



PHIL*4140 Current Debates in Philosophy of Science

Fall 2020

Section(s): 01

Department of Philosophy

Credit Weight: 0.50

Version 1.00 - September 14, 2020

1 Course Details

1.1 Calendar Description

Each offering of this course will focus on a specific issue or set of related issues that are now being debated in Philosophy of Science. Readings will be contemporary works.

Pre-Requisites: 1.00 credits in Philosophy at the 3000 level or 12.50 credits

1.2 Course Description

Knowing *why* is a singular achievement, distinct from other scientific accomplishments. This course focuses on the philosophy of scientific explanation and related issues including reduction, emergence, idealization and modeling. The emphasis is on contemporary work.

1.3 Timetable

The course meets on Fridays from 12:30 to 3:20 in Thornborough 1200. Students may participate face-to-face or remotely. Each class will be livestreamed via Zoom. The link to the live class is accessed through CourseLink.

1.4 Final Exam

There is no final exam.

2 Instructional Support

2.1 Instructional Support Team

Instructor: Andrew Wayne
Email: awayne@uoguelph.ca

Telephone: +1-519-824-4120 x00000
Office Hours: Wednesdays, 3:00 - 4:00 on Zoom, and by appointment. The link to the Zoom office hour meeting is accessible on CourseLink.

3 Learning Resources

3.1 Required Resources

All readings will be available on CourseLink (Article)

4 Learning Outcomes

4.1 Course Learning Outcomes

By the end of this course, you should be able to:

1. Understand, explain and assess main aspects of the scientific explanation, including causal and non-causal approaches, model-based explanation, and explanatory asymmetry.
 2. Understand, explain and assess key philosophical concepts including deduction, causation, reduction, emergence, modeling and idealization.
 3. Prepare a sustained piece of philosophical writing in which a topic is articulated clearly and a stance on that topic is supported by appropriate and well thought-through reasons.
 4. Argue successfully for your own view and be able to identify and critically evaluate patterns of argumentative reasoning in the work of others.
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5 Teaching and Learning Activities

5.1 Tentative Schedule

Week	Topic	Reading
Sept. 11	Introduction	Weinberg 2001
	1. Standard accounts of scientific explanation	
Sept. 18	The deductive-nomological account	Hempel 1965, pp. 245-251, 333-354, 412-415
Sept. 25	The unificationist account	Kitcher 1981

Week	Topic	Reading
Oct. 2	The causal-mechanical account	Salmon 1984, Chs. 1 and 5
Oct. 9	The causal-interventionist account	Woodward 2003, Chs. 1 and 5
Oct. 16	<i>Synthesis paper #1 due at noon. Graduate students present.</i>	<i>None</i>
2. Current work on scientific explanation		
Oct. 23	Explanatory fictions	Bokulich 2012
Oct. 30	Minimal-model explanations	Batterman and Rice 2014
Nov. 6	The Counterfactual Theory of Explanation	Reutlinger 2016
Nov. 13	Challenges for non-causal explanation	Saatsi and Pexton 2013
Nov. 20	<i>Synthesis paper #2 due at noon. Undergraduate students present.</i>	<i>None</i>
3. The problem of explanatory asymmetry		
Nov. 27	A solution to the problem of explanatory asymmetry	Wayne 2020
<i>Final paper due Dec. 11, 11:30 pm</i>		

6 Assessments

6.1 Course Requirements

- 20% Synthesis paper 1
 - 20% Synthesis paper 2
 - 20% Presentation
 - 40% Term paper
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7 Course Statements

7.1 Additional support

Students with special needs or requiring additional support are encouraged to speak with me as early in the term as possible to ensure that appropriate arrangements are made.

7.2 Live and recorded online classes

By enrolling in a course, unless explicitly stated and brought forward to their instructor, it is assumed that students agree to the possibility of being recorded during lecture, seminar or other "live" course activities, whether delivery is in-class or online/remote.

If a student prefers not to be distinguishable during a recording, they may:

1. 1. 1. turn off their camera
2. mute their microphone
3. edit their name (e.g., initials only) upon entry to each session
4. use the chat function to pose questions.

Students who express to their instructor that they, or a reference to their name or person, do not wish to be recorded may discuss possible alternatives or accommodations with their instructor.

7.3 Online Behaviour

Inappropriate online behaviour will not be tolerated. Examples of inappropriate online behaviour include:

- Posting inflammatory messages about your instructor or fellow students
- Using obscene or offensive language online
- Copying or presenting someone else's work as your own
- Adapting information from the Internet without using proper citations or references
- Buying or selling term papers or assignments
- Posting or selling course materials to course notes websites
- Having someone else complete your quiz or completing a quiz for/with another student
- Stating false claims about lost quiz answers or other assignment submissions
- Threatening or harassing a student or instructor online
- Discriminating against fellow students, instructors and/or TAs
- Using the course website to promote profit-driven products or services
- Attempting to compromise the security or functionality of the learning management system
- Sharing your user name and password
- Recording lectures without the permission of the instructor

8 University Statements

8.1 Email Communication

As per university regulations, all students are required to check their e-mail account regularly: e-mail is the official route of communication between the University and its students.

8.2 When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Graduate Calendar - Grounds for Academic Consideration

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions

<https://www.uoguelph.ca/registrar/calendars/diploma/current/index.shtml>

8.3 Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all students (undergraduate, graduate and diploma) except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in their respective Academic Calendars.

Undergraduate Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Graduate Calendar - Registration Changes

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-reg-regchg.shtml>

Associate Diploma Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml>

8.4 Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

8.5 Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability.

Use of the SAS Exam Centre requires students to book their exams at least 7 days in advance and not later than the 40th Class Day.

For Guelph students, information can be found on the SAS website
<https://www.uoguelph.ca/sas>

For Ridgetown students, information can be found on the Ridgetown SAS website
<https://www.ridgetownc.com/services/accessibilityservices.cfm>

8.6 Academic Integrity

The University of Guelph is committed to upholding the highest standards of academic integrity, and it is the responsibility of all members of the University community—faculty, staff, and students—to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff, and students have the responsibility of supporting an environment that encourages academic integrity. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

Undergraduate Calendar - Academic Misconduct
<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Graduate Calendar - Academic Misconduct
<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

8.7 Recording of Materials

Presentations that are made in relation to course work - including lectures - cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

8.8 Resources

The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs.

Academic Calendars

<https://www.uoguelph.ca/academics/calendars>

8.9 Disclaimer

Please note that the ongoing COVID-19 pandemic may necessitate a revision of the format of course offerings and academic schedules. Any such changes will be announced via CourseLink and/or class email. All University-wide decisions will be posted on the COVID-19 website (<https://news.uoguelph.ca/2019-novel-coronavirus-information/>) and circulated by email.

8.10 Illness

The University will not normally require verification of illness (doctor's notes) for fall 2020 or winter 2021 semester courses. However, requests for Academic Consideration may still require medical documentation as appropriate.
