

**Class:** LPS H123 What is disease?

**Professor:** Professor Ross

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**Office:** 791

**Office Hours:** by appointment

**1. Course Description:** This class explores philosophical issues associated with scientific efforts to understand and explain disease. Questions that we will focus on in this class include the following: What is disease and how is it understood and explained in modern medicine? How have past medical theories influenced our current medical model? Are diseases best understood with reductive or non-reductive approaches? What makes a disease trait valid or legitimate? How does psychiatric disease differ from physical or somatic disease, if it does all? How should we understand appeals to causal concepts such as “mechanism” and “pathway” in contemporary disease explanations? How should disease diagnosis, classification, explanation, and discovery be understood? What challenges face these practices in modern medicine? Are diseases socially constructed concepts or objective things in the world?

There are no formal prerequisites for this course. This class may be of interest to students who would like to study and examine modern medical theories, the philosophy and history of medicine, and scientific approaches to understanding and explaining disease.

**2. Textbooks:** Weekly readings will be made available through the course website.

**3. Course objectives:**

- (1) Critically examine philosophical claims regarding the nature of disease.
- (2) Assess philosophical claims about disease with respect to the history of medicine and our best scientific theories of disease.
- (3) Formulate and argue for answers to philosophical questions about how diseases are (or should be) understood and explained.

**4. Course Requirements and Expectations:**

Summary of course requirements:

Assignment	Weight
1. Attendance/Participation	30%
2. Paper presentation/discussion	10%
3. Research Project	25%
4. Book Report	25%
5. Final Presentation	10%
Total	100%

*4.0 Course Evaluation:* Extra credit points (5pts. 5% grade) are allotted for completing the course evaluation.

*4.1 Attendance/Participation:* This portion of the grade is decided on the basis of class attendance and participation. Students are expected to attend all classes and engage in discussion of the readings. Be prepared to discuss concepts from the readings, parts that you found compelling or problematic, and general questions raised by the readings. It is helpful to come to class with particular aspects of the readings you want to discuss.

*4.2 Paper presentation/discussion:* Students will each present and run class discussion for one paper on the syllabus. This should involve presenting some of the main points and concepts from the paper, questions raised by the paper, interesting connections to current events, etc. Students should do their best to deeply understand each paper they present and simply help lead discussion of the paper for the week it is discussed. **Email me your top 5 papers by this Friday (1/11).**

*4.3 Research project:* Students will complete a 1,500-2,000 word essay on a philosophical thesis related to course readings. Paper's should engage with or include scientific literature, medical case studies, and/or scientific reasoning in biomedicine. Paper topics must be approved by the instructor by Wednesday **of the fifth week** at the latest. Essays are due by **Friday of the seventh week**. Sample essay topics will be provided by the instructor.

*4.4 Book report:* The book report project involves writing up an analysis and description of a medically-related book. Suitable books can cover the philosophy of medicine, history of medicine, particular disease of interest, or popular press book on medicine. Books must be approved by the instructor by Wednesday of the **second week**. Examples of suitable books include *The Emperor of All Maladies*, *The Spirit Catches You and You Fall Down*, *The House of God*, and *Complications: A Surgeon's Notes on an Imperfect Science*. Book reports involve providing a 3,000 word review of the book by Wednesday **of the tenth week**. The review should provide a brief synopsis of what the book covers and a more detailed analysis the book's strengths and weaknesses.

*4.5 Final Presentation:* Final presentations will involve students presenting their book reports. These presentations will take place during the final time during finals week.

## 5. Grading

The following grading scale will be used in determining your final grade.

### Grading Scale

A+	98-100%	B+	88-89	C+	78-79	D+	68-69	F	58-59
A	93-97	B	83-87	C	73-77	D	63-67		
A-	90-92	B-	80-82	C-	70-72	D-	60-62		

The University describes the levels of attainment for A, B, C, and D grades as excellent, good, average, and barely passing, respectively (<https://www.reg.uci.edu/services/transcripts/notations.html>). For F, I, and IP grades, I will follow the standards set by the University (<https://www.reg.uci.edu/faculty-staff/gradingpolicy-facstaff.html>).

## 6. Policies on Classroom Environment

Students are expected to interact with one another in a polite and professional manner. Student behavior that does not support this environment will not be tolerated.

## 7. Policies on Late or Missed Assignments and Exams

*7.1 Attendance/Participation:* This portion of the grade is decided on the basis of attendance and class participation. Students are expected to contribute to class discussion during **every class**. Attendance is worth 15% and class participation 15%—if a student attends a class but does not comment in discussion, only 15% of these points will be acquired. Class participation should reveal that the students carefully read the course material and that they are prepared to discuss it. If you think you will have a harder time engaging in discussion, consider planning out particular parts of the readings that you want to mention—why you found them interesting, problematic, or related to some current event. Please bring readings to class, so that we can consult part of them during discussion if need be.

*7.1 Paper presentation/discussion:* This portion of the grade is decided on the basis of presenting one paper (in course readings) and leading a discussion on the paper. Students should plan to discuss overall argument/claims of the paper, main concepts that it covers, and particular issues that may be interesting for discussion. Students should prepare a brief outline that includes these components and bring copies for the class so that class participants can follow along. If you would like to prepare a powerpoint instead, this fine by not necessary. If you will use powerpoint please just inform me the day before class and send your powerpoint before the beginning of class.

