



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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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

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
<ul style="list-style-type: none">Literature Review	<ul style="list-style-type: none">Your Project Proposal/Plan
<ul style="list-style-type: none">Coursework – assessed by tutors	<ul style="list-style-type: none">Coursework – assessed by project supervisor
<ul style="list-style-type: none">Mandatory tutorial groups	<ul style="list-style-type: none">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

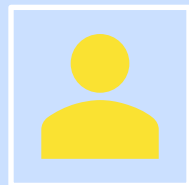
Part 2: Course Organisation



1 Components of IPP



2 Timeline



3 Project Supervisors



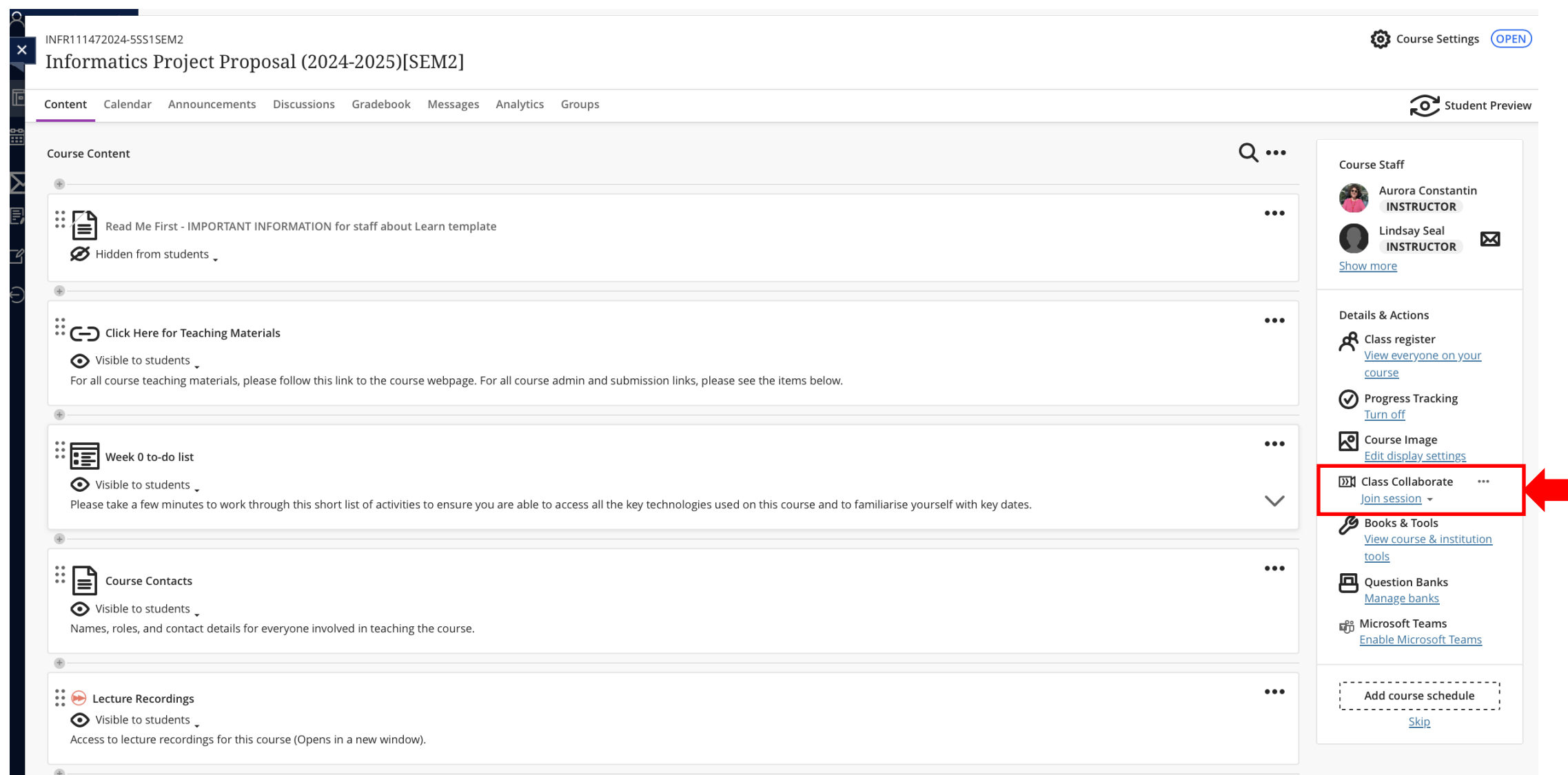
Components of the IPP

- 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



INFR111472024-5SS1SEM2

Informatics Project Proposal (2024-2025)[SEM2]

