THE UNIVERSITY of EDINBURGH
informatics

Lecture 1
IPP Overview

Informatics Project Proposal (IPP)
2024/2025

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Based on and adapted from earlier versions by Björn Franke
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Core IPP Course Team

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Part 1: Overview

1 Your MSc Programme

2 Motivation

3 Goals

Your MSc Programme

- **Taught component (100 credits)**
  - Lectures, tutorials, courseworks, exams
  - Learn established techniques that work
- **Research component (80 credits)**
  - Do something that has never been done before
    - Study a new problem, develop a new method, etc.
    - Probably the most exciting (and hardest) part of MSc
  - ***Dissertation*** (**60 credits** , 20-40 pages)
- **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
- **Project Proposals - DISS: MSc Dissertation (Informatics)**
  - ***Fri, 17 Jan 2025:*** deadline for all project proposals, including self-proposed projects
  - ***Fri 24 Jan 2025 – Fri, 7 Feb 2025:*** Talk to supervisors, pick set of topics
  - algorithmic allocation (due 21st Feb tbc)
- **Semester 2 (IPP)**
  - write a detailed **research plan** for what you're going to do (CW, 100%)
- **Summer** (provided you progress to the dissertation stage)
  - Work on your **project** (design, build, test, analyse results)
  - Write a **dissertation** – ***end of August 2024 (TBA)***
- **Timetable:** https://opencourse.inf.ed.ac.uk/diss/

Why?

SCQF LEVEL DESCRIPTORS

scottish credit and qualifications framework

LEVEL 11

The following descriptions are for guidance only –
it is not expected that every point will necessarily be covered.

CHARACTERISTIC 1: KNOWLEDGE AND UNDERSTANDING

- Demonstrate and/or work with:
  - Knowledge that covers and integrates most, if not all, of the main areas of the subject/discipline/sector – including their features, boundaries, terminology and conventions.
  - A critical understanding of the principal theories, concepts and principles.
  - A critical understanding of a range of specialised theories, concepts and principles.
  - Extensive, detailed and critical knowledge and understanding in one or more specialisms, much of which is at, or informed by, developments at the forefront.
  - A critical awareness of current issues in a subject/discipline/sector and one or more specialisms.

CHARACTERISTIC 2: PRACTICE: APPLIED KNOWLEDGE, SKILLS AND UNDERSTANDING

- Apply knowledge, skills and understanding:
  - In using a significant range of the principal professional skills, techniques, practices and/or materials associated with the subject/discipline/sector.
  - In using a range of specialised skills, techniques, practices and/or materials that are at the forefront of, or informed by forefront developments.
  - In applying a range of standard and specialised research and/or equivalent instruments and techniques of enquiry.
  - In planning and executing a significant project of research, investigation or development.
  - In demonstrating originality and/or creativity, including in practices.
  - To practise in a wide and often unpredictable variety of professional level contexts.

CHARACTERISTIC 3: GENERIC COGNITIVE SKILLS

- Apply critical analysis, evaluation and synthesis to forefront issues, or issues that are informed by forefront developments in the subject/discipline/sector.
- Identify, conceptualise and define new and abstract problems and issues.
- Develop original and creative responses to problems and issues.
- Critically review, consolidate and extend knowledge, skills, practices and thinking in a subject/discipline/sector.
- Deal with complex issues and make informed judgements in situations in the absence of complete or consistent data/information.

CHARACTERISTIC 4: COMMUNICATION, ICT AND NUMERACY SKILLS

- Use a wide range of routine skills and a range of advanced and specialised skills as appropriate to a subject/discipline/sector, for example:
  - Communicate, using appropriate methods, to a range of audiences with different levels of knowledge/expertise.
  - Communicate with peers, more senior colleagues and specialists.
  - Use a wide range of ICT applications to support and enhance work at this level and adjust features to suit purpose.
  - Undertake critical evaluations of a wide range of numerical and graphical data.

CHARACTERISTIC 5: AUTONOMY, ACCOUNTABILITY AND WORKING WITH OTHERS

- Exercise substantial autonomy and initiative in professional and equivalent activities.
- Take responsibility for own work and/or significant responsibility for the work of others.
- Take significant responsibility for a range of resources.
- Work in a peer relationship with specialist practitioners.
- Demonstrate leadership and/or initiative and make an identifiable contribution to change and development and/or new thinking.
- Practise in ways which draw on critical reflection on own and others' roles and responsibilities.
- Manage complex ethical and professional issues and make informed judgements on issues not addressed by current professional and/or ethical codes or practices.

