

# Introduction to Logic

## People, Locations, and Times

<i>Professor</i>	<i>Lecture</i>	<i>Office Hours</i>
John Morrison	TBA	326B Milbank
<a href="mailto:jmorrison@barnard.edu">jmorrison@barnard.edu</a>	MW 11:00-12:15	W 3:00-4:00 & by appt.

<i>TA</i>	<i>Office Hours</i>	<i>TA</i>	<i>Office Hours</i>
Jeremy Wolos	TBA	Jorge Morales	TBA
<a href="mailto:jdw2156@columbia.edu">jdw2156@columbia.edu</a>	T 11-12, H 6-7	<a href="mailto:jfm2178@columbia.edu">jfm2178@columbia.edu</a>	M 6:30-7:30, W 4:30-5:30

## Textbook

We'll be using *Language, Proof and Logic* by Barwise & Etchemendy. All of the homework assignments will be completed on-line using the accompanying software. Because the software license is not transferable you'll need a new copy of the CD. We'll be using the first edition of the textbook. You can buy the textbook at the Columbia University Bookstore (2922 Broadway). To save money, you can also buy a CD containing the textbook as a PDF at Book Culture (536 West 112th Street).

## Software

The textbook comes with four programs:

1. *Tarski's World*: a program for investigating when sentences in logical languages are true or false.
2. *Fitch*: a program for constructing and checking formal proofs
3. *Boole*: a program for constructing and checking truth tables
4. *Submit*: a program for submitting homework assignments to an on-line program called 'Grade Grinder'

To use Submit you will need to input the ID number found on the face of the CD that came with our textbook. The textbook website (<http://lpl.stanford.edu>) is helpful if you are having problems with the software. If that's not enough, see me or a TA during one of our office hours. Note that if you're using Mac OS 10.7 (Lion) or higher you'll need to download the software update listed here: <http://ggweb.stanford.edu/support/faq#Lion>

I'll be using CourseWorks (<http://courseworks.columbia.edu/>) to post my slides, your grades and other relevant files.

## Communication

If you have questions you should first e-mail your TA. If your last name begins with a letter between A and L your TA is Jorge. If your last name begins with a letter between M and Z you should e-mail Jeremy. Regardless, you should always CC me on your e-mails so that I can make sure that the TAs are giving out the same information. Note that you can attend the office hours of either TA.

## Grade

There will be three exams, each worth 30% of your final grade. Make-up exams will only be provided to students with excuses verified by their class dean. Except for the final, all make-ups will be provided at the end of the semester. The make-up for the final exam will be in January at a time set by the college. See [urlhttp://barnard.edu/catalogue/policies/exams](http://barnard.edu/catalogue/policies/exams)

The remaining 10% your grade will be determined by your performance on designated homework questions. For each of the designated questions that you correctly answer by the deadline (i.e. by the start of the next class) you will receive one point (1). For each of the designated questions that you *incorrectly* answer by the deadline you will receive eight-tenths of a point (.8). You will receive zero points for answers that are late even if they are correct. Note that if you answer every assignment by the deadline, but you answer them all incorrectly, your homework grade will still be 8/10.

If your homework is not turned in by the relevant day and time, you will not receive any credit for it and there will be **absolutely no exceptions**. But because I realize that it isn't always possible to complete your homework by the due date, whether due to other coursework, personal emergencies or religious holidays, I will automatically drop your four lowest scores on individual questions.

The designated homework questions are in bold below. They must be submitted through Submit, a program described above and in the book (p.5-10). The program will ask you for the instructor's e-mail. You **must** input: introductionlogic@gmail.com. If you input the e-mail address of the professor (jmorrison@barnard.edu) or one of the TAs, you will not count as having completed the assignment. The program will also ask you for your email address. You **must** use your Columbia e-mail address even if you are a Barnard student. Your Columbia e-mail address is just your UNI followed by @columbia.edu. This is necessary in order to efficiently coordinate your homework grades with the exams grades posted on Course Works.

