

Science Foundation Ireland's input on QA guidelines for research degree programmes

Thank you for the opportunity for Science Foundation Ireland to comment on the draft white paper on QA guidelines for research degree programmes. The paper is very informative and useful; the final version will be an extremely valuable resource for the Irish system.

Our input consists of specific **suggested** changes which focus on scientific reproducibility.

Our input is detailed below; suggested changes to the original draft are highlighted in **bold**.

1 GOVERNANCE AND MANAGEMENT OF QUALITY

1.1 Governance

Page 8:

Take cognisance of the evolving requirements on ethics, research integrity, **scientific reproducibility**, commercial and legal sensitivities and matters that impact on research projects following their conclusion (intellectual property)

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Training in all relevant areas: standards of writing and referencing, ethics, research integrity, **scientific reproducibility** and generic and transferable skills

1.2 Resources and provisions

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Access to training/ information on intellectual property, integrity, **scientific reproducibility**, ethics and other legal and commercial matters evolving as a consequence of increased professionalism and joint projects

Research records that are in accord with high ethical and professional standards **and that facilitate scientific reproducibility**.

3. RESEARCH STUDENTS

3.1 Recruitment and registration

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responsibilities, duties, normal and permissible working hours and **best lab** / safety practices

3.2 Responsibilities of research students

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Procedures are in place to make research students aware of their responsibilities, for example, with respect to commitment; attendance, training (*for example Research Integrity and Scientific Reproducibility*) and work expectations reflecting the intensity of research; the progress of their own research projects; and attaining the standards necessary to graduate. The procedures outline a role for all levels within the institution and also ensure that officers, research supervisors and other stakeholders support and facilitate an understanding of student responsibilities.

4 SUPERVISORS AND PROJECTS

4.2 Supervisors

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Provide qualified research-active staff with supports and training as research degree supervisors and/or as advisors, including:

obligatory structured training courses with a range of *activities including but not limited to:*

- **Research Integrity**
- **Scientific Reproducibility**

4.3 Research projects

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Procedures are in place to establish oversight mechanisms that seek to ensure the research projects agreed with students are realistic and appropriate with respect to:

requirements for consideration of the project having been satisfied, such as:

- ethical and professional matters have been vetted by a competent committee, including research integrity / **scientific reproducibility** processes in place for all research proposals
- record-keeping and monitoring in all these relevant areas **to an auditable standard**

6 TRAINING AND CAREER PREPARATION

6.2 Skills training

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Research students are provided with opportunities to become knowledgeable about areas relevant to their discipline and professional areas, such as:

- ethics
- research integrity
- **Scientific Reproducibility**

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There are specific sessions and sources of information for research students on plagiarism, citation Standards, **research integrity, scientific reproducibility** and related areas.

10 CONTINUOUS QUALITY MONITORING

10.1 Core data

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Procedures are in place to ensure that:

- Data collection related to research degree programmes and decisions on what is recorded, how and by whom, are managed at a high level within the provider. **Scientific rigor is adhered to, to ensure robust and unbiased experimental design, methodology, analysis, interpretation and reporting of results. This includes full transparency in reporting experimental details so that others may reproduce and extend the findings.**