

HURON UNIVERSITY COLLEGE AT WESTERN
Undergraduate Course Outline 2013-14
Philosophy 2250: Introduction to Logic

Time: Mon., Tues., Thurs. 3:30-4:30
Location: HC-W18
Antirequisite(s): [Philosophy 2020, 2252W/X.](#)
Prerequisite(s): None

Instructor: Dr. Morgan Tait
Office: A202
Office Hours: Mon 4:30-5:30, or by appointment
mtait8@uwo.ca

DESCRIPTION

This is an introductory course in formal logic. We will study sentential and predicate logic systems, focusing on the methods and procedures of logical analysis such as truth trees and natural deduction systems, as well as the formal techniques relevant to effective argumentation. We will also study logical properties and relations, and develop an understanding of syntactic and semantic concepts and results. No previous knowledge of logic is presupposed.

OBJECTIVES

The course has three main objectives:

- i) To familiarize students with formal language systems and the techniques of logical deduction, and to apply these techniques in the evaluation of arguments;
- ii) To develop a general facility for the formal analysis of argumentation, including translating between written arguments and formal language systems;
- iii) To apply relevant logical concepts such as validity, soundness, logical truth, necessity and contingency to the analysis of reasoning and inference, and to develop a logical vocabulary for the formal analysis of language in any subject area.

TEXTS

Merrie Bergmann, James Moor, and Jack Nelson. *The Logic Book*. Fifth Edition. McGraw Hill, 2009. The text is available for purchase at the campus bookstore.

Additional materials may be made available on WebCT.

REQUIREMENTS

Attendance and participation:	10%
Four take-home assignments (7.5% each):	30%
Two in-class midterms (15% each):	30%
Final cumulative exam:	30%

Take-home assignments will be handed out in class on Thursdays. Assignments are due in class one week after they are handed out. Late assignments will be penalized 3% per day.

Tentative Schedule of Readings

(All references to sections are from *The Logic Book*)

Week 1: Sept. 9, Sept. 10, Sept. 12

The Purpose of a Course in Logic; Sentences, Arguments, Truth and Falsity; Validity and Soundness; TLB Sections 1.1-1.4

Week 2: Sept. 16, Sept. 17, Sept. 19

Induction vs. Deduction; Consistency and Equivalence; Special Cases of Validity; Introduction to Symbolization; TLB Sections 1.5-1.7, 2.1

Week 3: Sept. 23, Sept. 24, Sept. 26

Introduction to Symbolization (continued); Complex Symbolizations; TLB 2.1, 2.2

Week 4: Sept. 30, Oct. 1, Oct. 3

Complex Symbolizations (continued); Non Truth-Functional Connectives; TLB 2.2, 2.3

First assignment handed out October 3.

Week 5: Oct. 7, Oct. 8, Oct. 10

Introduction to Truth Tables; Truth Functional Truth, Falsity and Indeterminacy; Truth Functional Equivalence; TLB 3.1-3.3

First Assignment due in class October 10.

Week 6: Oct. 14 no class- Thanksgiving Holiday, Oct. 15, Oct. 17

Truth-Functional Consistency, Entailment and Validity; Other Truth-Functional Properties; Introduction to Truth Trees; TLB 3.4-3.6, 4.1-4.2

Week 7: Oct. 21, Oct. 22, Oct. 24 .

Introduction to Truth Trees (continued); Truth Trees for Conditionals and Biconditionals; Complex Truth Trees; TLB 4.2-4.4

Week 8: Oct. 28, Oct. 29, No class Oct. 30 Fall Study Break

Complex Truth Trees (continued); Testing Truth-Functional Properties With Truth Trees; TLB 4.4-4.6

Week 9: Nov. 4, Nov. 5, Nov. 7 *Second Assignment Handed Out*

Testing Truth-functional Properties With Truth Trees (continued); Introduction to Derivations; TLB 4.6-4.7, 5.1

First Midterm in class on Tuesday, Nov. 5.

Week 10: Nov. 11, Nov. 12, Nov. 14 *Second Assignment Due in Class.*

Introduction to Derivations (continued); TLB 5.1

Week 11: Nov. 18, Nov. 19, Nov. 21

Using Derivations to Develop Basic Concepts of Sentential Logic; Strategies for Derivations; TLB 5.2-5.3

Week 12: Nov. 25, Nov. 26, Nov. 28

Strategies for Derivations (continued); SD+; TLB 5.3-5.4

Second assignment handed out November 28.

Week 13: Dec. 2, Dec. 3, Dec. 5
Derivations in Sentential Logic: Overview; TLB 5.4
Second assignment due in class December 5th.

