

RESPONSIBLE RESEARCH, INNOVATION AND ENTREPRENEURSHIP

STUDY PLAN 2022-2023

Coordinated by **Dr Pastora Martínez Samper**, Vice president for Globalization and Cooperation at Universitat Oberta de Catalunya and Associated professor at Universitat de Barcelona

GENERAL INFORMATION

Subject Name	Responsible Research, Innovation and Entrepreneurship
Code	572713
Type	Optional
Teaching	Second semester
Coordinator	Dr. Pastora Martínez
Contact details	pmsamper@uoc.edu
ECTS credits	3

OBJECTIVES

Part 1: Responsible Research and Innovation

This subject has two differentiated blocks and the main objectives are:

- A) Scientific communication for a scientific audience
- Improve the student's capacity to communicate and disseminate the results obtained from their research in different formats (oral presentations, posters, scientific papers, CV)
 - To contextualize such communications within the different stages of research
- B) Responsible Research and Innovation (RRI) or Scientific communication for a general public
- Report the key issues from the Responsible Research and Innovation (RRI) actions promoted by the European Commission within the action research program Horizon 2020
 - Skills to delve deeper in systems and mechanisms

Part 2: Entrepreneurship

The overall objective of the subject is to provide students the basic set of knowledge, know-how and skills to understand the basic policies and procedures to capture value from basic and translational research in Biomedicine and Biotechnology.

COMPETENCES TO BE GAINED DURING THE STUDY

General

- G1: Broader view of biomedicine and biotechnology
G2: Communication, initiative and personal development

Specific

- S1: Negotiation skills
S2: Basic bio-business trends
S3: Learn in a scientific and social context how the research careers develop
S4: Learn how to disseminate research results (audiovisual tools, social networking, scientific databases)
S5: Learn the key aspects in what is called public engagement (education, ethics, dissemination, open science...)

THEMATIC BLOCKS

Part 1: Responsible Research and Innovation

1. Introduction
2. Block A: Scientific communication for a scientific audience
 - Speaking in public: tips for impact presentations
3. Block B: Scientific communication to the general public (public engagement)
 - The need for a renewed relationship between science and society: towards responsible research and innovation
 - Science dissemination 2.0
 - Research and public engagement: analysis of case studies
 - From the Open Access initiative to the Open Science movement

Part 2: Entrepreneurship

1. Introduction: how does the sector look like?
2. Public-Private partnerships
3. Patents in Biomedicine and related areas
4. Biopharma: key strategic challenges and future perspectives
5. The Organization of Transfer policies in a University Hospital
6. Creation and development of start-up companies

METHODOLOGY

Total training hours: 3 credits ECTS x 25h/credit = 75h

- a) Face-to-face (40h):
 - Lectures
 - Seminars
 - Debates
 - Research projects presentations, elevator pitch
- b) Home training (35h): Individual and group work

EVALUATION

Evaluation criteria:

To pass the module, students must obtain a minimum of 50 points. The score will be established as follows:

Attendance: 50% of the overall grade.

Attendance will be evaluated as: 95%-100% → 50 points / 80% - 95% → 40 points / 30-80% → 20 points / <30% → Subject Failure

Oral Presentation (face to face): 50% of the overall score

Reevaluation: In case of failing the ordinary evaluation students will have to contact the subject's coordinator. The re-evaluation final score will never get over 50 points.

REFERENCES

Part 1: Responsible Research and Innovation

Scientific presentations

- Leeming J (2017) [Scientific presentations: A cheat sheet](#)

Responsible Research and Innovation (RRI)

- Richard Owen, Phil Macnaghten, Jack Stilgoe, Responsible research and innovation: From science in society to science for society, with society, *Science and Public Policy*, Volume 39, Issue 6, December 2012, Pages 751–760
- Stilgoe, J., Owen, R., & Macnaghten, P. (2013). 'Developing a framework for responsible innovation', *Research Policy*, 42/9: 1568–1580
- Crowe, S., et al. (2015): «Patients', clinicians' and the research communities' priorities for treatment research: there is an important mismatch», *Research Involvement and Engagement* 1:2.
- Abma, T.A., Broerse, J., (2010) Patient participation as dialogue: setting research agendas. *Health Expectations*, doi: 10.1111/j.1369-7625.2009.00549.x
- [How to set up a participatory research agenda setting](#), RRI Tools website

Citizen Science and Community Based Participatory Research

- [Website on Citizen Science](#) by the EC
- [How to co-create Community Based Participatory Research](#), RRI Tools website
- [European Citizen Science Association](#) website
- [How citizen science can help fight cancer](#), Cancer Research UK

