

A Course of Study

The following represents one option for a course of study through *Symbolic Logic* – based on courses offered by me within the “fine-grained” sequence mentioned in the Preface. The course is described in some detail for Volume I, with only a general outline for Volume II.

Sentential Logic

A1. Hw: Read SL through 1.2.1. Do E1.1, 1.3.

Ex: E1.2

A2. Hw: HW: Finish SL Chapter 1. Do 1.4 – E1.6.

Ex: Any of E1.7, 1.8, 1.10.

A3. Hw: Read SL chapter 2 through 2.2.2. Do E2.3.

Ex: Any of the other exercises from E2.1 – 2.5.

A4. Hw: Read SL through 2.2.3. Do E2.6 and E2.7.

Ex: E2.8, 2.9.

First Exam (take-home component / cheat sheet: E1.9a,b and E2.10b,d)

A5. Hw: Read SL chapter 4 through 4.1.1. Do E4.1.

A6. Hw: Read SL chapter 4 through 4.1.3. Work E4.2 and E4.3.

A7. Hw: Read SL through 4.1.4. Work E4.4.

Ex: E4.5.

A8. Hw: Read SL chapter 5 through 5.2.1. Work E5.1 - E5.2.

A9. Hw: Read SL through 5.2.3. Work E5.3 - 5.5. You may decide to combine 5.5 with 5.3 and 5.4.

Ex: E5.6, 5.7.

A10. Hw: Read SL through 5.2.4. Work E5.8.

Ex: E5.9.

A11. Hw: Read SL through the end of 5.2. Do E5.10, E5.12.

Ex: E5.11, E5.14.

Second Exam (take-home component / cheat sheet: E4.7a,b and E5.15b,c)

A12. Hw: Read *SL* chapter 6 through 6.1. Do E6.1, E6.3.

Ex: E6.2, E6.4.

A13. Hw: Read *SL* through 6.2.1. Do E6.5 - 6.7.

A14. Hw: Read *SL* through 6.2.2. Do E6.8 - E6.10.

A15. Hw: Read *SL* through 6.2.3. Do E6.11 - E6.13.

Third Exam (take-home component / cheat sheet: E6.23a,c)

A16. Hw: Read *SL* 6.2.4 through “strategies for a goal.” Do E6.14, E6.15a-o.

A17. Hw: Finish E6.15, do E6.16.

A18. Hw: Finish 6.2.4. Do E6.17 - 6.18.

Ex: E6.19, E6.20.

A19. Hw: Read *SL* through 6.2.5. Do E6.21 - 6.22.

Final Exam (take-home component / cheat sheet: E6.23b,e)

Predicate Logic

- A1. Hw: Read *SL* 2.3 through 2.3.2. Do E2.11 - 2.14.
- A2. Hw: Read *SL* through 2.3.3. Do E2.15 - 2.17.
- A3. Hw: Read *SL* through 2.3.5. Do E2.18 - 2.19, 2.21 - 2.22.
Ex: E2.20.
- A4. Hw: Read *SL* 6.3 through 6.3.1. Do E6.24 - 6.26.
- A5. Hw: Read *SL* through 6.3.2. Do E6.27 - 6.29.
- A6. Hw: Read *SL* through 6.3.3 (esp. SG). Do E6.30, 6.32a-j.
- A7. Hw: Read *SL* through 6.3.3 (esp. SC). Do E6.31, 6.32k-y.
Ex: E6.33.
- A8. Hw: Read *SL* through 6.3.4. Do E6.35.
Ex: E6.34.
- A9. Hw: Read *SL* through 6.3.5. Do E6.36.
Ex: E6.37.
- A10. Hw: Read *SL* through 6.4.1. Do E6.40.
Ex: E6.39, 6.41.

First Exam (take-home component / cheat sheet: E2.23b,c and E6.44a,b)

- A11. Hw: Read *SL* 4.2 through 4.2.2. Do E4.8,9,10,12.
Ex: E4.11.
- A12. Hw: Read *SL* through 4.2.3. Do E4.13, 4.14 (do 14 in different color on same trees).
- A13. Hw: Read *SL* through 4.2.4. Do E4.15, 4.16a,b,d,e,h.
Ex: Finish E4.16.
- A14. Hw: Read *SL* through 4.2.5. Do E4.17a-e, 4.18.
Ex: Finish E4.17, E4.19.
- A15. Hw: Read *SL* 5.3 through 5.3.1. Do E5.16-5.17.
Ex: E5.18.
- A16. Hw: Read *SL* through 5.3.2. Do E5.19, 5.20.
Ex: E5.21, 5.22.
- A17. Hw: Read *SL* through 5.3.3. Do E5.23, E5.24.
Ex: E5.25, 5.26.
- A18. Hw: Read *SL* through 5.3.4. Do E5.27, 5.29, 5.30 (for the latter use *ND+*).
Ex: E5.28, E6.38.