IRR vs IPP

IRR	IPP
• Literature Review	• **Your** Project Proposal/Plan
• Coursework – assessed by tutors	• Coursework – assessed by project supervisor
• Mandatory tutorial groups	• Mandatory **tutorial groups** & **meetings with supervisor!**

Goals

- Learn skills of **project planning**
- Confirm choice of (research) **project area**
- Scope out your **summer project**

Further IPP Goals

- Knowing **what to work on** is a **big part of research**
  - Motivation is identifying a **void** in the **literature**, or a real-world **problem** that has **not been solved**.
  - Coming up with a **feasible** way to address the problem.
    - Propose **ways of evaluating** the techniques.
    - Present **expected outcomes** succinctly and objectively.
- Important skills
  - For PhD applications
  - For grant writing
  - For industry project proposals

Part 2: Course Organisation

1 Components of IPP

2 Timeline

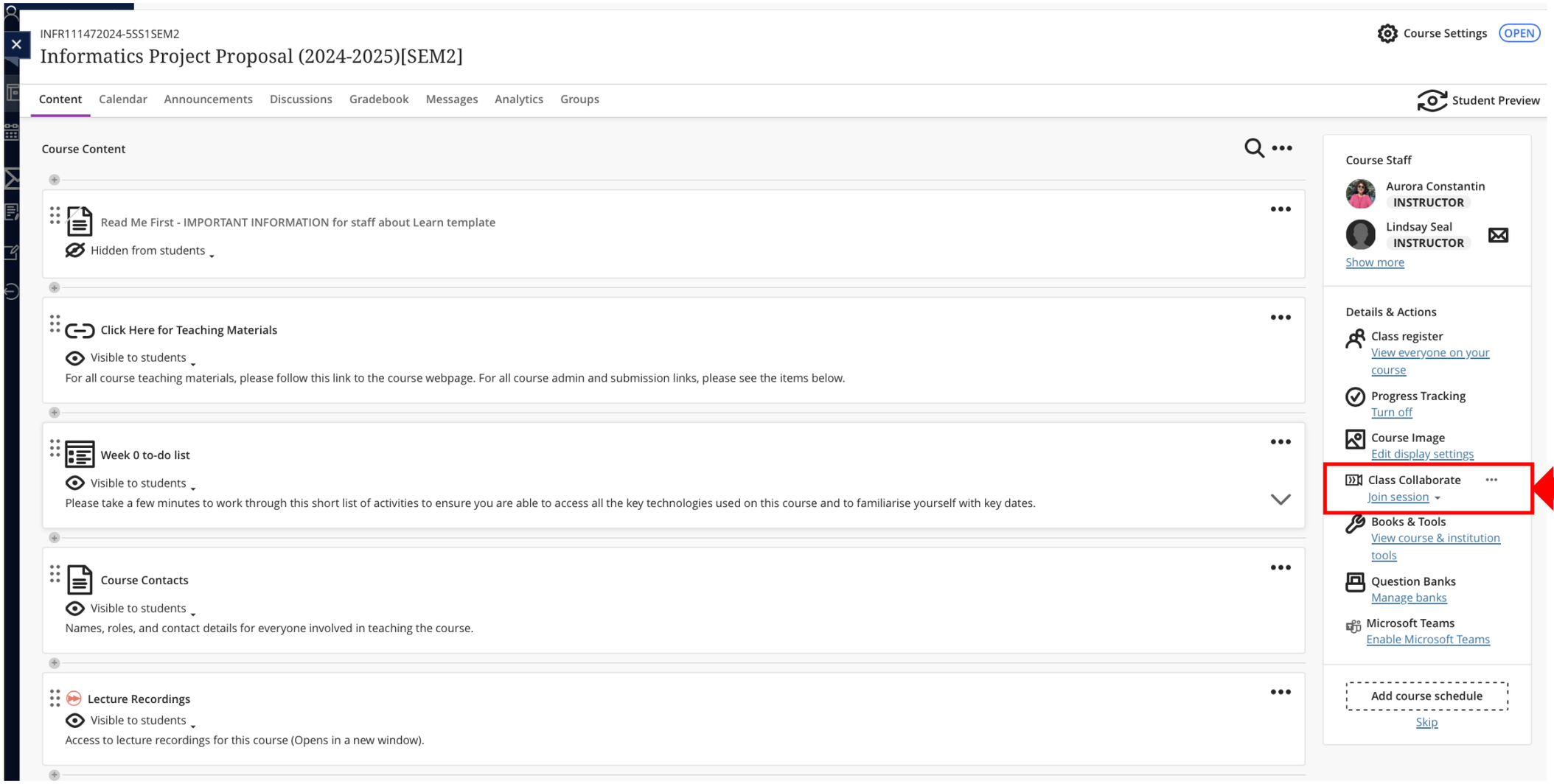
3 Project Supervisors

Components of the IPP

- 5 **lectures / Q&A sessions – in person in George Square Theatre, room** GALT_ Gordon Aikman Lecture Theatre
- Q&A also live on Collaborate
- 6 **IPP tutorials, starting from week 4** – in person
- **Coursework** – due in W14, on Mon 21 Apr 2025, 12:00 (Noon)
- **Regular** (e.g., weekly or fortnightly) **meetings with your project supervisor**

