



**PHIL 677 Lec 01
Metalogic
Fall Term 2020**

COURSE OUTLINE

Instructor Name: Ali Kazmi

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Office Hours: Office hours will be held via Zoom, T, Th, 12:30-13:15.

COURSE DELIVERY INFORMATION

Students are invited to attend course meetings for PHIL 379 held via Zoom, T, Th, 14:00-15:15. Additional meetings via Zoom may be arranged, if needed.

COURSE INFORMATION

This course is an introduction to the meta-theory of first-order logic. The topics include the undecidability of first-order logic, the soundness and the completeness of its formalizations, the compactness theorem, and the Lowenheim-Skolem theorems.

COURSE OBJECTIVES/LEARNING OUTCOMES

Students will learn to prove the following results about first-order logic: (i) a set of sentences is satisfiable, if every finite subset of it is satisfiable, (ii) every satisfiable set of sentences has a countable model, (iii) there is a sound and complete procedure for unsatisfiability, (iv) the decision problem for satisfiability is unsolvable.

RECOMMENDED TEXTBOOK

George Boolos, John Burgess, and Richard Jeffrey, *Computability and Logic*, 5th edition (Cambridge University Press).

COURSE ASSESSMENT AND EVALUATION

Assessment Components and Grading Schemes

There will be five take-home assignments, each weighted 20% of the final mark. Passing mark in any one assignment is not required to pass the course. A letter grade of B- or higher is required to pass the course. No late coursework will be accepted under normal circumstances. There will be no Registrar-scheduled final examination.

The following table will be used to calculate letter grades from the final marks.

0-45% F	56-60% C-	71-75% B-	86-90% A-
46-50% D	61-65% C	76-80% B	91-95% A
51-55% D+	66-70% C+	81-85% B+	96-100% A+

SCHEDULE OF ASSIGNMENTS

The assignments will be posted on the course D2L site. The completed assignments will be due in a designated drop box on that site.

Assignment	Posted On	Due On
#1	September 22	September 29

#2	October 6	October 13
#3	October 20	October 27
#4	November 17	November 24
#5	December 1	December 8

IMPORTANT DEPARTMENTAL, FACULTY AND UNIVERSITY INFORMATION

Academic Accommodations

It is the student's responsibility to request academic accommodations according to the University policies and procedures. The student accommodation policy can be found at ucalgary.ca/policies/files/policies/student-accommodation-policy.pdf.

Students needing an Accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities.pdf. Students needing an Accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to their instructor.

Absence or Missed Course Assessments

Students who are absent from class assessments (tests, participation activities, or other assignments) should inform their instructors as soon as possible. If the reason provided for the absence is acceptable, instructors may decide that any arrangements made can take forms other than make-up tests or assignments. For example, the weight of a missed grade may be added to another assignment or test.

Student Support and Resources

Full details and information about the following resources can be found at ucalgary.ca/Registrar/registration/course-outlines

- Wellness and Mental Health Resources
- Student Success Centre
- Student Ombuds Office
- Student Union (SU) Information
- Graduate Students' Association (GSA) Information
- Emergency Evacuation/Assembly Points
- Safewalk

Academic Advising

If you are a student in the Faculty of Arts, you can speak to an academic advisor in the Arts Students' Centre about course planning, course selection, registration, program progression and more. Visit the Faculty of Arts website at arts.ucalgary.ca/advising for contact details and information regarding common academic concerns.

For questions specific to the philosophy program, please visit phil.ucalgary.ca. Further academic guidance is available by contacting David Dick (Undergraduate Program Director dgdick@ucalgary.ca) or Jeremy Fantl (Honours Advisor jfantl@ucalgary.ca). If you have questions regarding registration, please email Rebecca Lesser (Undergraduate Program Administrator phildept@ucalgary.ca).

Writing Assessment and Support

The assessment of all written assignments—and, to a lesser extent, written exam responses—is based in part on writing skills. This includes correctness (grammar, punctuation, sentence structure, etc.), as well as general clarity and organization. Research papers must include a thorough and accurate citation of

sources. Students are also encouraged to use Writing Support Services for assistance. For more information, and other services offered by the Student Success Centre, please visit ucalgary.ca/ssc.

Required Technology

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Webcam (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;
- Current antivirus and/or firewall software enabled;
- Broadband internet connection.

Most current laptops will have a built-in webcam, speaker and microphone.

Responsible Use of D2L

Important information and communication about this course will be posted on D2L (Desire2Learn), UCalgary's online learning management system. Visit ucalgary.service-now.com/it for how-to information and technical assistance.

All users of D2L are bound by the guidelines on the responsible use of D2L posted here: <https://elearn.ucalgary.ca/commitment-to-the-responsible-use-of-d2l/>. The instructor may establish additional specific course policies for D2L, Zoom, and any other technologies used to support remote learning. Instructional materials, including audio or video recordings of lectures, may not be posted outside of the course D2L site. Students violating this policy are subject to discipline under the [University of Calgary's Non-Academic Misconduct policy](#).

Media Recording

Please refer to the following statement on media recording of students: https://elearn.ucalgary.ca/wp-content/uploads/2020/05/Media-Recording-in-Learning-Environments-OSP_FINAL.pdf

Academic Misconduct/Honesty

Cheating or plagiarism on any assignment or examination is as an extremely serious academic offense, the penalty for which will be an F on the assignment or an F in the course, and possibly a disciplinary sanction such as probation, suspension, or expulsion. For information on academic misconduct and its consequences, please see the University of Calgary Calendar at ucalgary.ca/pubs/calendar/current/k.html.

Intellectual honesty requires that your work include adequate referencing to sources. Plagiarism occurs when you do not acknowledge or correctly reference your sources. If you have questions about referencing, please consult your instructor.

University Policies

The Instructor Intellectual Property Policy is available at ucalgary.ca/policies/files/policies/Intellectual%20Property%20Policy.pdf

The University of Calgary is under the jurisdiction of the provincial Freedom of Information and Protection of Privacy (FOIP) Act, as outlined at ucalgary.ca/legalservices/foip. The instructor (or TA) must return graded assignments *directly* to the student UNLESS written permission to do otherwise has been provided.

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-

[copyright-policy.pdf](#)) and requirements of the copyright act (laws-lois.justice.gc.ca/eng/acts/C-42/index.html).