

Proposal to rename IRP with small changes to descriptor

Background:

The current course title “Informatics Research Proposal” implies that all proposals (and by extension MSc dissertation projects) must be research-based, and the descriptor is in line with that. However, the descriptor and marking guidelines for MSc Dissertation do *not* require a research-based project, nor do the University guidelines for dissertations, the BCS accreditation guidelines, or the SCQF level 11 guidelines. All of these permit projects/dissertations that are primarily practice-based, as long as they provide opportunities to demonstrate factors such as creativity/originality, critical analysis and judgement, knowledge of advanced/leading edge subject material, and self-direction (see Notes below for more details).

Some MSc projects already fall mainly into the practice-based category, but many supervisors (and probably students) seem to be under the impression that projects must be research-based. Some of our students undoubtedly want research-based projects, but the extreme popularity of large practical courses such as MLP and MT suggests that many students might prefer more practice-based options. This proposal aims to make the possibility of such options more explicit, and to bring the title and descriptor of IRP in line with those options, while making as few other changes to the descriptor as possible. The proposed descriptor subsumes the previous one (i.e., the existing version of IRP is still entirely possible within the new, broader descriptor).

The proposed descriptor should also be flexible enough to accommodate alternative project supervision models that are currently under discussion, if these go ahead. For example, some supervisors (with TAs) might take a group of 10-20 students onto the same general project, where preparation might consist of a seminar-style reading group and/or structured preparatory implementation done by all students, followed by individual students proposing how to extend their work during the summer period.

Proposed changes to title and descriptor:

The relevant sections of the IRP descriptor are shown, with changes indicated. Any sections not listed will not change.

Title

Informatics ~~Research-Project~~ Proposal [see Notes below]

Prohibited Combinations

Students must not also be taking Informatics Research Proposal (INFR11071) ([old 20 credit version](#)) or Informatics Research Proposal (INFR11137) ([previous name of this 10 credit course](#))

Summary

The aim of this ~~module~~[course](#) is to develop generic research ~~and/or practical~~ skills that can be deployed in academic or commercial environments. Students will demonstrate their

ability to develop interesting concepts and or hypotheses into ~~research~~ proposals appropriate for a larger research- or implementation-based project and demonstrate their ability to identify legal, social, ethical and professional issues.

~~Student and supervisor will work towards agreement on a topic at the start of the semester. The student will then work on~~ Structure and delivery of this course will vary according to the nature of the project, and will be agreed between student and supervisor at the start of the semester. Representative activities might include literature review, data preparation, preliminary implementation, or establishing connections and gathering requirements from stakeholders. The student will then produce a project proposal that explains the hypotheses and/or goals, project management, and milestones with approximate times with some justification for these decisions. Key methodologies should be introduced.

This 10 credit course replaces Informatics Research Proposal (Level 11) (INFR11137) and Informatics Research Proposal (Level 11) (INFR11071) - 20 credit course.

Learning and teaching activities:

Total Hours: 100 (Lecture Hours 1, Seminar/Tutorial Hours 9, Dissertation/Project Supervision Hours 10, Programme Level Learning and Teaching Hours 2, Directed Learning and Independent Learning Hours 78)

Additional information (Assessment):

Written Exam 0 %, Coursework 100 %, Practical Exam 0 %

The assessment will come from one piece of submitted work: a full research-project proposal, including background, motivation, and a description of the ~~research~~ methodology and expected outcomes. A good proposal might be organised as follows:

- * Purpose: a statement of the problem to be addressed.
- * Background: a short description of how previous work addresses (or fails to address) this problem.
- * Methods: A description of the methods and techniques to be used ~~to test the hypotheses~~, indicating that alternatives have been considered and ruled out on sound scientific or engineering grounds.
- * Evaluation: Details of the metrics or other methods by which the outcomes will be evaluated.
- * Consideration of legal, social, ethical or professional issues particular to the project.
- * Workplan: A timetable detailing what will be done to complete the proposed project, and when these tasks will be completed.

Learning outcomes:

On completion of this course, the student will be able to:

1. Critically evaluate research literature or other prior work appropriate for their project subject

2. Use existing research literature or other prior work to justify ~~experimental design choices~~choices in experimental design and/or implementation
3. Develop a structured research-project proposal
- ~~4. Discuss research proposals with particular reference to key hypotheses and methodological approaches.~~ [unclear and unassessed outcome removed]
- 5.4. Outline project/research management issues and potential legal, social, ethical or professional issues

Notes:

Alternative titles

Instead of “Informatics Project Proposal”, we might also consider “Informatics Project Preparation”. This would ease further possible future changes, such as allowing more flexibility in terms of the document produced at the end of the semester, without having to change the name of the course again.

Consultation

This proposal has been discussed with DoT, DDot, MSc Convenor, and MSc Year Organizer, plus Ewan Klein. Some small updates were made based on their comments. All said they are happy with the changes, though Year Organizer queried whether there may be some University requirement for research in dissertations, due to the presence of a question about research on the College form for marking dissertations. I have looked into this and quote relevant documents below, which alleviate the concern.

In addition, Convenor noted we may need to adjust the marking forms for IRP appropriately. The IRP coordinator will be tasked with this if the proposal is approved.

(Non-)requirements for research in MSc projects

The **University taught assessment regulations** do not mention projects.

The **University Curriculum Framework** (<http://www.ed.ac.uk/academic-services/staff/curriculum/curriculum-framework>) states in the document "Implementing the framework for undergraduate and postgraduate curricula" (http://www.ed.ac.uk/files/atoms/files/implementation_document.pdf) that MSc programmes must contain (with emphasis theirs)

“For the research/dissertation element 60 points at level 11 that demonstrate that the student can show proficiency in research and/or analytical skills relevant to advanced work in the Discipline.”

The **SCQF guidelines for Level 11** list the following characteristics of applying knowledge at Level 11 (with emphasis mine, and also note these are also “for guidance only – it is not expected that every point will necessarily be covered”).

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.

The **BCS accreditation guidelines** state:

"An individual project is an expectation within undergraduate, integrated masters, and postgraduate masters programmes" and that projects must have a report.

There is **no** requirement for each student to have totally unique project, or to do totally novel work. The requirement is that

"Postgraduate projects must give the student the opportunity to demonstrate:

- a systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of the specialist academic discipline
- a comprehensive understanding of techniques applicable to their own research or advanced scholarship
- deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences
- demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level
- critical self-evaluation of the process"