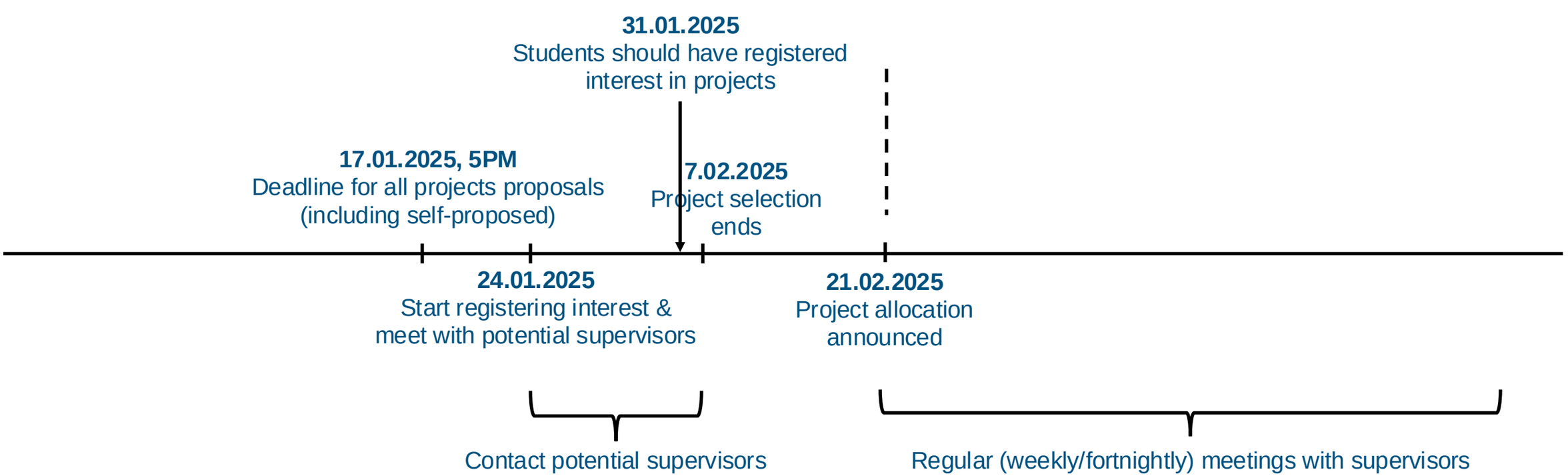
Components of the IPP

Open hours → Class Collaborate from Learn



Timeline*

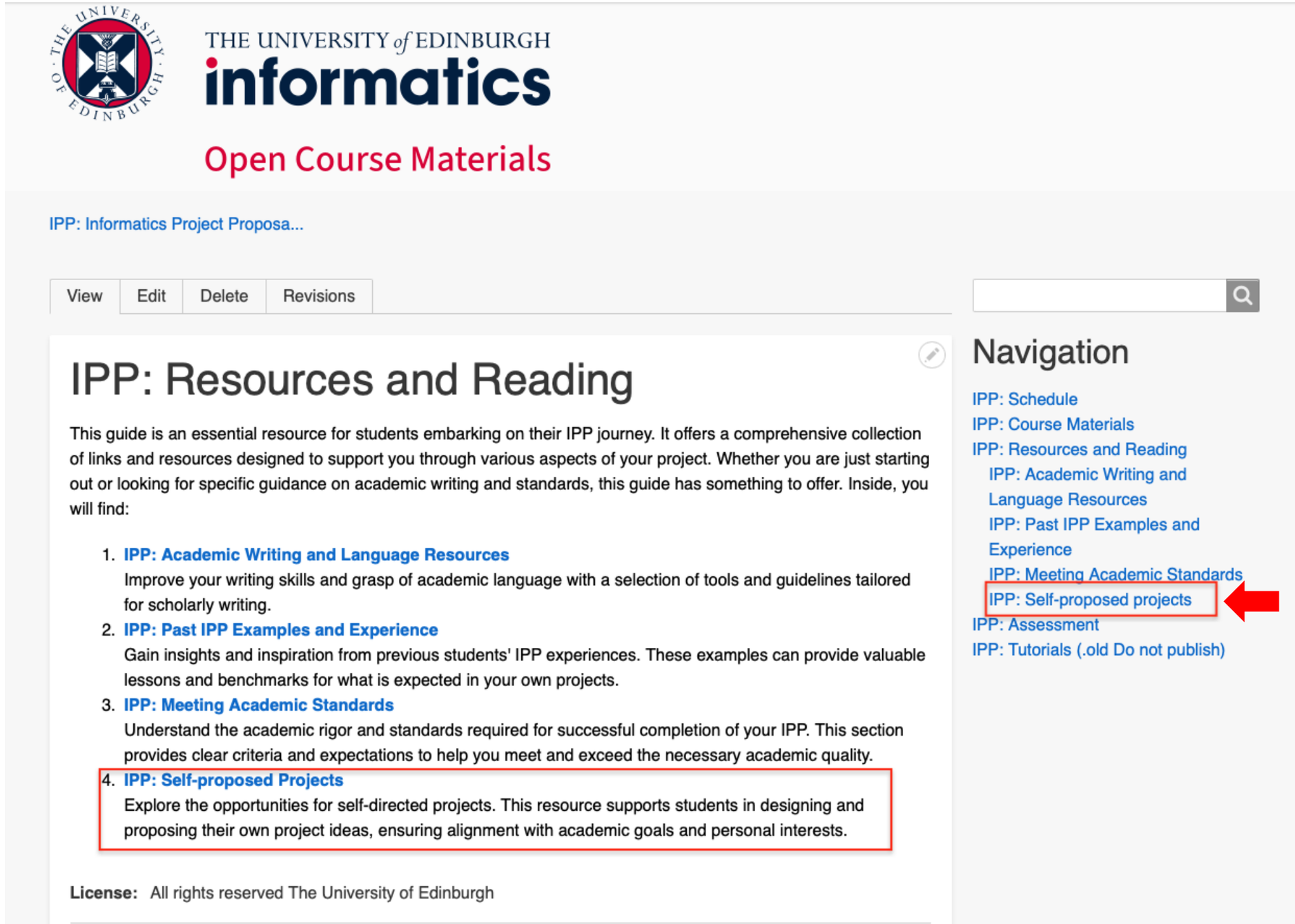
	W1	W2	W3	W4	W5	FLW	W6	W7	W8	W9	W10	W11	…	W14
Lectures	✓	✓			✓		✓	✓						
Q&A sessions			✓	✓					✓	✓	✓			
Tutorials				✓	✓			✓	✓	✓	✓			
Coursework (IPP) submission														21.04 12:00



FLW =Flexible Learning Week
https://opencourse.inf.ed.ac.uk/diss/

Dates valid 2024/25 session only.
**https://opencourse.inf.ed.ac.uk/diss*

Self-proposed projects



https://opencourse.inf.ed.ac.uk/ipp/self-proposed-projects

IPP Lectures*

Week (*date*)	Lecture Topic *(Lecturers)*
W1 (14/01/24)	Lecture 1: IPP Overview *Aurora Constantin & Douglas Armstrong*
W2 (21/01/25)	Lecture 2: MSc Project Selection Guidance *Amir Vaxman (Project coordinator)*
W5 (11/02/25)	Lecture 3: Writing a Research Proposal *David Caulton*
W6 (25/02/25)	Lecture 4: How to write a great IPP proposal *Aurora Constantin & Douglas Armstrong*
W7 (04/03/25)	Lecture 5: Responsible Research & Ethics *Bjorn Ross, Aurora Constantin & Douglas Armstrong*

