

Online Experiments for Language Scientists

Lecture 1: Introduction

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What is this course about?

Language is something that humans do, so all subfields of linguistics involve collecting data from humans

- Grammaticality judgments, naturalistic recordings, sociolinguistic interviews, preferential looking/listening in infants, reading times, reaction times and/or choices in psycholinguistic experiments, ...

This kind of data can be collected in person

Or it can be collected online (i.e. via a web browser)

This course shows you how to build language-relevant experiments that run in browsers, and how to crowdsource experiment participants

Who teaches on it?



Kenny Smith
Prof

Lectures
Labs
Course
organiser



Alisdair Tullo
*Programming and
Apps Manager*

Labs



Maisy Hallam
*PhD student,
Linguistics*

Labs



Aislinn Keogh
*PhD student,
Linguistics*

Labs



Vilde Reksnes
*PhD student,
Linguistics*

Labs

How is it delivered?

Lectures (Mondays 9am-9.50am)

Labs (**Thursdays** 9am-10.50am)

Lectures

- In person (but recorded and with a live-streaming option - don't come in person if you are unwell!)
- Each lecture has associated pre-reading, **do the readings before the lectures** so we can discuss any questions/thoughts you have
- Bit of context by me, **plus discussion / Q&A time**

Labs

- In person (no online alternative, but still don't come if you are unwell!)
- Work through the practicals, with support on hand!

Additional drop-in labs

Weeks 1-3: Thursdays 2pm-3pm on Teams, with Aislinn

- Optional, only if you need a bit of extra help
- Instructions on how to join the Teams team on Learn

Plus in the run-in to the final assignment

- Details TBC

For undergraduates, how is it assessed?

Assessment 1: annotated bibliography, worth 30%, due 9th November

- Brief summary plus evaluation of 4 papers
- Papers can come from course readings or elsewhere

Assessment 2: coding project + report, worth 70%, due 7th December

- A functioning web experiment
- A short report explaining the motivation for that experiment, discussing and evaluating critical implementation decisions

Lots of information re. rationale and expectations available in the assignment brief.

There will be a cut-off date for questions on the assignments!

For postgraduates, how is it assessed?

Single assessment: coding project + report, worth 100%, due 7th December

- A functioning web experiment
- A short report explaining the motivation for that experiment, discussing and evaluating critical implementation decisions

Lots of information re. rationale and expectations available in the assignment brief.

There will be a cut-off date for questions on the assignments!

Bad news: Strike action this semester

**DEFEND THE FUTURE OF UK
HIGHER EDUCATION**

ucu.org.uk/rising



UCU, the main union for academics and support staff, is in dispute with the University employers over **pay, casualization, pay inequality**

No classes (no lecture, no tutorial, no drop-in labs) in **week 2, i.e. next week.**

All other content will move back 1 week.

We lose 1 week of content.

I will update the course pages this week (just in case it gets called off).

You can respectfully email your views to our Principal, Prof Peter Mathieson,
principal@ed.ac.uk

We would much rather be teaching and getting paid!

Where can I find all this information?

Course Learn page

- Links to course pages on github
- Lecture live streams/recordings
- Access code to set up Teams drop-in labs (if you need it)
- Assignment submission links

Course pages on github

- Everything else

Any questions on course organization, admin?

Three components of running an online experiment

Building an experiment that will run in a web browser

- We'll be using javascript and jsPsych
- Also useful for running experiments in-person!

Making it openly available online

- PPLS / the Uni provide servers

Connecting with experiment participants

- E.g. through **crowdsourcing websites**

A look at some simple experiments

Javascript and jsPsych

Javascript: a programming language that runs in web browsers

jsPsych: a library that makes it easy to build experiments

(<https://www.jspsych.org>)

de Leeuw, J. R. (2015). jsPsych: A JavaScript library for creating behavioral experiments in a web browser. *Behavior Research Methods*, 47, 1-12. doi:10.3758/s13428-014-0458-y.



Josh de Leeuw
Vassar College



Plugins and timelines

Plugins: basic building blocks

```
var hello_trial = {  
  type: jsPsychHtmlKeyboardResponse,  
  stimulus: 'Hello world!'  
}
```

Timeline: a sequence of those building blocks

```
jsPsych.run([hello_trial]);
```

A wide range of plugins available

See <https://www.jspsych.org/7.3/plugins/list-of-plugins/>

Building an experiment involves

- Knowing how to use plugins
- Figuring out how to piece them together to make the experiment you want
- Some tiny bits of html and javascript to connect the plugins and make them do what you want
- (Occasionally, and optionally, making your own plugin)

A quick word about coding
and realistic expectations!



Any questions/concerns so far?

Next up

Thursday, 9am, Appleton Tower 4.02: first lab!

- Week 1 practical, linked from the course page on github
- Bring a laptop if you can
- You'll get more out of the lab if you take a look at the materials beforehand!

Next lecture: crowdsourcing experimental data

- Either Monday 25th September (if strikes cancelled, unlikely) or Monday 3rd October (if strikes go ahead)
- **Do the reading beforehand!**