Summary of class:

Biases in medicine are unfortunately ubiquitous and impede reliable evidence and efficient medical care. When we take a pharmaceutical drug and feel better, we might infer that the medicine has cured us. However, our illness may have very well improved on its own. This is what we call confirmation bias. Of course, medical research has implemented overtime different methodological safeguards in order to avoid this type of bias, notably, carefully designed studies. Since the 1990s, “Evidence Based Medicine” refers to the idea that we can rank by quality these different levels of evidence. The methodological safeguards in medical research however are not perfect and confirmation bias is not the only bias impacting the reliability of medical evidence and the quality of care. For instance, what we call publication bias favors the publication of positive or striking results over negative results or replications. Moreover, some other biases are directly linked to gender and race discriminations. This course will explore some of the different biases medical science is facing, what it means for medicine overall and how it impacts society. Finally, the course will consider what impact the introduction of artificial intelligence technologies in medicine may have on these issues: is artificial intelligence likely to make medicine more reliable or on the contrary even more biased?

Online Format: Synchronic online sessions on Teams or Zoom

Evaluation:

Essay Proposal of 500 words (5%), due via Quercus on January 25, 2020 at 10:00a.m.

Book review of 1200 words (20%), last due via Quercus on February 22, 2020 at 10:00a.m. Book review from the suggested list (see below) – preferably everyone should pick a different book. Detailed instructions on how to best write a book review will be given during the first class. A book review is not solely a summary of what you have read. You should also try to engage with what you have read, discuss the arguments with your own and confront them with your other readings. I included a book suggestions list at the end of this syllabus.

Book review oral presentation (10%), presenting your book review to the rest of the class in the most pedagogical way – 20 min maximum – slides or no slides – video or oral only – synchronous or asynchronous (this oral presentation replaces the usual evaluation of participation). Dates to be define individually.
5 mini assignments of 500 words (30%), each worth 6% for weeks designated with an *. The details of the assignments are given the week before they are due. Assignments are to be submitted on Quercus under “assignments” before Saturday for weeks designated with an *. Work count is flexible, but no less than 500 words or so.

Essay of 2000 Words (35%), due via Quercus on March 15, 2020 at 10:00a.m. Note that between February 15 and February 22, 2020, you are offered to submit at any time via Quercus a draft of your essay in order to get feedbacks. Submitting your draft will not impact your final grade. Feedbacks will be given before March 1.

Note that all words counts are flexible, if you want to write a bit less or a bit more, suit yourself. However, I would advise not to overdo it: it is always a good idea to be concise in your writing. More pages will not mean a better grade.

Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University’s use of the Turnitin.com service are described on the Turnitin.com web site.

The readings listed below are tentative and subject to change

January 4 –No classes On January 4 week (see link)

January 11* – Introduction: Syllabus Overview – Philosophy of Medicine meets Ethics meets Philosophy of Information Technology

Topics that will be covered:
- What are biases? One word, several phenomena.
- Syllabus Overview.
- How to read research papers. How to read academic books.
- How to write a philosophy essay. How to write a book review.
- How to cite. How to make a bibliography.


Suggested non-mandatory reading:

Lenman, L., “How to write a crap philosophy essay: a brief guide for students”
January 18* — A short intro to “Evidence Based Medicine”

Daly, D. L., “Why we randomize”, a 6 min video on YouTube: https://www.youtube.com/watch?v=dSOipxo1UX0&t=20s


January 25 – Essay proposal of 500 words due – Bias in medical research – Financial Bias Part 1

Sismondo, S., Ghost-Managed Medicine, Chapter, 1: “Power and Knowledge in Drug Marketing” (excerpts to be defined).

Goldacre, B., Bad Pharma, Chapter 6: “Marketing” (excerpts to be defined).

Holman, B., Elliott, E.C., 2018, “The promise and perils of industry-funded science”, Philosophy Compass, 2018; e12544.

February 1* – Bias in medical research – Financial Bias Part 2

Sismondo, S., Ghost-Managed Medicine, Chapter 3: “Ghosts in the machine: publication planning 101” (excerpts to be defined)

Goldacre, B., Bad Pharma, Chapter 1: “Missing Data” (extracts to be defined).

February 8 – Bias in medical research Part 3 – Insights from history

Some of these readings can be upsetting


February 15 – Reading Week – No classes – You can send a draft of your essay any time during this week.

February 22 – Last day on which you can submit a first draft of your essay for feedback – Book Review Due – Focus 1: Gender Bias in Medicine


22min Video on YouTube - “Bias in medicine: Last Week Tonight” with John Oliver (HBO).

_Complementary non-mandatory reading:_

March 1 – Focus 2: Racism in medicine


_Complementary reading:_


March 8* – Focus 3: Covid-19


_Non-mandatory reading suggestion:_
March 15 – ESSAYS DUE – Artificial intelligence and bias: why this is an issue

39min talk on the Centre for Ethics’ YouTube Chanel where Catherine D'Ignazio and Lauren F. Klein present their book Data Feminism: https://www.youtube.com/watch?v=bnc5uElLQj8


March 22* - Explanation in Medicine and Opacity in Medical AI


Book reading suggestions (books marked with a * are the one I recommend for the book review assignment, as they relate the most to the topics in class, but you are ultimately free to choose):

* Goodman, K., 2016, Ethics, medicine and information technology, Cambridge, UK: Cambridge University Press.
* Moore, K., 2016, The Radium Girls: They paid with their lives. Their final fight was for justice, Simon & Schuster UK.
* Sismondo, S., 2017, Ghost-Managed Medicine, Big Pharma’s Invisible Hands, MatterPress.