



Informatics Research Review (IRR)

Lecture 1: Overview and Literature Searching

2019/20

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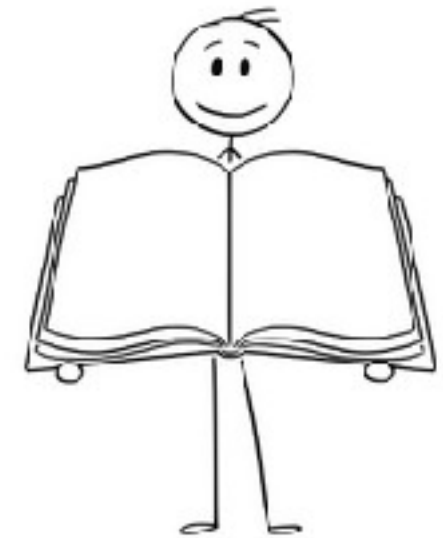
Core IRR Course Team



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IRR Tutors



Overview

- Introduction
- Course Organisation
 - Tutorials, Lectures, Assessment
 - Website & Resources
- Literature Review
- Literature Searching
- Academic Standards
- Useful Information



- Introduction:



IRR in a Nutshell

- **Compulsory:** you have to show up.
- **Review** of research in targeted area
- May be forerunner to summer project
 - *Review can be unrelated to your exact summer project*
 - Choice of project done **after** IRR
- Delivered by a **teaching assistant (TA)**
 - Another lecturer, PostDoc, or a PhD student
 - Knowledgeable about your **specialist area**
- Keep it to **at most 10 pages** including references



Purpose of IRR

- Learn skills of research reading
- Learn skills of research writing
- Refine choice of research area
- Learn background to potential project area
 - **Independent learning!**
 - **Critical evaluation of the state-of-the-art**

View from 35000 Feet

- Identify and read relevant **papers**
- Keep **notes** on each paper
- Attend related **seminars**
 - e.g. <http://www.inf.ed.ac.uk/events/seminars>
- **Practice** reviewing & writing: minor reviews + feedback
- Weave your new knowledge into a **story**
- Write your **report**
- **Draft submission:** Early December
 - **Tier-4 visa engagement point!**
- **Deadline:** 4pm on Thursday, January 23, 2020

Organisation



Your MSc Programme

- **Taught component (100 credits)**
 - Lectures, tutorials, coursework, exams
 - Learn established techniques that work
- **Research component (80 credits)**
 - Do something that's never been done before
 - Study a new problem, develop a new method, etc.
 - Probably the most exciting (and hardest) part of MSc
 - Culminates in you writing a **dissertation** (~50 pages, 60 credits)
 - **Two courses** prepare you:
 - **IRR:** literature review in your broad area of interest (10 credits)
 - **IPP:** write a detailed plan for your specific MSc project (10 credits)

MSc Project Timeline

- **Semester 1 (IRR)**
 - Learn about a relevant area: **explore** research papers
 - Write a 10-page **critical review** of what you learned
- **January**
 - Faculty supervisors propose **project topics**
 - Or, propose your own (get started with this in S1!)
 - Talk to supervisors, pick set of topics, algorithmic allocation
- **Semester 2 (IPP)**
 - write a detailed **research plan** for what you're going to do
- **Summer** (provided you progress to the dissertation stage)
 - Work on your **project** (build, test, analyse results)
 - Write a **dissertation**



IRR/IPP Structure

- **Central allocation**
- Groups will meet **every week** (starting in week 3(tbc))
 - Guide you through the **stages of writing** a review
 - **Discuss** progress, answer **questions**, provide **feedback**
 - Your tutor will email to arrange meeting time/place
 - Attendance **mandatory** – will affect mark
- IRR Tutor \neq Personal Tutor

FAQ

- Does IRR need to overlap with my course topics?
No, it is common but not required.
- Does my project need to be in my IRR area?
No, it is common but not required.
- Does my project need to be in line with my course topics?
No, but “suitability” for a project may depend on course choices.
- As part-time student, do I need to do IRR & IPP in the same year?
No. Instead try to do IPP and project in the same year.
- Do IPP and my project be on the same topic?
No, but this is very common.
Special case: Part-time students.



