

PHI 012: Introduction to Symbolic Logic

Summer Session 2, 2022

Information

Instructor: Kory Matteoli, bjmatteoli@ucdavis.edu.

Time: MTWR, 12:10–1:50pm.

Location: Teaching and Learning Complex, 3211.

Office Hours: R, 9:00–11:00am, via Zoom: <https://ucdavis.zoom.us/j/95060181546?pwd=Wi9Bc3NhbGorUzBlYnUxUGFRSW45dz09>.

Text(s): P.D. Magnus and Tim Button (2021). *forall x. Calgary*. Remixed, revised, and expanded by Aaron Thomas-Bolduc and Richard Zach. URL: <https://forallx.openlogicproject.org/>. Also available on Canvas.

Syllabus may be subject to change without notice.

Course Description

This course is about the study of deductive arguments. There are four main aims in this course:

1. Familiarity with basic concepts in logic, including but not limited to: validity, soundness, truth preservation, consistency, and tautology.
2. Ability to formalize English sentences in sentential logic.
3. Ability to evaluate arguments by using truth tables.
4. Ability to perform derivations using the proof system for sentential logic.

Assessment

Grades are determined by:

Problem Sets (70%): There will be a total of 5 problem sets, to be completed on Carnap.io. Problem sets will be released by Tuesdays, and are due the following Friday at 5:00pm.

Exams (30%): There will be a cumulative exam, in person, on the last day of class.

Letter grades correspond to percentage scores (s) as follows:

A+: $s \geq 97\%$	B+: $90\% > s \geq 87\%$	C+: $80\% > s \geq 77\%$
A: $97\% > s \geq 93\%$	B: $87\% > s \geq 83\%$	C: $77\% > s \geq 73\%$
A-: $93\% > s \geq 90\%$	B-: $83\% > s \geq 80\%$	C-: $73\% > s \geq 70\%$
D: $70\% > s > 50\%$		F: $50\% \geq s$

Grades may be adjusted on a per-assignment basis at my discretion.

Work will be accepted late without penalty if and only if I have given you *written* permission no later than one calendar day prior to the deadline of the assignment, excepting emergencies or other exception. Any other late work may receive half credit.

Carnap.io

Problem sets are to be completed on Carnap.io. The course enrollment link is: <https://carnap.io/enroll/UC%20Davis%20-%20PHI%20012%20-%20SS2%202022>.

Follow the link above and select ‘Login via Google’ and then select your uc-davis.edu account if that is listed. Otherwise select ‘Use another account’ and then enter your UC Davis student email address. You will then be prompted to log in to CAS with your UC Davis student login credentials. There is a slightly lengthier guide on Canvas.

Schedule and Readings

In essence, you should aim to be reading the parts of the text as we work through them. Come prepared!

Week 1: Core concepts, syntax, and symbolization.

Read Part I, Key notions of logic.

Week 2: Symbolization and truth tables.

Read Part II, Truth-functional logic.

Week 3: Truth tables, continued.

Read Part III, Truth tables.

Week 4: Derivations, part 1.

Read Part IV, Natural deduction for TFL, chapters 15–17.

Week 5: Derivations, part 2.

Read Part IV, Natural deduction for TFL, chapters 18–20.

Week 6: Soundness and completeness.

Read Chapter 46, Soundness.

Resources

You may find the following resources helpful:

Tutoring Center: <https://tutoring.ucdavis.edu>.

Student Disability Center: <https://sdc.ucdavis.edu>.

Student Health and Counseling: <https://shcs.ucdavis.edu>.

Disability Accommodations

If you are a student who currently receives academic accommodation(s), please submit your SDC Letter of Accommodation to me as soon as possible, ideally within the first week of this course.

Code of Academic Conduct

All students are expected to respect the Code of Academic Conduct.¹ It is a violation of the UC Davis Code of Academic Conduct to submit the work of another student as your own, to buy or copy work, or to use the words *or ideas* of others without proper quotation and citation. Please note that plagiarism is not merely the use of quotations without attribution. Copying answers in any form will be treated as academic dishonesty; students who do so will be referred to Student Judicial Affairs for violation of the Code of Academic Honesty.

Regulation 550, clause E (Am. 09-01-2018) of the Davis Division of the Academic Senate² states that the instructor has the authority to determine a grade penalty when academic misconduct is admitted or is determined by adjudication to have occurred, with a maximum grade penalty of an F for the course. If you email me a picture of an otter during the first week of the course, you may receive extra credit; do not share this information with other students. If you are having trouble completing your own work or are concerned about how to properly cite sources, please contact me.

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¹<https://ossja.ucdavis.edu/code-academic-conduct>.

²<https://academicssenate.ucdavis.edu/bylaws-regulations/regulations#550->.