Course Settings [OPEN](#)

Content Calendar Announcements Discussions Gradebook Messages Analytics Groups

Student Preview

Course Content

- Read Me First - IMPORTANT INFORMATION for staff about Learn template
Hidden from students
- Click Here for Teaching Materials
Visible to students
For all course teaching materials, please follow this link to the course webpage. For all course admin and submission links, please see the items below.
- Week 0 to-do list
Visible to students
Please take a few minutes to work through this short list of activities to ensure you are able to access all the key technologies used on this course and to familiarise yourself with key dates.
- Course Contacts
Visible to students
Names, roles, and contact details for everyone involved in teaching the course.
- Lecture Recordings
Visible to students
Access to lecture recordings for this course (Opens in a new window).

Course Staff

- Aurora Constantin
INSTRUCTOR
- Lindsay Seal
INSTRUCTOR
- [Show more](#)

Details & Actions

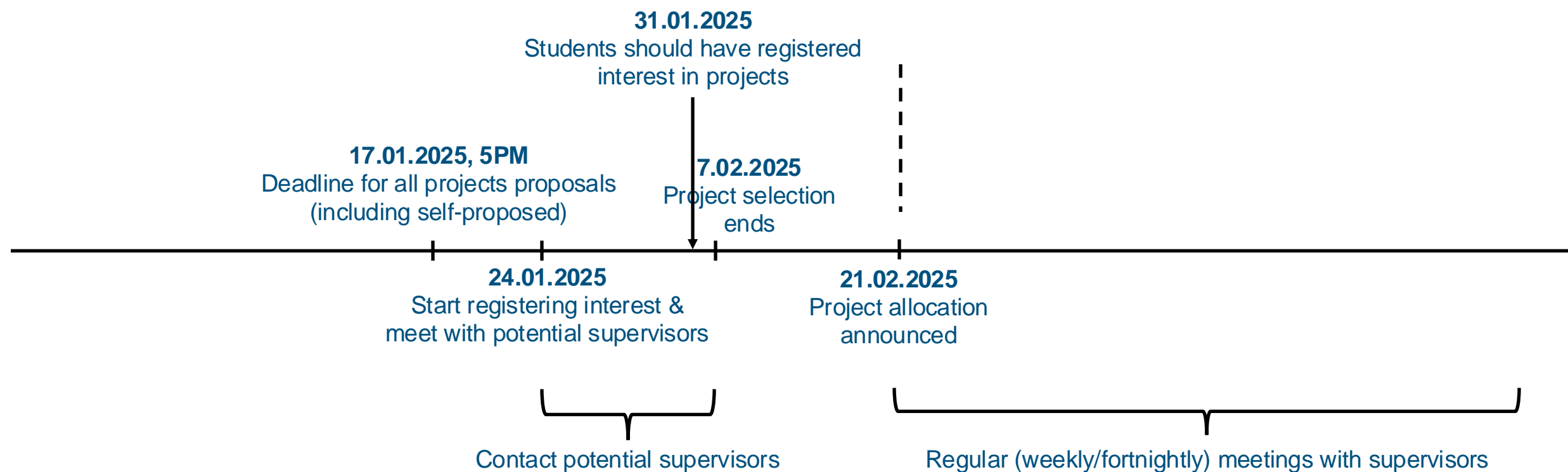
- Class register
[View everyone on your course](#)
- Progress Tracking
[Turn off](#)
- Course Image
[Edit display settings](#)
- Class Collaborate** [Join session](#)
- Books & Tools
[View course & institution tools](#)
- Question Banks
[Manage banks](#)
- Microsoft Teams
[Enable Microsoft Teams](#)

Add course schedule
[Skip](#)



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

THE UNIVERSITY of EDINBURGH
informatics
Open Course Materials

IPP: Informatics Project Proposa...