** Lectures will be held in person, on Tuesdays, at 13:10 in George Square Theatre, room GALT*

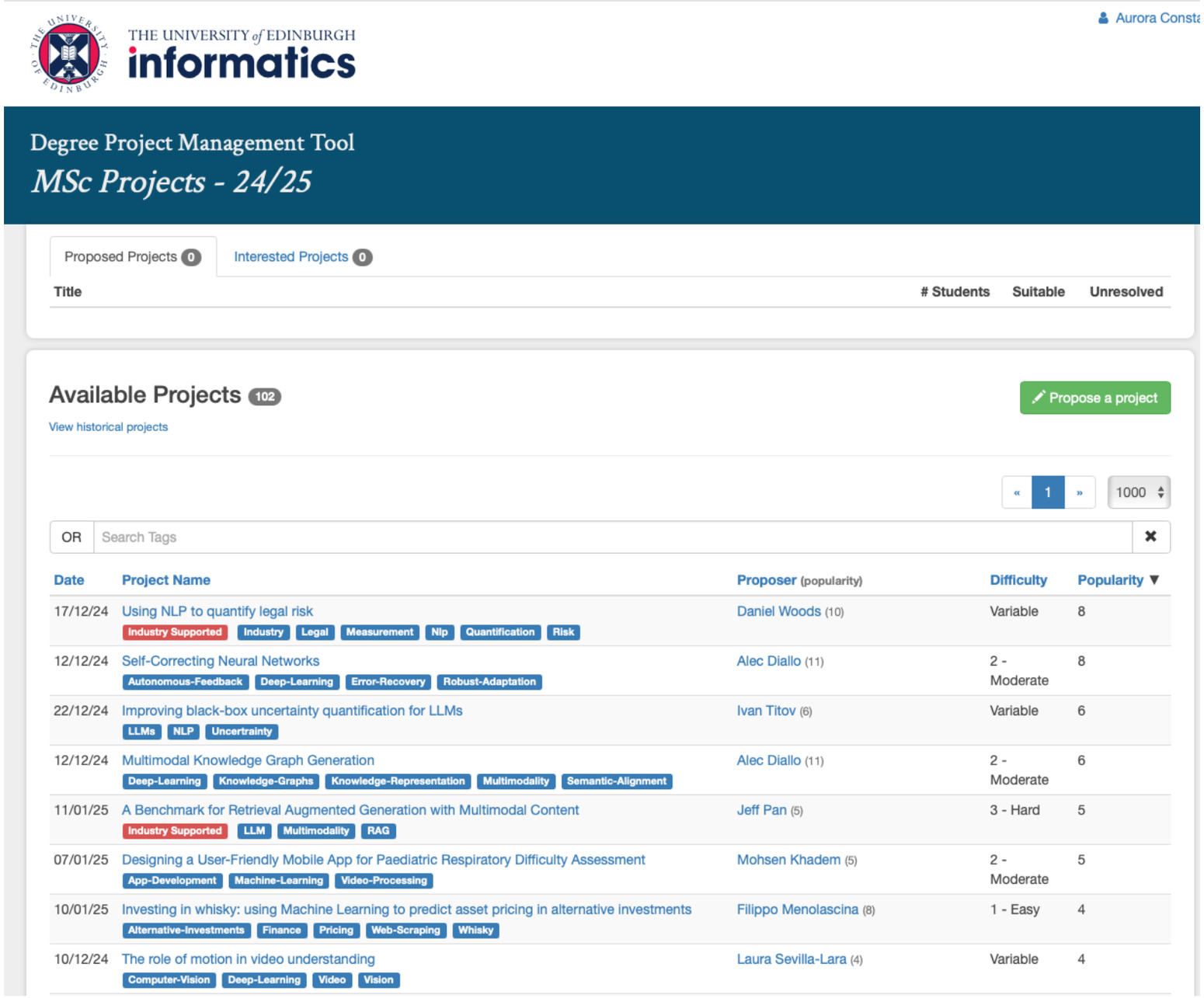
IPP Tutorials

- Tutorials focus on **generic project planning** skills and **proposal writing**, not the technical content of your plan
- Tutors are there to help you. Get this opportunity.
- Attendance is mandatory: ignore meetings = fail IPP
- Tutorial group allocation → TTU
- To change your tutorial group, you need to complete a GCRF form direct to TTU: https://registryservices.ed.ac.uk/groupchangerequestform

Coursework

- CW (100%): Writing an IPP – *due on 21/04/25, 12:00 PM (Noon)*
  - Students work individually to write a project proposal focused on the project which will be allocated to them towards the end of February 2022.
  - This proposal will guide their summer project.
  - Marked by supervisors – pass/fail

Degree Project Management Tool (DPMT)



Regular Meetings with Project Supervisor

- Start **after project allocation**
- You are in charge to **schedule regular meetings**

  Do not let it slip! Supervisors will not chase you
- Supervisors mark your report

Relation with your Supervisor

- **Weekly meetings** are a good starting point – fortnightly if your supervisor prefers – but make it short if you have nothing to discuss
- **Do not cancel if you are stuck**!
- **Bad practice**
  - Asking feedback on many versions of your IPP
  - Last minute cancellations
- **Good practice**
  - Show initiative
  - Search and read secondary literature
- **Essential ingredients**
  - Good communication
  - Clarity about expectations