SYLLABUS

Name: Technology Assessment methods
Name in Polish: Metody oceny technologii
Name in English: Technology Assessment methods

Information on course:

Course offered by department:	Faculty of Organisation and Management
Course for department:	Silesian University of Technology
Study level and form:	Bachelor's degree, Full-time
Term:	summer semester 2022/2023
Coordinator of course edition:	dr hab. Aleksandra Kuzior, prof. PŚ

Default type of course examination report:

ZAL

Language:

English

Course homepage:

ECTS

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Short description:

To familiarise students with the history of the development of Technology Assessment and Technology Assessment models and to equip them with the core competencies needed to assess technology and participate in a participatory technology assessment model.

Description:

To familiarise students with the history of the development of Technology Assessment and Technology Assessment models and to equip them with the core competencies needed to assess technology and participate in a participatory technology assessment model. Moreover, the aim of the subject is to develop students' awareness of the importance of technology assessment and education in the participatory model of technology assessment.
Educational content: lecture/classes
1. Philosophy of technology as a precursor to Technology Assessment
(a) F. Bacon as a precursor of the philosophy of technology.
(b) J.J. Rousseau as a contestant to the development of civilisation.
(c) The compensatory role of technology in Ernest Kapp's consideration.
d) The embrace of technology in the deliberations of L. Mumford, J. Ellul, M. McLuhan.
2. The notion of homo faber and its historical connotations.
3. Catastrophic and triumphalist visions of the development of technology.
4. The normative turn in the understanding of science and technology.
5. The origins of technology assessment.
6 The development of science and technology assessment centres - introduction.
7. Institutionalisation of science and technology assessment - activities of the Office of Technology Assessment (OTA), The Institute for Technology Assessment and Systems Analysis (ITAS), European Parliamentary Technology Assessment (EPTA), Science and Technology Options Assessment (STOA), Polish Academic Network of Technology Assessment (PANTA,), Polish Society for Technology Assessment (PTOT).
8. Elements of environmental law, intellectual property rights related to the development of science and technology.
9. Technology assessment models (expert model and participatory model).
10. Participatory model of technology assessment as a manifestation of civil society and knowledge society.
11. Methods used in technology assessment.
12. Ethical issues in technology assessment.
13. Methods and procedures used in technology assessment (factor analysis, discourse analysis and reconstruction, stakeholder analysis, benefit-risk analysis).
14. Methods and procedures used in technology assessment (cost-benefit analysis. S-curve analysis, marginal analysis, morphological analysis, preference analysis),
15. Methods and procedures used in technology appraisal (risk analysis, STEEPVL Analysis, SWOT analysis, system analysis, value for money analysis).
Number of hours with direct participation of academic teachers or other persons teaching courses and students:
Lecture: 30
Student's own work:
Preparation for the test: 20

Total workload: 50
Number of ECTS credits: 2

Bibliography:

1. Technology Assessment (TA) deals with the relationship between technological change and social problems. In: Encyclopedia of Applied Ethics (Second Edition), 2012. https://www.sciencedirect.com/topics/social-sciences/technology-assessment
2. Banta D. What is technology assessment? International Journal of Technology Assessment in Health Care, 25:Supplement 1 (2009), 7–9.
3. Kuzior A., Kiepas A., Leks–Bujak E.: Zrównoważony rozwój. Sustainable development, Mstudio s.c, Zabrze 2011.
4. Technology Assessment. Problematyka oceny technologii. Studia Biura Analiz Sejmowych Kancelarii Sejmu nr 3(43)/2015.
5. Kaźmierczak J., Ocena oddziaływań społecznych innowacyjnych produktów i technologii („Technology Assessment"), http://www.ptzp.org.pl/files/konferencje/kzz/artyk_pdf_2013/p011.pdf
6. Kiepas A., Człowiek wobec dylematów filozofii techniki. Gnome, Katowice 2000
7. Michalski K. Technology Assessment. Ocena technologii – nowe wyzwania dla filozofii nauki i ogólnej metodologii nauk. Rzeszów 2019.

Learning outcomes:

K1A_W20 - fundamental dilemmas of modern civilization
K1A_U08 - critically analyse how existing technical solutions work and evaluate these solutions
K1A_U16 - take part in the debate - present, justify and evaluate various opinions and positions and discuss them
K1A_U19 - independently plan and implement their own lifelong learning
K1A_K05 - responsible performance of professional roles, including compliance with the principles of professional ethics and demanding the same from others, and care for the achievements and traditions of the profession

Assessment methods and assessment criteria:

Preparation of a multimedia presentation on a selected technology assessment topic presented during lectures. Answers to questions for the presentation.

Practical placement:

Not applicable