



Taras Shevchenko National
University of Kyiv

COURSE GUIDE

EC2.02 SCIENCE, TECHNOLOGY, AND SOCIETY



Faculty of Sociology

COURSE INFO

| | |
|--------------------------------|---|
| Title | Science, Technology, and Society |
| Code | EC2.02 |
| Field of study | 054 Sociology |
| Degree level | Master |
| Study program | Sociology (language of instruction - English) |
| Type | elective |
| Semester | 4 |
| ECTS credits | 5.00 |
| Language of instruction | English |
| Final control | exam |
| Instructor | Dr. Artemiy Deineka |

SUMMARY

Contemporary society becomes increasingly technological and digitalized, which results in fundamental shifts in social structure, social practices, and cultural identities. In recent decades, attention of many social scientists has been focused on the conditions of production of scientific facts and technological artifacts, as well as the processes of their implementation in public life. Social studies of science and technology have greatly deepened contemporary knowledge about the social role of science and unexpected consequences of work of scientists and engineers. The course "Science, Technology and Society" is aimed at expansion of students' knowledge of science and invention as social practices, as well as its planned and unintended consequences.

PREVIOUS KNOWLEDGE

1. Basic understanding of key principles of scientific knowledge
2. Be able to work with online catalogs of scientific literature
3. Have basic skills in designing sociological research

COMPETENCES

| | |
|-------------|--|
| GC01 | Ability to think abstractly, analyze and synthesize |
| SC03 | Ability to design and perform sociological research, develop and justify their methodology |
| SC06 | Ability to observe the norms of professional ethics of a sociologist and to comply with the universal human values |
| SC07 | Ability to develop and evaluate social projects and programs |



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COURSE LEARNING OUTCOMES

| | |
|------------|--|
| 1.1 | Know key characteristics of social research of science and technology as a research field |
| 1.2 | Be able to apply the methodological principles of STS in the design of research projects |
| 2.1 | Know the basic concepts of theoretical work of key authors in the field of STS |
| 2.2 | Be able to use the conceptual apparatus of key theoretical approaches in STS to conceptualize a subject of study |
| 3.1 | Know the features of use of semiotic analysis and case-study strategies in the implementation of STS-research |

EVALUATION

| | | |
|--------------------------|--|--------------|
| 20 points | Participation in class discussions | |
| 20 points | Preparation of a research project with elaboration of a conceptual scheme of the subject of study, which is based on one of the theoretical approaches | |
| 20 points | Two midterm tests | |
| 40 points | Final exam Admission to exam threshold: 36 points | |
| Grade explication | 90-100 | Excellent |
| | 75-89 | Good |
| | 60-74 | Satisfactory |
| | 0-59 | Fail |

COURSE STRUCTURE

| CHAPTERS | WORKLOAD (in hours) | | |
|--|------------------------|----------|------------|
| | lectures | seminars | self-study |
| 1. Science, Technology and Society (STS) as a research area | | | |
| 1. STS between sociology of science and epistemology | 2 | 2 | 12 |
| 2. Interdisciplinary origins of STS | 2 | 2 | 12 |
| 3. Key directions and principles of STS research | 2 | 2 | 16 |
| 2. Main theoretical approaches in STS | | | |
| 4. From functionalist sociology of science to anthropology of scientific practices | 2 | 2 | 14 |
| 5. Key paradigms in social studies of science and technology | 2 | 2 | 14 |



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| 6. Feminist and environmental approaches in STS | 2 | 2 | 16 |
| 3. Methodological principles of STS research | | | |
| 7. Case-study and STS-study design | 2 | 4 | 16 |
| 8. Semiotic and pragmatic schematization of the object of study | 0 | 4 | 16 |

READINGS

Required

1. Bauchspies, W.K., Croissant, J. and Revisto, S. (2007). *Science, technology, and society : a sociological approach*. Malden: Blackwell.
2. Felt, U. (2017). *The handbook of science and technology studies*. Cambridge, Massachusetts: The Mit Press.
3. Gomm, R. (2011). *Case study method : key issues, key texts*. Los Angeles: Sage.
4. Hackett, E.J. and For, S. (2008). *The handbook of science and technology studies*. Cambridge, Mass.: Mit Press.
5. Latour, B. (2015). *Science in action : how to follow scientists and engineers through society*. Cambridge, Mass.: Harvard Univ. Press.
6. Sismondo, S. (2010). *An introduction to science and technology studies*. Malden, Mass. Blackwell.

Additional

1. Bijker, W.E. and Law, J. (2010). *Shaping technology/building society : studies in sociotechnical change*. Cambridge, Mass. Mit Press.
2. Bloor, D. (1976). *Knowledge and social imagery*. London: Routledge & Kegan Paul.
3. Haraway, D. (1988). *Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective*. *Feminist Studies*, 14(3), pp.575–599.
4. Henning Schmidgen and Custance, G. (2015). *Bruno Latour in pieces : an intellectual biography*. New York: Fordham University Press.
5. Høstaker, R. (2005). *Latour - Semiotics and Science Studies*. *Science & Technology Studies*, 18(2), pp.5–25.
6. Law, J. (2010). *After method : mess in social science research*. London ; New York: Routledge, , Cop.
7. Pickering, A. (1993). *The Mangle of Practice: Agency and Emergence in the Sociology of Science*. *American Journal of Sociology*, 99(3), pp.559–589.
8. Sayes, E. (2013). *Actor–Network Theory and methodology: Just what does it mean to say that nonhumans have agency?* *Social Studies of Science*, 44(1), pp.134–149.
9. Shapin, S., Schaffer, S. and Princeton University Press (2018). *Leviathan and the air-pump : Hobbes, Boyle, and the experimental life*. Princeton ; Oxford: Princeton University Press.
10. Verran, H. (2002). *A Postcolonial Moment in Science Studies*. *Social Studies of Science*, 32(5-6), pp.729–762.



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Other sources

1. <http://www.bruno-latour.fr/>
2. <http://heterogeneities.net/>
3. <https://journals.sagepub.com/home/sss>
4. <https://journals.sagepub.com/home/sth>
5. <https://journals.sagepub.com/home/sts>