Repositories of methodologies for public involvement in research

- [Methodologies for different phases of the process](#), A Rough Guide to Public Involvement, NIHR Imperial BRC Patient Experience Research Centre (pages 12-13)
- [Action Catalogue](#)

Gender equality in research

- Bunton and Petersen (1997). Foucault, Health and Medicine. London: Routledge.
- Preciado (2007). Biopolítica del género. UBA <http://capacitacioncontinua.sociales.uba.ar/wp-content/uploads/sites/25/2016/10/PRECIADO-Biopolitica-del-genero.pdf>
- Lancet special on gender and health <https://www.thelancet.com/series/gender-equality-norms-health>

Science dissemination

Altmetrics

- Adams J, Loach T. (2015). [Altmetric mentions and the communication of medical research](#).
- Maggio LA, Leroux T, Meyer HS, Artino AR. (2018). [Exploring the relationship between altmetrics and traditional measures of dissemination in health professions education](#).
- Wooldridge J, King MB. (2018). [Altmetric scores: An early indicator of research impact](#).
- Lemke S., Peters I., Mazarakis A. (2019, March 20). ["If you use social media then you are not working" – How do social scientists perceive altmetrics and online forms of scholarly communication?](#)[Blog post].

Blogging

- LSE Impact Blog. (2012, February 24). [Five minutes with Patrick Dunleavy and Chris Gilson: "Blogging is quite simply, one of the most important things that an academic should be doing right now"](#). [Blog post].
- Dunleavy, P. (2014, December 28). [Shorter, better, faster, free: Blogging changes the nature of academic research, not just how it is communicated](#) [Blog post].
- Dunleavy, P. (2016, January 25). [How to write a blogpost from your journal article in eleven easy steps](#). [Blog post].
- Carrigan, M. (2016, April 26) [40 reasons why you should blog about your research](#) [Blog post].
- Mollett A., Brumley C., Gilson C., Williams S. (2017, May 25). [So you've decided to blog? These are the things you should write about](#). [Blog post].

Twitter

- Emily S. Darling et al (2013). [The role of twitter in the life cycle of a scientific publication](#).

- QingKe , Yong-Yeol Ahn and Cassidy R. Sugimoto (2017). [A systematic identification and analysis of scientists on Twitter.](#)
- Monya Baker (2015). [Social media: A network boost.](#)
- Wheeler, T. (2015, August 21). [Permission to tweet? The underlying principles of good science communication are all about sharing.](#) [Blog post].
- Haustein, S. & Costas, R. (2015). [Identifying Twitter audiences: who is tweeting about scientific papers?](#)
- Ortega, JL. (2017, December 4). [Academic journals with a presence on Twitter are more widely disseminated and receive a higher number of citations.](#) [Blog post].

Sharing

- Gill, J. (2013, 2 January). [Six ways to use Google + Hangouts for academic productivity.](#) [Blog post].
- Noruzi, A. (2017). [YouTube in scientific research: A bibliometric analysis](#)
- Diner E. (2019, 25 January). [Should academics share their presentations?](#)[Blog post]

Open Access

- Documentary “Paywall - the Business of Scholarship” <https://paywallthemovie.com/>

Open science

- [Open science: Sharing is caring, but is privacy theft?](#), David Mehler and Kevin Weiner. *PLOS Neuro Community* blog. 2018.
- [Qué es la ciencia abierta?](#), Lluís Anglada and Ernest Abadal. Anuario ThinkEPI, vol. 12. 2018.
- [Open science is all very well but how do you make it FAIR in practice?](#), Rachel Bruce and Bas Cordewener. JISC blog. 2018.
- [Mapping Open Science Tools](#), Lettie Y. Conrad. *The Scholarly Kitchen* blog. 2018.
- [Monográfico InfoDoc sobre Ciencia Abierta.](#) Universidad de Salamanca. 2018.
- [Open Science: Sharing Your Research with the World:](#) MOOC of the University of Delft. 2018.
- [Open Science MOOC:](#) MOOC of the University of Leiden. 2018.
- [The Open Science Training Handbook.](#) 2018.
- [Una aproximació al concepte de ciència oberta \(i 25 recursos per aprofundir-hi\)](#), Xavier Lasauca i Cisa. *L'ase quàntic* blog.

Part 2: Entrepreneurship

- Innovation and Entrepreneurship in the Healthcare Sector: From Idea to Funding to Launch. Luis Pareras ed. ISBN-10: 0982705530 | ISBN-13: 978-0982705537
- www.biocat.cat
- Nature Biotechnology Journal