

HISTORY AND PHILOSOPHY OF SCIENCE HIST 393/PHIL360

Tuesdays/Thursdays 2:00 to 3:30 Buchanan D322

Professor Margaret Schabas, Department of Philosophy

Teaching Assistant: Eric Anderson eander05@mail.ubc.ca

Buchanan E358 Office Hours: Tuesday/Thursday 11:30 to 12:30

Course Outline

What is science? There is no single answer, but to begin to understand it as a human practice, a body of knowledge, or an instrument for change, we will read some of the key classics in the history of science and apply these to grapple with philosophical questions on the methods and scope of science. We will first read brief selections by the leading natural philosophers who forged modern science (Matthews anthology), then read overviews of science in the eighteenth century (Hankins) and the nineteenth century (Snyder), followed by chapters from Darwin's groundbreaking book, *On the Origin of Species* (1859). We will finish with Kuhn's challenge to the belief in continuous scientific progress.

Textbooks (available at the UBC Bookstore; all are paperback and inexpensive)

Michael Matthews, *The Scientific Background to Modern Philosophy*

Thomas L. Hankins, *Science and the Enlightenment*

Laura J. Snyder, *The Philosophical Breakfast Club*

Charles Darwin, *On the Origin of Species* (UBC library or purchase online)

Thomas S. Kuhn, *The Structure of Scientific Revolutions*

Grading

Weight

| | |
|-------------------------------|--------------------|
| Two Tests | 40 February 2 & 28 |
| Essay | 20 Due March 21 |
| Quiz | 5 March 30 |
| Final Examination (2.5 hours) | <u>35</u> TBA |
| | 100% |

Logistics: Each class will be a mixture of lecture and discussion. The in-class tests will consist both of short questions (some choice) and one longer essay question. The first is on the readings from Matthews, the second on the text by Hankins. The Essay (1000 words) is on an assigned question on Snyder's book. No research is recommended or required for the essay. The short quiz on Darwin will take the first 15 minutes of the class time. The preview of the final examination will be distributed in the last class and include a set of essay questions, some of which will appear on the actual exam. The exam will also have short questions or terms for identification drawn mostly from Kuhn. Unless granted a concession (and notified in advance of the due date), late assignments will be penalized at 5% per day.

Please do the assigned readings in advance of the Tuesday class and always bring the readings to class.

Schedule

Early Modern Science

- January 10-12: Preliminaries, Copernicus (Matthews)
January 17-19: Bacon, Galileo (Matthews)
January 24-26: Descartes, Boyle, Huygens (Matthews)
January 31: Newton (Matthews)
February 2: **First Test** (in class)

Science and the Enlightenment

- February 7-9: Hankins, Ch. 1-3
February 14-16: Hankins, Chs. 4-6
February 21-23: **Midterm Break**
February 28: **Second Test** (in class)

Nineteenth-Century Science

- March 2: Snyder, Prologue, Chs. 1-2
March 7-9: Snyder, Chs. 3-8
March 14-16: Snyder, Chs. 10-13, Epilogue
March 21: Darwin, Introduction, Chs. 1-2 **Essay Due** (on Snyder)
March 23: Darwin, Chs. 3-5
March 28: Darwin, Chs. 6, 15

Does Science Progress?

- March 30: Kuhn, Chs. 1-2; Short Quiz on Darwin
April 4-6: Kuhn, Chs. 3-10
April 11: Kuhn, Chs. 11-13 plus Postscript
Exam Preview Distributed
April 13: No Class
April TBA: Final Examination

[Senate Policy V-130](#) “UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available **here** (<https://senate.ubc.ca/policies-resources-support-student-success>).”

Under [UBC's academic concession policy](#), students seeking academic concession for any of three reasons: conflicting responsibilities; medical circumstances; and compassionate grounds, are directed to consult the course syllabus for guidance on next steps. If you miss marked coursework for the first time (assignment, exam, presentation, participation in class) and the course is still in-progress, speak with me immediately to find a solution for your missed coursework. If this is not the first time you have requested concession or classes are over, fill out Arts Academic Advising's [online academic concession form](#) immediately, so that an advisor can evaluate your concession case. If you are a student in a different Faculty, please consult [your Faculty's webpage on academic concession](#), and then contact me if appropriate.

Plagiarism:

Plagiarism, which is intellectual theft, occurs where an individual submits or presents the oral or written work of another person as his or her own. Scholarship quite properly rests upon examining and referring to the thoughts and writings of others. However, when another person's words (i.e. phrases, sentences, or paragraphs), ideas, or entire works are used, the author must be acknowledged in the text, in footnotes, in endnotes, or in another accepted form of academic citation. Where direct quotations are made, they must be clearly delineated (for example, within quotation marks or separately indented). Failure to provide proper attribution is plagiarism because it represents someone else's work as one's own. Plagiarism should not occur in submitted drafts or final works. A student who seeks assistance from a tutor or other scholastic aids must ensure that the work submitted is the student's own. Students are responsible for ensuring that any work submitted does not constitute plagiarism. Students who are in any doubt as to what constitutes plagiarism should consult their instructor before handing in any assignments.

A link about Academic misconduct is below

<http://www.calendar.ubc.ca/Vancouver/index.cfm?tree=3,54,111,959>