

COURSE OUTLINE

(1) GENERAL

SCHOOL	Social Sciences		
ACADEMIC UNIT	Sociology Department		
LEVEL OF STUDIES	Undergraduate		
COURSE CODE	ANAK282	SEMESTER	Spring
COURSE TITLE	Technology and Social Inequalities		
TEACHER	Dr. Hara Kouki		
INDEPENDENT TEACHING ACTIVITIES <i>if credits are awarded for separate components of the course, e.g. lectures, laboratory exercises, etc. If the credits are awarded for the whole of the course, give the weekly teaching hours and the total credits</i>		WEEKLY TEACHING HOURS	CREDITS
		3	5
<i>Add rows if necessary. The organisation of teaching and the teaching methods used are described in detail at (d).</i>			
COURSE TYPE <i>general background, special background, specialised general knowledge, skills development</i>			
PREREQUISITE COURSES:	None		
LANGUAGE OF INSTRUCTION and EXAMINATIONS:	Greek		
IS THE COURSE OFFERED TO ERASMUS STUDENTS	Yes, upon request and on the basis of preparing an essay and presenting it in the course (in English)		
COURSE WEBSITE (URL)			

(2) LEARNING OUTCOMES

<p>Learning outcomes</p> <p><i>The course learning outcomes, specific knowledge, skills and competences of an appropriate level, which the students will acquire with the successful completion of the course are described.</i></p> <p><i>Consult Appendix A</i></p> <ul style="list-style-type: none"> <i>Description of the level of learning outcomes for each qualifications cycle, according to the Qualifications Framework of the European Higher Education Area</i> <i>Descriptors for Levels 6, 7 & 8 of the European Qualifications Framework for Lifelong Learning and Appendix B</i> <i>Guidelines for writing Learning Outcomes</i>
<p><u>Students are expected to:</u></p> <p><i>Learning outcomes</i></p> <ul style="list-style-type: none"> To become familiar with, recognize, and critically analyze key concepts, theoretical frameworks, and ethnographic case studies from the discipline of Science, Technology, and Society Studies (STS). To understand the methodological approaches through which the field of Science, Technology, and Society Studies (STS) is applied in social research, with a particular focus on the analysis of the (re)production of social inequalities. To become familiar with the sociological analysis of technology and the historical formation of related concepts, institutions, and practices. To be able to distinguish and develop central arguments in critical approaches concerning narratives of scientific progress and the authority of experts associated with technology. To understand and analyze how power relations, politics, and collective identities shape scientific progress and technological artifacts. To analyze how intersecting forms of inequality (gender, race, class, disability, Global North-South divide) influence the design and implementation of technologies.

- To understand the role of technology in historical struggles and contemporary social justice movements.
- To become familiar with the interconnections between technology, the environment, climate change and sustainable development.

Skills:

- To develop critical thinking regarding dominant narratives on technology and its use
- To recognize the historical formation of technology
- To recognize the dual role of technology as both a means of social control and a tool for social justice.

General Competences

Taking into consideration the general competences that the degree-holder must acquire (as these appear in the Diploma Supplement and appear below), at which of the following does the course aim?

Search for, analysis and synthesis of data and information, with the use of the necessary technology
Adapting to new situations
Decision-making
Working independently
Team work
Working in an international environment
Working in an interdisciplinary environment
Production of new research ideas

Project planning and management
Respect for difference and multiculturalism
Respect for the natural environment
Showing social, professional and ethical responsibility and sensitivity to gender issues
Criticism and self-criticism
Production of free, creative and inductive thinking
.....
Others...
.....

- Autonomous work - Group work
- Exercise planning and management
- Work in an interdisciplinary environment
- Respect for diversity and multiculturalism
- Promotion of free, creative and inductive thinking
- Exercise criticism and self-criticism and develop critical thinking, especially in relation to what seems self-evident
- Pursuit of social responsibility and empathy in matters of class, gender, race and disability

(3) SYLLABUS

Summary

This course explores the complex relationship between technology and social inequalities through the lens of Science, Technology, and Society Studies (STS). Beginning with theoretical texts, students will examine how science and technology are socially constructed, historically shaped, and politically biased. The course traces the historical development of technology, not only as a tool of power and control but also as a space where alternative, emancipatory futures can be envisioned and contested.