If Grade Grinder indicates that your assignment was incorrect, you can try again before the deadline without penalty. You are encouraged to work in groups though you must write up the answers on your own.

## Schedule

Date	Chapter	Reading	Homework (by next class)
9/7	W Introduction	p. 1-10	
9/12	M Atomic Sentences	1.1-1.4	<b>1.2, 1.3, 1.4, 1.5</b>
9/14	W Logic of Atomic Sentences	2.1, 2.5	handout
9/19	M Boolean Connectives	3.1-3.7	3.2, <b>3.3</b> , 3.6, <b>3.7</b> , 3.9, 3.24
9/21	W Logic of Boolean Connectives	4.1	<b>4.2</b> , 4.4, <b>4.5</b> , 4.6, <b>4.7</b>
9/26	M Logic of Boolean Connectives	4.2-4.3	<b>4.12</b> , 4.13, 4.14, <b>4.20</b> , 4.21
9/28	W Review		handout
10/3	M <b>First Exam</b>		No homework
10/5	W Methods of Proof for Boolean Connectives	2.2-2.4, 5.1-5.3	<b>2.17</b> , 2.20, 5.1, 5.5, 5.7, 5.17
10/10	M Formal Proofs and Boolean Connectives	6.1, 6.2	<b>6.3, 6.4, 6.5, 6.6</b>
10/12	W Formal Proofs and Boolean Connectives	6.3	<b>6.9, 6.10</b> , 6.11, 6.12
10/17	M Formal Proofs and Boolean Connectives	6.4-6.6	<b>6.18</b> , 6.19, <b>6.20</b> , 6.28, 6.29
10/19	W Conditionals	7.1, 7.2	<b>7.1</b> , 7.2, 7.10, <b>7.12</b> , 7.13
10/24	M Logic of Conditionals	8.1, 8.2	<b>8.18, 8.19</b> , 8.20, <b>8.21</b>
10/26	W Logic of Conditionals	8.4	8.44, 8.45, <b>8.46</b> , 8.48
10/31	M <b>No Class</b> due to Academic Holiday		No homework
11/2	W Logic of Conditionals	8.4	8.49, <b>8.50, 8.51, 8.52</b> , 8.53
11/7	M Review		handout
11/9	W <b>Second Exam</b>		No homework
11/14	M Introduction to Quantifiers	9.1-9.4	9.1, <b>9.2</b> , 9.3, <b>9.5</b> , 9.6
11/16	W Introduction to Quantifiers	9.5, 9.6	9.9, <b>9.12, 9.13</b> , 9.16, <b>9.17</b>
11/21	M Multiple Quantifiers	11.1-11.5	<b>11.4, 11.11</b> , 11.17, <b>11.20</b>
11/23	W <b>No Class</b> due to Thanksgiving		No homework
11/28	M Methods of Proof for Quantifiers	12.1-12.4	12.4, <b>12.5</b> , 12.16, <b>12.17</b>
11/30	W Formal Proofs and Quantifiers	13.1, 13.2	<b>13.2, 13.3</b> , 13.4, 13.11, <b>13.12</b>
12/5	M Formal Proofs and Quantifiers	13.3	<b>13.23</b> , 13.33, 13.35, handout
12/7	W Formal Proofs and Quantifiers	13.5	<b>13.43</b> , 13.45, 13.46, 13.50
12/12	M Review	13.5	handout
12/19	M <b>Third Exam</b>		

*Note:* I'm likely to adjust the assignments as the semester progresses. I will always notify you by e-mail when there's been an adjustment and the current syllabus can always be found on-line at CourseWorks and the date will be printed at the bottom of the last page (e.g. see below).

*Other Important Dates:* 10/11 is the last day to drop the course and 11/17 is the last day to withdraw or take the P/D/F option.

<i>Syllabus Version:</i> Friday 2 <sup>nd</sup> September, 2011
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