IRR Tutorials

- **Exact Location, time, and contents determined by tutor**
- **Content**
 - What is a literature review
 - How to search for papers
 - How to read papers effectively
 - Write an introduction of your report & scientific writing
 - Using scientific writing software
 - Using Turnitin, reviewing drafts
 - Feedback on first draft
- **Submit your report via Turnitin (details will be on the website)**



IRR/IPP Information

- **IRR website**
<http://www.inf.ed.ac.uk/teaching/courses/irr>
- **IPP website (work in progress)**
<http://www.inf.ed.ac.uk/teaching/courses/ipp>
- **MSc project guide**
<http://www.inf.ed.ac.uk/teaching/courses/diss/guide.html>
- **If you have **questions** (in this order!)**
 1. Post your question on the Piazza forum
 2. Ask the tutor of your group
 3. Email the TA
 4. Email me
 5. Make an appointment to see me

Technicalities

what are other
words for
technicalities?

minutiae, specifics, details,
technicality, niceties,
fine point, particulars,
fine points, technology



Course Website

- <http://www.inf.ed.ac.uk/teaching/courses/irr>
- Central repository of **relevant course information**
 - Announcements, resources, software, coursework information
 - Gets updated as we go along, keep checking!
- **Resources**
 - Material on literature searching, academic reading & writing, critical reviewing, academic standards & good practice
 - Links to IAD resources, papers, books & videos
 - It's **your responsibility** to make use of these!

Piazza Forum

- **Forum** for course-wide **discussion**
 - Not just for asking questions when you're struggling
 - **Main resource** for discussions around this course
 - Peer-to-peer, tutors, TA, course lecturer
 - Don't expect me to respond to all questions and/or within 5 minutes!
- Allows **anonymous** posts
 - No trolling, University regulations still apply
 - May drop anonymity if forced to
- Tutors, TA & myself will follow discussions & contribute



Course Wiki

- Mainly a resource for **course tutors**
 - Schedule/content for tutorials
 - Sharing of tutorial materials
 - Take a look!
- **Seed papers**
 - Dynamic resource, lecturers/tutors may update this
- Archive of older course materials

Software Tools

- **Recommended tools**
 - LaTeX & BibTeX
 - Overleaf
 - LaTeX **template** provided on website
 - Links to useful tutorials provided on website
- Free to use whatever for writing, but not supported/recommended
 - MS Word, Open/LibreOffice, ...
- Other useful tools, e.g. for management of references
 - Mendeley, Papers, ...
- Keep **backups** when working locally!

Assessment



Assessment

- We are here to help and most students enjoy the course
- Main reasons for failure:
 - Plagiarism
 - Not showing up at tutorials
 - Non-scientific topic: 'the new iPhone', 'History of facebook'
 - Poorly written literature review
 - Summary of random papers, rather than structured and critical review telling a story and culminating in the identification of an area worthy of further investigation

Assessment

- Minor review exercises within tutorial groups not marked, but feedback
- Final report will be marked by your tutor & you will receive feedback
- Mark is based on:
 - **Appropriate coverage**
Did you hit all the important papers in the area?
 - **Understanding of sources**
Are you just parroting back what you read?
 - **Critical evaluation and comparison**
Beyond “A did X, B did Y”?
 - **Clarity of expression and presentation**
Do your friends understand it?
 - **Attendance of tutorial group meetings**
Discuss all absences with your tutor



