

History and philosophy of science

Science studies nature: HPS studies science.

The Department of History and Philosophy of Science studies science by asking such questions as:

- If science tells the truth, why do scientists sometimes say one thing (for example, dinosaurs were cold-blooded) and then later say the opposite (dinosaurs were warm-blooded)?
- What determines which diseases are given priority in medical research?
- Can science usefully work with Aboriginal beliefs about nature to better conserve the environment?
- Is it really true that people in medieval Europe believed the earth was flat?
- When science and religion disagree, which should we believe?
- How many scientific theories have been biased against women, religious, or racial minorities?
- Are science students well trained to think for themselves or are they just trained to apply the current popular scientific theories?
- How much influence in society should scientists have?

Suggested subjects

Students should consult the full list of history and philosophy of science subjects and their detailed descriptions (see page 223).

Not all history and philosophy of science subjects receive Science credit. The tables below list the history and philosophy of science subjects for which Science credit will be awarded. If a student elects to complete a history and philosophy of science subject that does not appear in these tables, non-Science credit will be awarded towards the Bachelor of Science degree.

Note that:

- Students enrolled in a combined Bachelor of Science course are not entitled to count non-Science points towards the Bachelor of Science component.
- History and philosophy of science subjects count toward the Arts component of both the Bachelor of Arts/Bachelor of Science combined course and the Bachelor of Arts and Sciences course.

Science students are not able to major in history and philosophy of science, but can do a co-major in the discipline, provided that they also complete an approved Science major, as detailed in *Majors* (p.762).

100-level subjects

All 100-level subjects are available to Science students without prerequisites.

Table 30: History and philosophy of science subjects offered for Science credit at the 100-level		
<i>Careful attention should be paid to the level and number of Science credit points that will be awarded for the completion of these subjects.^a</i>		
Subject code and title	Science credit points	Semester
136-028 History of Astronomy (p.223)	12.5	1
136-030 Human Values, Science, and Nature (p.223)	12.5	1
136-031 Science, Philosophy and History (p.224)	12.5	2
136-032 The Ecological History of Humankind (p.224)	12.5	2

- a. Note: History and philosophy of science subjects count toward the Bachelor of Arts component of both the Bachelor of Arts/Bachelor of Science combined course and Bachelor of Arts and Sciences course. Refer to the Arts section of this Handbook for points details.

200-level subjects

Students are generally required to have completed at least 62.5 points at the 100-level before enrolling in 200-level subjects. Completion of 100-level HPS is not required.

Table 31: History and philosophy of science subjects offered for Science credit at the 200-level		
<i>Careful attention should be paid to the level and amount of Science credit points that will be awarded for the completion of these subjects.^a</i>		
Subject code and title	Science credit points	Semester
136-029 Darwinism (p.224)	12.5	2
136-033 Science, Reason and Reality (p.224)	12.5	1
136-034 Science, Life and Mind (p.224)	12.5	1
136-036 Philosophy of Science (p.225)	12.5	2
136-037 Issues in the Modern Life Sciences (p.225)	12.5	2
136-038 The Scientific Revolution (p.225)	12.5	1
136-040 Science Technology and Society (p.225)	12.5	1
136-044 Current Issues in HPS (p.225)	12.5	2

- a. Note: History and philosophy of science subjects count toward the Bachelor of Arts component of both the Bachelor of Arts/Bachelor of Science combined course and Bachelor of Arts and Sciences course. Refer to the Arts section of this Handbook for points details.

300-level subjects

Students doing a co-major or seeking entry to honours in HPS are required to complete 12.5 points at second/third year level in two of the following areas: history of science, philosophy of science and sociology of science; and should select at least one 300-level subject from 136-052, 136-054, 136-055 [note that these subjects do have prerequisites].

Table 32: History and philosophy of science subjects offered for Science credit at the 300-level		
<i>Careful attention should be paid to the level and amount of Science credit points awarded for the completion of these subjects.</i>		
Subject code and title	Science credit points	Semester
136-052 Science as Practice and Culture (p.229)	12.5	Not offered
136-054 Controversies in Philosophy of Science (p.226)	12.5	2
136-055 Approaches to the History of Science (p.226)	12.5	1
136-062 Directed Study (p.227)	12.5	1, repeat 2
136-329 Darwinism (Science 3) (p.226)	12.5	2
136-333 Science, Reason and Reality (Science 3) (p.226)	12.5	1
136-334 Science, Life and Mind (Science 3) (p.226)	12.5	1
136-336 Philosophy of Science (Science 3) (p.227)	12.5	2
136-337 Biotechnology in Modern Society (Sci.3) (p.227)	12.5	2

Table 32: History and philosophy of science subjects offered for Science credit at the 300-level*Careful attention should be paid to the level and amount of Science credit points awarded for the completion of these subjects.*

Subject code and title	Science credit points	Semester
136-338 The Scientific Revolution (Science 3) (p.227)	12.5	1
136-340 Science Technology & Society (Science 3) (p.227)	12.5	1
136-344 Current Issues in HPS (Science 3) (p.227)	12.5	2

Bachelor of Science (Honours)

For information about the Faculty *and* departmental entry requirements for Honours, please refer to *Bachelor of Science (Honours)* and *Bachelor of Information Systems (Honours)* (p.883). These requirements should be considered when planning your course.