



Higher Education Institutions & Responsible Research and Innovation



HEIRRI project has received funding from the European Union's Horizon 2020
research and innovation programme under grant agreement No 666004

HEIRRI project: Creating training programs for responsible research and innovation

Ana Marušić, Ivan Buljan, Mario Malički, HEIRRI Consortium

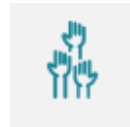


European Commission:

„Responsible research and innovation is an approach that anticipates and assesses potential implications and societal expectations with regard to research and innovation, with the aim to foster the design of inclusive and sustainable research and innovation.”



The European Commission has identified **six key axes of RRI**: public engagement, science ethics, science education, gender equality, open access, and science governance.



Four domains of RRI:

Diversity and inclusion

Anticipation and reflection

Openness and transparency

Responsiveness and adaptive change



HEIRRI is a **Horizon2020 project** that aims to integrate the concept of Responsible Research and Innovation (**RRI**) at all stages of **education** of scientists and engineers, as well as other fields or professions working on or affected by R&I.

A Higher Education Institution, HEI, is a formal learning organism that is accessible after the secondary education: universities, academies, colleges, seminaries, and institutes of technology.



HEIRRI Consortium



HEIRRI results so far

State of the art review of RRI and RRI learning

RRI Database – 23 exemplary cases related to RRI and RRI learning in higher education institutions (EU projects, different teaching/pedagogical approaches, programmes and courses and a policy document and a report)

HEIRRI training programmes



HEIRRI training programme syllabus

- Title
- Cycle
- Year of study
- ECTS credits
- Learning outcomes
- Mode of delivery
- Prerequisites and co-requisites
- Course content
- Recommended or required reading and other learning resources/tools
- Planned learning activities and teaching methods
- Assessment methods and criteria



Studying Responsibility: A Module-Based Integration of RRI into Bachelor's Programmes

ECTS: 4×0.5

Audience: Undergraduate students

Design: 4 modules, implemented together or included in already existing courses. Students (1) learn what research, innovation, and RRI mean in their field of study, (2) deal with concrete cases of RRI, (3) get to know practical approaches to promote RRI, and 4) to reflect on the responsibility of R&I in their scientific field.



Doing and Experiencing Dialogical Reflection on Research and Innovation

ECTS: 3.0

Audience: Masters students

Design: Interactive course – students get to know and discuss different approaches of how to facilitate dialogues on issues of R&I. Then they have to develop dialogue activities in groups and implement these in “dialogue experiments” with their colleagues as participants.



Enhance your Thesis

ECTS: 2.0

Audience: Masters students

Design: Course for master's students starting their final thesis – participants get to know concepts of RRI and discuss case examples, and then identify, investigate, and reflect on RRI aspects of their own theses.



Responsible PhD: RRI and PhD Research Projects

ECTS: 1.0

Audience: PhD students

Design: Course – introduces PhD students to the concept and idea of RRI, discuss its role in (academic) research by case examples, and further shows how PhD students can apply RRI in their own research.



Supporting RRI: Developing RRI Guidelines for PhD Candidates

ECTS: 1.0

Audience: PhD students

Design: Five- to six-hours workshop for PhD candidates – students develop RRI guidelines specific for the position of a PhD researcher. They identify their own possibilities to promote change towards more responsible research within their research context, and then set up guidelines that consider different concepts of RRI.



Teaching Responsible Research and Innovation in Higher Education

Audience: Academic and non-academic HEI members

Design: Train-the-trainer online course based on participants' independent study of provided texts, video material, and literature in combination with writing assignments and discussions in an online forum and chat. Participants deal in three parts with (1) concepts and the relevance of RRI, (2) practical approaches towards RRI, and (3) teaching RRI in higher education.



Facilitating Reflection on Responsible Research and Innovation

Audience: Academic and non-academic HEI members

Design: Train-the-trainer one-day workshop – participants will experience a reflection exercise on issues of Responsible Research and Innovation and related aspects. They will learn how to initiate and facilitate such reflection in their own field and particularly in teaching.



Considering Responsible Research and Innovation by Design

ECTS: 2.0

Audience: Master's and PhD students, R&I actors and other stakeholders

Design: Interactive five-day summer school brings together participants with different scientific and professional background to get to know RRI and work on concrete research proposals that consider RRI in organising a research process.



Concepts and Practice of Responsible Research and Innovation

ECTS: 2.0

Audience: Students, researchers, HEI actors, stakeholders, and other interested actors

Design: Massive open online course (MOOC) directed at a broader audience, from students and other stakeholders and actors of HEIs (e.g. researcher, librarians, administrative staff) to other interested people. Provides an overview of existing concepts and practices of responsible and sustainable research and development.





Call for Applications to test the HEIRRI training materials is now open!

News HEIRRI Marzo 1, 2017, 3 meses ago 0 1.6K

The HEIRRI project calls on **higher education institutions from all continents interested in Responsible Research and Innovation** and its integration into the curricula for a pilot test of two of the training programs and materials developed by the HEIRRI project.

- Description of the higher education institution
- Institution's interest in RRI (and information on previous experiences, if any)
- People that will be involved in the testing
- Training material(s) they would like to test (and why)
- Future plans to integrate RRI into the teaching of the institution



Testing training programmes

- Level 1 outcomes – learners' reaction to the intervention
- Level 2 outcomes – changes in attitudes and knowledge
- Level 3 outcomes – behavioural change transferred from the learning environment to the workplace (behavioural intentions; actual change in practices)
- Level 4 outcomes – organizational changes attributable to the intervention.





Higher Education Institutions
& Responsible Research and Innovation

Thank you for your attention!

ana.marusic@mefst.hr



HEIRRI project has received funding from the European Union's Horizon 2020
research and innovation programme under grant agreement No 666004