San José State University
Department of Philosophy
PHIL 157 – Intermediate Logic
Spring Semester 2017

Course and Contact Information

Instructor: Noah Friedman-Biglin
Office Location: Faculty Offices Building, Room 232
Email: noah.friedman-biglin@sjtu.edu
Office Hours: Tuesdays, from 3 – 5 pm or by appointment
Classroom: BBC 203
Prerequisites: Upper Division Standing

Faculty Web Page and MYSJSU Messaging
All course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on the Canvas learning management system course website. You are responsible for regularly checking with the messaging system through MySJSU to learn of any updates. I will do my best to answer any emails within 48 hours, or 24 hours in case of (clearly marked) emergencies. No emails will be answered on Saturdays.

You are also both invited and encouraged to come to my office hours to meet with me in person. Office hours are on a drop-in basis, and no appointment is necessary. If you cannot make my usual hours, but still want to meet, it is possible to make an appointment for a different time.

Course Description
The focus of this course is the concept of logical consequence. In the most general terms, this amounts to the theory of what follows from what. The goal of the semester will be to flesh out the terms 'what' and 'follows from' using the tools of formal logic, as well as philosophical investigation.

At the end of the semester, you should expect to be familiar with the syntax and semantics of full first-order logic with identity. You will learn to prove using natural deduction, as well as with semantic methods. Additionally, we will read some papers in the philosophy of logic with an eye towards gaining a critical understanding of what we are up to in the formal portion of the class.

Required Texts/Readings

Required Textbook
Tomassi, Paul. Logic. Routledge
ISBN10: 0415166969
The book is available in the campus bookstore, and (of course), widely available online. As far as I am aware, there is only one edition, so there should not be any problems getting the book.

Other required readings will be provided via Canvas. You are responsible for checking the syllabus to determine where the weeks' reading is, and for checking Canvas to find any non-textbook readings.

Other Readings (Recommended but not Required)

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<tr>
<th>Title</th>
<th>Author</th>
<th>ISBN:</th>
<th>Website</th>
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<tbody>
<tr>
<td><em>LaTeX for Logicians</em></td>
<td>Smith, Peter</td>
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Course Requirements and Assignments

SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in [University Policy S12-3](http://www.sjsu.edu/senate/docs/S12-3.pdf) at [http://www.sjsu.edu/senate/docs/S12-3.pdf](http://www.sjsu.edu/senate/docs/S12-3.pdf).

Final Examination or Evaluation

The final evaluation for this course will be an exam focusing on the logical techniques covered in the class.

Grading Information

10 percent – **Informed participation**: this means you have *read any assignments prior to class and come ready to discuss them* and, during those discussions, you demonstrate this fact. When I ask questions on the reading your answers show that you are informed by what you have read. Disruptive, superfluous comments or comments off topic will not be tolerated.

40 percent – **Exercises**: there will be regular exercises assigned for homework throughout the semester. You are required to submit them in hard copy, at the beginning of the class period in which they are due. They can be handwritten, and indeed I would recommended that you do write them by hand; however, any work I cannot read will not receive any points.

25 percent – **Mid-Term Examination**: there will be an in-class mid-term examination. The exam will consist of a selection of problems, similar to those from the homework. You will have the entire class period to complete the exam. If you need accommodations, please be in touch with me *at least one week prior* to the exam date.

25 percent – **Final Examination**: the final examination will be similar to the mid-term, but extended so as to cover material from the entire duration of the course. As before, if you need accommodations, please be in touch with me *at least one week prior* to the exam date.
Determination of Grades

- Grades will be determined according to the rubric above. Intermediate grades will be used (that is, grades using + and –) according to the following formula:
  1. 100 – 98: A+
  2. 97 – 94: A
  3. 93 – 90: A–
  4. and so on ...

- No extra credit will be offered. Make sure to factor this in – if you want to get a good grade in this course, put effort into your work from the very beginning of the semester.