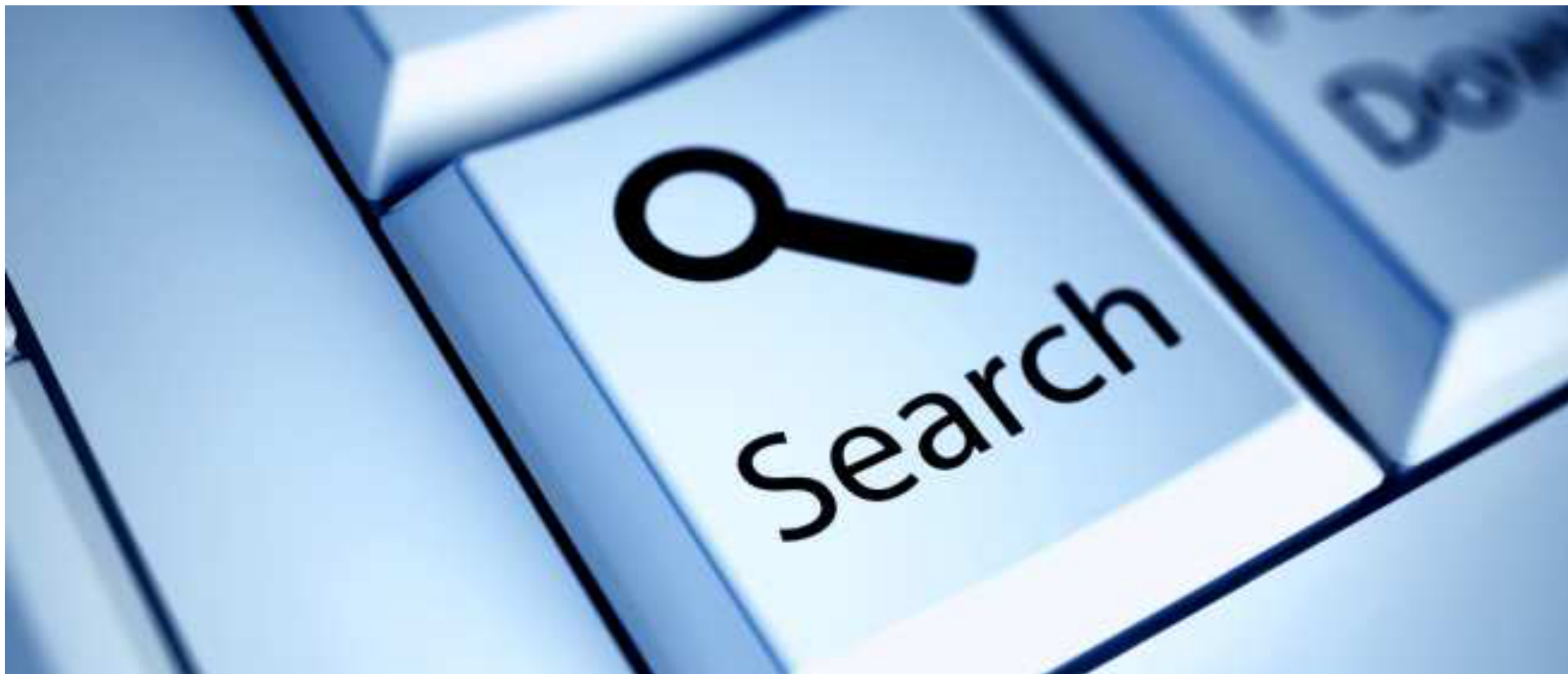
Literature Review

Goals of a Literature Review

- Understand the **state-of-the-art**
 - What is current substantive knowledge?
 - What are the most important questions?
 - What research has been done most recently?
 - Who is doing the research?
 - What are they investigating?
- What is **current methodological knowledge**?
 - What research methods are being used?
 - What tools and techniques are being used?
 - How are results being analysed?

Why do a Literature Review?

- Help you understand current work in the field
- Can assist with understanding of theoretical or practical problem and/or hypothesis
- Helps identify your contribution
- Provides a firm foundation for your work
- Increases chances of paper being accepted
- Stops comments from reviewers such as, *“This paper should have considered the work of Smith et al. who performed an experiment very similar to the one described in this paper”*



Starting Point

- Select interesting **seed papers** from:
<https://www.wiki.ed.ac.uk/display/irrirpwiki/IRRSeedPapers>
- Provided by **project supervisors** for each specialist area
- You can also use a paper you **found yourself**
 - Check with tutor

