

Elementary Symbolic Logic

PHIL 2110, Winter 2013
University of Guelph
MW 9:30-10:20am, MACS 209

Instructor: Vicki Weafer
vweafer@uoguelph.ca
Office hours: MW 10:30-11:30am
332 MacKinnon

TA: Corey Sawkins
csawkins@uoguelph.ca
Office hours: Fri 10:30-11:30am
328 MacKinnon

Required Textbook: *Language, Proof, and Logic*, 2nd Edition, by Barker-Plummer, Barwise & Etchemendy. The textbook comes with a set of programs on a CD which you should install on your computer. If you do not have a CD drive you will be able to download the software from the textbook website. Many of the homework assignments will be complete online using the associated software. You will need to buy a new copy of the textbook because the software license is not transferable.

Grade Distribution: There will be three tests, each worth 15% of your final grade. Homework assignments will be worth 15% and the final exam worth 40%. You will be assigned 11 homework assignments over the semester out of which the 10 with the highest scores will count toward your grade.

Homework: Homework assignments are due by the beginning of class on the dates listed in the course schedule. Late work will not be accepted except in the case of documented personal emergencies.

Personal Emergencies: Reasonable accommodations can be made concerning missed tests and late work due to personal emergencies if those emergencies are documented. If you have to turn in an assignment late or miss a test because of a personal emergencies, please advise the instructor by e-mail ahead of time whenever possible.

Laptops: Students are kindly requested to refrain from using laptops, tablets, etc., during class, unless asked to do so. If this is a problem, please speak with the instructor during office hours or by appointment.

Office Hours: Instructor and TA office hours are listed above. If you need to see one of us but cannot come during office hours, please email to set up an appointment.

Supported Learning Group: There will be optional weekly Supported Learning Group sessions for those students who wish to take part. More information will be announced in the first week of classes.

College of Arts Policies:

E-mail Communication

As per University regulations, all students are required to check their uoguelph.ca e-mail account regularly: e-mail is the official route of communication between the university and its students.

When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, ID#, and e-mail contact. See the Undergraduate Calendar for information on regulations and procedures for Academic Consideration: www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml

Drop Date

The last date to drop one-semester Winter 2013 courses, without academic penalty, is Friday, March 8, 2013. For

regulations and procedures for Dropping Courses, see the Undergraduate Calendar: www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml

Copies of out-of-class assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

Student Rights and Responsibilities

Each student at the University of Guelph has rights which carry commensurate responsibilities which, broadly, being a civil and respectful member of the University community. The Rights and Responsibilities are detailed in the Undergraduate Calendar: www.uoguelph.ca/registrar/calendars/undergraduate/current/c14/c14-strightsrespon.shtml

Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and enjoins all members of the University community faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. The Academic Misconduct Policy is detailed in the Undergraduate Calendar: <http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Recording of Materials

Presentations which are made in relation to course work including lectures cannot be recorded in any electronic media without the permission of the presenter, whether the instructor, a classmate or guest lecturer.

Resources

The Undergraduate Calendar is the source of information about the University of Guelphs procedures, policies and regulations which apply to undergraduate programs. It can be found at: www.uoguelph.ca/registrar/calendars/undergraduate/current

If you find yourself in difficulty, contact the undergraduate advisor in your program, or the BA Counseling Office: www.uoguelph.ca/baco/contact.shtml

Course Schedule:

| Date | Topic | Reading | Homework Due |
|----------|---|-----------------------------------|--|
| M Jan 7 | Introduction; using the software; atomic sentences | Software Manual; p.1-11, 19-24 | |
| W Jan 9 | Atomic sentences; validity & soundness | 1.1-4 | |
| F Jan 11 | Classifying arguments | – | |
| M Jan 14 | Informal proofs; identity | 46-51 | 1.3, 1.4, 1.9, 1.10, 2.1 |
| W Jan 16 | Formal proofs; using Fitch | 54-61 | |
| F Jan 18 | Nonconsequence; counterexamples | 63-65 | |
| M Jan 21 | Negation (\neg), conjunction (\wedge), disjunction (\vee) | 68-77 | 2.8-10, 2.16-18, 2.23, 2.25 |
| W Jan 23 | Complexity; practice exercises | 77-81 | |
| F Jan 25 | Test 1 | – | |
| M Jan 28 | Using truth tables to check for tautology | 94-100 | 3.3, 3.7-8, 3.10, 3.12-15 |
| W Jan 30 | Tautological equivalence | 106-08 | |
| F Feb 1 | Tautological equivalence | 108-13 | |
| M Feb 4 | Proof rules: \wedge Elim, \wedge Intro, \vee Intro | 128-31, 143-50 | 4.9, 4.12-18, 4.23-4, 4.29-30 |
| W Feb 6 | Proof rules: \vee Elim | 132-35, 150-55 | |
| F Feb 8 | Proof rules: \neg Elim, \neg Intro | 137-39, 156-57 | |
| M Feb 11 | Proof rules: \perp Intro, \perp Elim | 157-61 | 6.2, 6.5, 6.6, 6.9, 6.11-12 |
| W Feb 13 | Proof practice | 161-63 | |
| F Feb 15 | Subproofs; strategizing | 165-73 | |
| M Feb 18 | | | |
| W Feb 20 | SPRING BREAK – NO CLASS | | |
| F Feb 22 | | | |
| M Feb 25 | Test 2 | – | 6.24-27 |
| W Feb 27 | \rightarrow and \leftrightarrow Boolean connectives | 180-85 | |
| F Mar 1 | \rightarrow Elim, \rightarrow Intro | 199-202, 207-09 | |
| M Mar 4 | Variables and quantifiers | 229-36 | 7.12, 8.17, 8.20, 8.22, 8.24 |
| W Mar 6 | Meanings of \forall and \exists ; Aristotelian forms | 237-39, 241-43 | |
| F Mar 8 | Translating complex noun phrases | 245-53 | |
| M Mar 11 | Tautologies involving quantifiers | 259-65 | 9.1-3, 9.9 |
| W Mar 13 | First-order consequence and validity | 267-73 | |
| F Mar 15 | Logically equivalent wffs | 277-81 | |
| M Mar 18 | Test 3 | – | 10.4-5, 10.10, 10.13, 10.16 10.22 |
| W Mar 20 | Multiple quantifiers | 298-306 | |
| F Mar 22 | Translating English to FOL | 307-13 | |
| M Mar 25 | \forall Elim and \forall Intro | 328-9, 332-4, 351-3 | 11.2, 11.4-5, 11.16 |
| W Mar 27 | Proof exercises | – | |
| F Mar 29 | \exists Elim and \exists Intro | 331-32, 329, 356-58 | |
| M Apr 1 | Common strategies | 361-67 | 13.45-49 |
| W Apr 3 | Common strategies, cont'd | – | |
| F Apr 5 | Review for final | – | |
| Tu Apr 9 | Final Exam , 11:30am-1:30pm | Location: TBA | |