Holiday Break

Week 14: Jan. 6, Jan. 7, Jan. 9
Introduction to Predicate Logic (PL); TLB 7.1-7.4

Week 15: Jan. 13, Jan. 14, Jan. 16
Quantifiers; The Syntax of PL; AEIO Sentences; Introduction to Symbolization in PL; TLB 7.4-7.7

Week 16: Jan. 20, Jan. 21, Jan. 23
Introduction to Symbolization in PL (continued); Multiple Quantifiers with Overlapping Scope; TLB 7.7-7.8
Third Assignment handed out January 23.

Week 17: Jan. 27, Jan. 28, Jan. 30
Identity and Other Logical Relations; Introduction to Semantics for PL; Quantification Properties of Sentences; TLB 8.1-8.3
Third assignment due in class Jan 30

Week 18: Feb 3, Feb. 4, Feb. 6
Quantification Properties of Sentences (continued); Truth-Functional Expansions; TLB 8.3-8.5

Week 19: Feb. 10, Feb. 11, Feb. 13
Identity in PL; Formal Semantics for PL; TLB 8.6-8.7
Second Midterm in class on Thursday, Feb 13.

Week 20 –Reading Week

Week 21: Feb. 24, Feb. 25, Feb. 27
Introduction to Truth Trees for PL; Truth Trees and the Semantic Properties of PL; TLB 9.1-9.3

Week 22: Mar. 3, Mar. 4, Mar. 6
Truth Trees and the Semantic Properties of PL (continued); Truth Trees for PL with Identity; TLB 9.3-9.6

Week 23: Mar. 10, Mar. 11, Mar. 13
Truth Trees for PL with Identity (continued); Introduction to Derivations in PD; TLB 9.6, 10.1

Week 24: Mar. 17, Mar. 18, Mar. 20
Introduction to Derivations in PD (continued); Using Derivations to Establish Syntactic Properties of PD; TLB 10.1-10.2

Week 25: Mar. 24, Mar. 25, Mar. 27
Using Derivations to Establish Syntactic Properties of PD; TLB 10.2
Final assignment handed out March 27.

Week 26: Mar. 31, Apr. 1, Apr. 3
Derivations in PD+ and PD with Identity; TLB 10.3-10.4
Final assignment due in class April 3.

Week 27: Apr. 7, Apr. 8
Review of key concepts

*****Final exam scheduled during examination period*****



Appendix to Course Outlines

Prerequisite Information

Students are responsible for ensuring that they have successfully completed all course prerequisites. Unless you have either the requisites for this course or written special permission from your Dean to enrol in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

Conduct of Students in Classes, Lectures, and Seminars

Membership in the community of Huron University College and the University of Western Ontario implies acceptance by every student of the principle of respect for the rights, responsibilities, dignity and well-being of others and a readiness to support an environment conducive to the intellectual and personal growth of all who study, work and live within it. Upon registration, students assume the responsibilities that such registration entails. The academic and social privileges granted to each student are conditional upon the fulfillment of these responsibilities.

In the classroom, students are expected to behave in a manner that supports the learning environment of others. Students can avoid any unnecessary disruption of the class by arriving in sufficient time to be seated and ready for the start of the class, by remaining silent while the professor is speaking or another student has the floor, and by taking care of personal needs prior to the start of class. If a student is late, or knows that he/she will have to leave class early, be courteous: sit in an aisle seat and enter and leave quietly.

Please see the *Code of Student Rights and Responsibilities* at:

<http://www.huronuc.ca/CurrentStudents/StudentLifeandSupportServices/StudentDiscipline>

Technology

It is not appropriate to use technology (such as, but not limited to, laptops, PDAs, cell phones) in the classroom for non-classroom activities. Such activity is disruptive and is distracting to other students and to the instructor, and can inhibit learning. Students are expected to respect the classroom environment and to refrain from inappropriate use of technology and other electronic devices in class.

Academic Accommodation for Medical/Non-Medical Grounds

For UWO Policy on Accommodation for Medical Illness and a downloadable SMC see:

http://www.uwo.ca/univsec/handbook/appeals/accommodation_medical.pdf

[downloadable Student Medical Certificate (SMC): <https://studentservices.uwo.ca> under the Medical Documentation heading]

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 will be determined by the Dean's Office in consultation with the instructor.

For non-medical grounds or for medical grounds when work represents less than 10% of the overall grade for the course, the student must submit a request to the instructor in writing

prior to the due date of an assignment, and immediately in the case of a test. (Or as soon as possible following a medical emergency) Students are protected under the Official Student Record Information Privacy Policy and so written requests need only include a broad and general explanation of the situation, and the approximate length of time required. At the discretion of the instructor, the granting of extensions and re-scheduled tests may require the student to submit supporting either medical or non-medical documentation to the Academic Counsellor, who will then make the determination as to whether accommodation is warranted.

Statement on Academic 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/handbook/appeals/scholastic_discipline_undergrad.pdf .

