

**DISCIPLINE CHART****1. Data about the program**

1.1 Institution of Higher education	“Alexandru Ioan Cuza” University of Iași
1.2 Faculty	Faculty of Philosophy and Social-Political Sciences
1.3 Department	Sociology
1.4 Field of studies	Social sciences
1.5 Cycle of studies	Doctoral School
1.6 Program of studies / Qualification	Sociology

2. Data about the discipline

2.1 Name of discipline		Module: Paradigms of Knowledge and Communication Discipline: Governance and Risk: Responsible Research and Innovation					
2.2 Holder of activities of course		Prof. univ. dr. Doina Balahur					
2.3 Holder of activities of seminar		Prof. univ. dr. Doina Balahur					
2.4 Year of study	I	2.5 Semester	I	2.6 Type of evaluation	Colloquy	2.7 Regime of discipline	OB

* *OB – Mandatory / OP – Optional***3. Total estimated time (hours per semester and didactic activities)**

3.1 Number of hours per week	4	out of which: 3.2 course	2	3.3. seminar/laboratory	2
3.4 Total hours from the curriculum	1 2	out of which: 3.5. course	6	3.6. seminar/laboratory	6
Distribution of time ground					hours
Study after the manual, course support, bibliography and others					8
Supplementary documentation in the library, on electronic platforms of specialty and on field					50
Preparation of seminars/laboratories, themes, papers, portfolio and essays					4
Tutoring					
Examination					4
Other activities					4

3.7 Total hours of individual study	70
3.8 Total hours per semester	12
3.9 Number of credits	5

4. Pre-conditions (if necessary)

4.1 Of curriculum	
4.2 Of competences	

**5. Conditions** (if necessary)

5.1 For the development of the course	Room with modern technical devices and internet connection
5.2 For the development of the seminar/laboratory	Room with modern technical devices and internet connection

6. Specific gained competences

Professional competences	<p>C1. Capacity to understand and operate within the new paradigmatic frame in social sciences brought by Mode 2 and Mode 3 of knowledge.</p> <p>C2. Critical understanding of the relationships between innovation, risk and responsibility in the actual scientific research.</p> <p>C3. Capacity to carry out advanced scientific research, based on computational social sciences methodologies, that observe all the aspects/dimensions of the Responsible Research and Innovation.</p> <p>C4. Stimulate creative problem solving and critical thinking abilities that contribute to bring progress of knowledge over the state of the art in the selected research field.</p>
Transversal competences	<p>CT1. Ability to use the inter and trans disciplinary analysis in the scientific research of social issues.</p> <p>CT2. Capacity to use, combine and adapt the quantitative and qualitative research methods in social sciences according to the peculiarities of the domain/social issues approached.</p>

7. Objectives of discipline (from the grille of specific gained competences)

7.1. General objective	To familiarize the Ph.D. students with the new paradigms of knowledge in social sciences, its associate methodologies (computational social sciences methodologies) and of its impact and implications on the social responsibility of the research and innovation in the actual world.
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7.2. Specific objectives	<p>In the successful completion of this discipline, students will be able to:</p> <ul style="list-style-type: none"> a) To be familiar with the main landmarks and normative requests of the new paradigms of knowledge in social sciences (Mode 2 and Mode 3) b) To be aware and observe the standards of Responsible Research and Innovation. c) To be aware about and observe the <i>special standards and requests</i> of RRI in research about/with and <i>on human beings</i>.
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8. Content

8.1	Course	Methods of teaching	Observations (hours and bibliographical references)
1.	Governance and risk within the actual techno-scientific world. Implications for scientific research and innovation: new paradigms of knowledge in social sciences (Post-normal science; Mode 2 and Mode 3 of knowledge).	Interactive presentation and debates based on preliminary documentation (thematic literature on each theme).	
2.	Scientific research/innovation and the “grand challenges” (climate change, demographic changes, preservation of bio-diversity, security issues and terrorism etc.).	Interactive presentation and debates based on preliminary documentation (thematic literature or each theme).	
3.	Responsible Research and Innovation. Principles and dimensions.	Interactive presentation and debates based on preliminary documentation (thematic literature or each theme).	
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Bibliography

Beck, U. (2009). *The world at risk*, Cambridge, Polity Press, 2009.

Helga Nowotny, Peter Scott, Michael T.Gibbons. (2003) *'Mode 2' Revisited: The New Production of Knowledge*, *Minerva*, 41, 179-194, Kluwer Academic Publishers.

Silvio Funtowicz and J. Ravetz. (2003) *Post-Normal Science*, JRC/IPSC, Research Methods Consultancy, London, England.

Elias G. Carayannis and D.F.J. Campbel. (2012) *Mode 3 Knowledge Production in Quadruple Helix Innovation Systems Twenty-first-Century Democracy, Innovation, and Entrepreneurship for Development*, SpringerBriefs in Business 7.

Doina, Balahur, P.Fadjukoff. (2010) *Gender and Technological Education. A European Comparative Perspective. The 10 Commands to the Policy Makers*, Al.I.Cuza University Press.

Von Schomberg, Rene. (2013) *A vision of Responsible Research and Innovation*. "A vision of responsible innovation". In: R. Owen, M.Heintz and J Bessant (eds.) *Responsible Innovation*. London: John Wiley.



European Commission (2013). Gendered Innovations. How Gender Analysis Contributes to Research; Publication Office of the European Union, Luxembourg, http://ec.europa.eu/research/science-society/document_library/pdf_06/gendered_innovations.pdf.

Additional references:

Ranga, Marina, Etzkowitz, Henry (2010) Athena in the World of Techne. The Gender Dimension of Technology, Innovation and Entrepreneurship, Journal of Technology Management and Innovation, Vol.5, No.1.

Schiebinger, Londa (2008) Gendered Innovation in Science and Technology, Stanford University Press.

(please, see also: <http://genderedinnovations.stanford.edu/what-is-gendered-innovations.html>)

8.2	Seminar / Laboratory	Methods of teaching	Observations (hours and bibliographical references)
1.	Governance and risk: Science with and for society.	Interactive debates.	
2.	The 4 th industrial revolution: science, research, innovation and responsibility.	Analysis of the funded European and International Projects.	
3.	Gender in EU funded research and innovation.	Analysis and presentation of small scale research projects on gendered innovation.	
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Bibliography

State of Innovation 2016, *Disruptive, Game-Change Innovation*, Thompson Reuters

9. Corroboration of discipline's content with the expectations of the representatives of the community, professional associations and representative employers from the field afferent for the program

The content of the discipline *Governance and Risk: Responsible Research and Innovation* is harmonized with the latest directions in the global and European scientific research and innovation as well as with the expectations of the labor market and potential employers.

10. Evaluation

Type of activity	10.1 Criteria of evaluation	10.2 Methods of evaluation	10.3 Weight in final grade (%)
10.4 Course	Creative participation in debates and case studies analysis.	Frequency and quality of interventions.	40 %
10.5 Seminar/ Laboratory	Quality of the proposed research projects.	Relevance of interventions in respect	60 %



		with the proposed research project.	
10.6 Minimum standard of performance			
Participation at debates and analysis as well as writing, presenting and defending a paper/research project after the discussions and objections of the colleagues and professor.			

Date of completion

20th of October 2016

Holder of course

Prof. univ. dr. Doina Balahur

Holder of seminar

Prof. univ. dr. Doina Balahur

Date of approval in the Council of the
Doctoral School

Director of the Doctoral School

Prof. univ. dr. Marius Dumitrescu