- All work is due when it's due. Any work submitted after the deadline will not be accepted, and if there are extenuating circumstances which prevent you from submitting your work on time, you are responsible for contacting the professor (i.e. me) as soon as you know about them.

- If you believe that there has been a mistake in calculating your grade, please contact me. However, any emails sent where you either (1) simply disagree with a mark I have given you, or (2) are asking me to round or otherwise alter your grade will not be dignified with an answer.

- Passage of the Writing Skills Test (WST) or ENGL/LLD 100A with a C or better (C- not accepted), and completion of Core General Education are prerequisite to all SJSU Studies courses. Completion of, or co-registration in, 100W is strongly recommended. A minimum aggregate GPA of 2.0 in GE Areas R, S, & V shall be required of all students.

Classroom Protocol

Philosophical discussions can be heated and full of discriminatory or offensive language. This will not be tolerated in my course. Comments of a racist, sexist, homophobic, or otherwise discriminatory nature will be grounds for disciplinary action; the determination of which comments violate this policy will be mine alone.

University Policies

Per University Policy S16–9, university–wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs’ Syllabus Information web page at http://www.sjsu.edu/gup/syllabusinfo/
## PHIL 157, Spring 2017, Course Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics, Readings, Assignments</th>
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| 1    | 1/31   | **Introduction to Formal Logic: Translations**  
Read: sections I, II, and III of ch. 2, and ch. 5 sections I – VI  
Exercises: All of 2.1 and 2.2, and all of 5.3 and 5.5 |
| 2    | 2/7    | **Introduction to Formal Logic: Truth-tables**  
Read: ch. 4  
Exercises: 4.1 (Questions 1 – 10 Only), 4.2 (Question 1 only), and 4.3(Questions 1 – 10 Only) |
| 3    | 2/14   | **Introduction to Natural Deduction (&I, &E, MP, CP)**  
Read: sections IV through X of ch. 2  
Exercises: All of 2.3 (question 2, numbers 1 – 5 only), 2.4 (question 1 only), and 2.5 (question 1, numbers 6 – 10 only) |
| 4    | 2/21   | **Natural Deduction (Continued) (MT, DNE, vI, vE)**  
Read: ch. 3, sections I – IV  
Exercises: All of 3.1, 3.2 (questions 1, 3, 5, 7 only), 3.4 (question 2, numbers 1 – 4), and all of 3.5 |
| 5    | 2/28   | **GUEST SPEAKER** |
| 6    | 3/7    | **Natural Deduction (Continued) (RAA)**  
Read: ch. 3, section VII  
Exercise: 3.9 (#1 – 10 only) |
| 7    | 3/14   | **Exam Review Day** |
| 8    | 3/21   | **Mid–Term Examination** |
| 9    | 3/28   | **NO CLASS – SPRING BREAK** |
| 10   | 4/4    | **Semantic Trees**  
Read: ch. 4, sections X – XI, ch. 7, sections I – III  
Exercises: all of 4.6, and 4.7 (#1 – 10 only), |
| 11   | 4/11   | **First Order Logic (FOL): Relations**  
Read: ch.5, sections VII – X  
Exercises: all of 5.6, and all of 5.7 question 1 |
| 12   | 4/18   | **FOL: Equivalence Relations and Identity**  
Read: ch.5, sections XI – XIII  
Exercises: all of 5.9, question 1, and all of 5.10 |
| 13   | 4/25   | **The Incompleteability of FOL**  
Read: ch.7, section III and IV  
Exercise: 7.3, question 1 #1 – #10 |
| 14   | 5/2    | **Introduction to the Philosophy of Logic**  
Readings TBA |
| 15   | 5/9    | **Introduction to the Philosophy of Logic**  
Readings TBA |
| 16   | 5/16   | **Introduction to the Philosophy of Logic**  
Readings TBA |
| FINAL EXAM | TBA |