



UNIVERSITY OF  
CALGARY

FACULTY OF ARTS  
DEPARTMENT OF PHILOSOPHY

## Philosophy 677 Lec 01 – Metalogic

### Winter 2018 Course Outline

**Instructor:** Ali Kazmi

**Office:** SS 1252

**Phone:** 403-220-5535

**Email:** [akazmi@ucalgary.ca](mailto:akazmi@ucalgary.ca)

**Office Hours:** TR 12:30-13:30

**Lectures:** STUDENTS ARE INVITED TO ATTEND PHIL379 LECTURES ON TR 11:00-12:15 (EDC 057)

**Teaching Assistant:** Joseph McDonald

**Office:** SS 1237

**Phone:** 403-220-6465

**Email:** [joseph.mcdonald1@ucalgary.ca](mailto:joseph.mcdonald1@ucalgary.ca)

**Office Hours:** MW 12:00-13:00

#### ***Course Description***

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 Prerequisite:*** PHIL 279 or 377.

#### ***Course 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.

#### ***Required Text***

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

#### ***Course Assessment***

There will be four take-home assignments, administered with PHIL 379, each weighted 10% of the final mark. In addition, there will be three in-class tests, administered with PHIL 379. The first test will be weighted 25%, the second test will be weighted 25%, and the third test will be weighted 10% of the final mark. 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. Passing mark in any one test or assignment is not required to pass the course. A letter grade of B- or higher is required to pass the course.

0-45% F  
45-50% D  
51-55% D+

56-60% C-  
61-65% C  
66-70% C+

71-75% B-  
76-80% B  
81-85% B+

86-90% A-  
91-95% A  
96-100% A+

## ***Schedule of Assignments and In-Class Tests***

<b>Assignment</b>	<b>Given On</b>	<b>Due in Class On</b>
#1	January 25	January 30
#2	February 1	February 6
#3	March 8	March 13
#4	March 15	March 20

  

<b>In-Class Test</b>	<b>Held On</b>
#1	February 13
#2	March 27
#3	April 12

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## **IMPORTANT DEPARTMENTAL, FACULTY AND UNIVERSITY INFORMATION**

### **Academic Honesty**

Cheating or plagiarism on any assignment or examination is regarded as an extremely serious academic offense, the penalty for which may be an F on the assignment, an F in the course, academic probation, or requirement to withdraw from the University. See the relevant sections on 'Academic Misconduct' in the current University Calendar. 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 correct referencing, consult your instructor.

### **Academic Accommodation**

The student accommodation policy can be found at: [ucalgary.ca/access/accommodations/policy](http://ucalgary.ca/access/accommodations/policy).

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 <http://www.ucalgary.ca/policies/files/policies/student-accommodation-policy.pdf>.

Students needing an Accommodation based on a Protected Ground other than Disability, should communicate this need, preferably in writing, to their instructor.

### **D2L Help**

Desire2Learn is UCalgary's online learning management system. Important information and communications about this course may be posted on D2L. Go to <https://ucalgary.service-now.com/it> for help.

### **General Academic Concerns and Program Planning**

Have a question but not sure where to start? The Arts Students Centre is your information resource for everything in the Faculty of Arts. Drop in at SS102, call 403-220-3580, or email [ascarts@ucalgary.ca](mailto:ascarts@ucalgary.ca). Advisors in the ASC can also provide assistance and advice in planning your program through to graduation. Visit the Faculty of Arts website at <https://arts.ucalgary.ca/undergraduate> for detailed information on common academic concerns

### **Advice on Philosophy Courses**

You may find answers to your more specific questions about a philosophy degree on the Department of Philosophy's website <http://phil.ucalgary.ca>, or contact one of Philosophy's Undergraduate Advisors. Jeremy Fantl ([jfantl@ucalgary.ca](mailto:jfantl@ucalgary.ca)), Allen Habib ([anhabib@ucalgary.ca](mailto:anhabib@ucalgary.ca)), Megan Delehanty ([mdelehan@ucalgary.ca](mailto:mdelehan@ucalgary.ca)).

### **Registration Overload/Prereq Waivers**

If you are seeking to register in a Philosophy course that is full or to get permission to waive the prereq for a course, email the Department Manager, Tram Nguyen ([tram.nguyen1@ucalgary.ca](mailto:tram.nguyen1@ucalgary.ca)). Include the specific course information and your UCID number in your request.

### **Writing**

This course will include written assignments. Faculty policy directs that all written assignments (including, although to a lesser extent, written exam responses) will be assessed at least partly on writing skills. Writing skills include not only surface correctness (grammar, punctuation, sentence structure, etc.) but also general clarity and organization. Research papers must be properly documented. Students are also encouraged to use Writing Support Services and other Student Success Centre Services, located on the 3rd floor of the Taylor Family Digital Library. Writing Support Services assist with a variety of assignments, from essays to lab reports. Students can book 30-minute one-on-one appointments online, sign up for 15-minute drop-in appointments, and register for a variety of writing workshops. For more information on this and other Student Success Centre services, please visit [www.ucalgary.ca/ssc](http://www.ucalgary.ca/ssc).

### **Protection of Privacy**

The University of Calgary is under the jurisdiction of the provincial Freedom of Information and Protection of Privacy (FOIP) Act. The Department of Philosophy ensures the student's right to privacy by requiring all graded assignments be returned to the student directly from the instructor or teaching assistant.

### **Internet and Electronic Communication Devices**

The instructor reserves the right to establish course policies regarding the use of devices such as laptops, tablets, and smartbooks. If allowed, these devices must be used exclusively for instructional purposes and must not cause disruption to the instructor or to fellow students. Cell phones and paging devices should be set to silent mode during lectures. Audio or video recording of lectures is not permitted without the written permission of the instructor. Students violating this policy are subject to discipline under the University of Calgary's Non-Academic Misconduct policy.

### **Emergency Evacuation:**

In case of an emergency evacuation during class, students must gather at the designated assembly point nearest to the classroom. The list of assembly points is found at <http://www.ucalgary.ca/emergencyplan/assemblypoints>. Please check this website and note the nearest assembly point for this course.

### **Other Helpful Contacts**

- Safewalk and Campus Security: 403-220-5333.
- Faculty of Arts Student Representatives: 403-220-6552, [arts1@su.ucalgary.ca](mailto:arts1@su.ucalgary.ca), [arts2@su.ucalgary.ca](mailto:arts2@su.ucalgary.ca), [arts3@su.ucalgary.ca](mailto:arts3@su.ucalgary.ca), [arts4@su.ucalgary.ca](mailto:arts4@su.ucalgary.ca)
- Student Union: <https://www.su.ucalgary.ca/>; 403-220-6551.
- Student Ombudsman: <http://www.ucalgary.ca/provost/students/ombuds>
- Campus Mental Health Strategy: <https://www.ucalgary.ca/mentalhealth/>