

WESTERN UNIVERSITY
Department of Philosophy
Undergraduate Course Outline 2026-27

PHILOSOP 1030A
Understanding Science

INSTRUCTOR INFORMATION

Information including instructor contact details and course location can be found on the course Owl BrightSpace: <https://westernu.brightspace.com/>

PREREQUISITE CHECKING

No prerequisites

[Student Responsibility for Course Selection](#)

COURSE DESCRIPTION

The aim of this course is to engage students in thinking about the nature of science, how science works, and what differentiates scientific from other forms of inquiry. Questions to be considered may include: What distinguishes science from non-science? What are the differences between basic, applied, and translational science? What is the scientific method? How do scientific experiments work? What role do models play in science? What is the structure of scientific reasoning? What is the nature of scientific explanation? What role do values play in science? Do funding and academic incentive structures impact knowledge production in science? If so, what are the implications? Are there limits to what science can or should explain? What does science tell us about reality?

LEARNING OUTCOMES

Students who successfully complete this course will have developed a detailed understanding of the nature of science and how it works as well as the ability to critically evaluate scientific findings as presented in the media and popular press. Students will gain analytic reasoning skills that are key to their success as future students of science and/or consumers of scientific discoveries and technologies.

TEXTS

There is one required text for this course, around which course discussions will be structured:

Angela Potochnik, Matteo Colombo, and Cory Wright. *Recipes for Science: An Introduction to Scientific Methods and Reasoning*. (2nd Edition). New York: Routledge, 2024.

The cost of the paperback and e-book versions of this book is CAD\$86.53 – NOTE: The second edition of this textbook is required for course.

Here is a link to the bookstore's website:

https://bookstore.uwo.ca/textbook-search?campus=UWO&term=W2026A&courses%5B0%5D=001_UW/PHI1030A

Here is a link to the publisher's website:

<https://www.routledge.com/Recipes-for-Science-An-Introduction-to-Scientific-Methods-and->

METHOD OF EVALUATION & TENTATIVE DATES OF EVALUATIONS

1. Exam 1 (Oct 6) – this exam will cover course material from Sept. 10-Oct 1(30%)
2. Exam 2 (Nov 16) – this exam will cover course material from Oct 8-Nov 12 (35%)
3. Final cumulative exam (To be scheduled during the Exam period) - (35%)

All examinations/evaluations will be held in class during scheduled course time. All exams will include some combination of multiple choice, true/false, matching type questions, short answer questions, and analyses of case studies using ideas, insights, and analytic skills learned in class.

DEPARTMENT OF PHILOSOPHY POLICIES

The Department of Philosophy policies that govern the conduct, standards, and expectations for student participation in Philosophy courses are available in the Undergraduate section of the Department of Philosophy website <http://uwo.ca/philosophy/undergraduate/policies.html> . It is your responsibility to understand the policies set out by the Senate and the Department of Philosophy, and thus ignorance of these policies cannot be used as grounds of appeal.

AUDIT

Students wishing to audit the course should consult with the instructor prior to or during the first week of classes.

ELECTRONIC DEVICES

Electronic devices of any kind (including calculators, cell phones and smart watches) are not permitted on texts and exams.

ACADEMIC ACCOMMODATION AND ACCESSIBLE EDUCATION

Academic Accommodation is “a means of adjusting the academic activities associated with a course or program of student in order to permit students with disabilities to participate in those activities at the University and to fulfill the essential requirements of a course or program.” <https://www.uwo.ca/univsec/pdf/academicpolicies/appeals/Academic%20Accommodationdisabilities.pdf>. Students with disabilities are encouraged to register with Accessible Education at the earliest opportunity. “Accessible Education plays a central role in Western's efforts to ensure that its academic programs are accessible for all students” <http://academicsupport.uwo.ca/accessibleeducation/index.html>

SPECIAL EXAMINATIONS

A Special Examination is any examination other than the regular examination, and it may be offered only with the permission of the Dean of the Faculty in which the student is registered, in consultation with the instructor and Department Chair. Permission to write a Special Examination may be given on the basis of compassionate or medical grounds with appropriate supporting documents. To provide an opportunity for students to recover from the circumstances resulting in a Special Examination, the University has implemented Special Examinations dates. These dates as well as other important information about examinations

and academic standing can be found [here](#).

ACADEMIC CONSIDERATION

Students may request academic consideration in cases of extenuating circumstances – that is, personal circumstances beyond the student’s control that have a substantial but temporary impact on the student’s ability to meet essential academic requirements.

1. Requests for academic consideration are made to the Academic Advising office of Faculty in which the student is registered.
2. Requests for academic consideration include the following components:
 - a. Self-attestation signed by the student;
 - b. Indication of the course(s) and assessment(s) relevant to the request;
 - c. Supporting documentation as relevant

Requests without supporting documentation are limited to one per term per course.

Documentation for medical illness, when required, includes the completion of a [Western Student Medical Certificate \(SMC\)](#) or, where that is not possible, equivalent documentation, by a health care practitioner. Requests linked to examinations scheduled by the Office of the Registrar during official examination periods as well as practice laboratory and performance tests typically scheduled in the last week of term always require formal supporting documentation.

Policy on Academic Consideration – Undergraduate Students in First Entry Programs

RELIGIOUS ACCOMMODATION

Western’s Policy on Accommodation for Religious Holidays can be found here:

https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf.

In the case of mid-term tests, notification is to be “given in writing to the instructor as early as possible, but not later than **one week** prior to the writing of the test”.

COURSE ASSIGNMENT

The last day of scheduled classes in any course will be the last day on which course assignments will be accepted for credit in a course. Instructors will be required to return assignments to students as promptly as possible with reasonable explanations of the instructor's assessment of the assignment.

SCHOLASTIC OFFENCES

Scholastic offences are taken seriously, and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site:

https://www.uwo.ca/ombuds/pdf/scholastic_offences.pdf

Computer-marked multiple-choice tests and exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

ACADEMIC ADVISING

Your Home Faculty's Academic Advising Office will support or refer whenever you have an issue that is affecting your studies, including information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters. Do not hesitate to reach out to them if you are struggling and unsure where to go for help. Contact info for all Faculties is here:

https://registrar.uwo.ca/faculty_academic_counselling.html

MENTAL HEALTH SUPPORT

Students who are in emotional/mental distress should refer to Mental Health@Western (<https://uwo.ca/health/>) for a complete list of options about how to obtain help. Immediate help in the event of a crisis can be had by phoning 519.661.3030 (during class hours) or 519.433.2023 after class hours and on weekends (24/7 availability).

GENDER-BASED AND SEXUAL VIOLENCE

Western University [is committed to reducing incidents of gender-based and sexual violence](#) (GBSV) and providing compassionate support to anyone who is going through or has gone through these traumatic events. If you are experiencing or have experienced GBSV (either recently or in the past), you will find information about support services for survivors, including emergency contacts at the following website:

https://www.uwo.ca/health/student_support/survivor_support/get-help.html. To connect with a case manager or set up an appointment, please contact support@uwo.ca.