Universidad del País Vasco Euskal Herriko Unibertsitatea

COURSE GUIDE 2024/25

Faculty 323 - Faculty of Social and Communication Sciences **Cycle** .

Degree GSOCIO31 - Bachelor's Degree in Sociology **Year** Fourth year

COURSE

25031 - Science, Technology & Society **Credits, ECTS:** 6

COURSE DESCRIPTION

Science, Technology and Society Studies have become crucial areas of knowledge to understand contemporary societies. The subject analyses science as a complex social institution and addresses its re-articulation re-definition processes. In the context of globalised and information societies, the course deals with the new meanings produced in the relationship between science, technology and society. It delves into theoretical issues such as the production of scientific knowledge, but also into specific controversies around automation and digitisation, platform or gig economy, Big Data, Artificial Intelligence, bio-technologies and so on. Overall, it addresses the social processes related to science and technology, as well as the importance of knowledge production and management in contemporary societies.

COMPETENCIES/LEARNING RESULTS FOR THE SUBJECT

The main goal of the subject is for students to learn the theoretical and methodological foundations of the sociological studies of science, technology and society. It thus aims for students to understand the social dimensions of change processes in society and organisations, taking also into account, knowledge production and management. In short, it seeks for students to acquire practical skills in handling and analysing information and data in the fields of both Science and Technology Studies and knowledge production and management.

GENERAL COMPETENCIES
At the end of the course, students will be expected to:
G001 - Plan and carry out sociological research applying the most appropriate techniques according to the established objectives.
G002 - Write and present a sociological research report.
G003 - Identify and define the basic components of the most relevant social problems

CORE SKILLS:
CB1 - Students demonstrate having and understanding the knowledge in this area of study. That includes aspects that involve knowing about the cutting-edge theories in the field of Science and Technology Studies.
CB2 - Students know how to apply the acquired knowledge to their work or vocation in a professional manner. That is, they possess the skills that are usually demonstrated by preparing and defending arguments and problem resolution in this field of study.
CB3 - Students have the ability to gather and interpret relevant data in this field in order to make judgements that include grounded thoughts and reflections on relevant social, scientific or ethical issues.
CB4 - Students are able to communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.
CB5 - Students have developed the necessary learning skills to carry out further studies with a high degree of autonomy.

CROSS-CUTTING SKILLS
C4CC01 - Students will be able to design, prepare and defend for assessment a research project demonstrating the skills and knowledge acquired throughout the degree course.
C4CC09 - Students will develop teamwork skills and abilities.
G008 - Students will be able to analyse synthetically information concerning to social problems and needs, with special focus on gender, class and ethnic inequalities and bias.
G009 - Students will develop a critical attitude towards data and social practices.
G010 - Students will deploy intellectual and ethical rigour based on sociological arguments and analysis to be applied in their future career.

SPECIFIC SKILLS:
C4CC02 – Analyse and critically acknowledge the role of technologcial innovation in the socio-economic and cultural change of society.
Specifically, from a macro-sociological perspective, the aim is for students to be able to address the processes of social innovation in the different dimensions of the social structure (Economy, Science and Technology, Education). Thus, they will be able to understand and explain the role of scientific, technological, economic and social innovation as elements of social change.
On the other hand, from a more micro-sociological perspective, the aim is for students to be able to analyse the relationship between science, technology and people's everyday experience. This way, the aim is for students to be able to interpret and explain a world mediated by technologies that ultimately give shape to the contemporary experience.

LEARNING OUTCOMES
1. Acquire and put into practice a basic set of concepts and methodologies for the sociological approach to science and

technology studies and knowledge management (cross-linked with competences 1-2-9 of the module).
2. Analyse and use the main concepts and methodologies of the national/regional science and innovation systems perspective (cross-linked with competences 1-2-9 of the module).
3. Analyse and put into practice conceptual and methodological instruments for the social study of the processes of design and implementation of new organisational systems related to knowledge management (cross-linked with competences 1-2-9 of the module).
4. Know how to present the main concepts and methodologies for the social study of science and technology.
5. Know how to use the main concepts and methodologies from the perspective of Science Technology and Society studies.

Theoretical and Practical Contents

MAIN TOPICS AND CONTENTS

1. Sociologies of knowledge, science and technology.
2. The production of scientific knowledge. Relations between science, technology and society.
3. Contemporary approaches to the production of knowledge.
4. Science and technology policies.
5. Technology, knowledge management and innovation systems.
6. Contemporary controversies around technological innovations.

TEACHING METHODS

In this subject, the individual work of students, teamwork and the capacity for collective analysis will be especially encouraged. More specifically, through different teaching methods (lectures, seminars, classroom practice and workshops), the following activities will be carried out:
-Lectures aimed to introduce the students to the theoretical foundations of the aforementioned main topics of the teaching programme.
-Sessions focused on carrying out practical tasks both individually and in groups: analyses of journal articles, press news, audio-visuals and seminars including classroom presentations and a small fieldwork.
-Specific workshops on contemporary issues, controversies and social processes revolving around technology and science. For example: automation and digitisation of processes, artificial intelligence, biotechnology, etc.

