Philosophy of Probability

PHIL 150, Harvard University, Fall 2017

Instructor: Prof. Susanna Rinard
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Office Hours: Friday 3-4 PM (or by appointment)
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Lecture Time and Location: Tues / Thurs 1-2 PM, Emerson 310 (Tanner Room)
Section: TBA
Course Website: https://canvas.harvard.edu/courses/31110 (readings available here)

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Course Description:

"Probability," remarked Bishop Butler, is "the very guide of life." In this course we will investigate the extent to which probabilistic tools can help answer basic questions like these: How should I choose among my options? What should I believe? How should I revise my beliefs upon acquiring new information? Does it make sense to believe in God? No background in math is necessary; the beginning of the course will cover the essentials of probability theory.

Assignments, Grading, and Course Requirements:

There will be five assignments: one quiz (4%), one exam (24%), and three papers (24% each).

I will occasionally recommend homework problems, but these will be neither collected nor graded; their purpose is entirely to help you learn the material.

The quiz and exam will be in-class. They must be taken on the dates scheduled, except in case of extreme emergency (e.g. hospitalization) and accompanying documentation.

Each paper will be 3 – 4 pages in length (double-spaced). Paper topics with additional details will be distributed one week prior to the due date (see tentative schedule for dates).

Papers are to be handed in at the beginning of class on the date they are due. Late papers—including papers received on the due date, after the start of class—will receive an F, unless an extension was requested at least one week prior to the due date and granted. Such papers will be read, and written comments given as usual, along with the grade the paper would have received, had it not be late.

The late penalty will not be applied in case of unforeseeable circumstances of a kind that could prevent even a responsible and dedicated student from being able to complete the paper in time. Such circumstances include illness, or a death in one's immediate family.

You will have an opportunity to re-write each paper, including late papers that received an F. If you choose to re-write a paper, your final grade for that paper will equal your grade on the re-write, and will not take into account your grade on the first version (unless your grade on the first version was higher than the re-write, in which case your final grade will equal that of the first version). You must turn in the graded version of your original paper with your re-write.

Note: philosophy graduate students enrolled in the course have the option of writing a single long term paper instead of the three short papers.

Regular, on-time attendance at lecture and section is required. Students who miss, or arrive late to, more than three class sessions (either lecture or section) will automatically fail the course, unless the absence/lateness was due to unforeseeable circumstances of a kind that could prevent even a responsible and dedicated student from attending on-time. In addition, if you have a cold or flu, you may stay home, to minimize the chance of its spreading to others.

Each student must have access to Ian Hacking's An Introduction to Probability and Inductive Logic. Other readings are from Michael Strevens' Notes on Bayesian Confirmation Theory (freely available online here: http://www.nyu.edu/classes/strevens/BCT/BCT.pdf), and other papers, which are available on the course website.

Electronic Devices:

The use of laptops, cell phones, iwidgets, etc. during lecture or section is prohibited (except in case of medical necessity, in which case follow the guidelines given below for students with disabilities).

How to Contact Me:

The best way to contact me is in person, either during office hours, or, if you have a short message, after class. You may also send e-mail. However, I do not check e-mail often, and so response time may be long. Moreover, e-mail is best used for quick logistical matters; substantive philosophical questions are much better addressed in person, e.g. during office hours. In particular, I do not comment on paper drafts over e-mail. I welcome (and encourage) you to bring paper drafts to office hours for feedback.

Academic Integrity:

The answers you give on the quiz and the exam must be entirely your own (although you may find it helpful to prepare beforehand with others).

You may find it helpful to discuss the paper topics, and your ideas, with others. However, you should write the paper entirely on your own, and it should reflect your own understanding of and approach to the material. (It may be helpful for you to get feedback from others on drafts you have written, but any writing—either on the initial draft, or revisions in light of feedback from others—should be done entirely on your own, and, again, should reflect your own understanding of the material.) If the views and arguments expressed in your paper have been influenced by

discussions with others, you must mention this in a footnote. However, do not name the people or provide any other information that could compromise blind grading. Consulting sources other than the course readings and lecture notes is discouraged, but if your views have been influenced by other articles you happen to be aware of, cite them.

Accommodations for Students with Disabilities:

Students needing academic adjustments or accommodations because of a documented disability must present their Faculty Letter from the Accessible Education Office (AEO) and speak with the instructor by the end of the second week of the term. Failure to do so may result in the instructor's inability to respond in a timely manner. All discussions will remain confidential, although the instructor may contact AEO to discuss appropriate implementation.

Tentative Schedule:

Hacking, An Introduction to Probability and Inductive Logic

Thurs, Aug 31 Hacking 3 – 5

Tues, Sept 5 Hacking 6 – 7

Thurs, Sept 7 NO CLASS

Tues, Sept 12 Hacking 8 – 9

Thurs, Sept 14 QUIZ; Hacking 11

Tues, Sept 19 Hacking 12 – 13

Thurs, Sept 21 Hacking 14 – 15

Tues, Sept 26 Hacking 16 – 17

Thurs, Sept 28 Hacking 18 – 19

Tues, Oct 3 Hacking 20 – 22

Thurs, Oct 5 EXAM; Paper 1 Topics Distributed

Bayesian Confirmation Theory

Tues, Oct 10 "Does Bayesianism Solve the Problem of Induction?" (Strevens BCT Notes)
"Bayesian Confirmation Theory and the Problems of Confirmation" (BCT Notes)

Thurs, Oct 12 PAPER 1 DUE

"The Subjectivity of Bayesian Confirmation Theory" (BCT Notes)
Optional: "Epistemic Permissiveness" (White)

Tues, Oct 17 "The Problem of Old Evidence" (Strevens BCT Notes)
Optional: "Why I Am Not a Bayesian" (Glymour)

Arguments for Probabilism; Epistemic Decision Theory

Thurs, Oct 19 "Dutch Book Arguments Depragmatized" (Christensen)

Tues, Oct 24 PAPER 1 RE-WRITE DUE; Paper 2 Topics Distributed
"A Nonpragmatic Vindication of Probabilism" (Joyce)

Thurs, Oct 26 "The Foundations of Epistemic Decision Theory" (Konek & Levinstein)

Tues, Oct 31 PAPER 2 DUE
"A Pragmatist's Guide to Epistemic Utility" (Levinstein)
"No Exception for Belief" (Rinard)

The Principle of Indifference; Imprecise Probability

Thurs, Nov 2 "Explanationist Aid for the Theory of Inductive Logic" (Huemer)

Tues, Nov 7 "Evidential Symmetry and Mushy Credence" (White)

Thurs, Nov 9 "Subjective Probabilities Should be Sharp" (Elga)

Tues, Nov 14 PAPER 2 RE-WRITE DUE; Paper 3 Topics Distributed
"A Decision Theory for Imprecise Probabilities" (Rinard)

Probability and Religion

Thurs, Nov 16 "The Evolutionary Anti-Naturalism Argument" (Plantinga)

Tues, Nov 21 PAPER 3 DUE
"Fine-Tuning and Multiple Universes" (White)

Thurs, Nov 23 NO CLASS (Thanksgiving Break)

Tues, Nov 28 Hacking 10; "Blaise and Bayes" (Hajek)

Thurs, Nov 30 "Bayes, Hume, Price, and Miracles" (Earman); "Of Miracles" (Hume)

PAPER 3 RE-WRITE DUE on December 4