Second Exam (take-home component / cheat sheet: E4.20b,c and E5.31a,c)

- A19. Hw: Read *SL* chapter 7 through 7.2.1. Do E7.1.
- A20. Hw: Read *SL* through 7.2.2. Do E7.2a-e.
Ex: Remaining problems from E7.2, 7.3.

A21. Hw: Read *SL* through 7.2.3. Do E7.4a-f, the (v) part of E7.5.

Ex: Remaining problems from E7.4, 7.5, 7.6.

A22. Hw: Read *SL* through 7.3.2. Do E7.8a,b,c, E7.9a,b,f,h.

Ex: E7.7, E7.10 and others from E7.8, 7.9.

A23. Hw: Read *SL* through 7.3.3. Do E7.11, 7.12a,b,c.

Ex: Finish E7.12.

A24. Hw: Read *SL* through 7.3.4. Do E7.13b,c,d,j.

Ex: Remaining problems from E7.13, 7.14.

A25.¹ Hw: Read *SL* through 7.3.5. Do E7.15, 7.17.

Ex: Any of E7.16, 7.18, 7.19.

Final Exam (take-home component / cheat sheet: E7.20a,b)

Transitional (usually the first part of a course leading to Part III or Part IV)

A1.² Hw: Read *SL* 6.4.2. Do E6.42.

Ex: E6.43.

A2. Hw: Read *SL* chapter 3 through 3.2. Do E3.3, 3.4.

Ex: E3.1, 3.2, 3.5.

A3. Hw: Read *SL* through 3.3. Do E3.7, 3.8, 3.10.

¹ Can be skipped.

² Can exclude A1, A9, A10 if not going on to Part IV.

- Ex: E3.9, 3.11.
- A4.³ Hw: Read *SL* through 3.4. Do E3.12.
- A5. Hw: Read *SL* chapter 8 through 8.2.3. Do E8.1 - 8.6.
- A6. Hw: Read *SL* through 8.2.5. Do E8.7 - 8.9, 8.11 - 8.13.
- Ex: E8.10, 8.14 - 8.24.
- A7.⁴ Hw: Read *SL* through 8.3.2. Do E8.25 - 8.28.
- Ex: E8.29.
- A8. Hw: Read *SL* through 8.3.4. Do E8.30, 8.31, 8.32.
- Ex: E8.33.
- A9. Hw: Read *SL* 8.4 through 8.4.3. Do E8.34, 8.35, 8.37, 8.38.
- Ex: E8.36.
- A10. Hw: Read *SL* through 8.4.6. Do 8.39, 8.41, 8.42.
- Ex: 8.40.

First Exam

³ Can be skipped.

⁴ Can exclude A7, A8 if not going on to Part III.

*Basic Metalogic (Part III)*⁵

Supposing the relevant transitional material, in order of increasing intensity:

1. *SL* chapter 9, chapter 10.
2. *SL* chapter 9, chapter 10 and (any or all of) 11.1 - 11.3. These parts of chapter 11 are independent of one another and may be worked any time after chapter 8.
3. *SL* chapter 9, chapter 10, chapter 11. The sections of chapter 11 are independent of one another, although section 11.4 requires chapter 10.

Incompleteness / Computability (Part IV)

Supposing the relevant transitional material, in order of increasing intensity:

1. *SL* chapter 12, sections 13.1, 13.2
2. *SL* chapter 12, 13.1, 13.2, and then either the rest of chapter 13 or chapter 14
3. *SL* chapter 12, chapter 13, chapter 14

The most challenging sections of the text are 11.4 and then 13.3 - 13.5. It is possible to take them on directly. But, especially on a first pass, it makes sense to skip over those sections--leaving them for "special topics" after.

⁵ If possible, it is best to do Part III before Part IV. However, depending on interests, with just a few backward references, it is possible to skip Part III and go directly to Part IV.