ST5 302: Cancer & Society

Fall 2016

Instructors:
Leslie Saucedo (Biology Department)
Email: lsaucedo@pugetsound.edu
Office hours: T 1-2, W 11-noon TH257F

Kristin Johnson (Science, Technology & Society Program)
Email: kristinjohnson@pugetsound.edu
Office hours: T&Th 1-3 Wyatt 153

Course Description: In this course students will develop an understanding of the history of cancer treatment, the biology of cancer, and analyze public perceptions of both. Students build a solid foundation in the science, history, and social context of cancer to allow thoughtful exploration and critique of where we’ve been and to identify future areas of concern and hope.

Objectives:

- In drawing on the methods of both history and science, this course fulfills the Connections Graduation Requirement. Thus, it will develop students’ “understanding of the interrelationship of fields of knowledge by exploring connections and contrasts between various disciplines with respect to disciplinary methodology and subject matter.”
- Students will be developing both scientific and historical literacy by learning about methods and approaches in both science and history, and analyze how and why this knowledge is constructed and communicated to non-professional audiences.
- In fulfilling a Category 3 elective (Policy & Values) in the Science, Technology and Society Program, this course aims to examine the relationship between science and society, and the relationship between science and values, in historical context.

This course also counts as an elective for the Bioethics Emphasis.

Books to Purchase:
Siddhartha Mukherjee, The Emperor of All Maladies: A Biography of Cancer
Course Reader

Assignments:
Participation & Attendance (including in-class exercises), 20%
Reading Responses, 10%
Three Essays, 15% each
Research Proposal 5%
Annotated Bibliography 5%
Research Paper, 15%

Statements of Policies

Academic honesty
All assignments must be written individually. CHEATING, PLAGIARISM, AND OTHER FORMS OF ACADEMIC DISHONESTY WILL BE REPORTED AND RESULT IN ACADEMIC PENALTIES. You are responsible for understanding what constitutes academic
honesty. Definitions and examples of academic dishonesty and the resultant penalties can be found in *The Logger*, the University’s academic handbook:

**Copyright Notice**
Course materials are for educational purposes only and limited to students enrolled in the course. They are protected by copyright law and may not be copied, downloaded, stored, transmitted, shared or changed in any way.

**Accommodations**
If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Peggy Perno, Director of the Office of Accessibility and Accommodation, 105 Howarth, 253-879-3395. She will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

**Classroom Emergency Response Guidance**
Please review university emergency preparedness and response procedures posted at www.pugetsound.edu/emergency/. There is a link on the university home page. Familiarize yourself with hall exit doors and the designated gathering area for your class and laboratory buildings. If building evacuation becomes necessary (e.g. earthquake), meet your instructor at the designated gathering area so she/he can account for your presence. Then wait for further instructions. Do not return to the building or classroom until advised by a university emergency response representative. If confronted by an act of violence, be prepared to make quick decisions to protect your safety. Flee the area by running away from the source of danger if you can safely do so. If this is not possible, shelter in place by securing classroom or lab doors and windows, closing blinds, and turning off room lights. Lie on the floor out of sight and away from windows and doors. Place cell phones or pagers on vibrate so that you can receive messages quietly. Wait for further instructions.

**Bereavement Policy**
The University of Puget Sound recognizes that a time of bereavement can be difficult for a student. Therefore, the university provides a Student Bereavement Policy for students facing the loss of a family member that can be accessed here: http://www.pugetsound.edu/student-life/personal-safety/student-handbook/academic-handbook/bereavement-policy/
Week 1
Aug 30, T  Introductions and Syllabus

Sep 1, Th  Methods, Boundaries & Themes
Reading: pps. xvii-xviii and 1-7 of Emperor of all Maladies, and readings by Gwande, Saucedo, and Johnson (posted on Moodle)

Week 2
Sep 6, T  Doing Science
Reading: New Roles for Model Genetic Organisms in Understanding and Treating Human Disease: Report From The 2006 Genetics Society of America Meeting. Spradling et al. (2006) Genetics 172: 2025-2032 (CR) and the following links regarding clinical approaches to cancer research (Moodle)

- http://www.cancer.net/research-and-advocacy/introduction-cancer-research/understanding-cancer-research-study-design-and-how-evaluate-results
- http://www.cancer.gov/research/areas/clinical-trials

Sep 8, Th  Doing History
Reading: excerpts from Porter’s The Greatest Benefit to Mankind: A Medical History of Humanity, Whorton’s Nature Cures: The History of Alternative Medicine in America, and Proctor’s The Nazi War on Cancer (CR)

Week 3
Sep 13, T  Mechanizing the Body – Whence and Why?

