

WESTERN UNIVERSITY
Department of Philosophy
Undergraduate Course Outline 2024-25

PHILOSOP 2020-650
Basic Logic

INSTRUCTOR INFORMATION

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

PREREQUISITE CHECKING

NA

It is your responsibility to ensure that you have the prerequisites for this course or have special permission to take the course without the prerequisites. [Student Responsibility for Course Selection](#)

COURSE DESCRIPTION

This is an introductory course in formal logic, which may be used to satisfy the logic requirement for the HSP module in Philosophy. The focus of the course is on Modern Symbolic Logic. The first term focuses solely on propositional or sentential logic; the second term is dedicated to first-order predicate logic. A system of natural deduction is introduced for proving statements and assessing natural language arguments. A formal language is introduced along with techniques for translating between this formal system and natural language. Truth tables are used to test for truth-functional properties. A more efficient system of truth trees is then introduced to test for these properties. Carroll Diagrams are introduced as a method to test for the validity of categorical syllogisms. Theoretical notions of soundness and completeness are defined. Informal reasoning to verify logical truth, equivalence, and consistency is presented. The course will conclude with a brief introduction to modal logic and logical paradoxes.

LEARNING OUTCOMES

1. Improve critical reasoning skills
2. Learn formal systems of propositional and first-order predicate logic
3. Learn to translate between ordinary language and formal language
4. Use truth tables to test for truth-functional properties
5. Learn to use formal trees to test for various logical properties
6. Learn formal proof methods and use them to test argument validity
7. Learn to use Carroll Diagrams to determine the validity of categorical syllogisms
8. Define soundness and completeness of a formal system
9. Informally verify quantificational truth, equivalence, and consistency

TEXTS

Arthur, Richard (2017). An Introduction to Logic Using Natural Deduction, Real Arguments, a Little History and Some Humour. 2nd Edition. Broadview Press.

METHOD OF EVALUATION

Weekly Assignments 40% (20% per term)

Midyear Examination 30% (3 hours, written **in person** during official examination period assigned by registrar's office)

Final Examination 30% (3 hours, written **in person** during official examination period assigned by registrar's office)

Note: Midyear and final examinations will be in person.

Each term there will be 11 weekly assignments. The top 10 will count towards your term assignment grade of 20%.

A link to the university Policy on Academic Consideration is below.

https://uwo.ca/univsec/pdf/academic_policies/appeals/academic_consideration_Sep24.pdf

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

No aids are permitted for the examinations in this course. Electronic devices of any kind (including calculators, cell phones and smart watches) are not permitted.

STATEMENT ON THE USE OF GENERATIVE ARTIFICIAL INTELLIGENCE (AI)

If plagiarism or unauthorized AI use is suspected, the instructor will ask for drafts of assignments after the assignment has been submitted. Students must keep all notes and first drafts until the assignment is returned to them.

In this course, a link to a theorem checker will be provided. The use of any other AI (automatic translation tools, grammar checkers, ChatGPT...) is prohibited. To ensure students are not using unauthorized AI, use of any formal system other than that taught in the course and presented in the text will receive a grade of 0 on assignments and exams.

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](#)

ACCOMMODATION

Students seeking academic accommodation on medical grounds for any missed tests, exams, participation components and/or assignments worth 10% or more of their final grade must apply to the Academic Counselling office of their home Faculty and provide documentation. Academic accommodation cannot be granted by the instructor or department. Documentation shall be submitted, as soon as possible, to the Office of the Dean of the student's Faculty of registration, together with a request for relief specifying the nature of the accommodation being requested. The UWO Policy on Accommodation for Medical Illness and further information regarding this policy can be found at https://uwo.ca/univsec/pdf/academic_policies/appeals/academic_consideration.pdf

The Student Medical Certificate is available at https://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf

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:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf

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.