The course further focuses on the intersections of gender, race, class, and disability and global inequalities (Global North/ South), analyzing how technological systems contribute to both the (re)production and the overturning of social inequalities. The final section of the course adopts a decolonial perspective, focusing on the use of technology within settler colonial regimes, while also highlighting the role of technology in acts of resistance.

Through this theoretical framework, STS methodological approaches, and ethnographic case studies, students will familiarize themselves with a critical sociological approach to technology, aiming to imagine more just technological futures.

Indicative Course Structure:

Introductory Session

- Getting to know each other
- Introduction to the course's problematics, themes, and methodology
- Presentation of topics for optional assignments

Section A: Developing a Sociological Perspective on Technology

- Introduction to Science, Technology, and Society Studies (STS)
- Historical trajectories of technology

Section B: Interdisciplinary Approaches and Case Studies

- Gender, Care, and Technology
- Race and Technology: Medical and Institutional Racism
- Class, Labor, and Technology
- Disability and Technology
- Decolonial Approaches to Technology: The Case of Settler Colonialism

Final Session

- Summary and discussion on technological futures
- Evaluation of the learning experience and reflection

(4) TEACHING and LEARNING METHODS - EVALUATION

DELIVERY <i>Face-to-face, Distance learning, etc.</i>	Face-to-face	
USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY <i>Use of ICT in teaching, laboratory education, communication with students</i>	<ul style="list-style-type: none"> Projecting slides for the lectures Use of technological tools (videos, polls, jamboard, etc.) for participatory exercises during the lectures Support of the learning process through the electronic platform moodle (elearn) 	
TEACHING METHODS <i>The manner and methods of teaching are described in detail.</i> <i>Lectures, seminars, laboratory practice, fieldwork, study and analysis of bibliography, tutorials, placements, clinical practice, art workshop, interactive teaching, educational visits, project, essay writing, artistic creativity, etc.</i> <i>The student's study hours for each learning activity are given as well as the hours of non-directed study according to the principles of the ECTS</i>	Activity	Semester workload
	Lectures	36
	Study and analysis of bibliography	26
	Independent optional study	23
	Critical Analysis of Audiovisual Material	20
	Interactive Teaching	10
	Course total	150
STUDENT PERFORMANCE EVALUATION <i>Description of the evaluation procedure</i> <i>Language of evaluation, methods of evaluation, summative or conclusive, multiple choice questionnaires, short-answer questions, open-ended questions, problem solving, written work, essay/report, oral examination, public presentation, laboratory work, clinical examination of patient, art interpretation, other</i> <i>Specifically-defined evaluation criteria are given, and if and where they are accessible to students.</i>	<p>The degree may depend in part on,</p> <ol style="list-style-type: none"> the final exam (100%), or the final exam (70%), and one paper (30%) <p>The written examination includes:</p> <ol style="list-style-type: none"> Multiple choice questions Short responses Open ended questions <p>Optional Assignment (30%)</p> <p>1,500 words, 30% of the mark, provided that the final exam will be passable.</p> <p>The objective of the assignment is to summarize and develop a critical positioning in the study of issues discussed during the semester. Clarifications of the assignments, as well as the grading criteria, will be made known to students at the beginning of lectures and posted on the course website.</p>	