Sep 15, Th  A Historical Case Study: Benjamin Rush and ‘Good Medicine’
Reading: excerpts from Powell’s Bring Out Your Dead and Benjamin Rush, “An Account of the late Dr. Hugh Martin’s Cancer Power” (CR)

Week 4
Sep 20, T  Discovering Cancer: First Attempts at Treating Blood and Breast Cancers
Reading: pps 21-72 of The Emperor of All Maladies

Sep 22, Th  Understanding Halsted: Historical Context
Reading: excerpts from R. Porter’s The Greatest Benefit to Mankind (CR)

Sep 23, Fri: ESSAY #1 DUE

Week 5
Sep 27, T  The Rise of Radiation and Chemotherapy
Reading: pps 73-104 of The Emperor of All Maladies

Sep 29, Th  Rebellions ~ old and new
Reading: excerpts from J. Whorton’s *Nature Cures: A History of Alternative Medicine in America*, “Cancer and Quakery,” and Weil “Integrative Oncology” (CR)

**Week 6**

Oct 2, T  The War Begins: Curing cancer as a national goal  
Reading: pps 107-190 of *The Emperor of All Maladies*

Oct 4, Th  From Nazi biology to the Cold War  

**Week 7**

Oct 11, T  What the numbers say  
Reading: pps 193-234 of *The Emperor of All Maladies* and additional readings posted on Moodle

Oct 13, Th  Cigarettes and lung cancer  
Reading: pps 235-275 of *The Emperor of All Maladies* and R. Proctor, “The history of the discovery of the cigarette-lung cancer link: evidentiary traditions, corporate denial, global toll” (CR)

**Week 8**

Oct 18, T  No Class (Fall break)

Oct 20, Th  The Uses of History  
Reading: R. Proctor, “‘Everyone knew but no one had proof,’: tobacco industry use of medical history expertise in US courts, 1990-2002” (CR) and watch the interview of Naomi Oreskes regarding her book *Merchants of Doubt: How a Handful of Scientists Obscured Truth on Issues from Tobacco Smoke to Global Warming* (on Moodle)

Oct 21, Fri ESSAY #2 DUE

**Week 9**

Oct 25, T  Emphasis on Early Detection  
Reading: pps 276-334 of *The Emperor of All Maladies* and Elmore, et. al., “Effect of Screening Mammography on Cancer Incidence and Mortality” (CR)

Oct 27, Th  Research Prep Day

**Week 10**

Nov 1, T  A Distorted Version of our Normal Selves  
Reading: pp 337-383 of *The Emperor of All Maladies*

Nov 3, Th  Access and Equity  
**Week 11**  
Nov 8, T  
The Hallmarks of Cancer  
Readings: pp 384-392 of *The Emperor of All Maladies* and handouts.  

**Research Proposal Due**

Nov 10, Th  
Thinking about Gender  

**Week 12**  
Nov 15, T  
How we think about and tell stories of cancer  

Nov 17, Th  
How we think about and tell stories of cancer  
Reading: Taylor “On Healthy Illusions,” and Lewis “From Victim to Victor: ‘Breaking Bad’ and the Dark Potential of the Terminally Empowered” (CR)

**Week 13**  
Nov 22, T  
The Fruits of Long Endeavors  
Reading: pp 395-440 of *The Emperor of All Maladies*

Nov 23 W  
**ESSAY # 3 DUE**

Nov 24, Th  
No Class (Thanksgiving break)

**Week 14**  
Nov 29, T  
A Moving Target /Personalized Medicine  
Read the following links (on Moodle): [https://www.mycancergenome.org](https://www.mycancergenome.org).  
Excerpts from: [http://genome.cshlp.org/content/23/7/1054.full](http://genome.cshlp.org/content/23/7/1054.full).  

**Annotated Bibliography Due**

Dec 1, Th  
What will the Future Bring?  
Reading: Alizadeh, “Primum non Nocere: Reflections of a Bahai Oncologist about Treating the Dying Patient” (CR) and Saucedo, “How Long is Enough?” (Moodle)

**Week 15**  
Dec 6, T  
Conclusions  
Reading: C. Cole’s “Lessons from 50 years of curing childhood leukemia” (CR)  
George Johnson’s “In Developing World, Cancer is a Very Different Disease,” *New York Times* Dec 18, 2005 and articles by Angelina Jolie (On Moodle)

*** Research Project is due Dec 15, Th at 2pm ***
Instructions for Participation

During lecture, constructive participation includes being mentally present and asking relevant questions based on the readings and course themes. During discussion, constructive participation includes these things plus joining in on the discussion, keeping your comments collegial and on task, listening attentively to your colleagues, and bringing the materials assigned for the day to class. Constructive participation entails avoiding both dominating discussion and letting others carry the discussion entirely.

Instructions for the Reading Responses

EVERY CLASS SESSION, bring (typed or handwritten) at least one substantial comment (what did you find interesting / surprising / problematic?) and two questions (not something you can quickly google yourself) inspired by the reading. When we are reading more than one source, you should bring a comment and questions for EACH source. Do not send these by email. If you forget, or did not do the reading, hand in a piece of paper with your name on it as we use these for attendance. The reading responses are not returned to you, but you get full credit if you follow the above instructions. We use these as a springboard for discussion, and to help assess participation (especially given there often won’t be enough time for everyone to speak) and attendance.

Instructions for the Research Project

Choose a topic related to cancer & society. You must analyze at least five scholarly sources outside of material discussed in class, evaluate the information and then integrate the material into a cohesive paper. A strong paper will consider the historical, scientific, and social issues concerning the chosen topic. Some research topics may be weighted more heavily towards one perspective, but should not be discussed exclusively within that theme. It is highly recommend that the five (or more) sources used for your research are varied. That is, they are not by the same author, nor all in agreement with one another. In general, this approach will lead to a stronger, more thoughtful analysis. In both the introduction and conclusion, the paper must be framed within at least one of the broad themes of the course.

Detailed instructions for the research proposal, annotated bibliography, and three essays will be forthcoming.