[View](#) [Edit](#) [Delete](#) [Revisions](#)

IPP: Resources and Reading

This guide is an essential resource for students embarking on their IPP journey. It offers a comprehensive collection of links and resources designed to support you through various aspects of your project. Whether you are just starting out or looking for specific guidance on academic writing and standards, this guide has something to offer. Inside, you will find:

- IPP: Academic Writing and Language Resources**
Improve your writing skills and grasp of academic language with a selection of tools and guidelines tailored for scholarly writing.
- IPP: Past IPP Examples and Experience**
Gain insights and inspiration from previous students' IPP experiences. These examples can provide valuable lessons and benchmarks for what is expected in your own projects.
- IPP: Meeting Academic Standards**
Understand the academic rigor and standards required for successful completion of your IPP. This section provides clear criteria and expectations to help you meet and exceed the necessary academic quality.
- IPP: Self-proposed Projects**
Explore the opportunities for self-directed projects. This resource supports students in designing and proposing their own project ideas, ensuring alignment with academic goals and personal interests.

Navigation

- [IPP: Schedule](#)
- [IPP: Course Materials](#)
- [IPP: Resources and Reading](#)
 - [IPP: Academic Writing and Language Resources](#)
 - [IPP: Past IPP Examples and Experience](#)
 - [IPP: Meeting Academic Standards](#)
 - [IPP: Self-proposed projects](#)
 - [IPP: Assessment](#)
 - [IPP: Tutorials \(.old Do not publish\)](#)

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<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 <i>Aurora Constantin & Douglas Armstrong</i>
W2 (21/01/25)	Lecture 2: MSc Project Selection Guidance <i>Amir Vaxman (Project coordinator)</i>
W5 (11/02/25)	Lecture 3: Writing a Research Proposal <i>David Caulton</i>
W6 (25/02/25)	Lecture 4: How to write a great IPP proposal <i>Aurora Constantin & Douglas Armstrong</i>
W7 (04/03/25)	Lecture 5: Responsible Research & Ethics <i>Bjorn Ross, Aurora Constantin & Douglas Armstrong</i>

* 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)

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Degree Project Management Tool

MSc Projects - 24/25

Proposed Projects 0 Interested Projects 0

Title # Students Suitable Unresolved

Available Projects 102

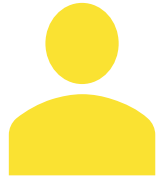
Propose a project

[View historical projects](#)

« 1 » 1000

OR Search Tags

Date	Project Name	Proposer (popularity)	Difficulty	Popularity ▼
17/12/24	Using NLP to quantify legal risk Industry Supported Industry Legal Measurement Nlp Quantification Risk	Daniel Woods (10)	Variable	8
12/12/24	Self-Correcting Neural Networks Autonomous-Feedback Deep-Learning Error-Recovery Robust-Adaptation	Alec Diallo (11)	2 - Moderate	8
22/12/24	Improving black-box uncertainty quantification for LLMs LLMs NLP Uncertainty	Ivan Titov (6)	Variable	6
12/12/24	Multimodal Knowledge Graph Generation Deep-Learning Knowledge-Graphs Knowledge-Representation Multimodality Semantic-Alignment	Alec Diallo (11)	2 - Moderate	6
11/01/25	A Benchmark for Retrieval Augmented Generation with Multimodal Content Industry Supported LLM Multimodality RAG	Jeff Pan (5)	3 - Hard	5
07/01/25	Designing a User-Friendly Mobile App for Paediatric Respiratory Difficulty Assessment App-Development Machine-Learning Video-Processing	Mohsen Khadem (5)	2 - Moderate	5
10/01/25	Investing in whisky: using Machine Learning to predict asset pricing in alternative investments Alternative-Investments Finance Pricing Web-Scraping Whisky	Filippo Menolascina (8)	1 - Easy	4
10/12/24	The role of motion in video understanding Computer-Vision Deep-Learning Video Vision	Laura Sevilla-Lara (4)	Variable	4



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