

## PH133 Logic Exercises

*Weekly exercises for the logic part of PH133.*

### When are they due?

2pm on the day before the seminar (unless otherwise instructed by the seminar group leader). This includes work submitted with Grade Grinder.

### Who to submit the exercises to?

Submit all exercises to your seminar group leader.

### \*Not sure who your seminar leader is?

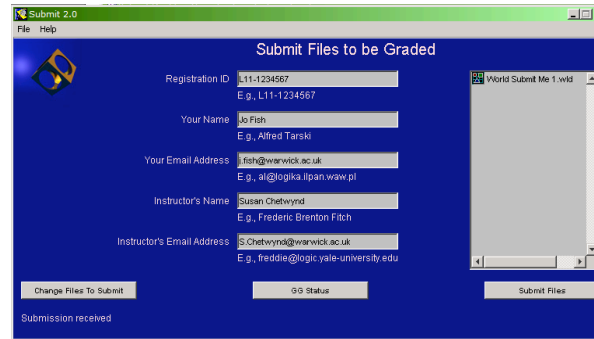
First sign up for a seminar group (using tabula), then check on tabula for the name of your seminar group leader.

### How to submit?

You need to submit some of these exercises using 'grade grinder' (see below); other exercises need to be submitted on paper or by email. For these other exercises, you can put them in your seminar group leader's\* pigeon hole in the Philosophy Department. Or you can email them to your seminar group leader.

### Using Grade Grinder

When using Grade Grinder, be sure to enter your seminar leader's\* name and email address in the 'instructor's name' and 'instructor's email address' sections. E.g.:



The screenshot shows a web browser window titled 'Submit 2.0'. The main heading is 'Submit Files to be Graded'. There are several input fields for user information: 'Registration ID' (with example 'L11-1234567'), 'Your Name' (with example 'Jo Fish'), 'Your Email Address' (with example 'j.fish@warwick.ac.uk'), 'Instructor's Name' (with example 'Susan Chetwynd'), and 'Instructor's Email Address' (with example 's.chetwynd@warwick.ac.uk'). Below these fields are three buttons: 'Change Files To Submit', 'GG Status', and 'Submit Files'. A small status message at the bottom left says 'Submission received'. On the right side, there is a file upload area with a text box containing 'World Submit Me 1.wld' and a file selection icon.

### What if I can't use grade grinder?

If you didn't buy a new copy of the textbook you can't use grade grinder. You should then submit all exercises by email or on paper (see above). Even if you are not using grade grinder, you should complete *\*all\** exercises set.

### Reading

Always read the associated sections of the textbook (Barwise & Etchemendy, *Language, Proof and Logic*) before attempting the exercises. E.g. read section §3.4 before attempting exercise 3.11.

### What do the numbers below refer to?

They are exercises in the textbook for this course, Barwise & Etchemendy's *Language, Proof and Logic*.

## Exercises 01

*For your first seminar*

- 1.1–1.5, 1.9–1.10
- 2.3, 2.4 (arguments and validity)
- 2.10, 2.12, 2.21 (counterexamples)
- 3.1–2 (negation)
- 3.5, 3.7 (conjunction)
- 4.1–2 (truth tables)

*Note that there may be changes to the following schedule of exercises : please check lecture handouts.*

## Exercises 02

*For your second seminar*

- 3.8, 3.12–13
- 3.20, 3.21, 3.22
- 4.4–7 (truth tables)
- 4.12–4.14 (truth tables)
- 5.1–4 (validity)
- 6.1–6 (proofs)
- 6.7, 6.9–10 (proofs and counterexamples)

## Exercises 03

- 4.17–18 (truth tables)
- 9.1 (quantifiers)
- 9.2 (quantifiers)
- 9.4–5 (quantifiers)
- 9.15–17, (translation)

**Exercises 04**

9.4–5, 9.8–10, 9.12 (quantifiers)

EITHER 6.17–20 (proof)

OR 6.33, 6.40 (proofs)

9.18, 9.20 (trans)

10.9 part 1 only (trans)

10.20

10.24–7

DO NOT USE TAUT CON. EVER.

**Further Exercises**

11.2, 11.4, 11.8, 11.9 (multiple quantifiers)

13.1–4 (quantifier proofs/counterex)

13.10–15 (quantifier proofs/counterex)