Statement on Academic Integrity

The International Centre for Academic Integrity defines academic integrity as "a commitment, even in the face of adversity, to five fundamental values: honesty, trust, fairness, respect, and responsibility. From these values flow principles of behaviour that enable academic communities to translate ideals to action." (CAI Fundamental Values Project, 1999).

A lack of academic integrity is indicated by such behaviours as the following:

- Cheating on tests;
- Fraudulent submissions online;
- Plagiarism in papers submitted (including failure to cite and piecing together unattributed sources);
- Unauthorized resubmission of course work to a different course;
- Helping someone else cheat;
- Unauthorized collaboration;
- Fabrication of results or sources;
- Purchasing work and representing it as one's own.

Academic Integrity: Importance and Impact

Being at university means engaging with a variety of communities in the pursuit and sharing of knowledge and understanding in ways that are clear, respectful, efficient, and productive. University communities have established norms of academic integrity to ensure responsible, honest, and ethical behavior in the academic work of the university, which is best done when sources of ideas are properly and fully acknowledged and when responsibility for ideas is fully and accurately represented.

In the academic sphere, unacknowledged use of another's work or ideas is not only an offence against the community of scholars and an obstacle to academic productivity. It may also be understood as fraud and may constitute an infringement of legal copyright.

A university is a place for fulfilling one's potential and challenging oneself, and this means rising to challenges rather than finding ways around them. The achievements in an individual's university studies can only be fairly evaluated quantitatively through true and honest representation of the actual learning done by the student. Equity in assessment for all students is ensured through fair representation of the efforts by each.

Acting with integrity at university constitutes a good set of practices for maintaining integrity in later life. Offences against academic integrity are therefore taken very seriously as part of the university's work in preparing students to serve, lead, and innovate in the world at large.

A university degree is a significant investment of an individual's, and the public's, time, energies, and resources in the future, and habits of academic integrity protect that investment by preserving the university's reputation and ensuring public confidence in higher education.

Students found guilty of plagiarism will suffer consequences ranging from a grade reduction to failure in the course to expulsion from the university. In addition, a formal letter documenting the offence will be filed in the Dean's Office, and this record of the offence will be retained in the Dean's Office for the duration of the student's academic career at Huron University College.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com.

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

Personal Response Systems ("clickers") may be used in some classes. If clickers are to be used in a class, it is the responsibility of the student to ensure that the device is activated and functional. Students must see their instructor if they have any concerns about whether the clicker is malfunctioning. Students must use only their own clicker. If clicker records are used to compute a portion of the course grade:

- the use of somebody else's clicker in class constitutes a scholastic offence,
- the possession of a clicker belonging to another student will be interpreted as an attempt to commit a scholastic offence.

Policy on Special Needs

Students who require special accommodation for tests and/or other course components must make the appropriate arrangements with the Student Development Centre (SDC). Further details concerning policies and procedures may be found at:

http://www.sdc.uwo.ca/ssd/?requesting_acc

Attendance Regulations for Examinations

A student is entitled to be examined in courses in which registration is maintained, subject to the following limitations:

- 1) A student may be debarred from writing the final examination for failure to maintain satisfactory academic standing throughout the year.
- 2) Any student who, in the opinion of the instructor, is absent too frequently from class or laboratory periods in any course will be reported to the Dean of the Faculty offering the course (after due warning has been given). On the recommendation of the Department concerned, and with the permission of the Dean of that Faculty, the student will be debarred from taking the regular examination in the course. The Dean of the Faculty offering the course will communicate that decision to the Dean of the Faculty of registration.

Class Cancellations

In the event of a cancellation of class, every effort will be made to post that information on the Huron website, <http://www.huronuc.ca/AccessibilityInfo> (“Class Cancellations”).

Accessibility

Huron University College strives at all times to provide its goods and services in a way that respects the dignity and independence of people with disabilities. We are also committed to giving people with disabilities the same opportunity to access our goods and services and allowing them to benefit from the same services, in the same place as, and in a similar way to, other customers. We welcome your feedback about accessibility at Huron. Information about how to provide feedback is available at:

<http://www.huronuc.ca/AccessibilityInfo>

Mental Health @ Western

Students who are in emotional/mental distress should refer to Mental Health @ Western <http://www.uwo.ca/uwocom/mentalhealth/> for a complete list of options about how to obtain help.

Program and Academic Counselling

Philosophy students registered at Huron who require advice about modules and courses in Philosophy should contact Dr. S. D’Arcy, Chair – sdarcy@huron.uwo.ca Students should contact Academic Counselling on other academic matters. See the Academic Counselling website for information on services offered.

<http://huronuc.ca/CurrentStudents/StudentLifeandSupportServices/CounselorsCounsellingServices>