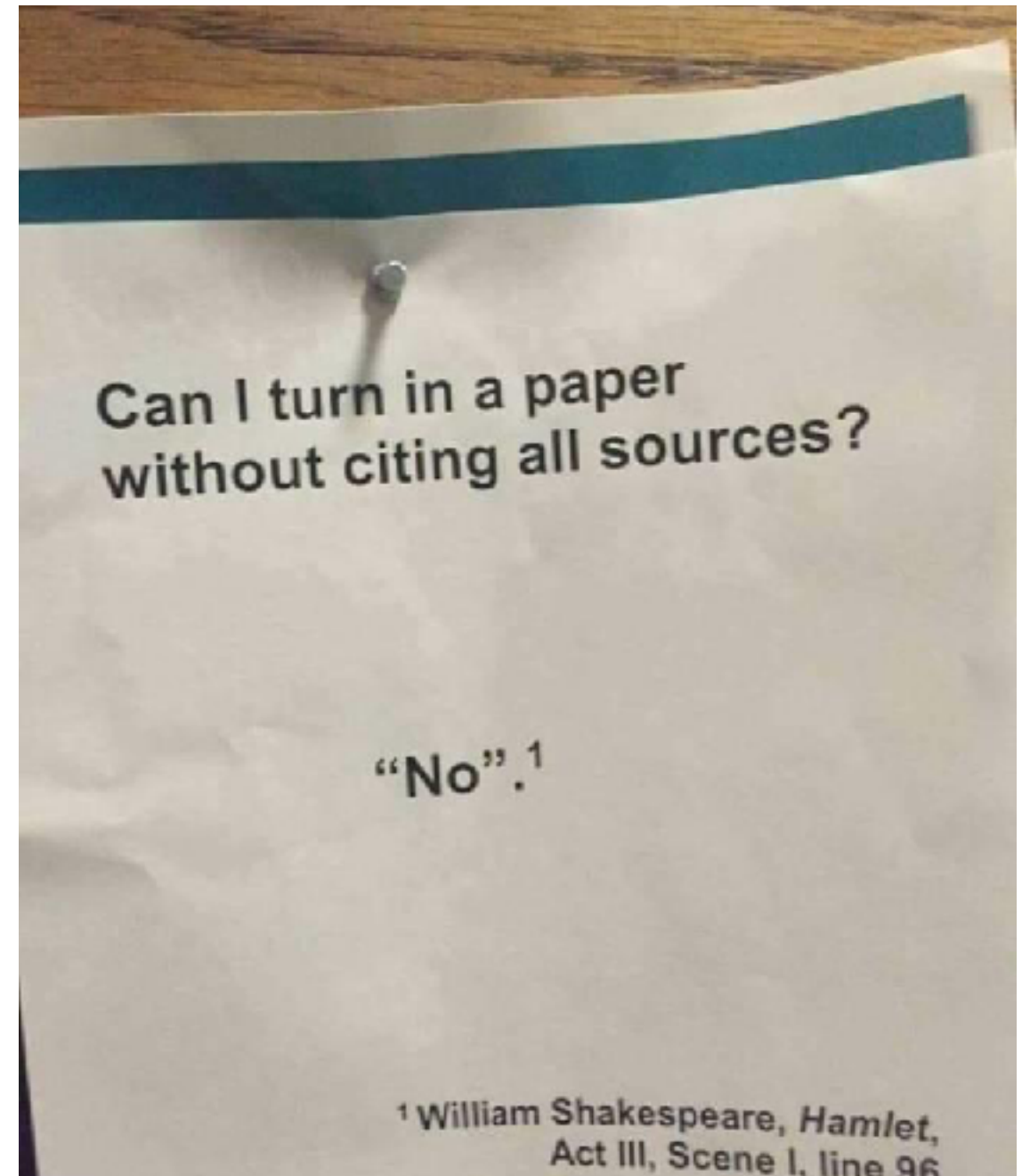
Next Steps

- Follow-up the **citations** in the papers you read
 - Reference list
- See who cited the paper (easy with **Google Scholar**)
- Library and online resources
 - ACM or IEEE **Digital Libraries**
 - Citeseer and ISI Web of Knowledge
 - Google Scholar
 - **Library Online** <http://www.lib.ed.ac.uk/resources>



Citations are important!

- Bedrock of academic honesty
- Avoids claims of plagiarism



Avoid Plagiarism

- **Quotations** must be acknowledged
 - Including close paraphrase
- Use **quote marks and cite source**
...Smith(2009, p.138) argued that “the Level 2 cache systems are the core to fast database systems in future HPC”....
- **Do not copy-paste-edit** from online sources
- Read **School guide on plagiarism**
 - <http://www.inf.ed.ac.uk/admin/ITO/DivisionalGuidelinesPlagiarism.html>
- Plagiarism carries **serious penalties**. Fail on the course is the least severe...
- Guidance on **Good Academic Practice** on the course website





Institute for Academic Development

- Part of the University of Edinburgh
- Offers for **free**:
 - Study skills workshops
 - Self-study learning resources
 - Advice to help you succeed in your studies
- Useful **resources** for taught postgraduate students
 - Literature review
 - Literature searching
 - Managing reading workloads
 - Writing at postgraduate level



English Language Education

- Also part of the University of Edinburgh
- Provides **free support**
 - Courses, workshops, independent study materials
- **Embedded sessions** in the IRR course
 - Lecture 2, 3: Academic Reading & Writing
 - Q&A, writing workshop

Time Management

- Work out **timetable** for reading/writing
- Leave plenty of time for **feedback** and **correction**
- Read at a **steady pace**
- Keep **notes**
- Write as you go
- Completeness over perfection
 - Allow for several iterations before submission
 - Don't become too attached to your own text



Lecture Recording

Where can you find them?

- If your lecture has been recorded, it will be available in Learn.
- To access recordings click on the link to Media Hopper Replay in your VLE.
- For more information visit: <http://edin.ac/2fh775s>

Getting the most out of your recorded lectures



Attend lectures.



Make notes.



Be specific.



Catch up.



Ask for help.



Don't cut corners.

Remember



Research shows that students who attend more lectures tend to get better grades.



Revisit the recording within 2-3 days, don't rewatch immediately after the lecture, or wait too long.



The best way to make notes is to summarise or paraphrase what the lecturer is saying, rather than writing down word-for-word.



Just because there's a recording doesn't mean you can't ask for help if you don't understand bits of the lecture.



Do not share, publish or sell recorded lectures outside the University of Edinburgh.

Why is my lecture not being recorded?

Not all University of Edinburgh lectures are recorded. This could be because:

- The room isn't set up for recording.
- The materials are sensitive or personal.
- The lecturer feels it is inappropriate.



NB: If a lecturer has opted out of recording, **students may still make their own audio recordings for individual use.**

This is in accordance with the University Accessible and Inclusive Learning Policy
(25 May 2016)