*7.3 Research Project:* A late submission will be accepted but penalized at the rate of one grade for each day the assignment is late (A to B, B to C, and so on). Research projects are worth 25 points total. 5 points are allotted for getting topic approved at end seventh week.

*7.4 Book Report:* A late submission will be accepted but penalized at the rate of one grade for each day the assignment is late (A to B, B to C, and so on). Book reports are worth 25 points total. 5 points are allotted for getting book approved by second week.

*7.5 Final Presentation:* Final presentations are graded on the basis of how well they provide a clear description and analysis of the chosen book. These presentations take place during finals week. These presentations can only be re-scheduled under exceptional circumstances.

All students are expected to comply with the above policies. The following are generally considered exceptional circumstances that can warrant the late completion of assignments: a medical emergency, the death of a near relative, and some university-related trips (e.g., athletic team commitments). If you are in these circumstances, (i) obtain written documentation from a relevant person (e.g., doctor, coach, etc) verifying that you are in one of these situations, (ii) contact me as soon as you can to set up an appointment, and (iii) provide the relevant documentation. I will then decide how to apply the above policies to your circumstance, and I will make, by mutual agreement, any necessary makeup assignments or other arrangements.

## 8. Disability Resources

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Disability Services Center (<http://www.disability.uci.edu/>) as early as possible in the term.

## 9. Getting Help

Please do not hesitate to talk to me if you have any difficulties, concerns, or questions regarding the course or your performance. Please feel free to email me, see me during my office hours, or make an appointment with me. If you are concerned with academic matters that are not specific to this course, you should consider contacting the Learning and Academic Resource Center (<http://www.larc.uci.edu/>).

## 10. Schedule of Topics and Readings

### Week 1: Introduction

- (1/9) How do we understand and explain disease?  
puzzles, challenges, list of terms, and orientation

### Week 2: Background

- (1/16) Causal/explanatory framework: A starting point  
–Gøtzsche, Peter, *Rational diagnosis and treatment*. Ch. 3 “The disease classification”.  
–Woodward, J., (2003) *Making things happen* Ch 1. “Introduction and preview”  
–Get approval for disease/medicine book for book report (5pm).

### Week 3: History of modern medicine

- (1/23) –Ross, Lauren (2018) “The doctrine of specific etiology”  
–Harrison, Mark (2013) “Scurvy on sea and land”  
–Broadbent, Alex (2009) “Causation and models of disease in epidemiology.”

### Week 4: Diagnosis and classification

- (1/30) –Battegay et al., “General Aspects of Diagnosis and Differential Diagnosis”  
–Gøtzsche, Peter, *Rational diagnosis and treatment*, Ch. 4 “Diagnosis”  
–Kennedy, Ashley (2013) “Differential Diagnosis and the Suspension of Judgment”  
–Kennedy, Ashley (2015) “Managing uncertainty in diagnostic practice”

## **Week 5: Causal concepts in biology and medicine**

- (2/6) –Machamer, Darder, and Craver (2000), “Thinking about mechanisms”  
–Ross, Lauren (Forthcoming) “Causal concepts in biology: How pathways differ from mechanisms and why it matters.”

Other causal concepts? The notion of a cascade: (class discussion)

–**Get paper topic approval (5pm).**

## **Week 6: Challenges for explanation, diagnosis, and classification**

- (2/13) –Stegenga, Jacob “Controversial diseases” Chapter 6  
–Lemoine, Mael (2016) Molecular Complexity: Why Has Psychiatry Not Been Revolutionized by Genomics (Yet)?  
–Maung, Hane Htut (2016) “Diagnosis and causal explanation in psychiatry.”

## **Week 7: Topics in Neuropsychiatry**

- (2/20) Fox, Michael (2018) “Mapping Symptoms to Brain Networks with the Human Connectome”

Interview

–**Research project/papers due by Friday (5pm).**

## **Week 8: What makes a disease valid?**

- (2/27) Kendler and Campbell (2009) “Interventionist causal models in psychiatry: repositioning the mind–body problem”  
–Schaffner, Kenneth (2012) “A philosophical overview of the problems of validity for psychiatric disorders”  
–Hyman, Steven (2010) “The diagnosis of mental disorders: The problem of reification”

How are disease traits different from non-disease traits? (class discussion)

## **Week 9: Treating disease**

- (3/6)–Gøtzsche, Peter, *Rational diagnosis and treatment*. Ch. 5 “Uncontrolled experience”  
–Gøtzsche, Peter, *Rational diagnosis and treatment*. Ch. 6 “The randomized clinical trial”

**Week 10: Constructivism and Objectivity**

(3/13) –Murphy, Dominic (2006) “Social construction and sociological causation” in *Psychiatry in the scientific image*

–Schaffner and Tabb (2014) “Varieties of social constructionism and the problem of progress in psychiatry”

–**Book report due (5pm).**

**Week 11: Finals Week: (3/18-22) –Book report presentations.**