TYPES OF TEACHING

Types of teaching	M	S	GA	GL	GO	GCL	TA	TI	GCA
Hours of face-to-face teaching	46	7	7						
Horas de Actividad No Presencial del Alumno/a	69	10,5	10,5						

Legend:
M: Lecture-based — S: Seminar — GA: Applied classroom-based groups
GL: Applied laboratory-based groups — GO: Applied computer-based groups — GCL: Applied clinical-based groups
TA: Workshop — TI: Industrial workshop — GCA: Applied fieldwork groups

Evaluation methods

- End-of-course evaluation

Evaluation tools and percentages of final mark

- Written test, open questions 50%
- Exercises, cases or problem sets 50%

ORDINARY EXAMINATION PERIOD: GUIDELINES AND OPTING OUT

Assessment in this subject will be CONTINUOUS and will include: a) a written exam to be taken based on a.1) producing and oral presentation (in class) of in-depth individual case-based research, which represents the 30% of the final grade. And a.2) a dissertation on the theoretical and practical content of different subjects worked in class. The grade obtained in this dissertation will account for 20% of the student's final grade. b) The performance and presentation in class of different individual and group tasks throughout the academic year. The grades for these assignments and the continuous assessment of work done by the student in class will represent 50% of the final grade.
To apply this mode of assessment, 80% minimum attendance at class is required.

As per the rules in force, students may submit a written waiver of continuous assessment to the lecturer responsible for the subject not less than a month before end of the teaching time (Assessment Regulations, Art. 12.2).

FINAL ASSESSMENT
Regulations for the evaluation of students in degrees of UPV/EHU (BOPV nº50-13/03/2017) Article 8.3 of the Student

Assessment Regulations for official degrees at the UPV/EHU (BOPV [Official Gazette of the Basque Country, No. 50-13/03/2017], "student shall be entitled to be assessed by the final assessment system, regardless of whether or not they in the continuous assessment system. To that end, students shall submit a written waiver of continuous assessment to the lecturer responsible for the subject within 9 weeks of the beginning of the four-month term [...] That final assessment will be a written final exam"
The final assessment under the ordinary session will consist of a written theoretical-practical exam making up 100% of the grade. This exam will include both theoretical questions and practical activities, and the knowledge acquired and the skills developed by the student will be jointly assessed.
If it is necessary to adapt the assessment to a distance and online environment, students who have applied for the final assessment must:
A) Carry out an integrated practical program of tasks that would cover the skills / learning outcomes of the subject and that will be delivered on the date of the ordinary session set by the academic calendar of the Faculty.
B) Carry out a theoretical-practical written test in synchronous mode, but online, using the platforms and software that the University of Basque Country makes available for distance learning.

EXTRAORDINARY EXAMINATION PERIOD: GUIDELINES AND OPTING OUT

For students who have followed the combined assessment modality, the grades obtained in the different tasks and assignments will be retained, provided these have exceeded the established minimum. For students who have not participated in the continuous assessment system under the ordinary session, the final assessment in an extraordinary session will be a written theoretical-practical exam making up 100% of the grade. This exam will include both theoretical questions and practical activities, and the knowledge acquired and the skills developed by the student will be jointly assessed.

If it is necessary to adapt the assessment to a distance and online environment, the students in extraordinary call must:
A) Carry out an integrated practical program of tasks that would cover the skills / learning outcomes of the subject and that will be delivered on the date of the ordinary session set by the academic calendar of the Faculty.
B) Carry out a theoretical-practical written test in synchronous mode, but online, using the platforms and software that the University of Basque Country makes available for distance learning.

MANDATORY MATERIALS

A selection of compulsory texts and materials will be provided. These materials will be used for the theoretical study of the subject, as well as for carrying out practical tasks. The detailed programming of the subject, as well as the necessary supplementary materials will be available for students on the eGela platform.

BIBLIOGRAPHY

Basic bibliography

Barnes, D., Edge, D.(1992) Science in Context: Readings in the Sociology of Science. Open Uni. Press.
Haraway, D.(1991) Simians, cyborgs, and women : the reinvention of nature. New York: Routledge.
Latour, B., & Woolgar, S. (1986) Laboratory life : the construction of scientific facts. Princeton, N.J.: Princeton University Press.
Latour, B. (2005) Reassembling the Social. An introduction to Actor-Network-Theory. Oxford: Oxford University Press.
Stengers, I. (2018) Another Science is Possible: A Manifesto for Slow Science: Polity Press.
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Detailed bibliography

Braidotti, R. (2019): Posthuman knowledge (Vol. 2): Polity Press Cambridge.
Frost, S. (2016): Biocultural Creatures. Toward a New Theory of the Human: Duke University Press.
Gibbons, M. (1994) The new production of knowledge: the dynamics of science and research in contemporary societies. London: Sage
Latour, B. (1987) Science in action: How to follow scientists and engineers throughout society. Cambridge, Mass.: Harvard Univ. Press
Latour, B. (1999) Pandora's Hope: Essays on the Reality of Science Studies: Harvard University Press.
MacKenzie, D.; Wajcman J. (editors) (1998) The Social Shaping of Technology: Second Edition. Open University Press: Buckingham, UK.
Sanz-Menéndez, L. & Cruz-Castro, L. (2005) "Explaining the science and tecnology policy of regional governments", Regional Studies 7, pp. 939-954
Tsing, H. ; Swanson, E. Gan, & Bubandt, N. (Eds.). (2017). Arts of living on a damaged planet. Minneapolis: University of Minnesota Press.

Journals

ArtefaCToS. Revista de estudios sobre la ciencia y la tecnología (ESP)
Athenea Digital. Revista de Pensamiento e Investigación Social (ESP)
Research Policy (UK)
Revista Iberoamericana de Ciencia, Tecnología y Sociedad (ESP)

Social Studies of Science (UK)
Techniques & Culture (FR)
Technovation (UK)
Tecnoscienza (IT)
Teknokultura (ESP)
Theory, Culture and Society (UK)

Web sites of interest

European Association for the Study of Science and Technology
European Commission
Society for Social Studies of Science
The Conversation
The Italian Society of Science and Technology Studies

OBSERVATIONS

Whenever possible, international students will be provided with learning materials and contents in english.