdom and Ireland

Reflective journal –guidelines provided	15%
Museum activities	10%
Participation – active engagement, punctual, attend all events	20%

After Return

Paper related to course topic	15%
Slide presentation of activity	10%
Integrative paper	5%

Topic Paper – This is to be a research paper that extends a topic covered in this class. These papers are to be typed using a 12 point font and double-spaced with one inch margins. It is expected that this paper will be 5 – 7 pages.

Actual topic choices will be posted on Scholar.

Reflective Journal – You will record the different sites that are visited, what you saw, what interested you most, and note the historical significance for psychology or biology of each in a daily journal. In addition, you will discuss what you learned at each site. This will help you assimilate the different aspects of each site and the particular areas of the course that each site may be pertinent. The trip journals will be subject to review by the professors at any time during the trip. It should always be up-to-date!

Museum Activities - Each museum will have an activity that is to be started and/or completed at the museum. The museum activities should be labelled and written in the daily journal on a separate page.

PowerPoint Presentation – Each student will develop a 3 to 5 slide PowerPoint presentation about one of the sites related to the science that was visited while in Europe. The slide show should include pictures of the site, information about the site, what can be learned from the site about science, and how the site relates to s. The presentations may be posted on Scholar for all students to view.

PowerPoint Lesson (Mini-lecture) – You will get to choose from a list of topics. The topics will be announced through Scholar and listed in a Google doc. Put your name beside the topic you want.

You will prepare a one-page handout that includes an outline of the material in your lesson and PowerPoint slides that provide the information in the lesson. Your lesson should include at least two sources (one can be your textbook). The sources should be reliable.

Integrative paper – A summary of what was learned and how study abroad affected your experience of learning the material.

Readings:

Several chapters and papers will be read before we leave for Europe. Please review or read the assignments **before** the class in which they are to be discussed. Make note of any questions you may have or items about which you need clarification. If these are not answered in the lecture or site visit, then be sure to ask your questions during or after class.

Grading Scale:

Points		Percentages	Points		Percentages
A	=	(92.51 and above)			
A -	=	(89.51 to 92.50)	D+	=	(66.51 to 69.50)
B+	=	(86.51 to 89.50)	D	=	(62.51 to 66.50)
B	=	(82.51 to 86.50)	D-	=	(59.50 to 62.50)
B-	=	(79.51 to 82.50)	F	=	(59.49 and below)
C+	=	(76.51 to 79.50)			
C	=	(72.51 to 76.50)			
C-	=	(69.51 to 72.50)			

Note: The cutoff points for each letter grade are firm. Letter grades will not be rounded up.

Physical Requirements

Students and faculty will walk to many sites in urban areas. This often amounts to 10 – 12 miles per day. In addition, some of the older hotels that the class stays in do not have elevators. Students and faculty may be required to climb as many as four flights of stairs. Some heat tolerance is necessary because many sites, restaurants, and hotels do not have air conditioning.

Disabilities:

In order for a student to receive an accommodation for a disability, that disability must be on record in the Dean of Students' Office, 3rd Floor, David Student Union (DSU). If you believe that you have a disability, please contact Dr. Kevin Hughes, Dean of Students (594-7160) to discuss your needs. Dean Hughes will provide you with the necessary documentation to give to your professors.

Students with documented disabilities are required to notify the instructor no later than the first day on which they require an accommodation (the first day of class is recommended), in private, if accommodation is needed. The instructor will provide students with disabilities with all reasonable accommodations, but students are not exempted from fulfilling the normal requirements of the course. Work completed before the student notifies the instructor of his/her disability may be counted toward the final grade at the sole discretion of the instructor.

Honor System

Any misconduct in terms of cheating or plagiarism will be dealt with as outlined in the student handbook. The *University Handbook* states that an academic violation of the Honor Code is a direct offense to the faculty member and to the members of the class in which the violation occurred . In addition, it is an affront to the institutional values and purpose of Christopher Newport University.