(5) ATTACHED BIBLIOGRAPHY

- Adas, M. (1989). *Machines as the Measure of Men: Science, Technology, and Ideologies of Western Dominance* (Ch. 5). Ithaca, NY: Cornell University Press.
- Ali, S. M. (2016). "A Brief Introduction to Decolonial Computing." In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems* (pp. 1–11). <https://doi.org/10.1145/2858036.2858092>
- Arnold, D. (2013). *Everyday Technology: Machines and the Making of India's Modernity*. Chicago: University of Chicago Press.
- Benjamin, Ruha. 2019. *Race After Technology: Abolitionist Tools for the New Jim Code*. Medford, MA: Polity Press
- Bijker, W. E. (2013). *Shaping Technology, Building Society: Studies in Sociotechnical Change*. Cambridge, MA: MIT Press.
- Braun, Lundy. 2021. Race Correction and Spirometry: Why History Matters. *Chest* 159 (4):1670-1675
- Brayne, Sarah. 2021. *Predict and Surveil: Data, Discretion, and the Future of Policing*. New York: Oxford University Press

Browne, S. (2015). *Dark Matters: On the Surveillance of Blackness*. Durham, NC: Duke University Press.

Chan, A. (2013). *Networking Peripheries: Technological Futures and the Myth of Digital Universalism*. Cambridge, MA: MIT Press.

Cowan, R. S. (1983). *More Work for Mother: The Ironies of Household Technology from the Open Hearth to the Microwave*. New York: Basic Books

Crawford, Kate. 2021. Earth. In *The Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence*. New Haven: Yale University Press, 23-51

D'ignazio, Catherine, and Lauren F. Klein. 2020. *Data Feminism*. Cambridge, MA: MIT press

Edwards, P. (1996). *The Closed World: Computers and the Politics of Discourse in Cold War America*. Cambridge, MA: MIT Press.

Eubanks, V. (2018). *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor*. New York: St. Martin's Press.

Gray, M., & Suri, S. (2019). *Ghost Work: How to Stop Silicon Valley from Building a New Global Underclass*. Boston: Houghton Mifflin Harcourt.

Haraway, D. (1991). A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century. In *Simians, Cyborgs, and Women: The Reinvention of Nature* (pp. 149-181). New York: Routledge.

Haraway, D. J. (1991). *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge.

Harding, S. (Ed.) (2011). *The Postcolonial Science and Technology Studies Reader*. Durham, NC: Duke University Press.

Hicks, M. (2017). Programmed Inequality: How Britain Discarded Women Technologists and Lost Its Edge in Computing (Ch. 2: "The Data Processing Sisterhood"). Cambridge, MA: MIT Press.

Hobsbawm, E. J. (2014). *The Age of Revolution: Europe 1789–1848*. New York: Verso.

Johnson, D. G., & Wetmore, J. M. (Eds.). (2022). *Technology and society: Building our sociotechnical future* (2nd ed.). MIT Press.

Latour, B. (1992). "Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts." In W. E. Bijker & J. Law (Eds.), *Shaping Technology/Building Society: Studies in Sociotechnical Change* (pp. 225–258). Cambridge, MA: MIT Press.

Light, J. (1999). "When Computers Were Women." *Technology and Culture*, 40(3), 455–483

Marx, K. (1867). *Capital*, Volume 1 (Ch. 15: "Machinery and Modern Industry"). (B. Fowkes, Trans.). London: Penguin Classics, 1990.

Marx, L. (2010). Technology: The emergence of a hazardous concept. *Technology and culture*, 51(3), 561-577.

Meyer, S. (1981). *The Five Dollar Day: Labor Management and Social Control in the Ford Motor Company, 1908-1921*. Albany: State University of New York Press.

Mindell, D. A. (2015). *Our Robots, Ourselves: Robotics and the Myths of Autonomy*. W.W. Norton & Company

Mullaney, Thomas S., Benjamin Peters, Mar Hicks, and Kavita Philip. 2021. *Your Computer is on Fire*. Cambridge, MA: MIT Press

Noble, D. (1984). *Forces of Production: A Social History of Industrial Automation* (Ch. 7: "Social Choice in Machine Design"). New York: Knopf.

Noble, S. U. (2018). *Algorithms of Oppression: How Search Engines Reinforce Racism*. New York: NYU Press.

Nye, D. E. (2006). *Technology Matters: Questions to Live With*. Cambridge, MA: MIT Press.

Pacey, A., & Bray, F. (2016). *Technology in world civilization: A thousand-year history* (Revised and expanded ed.). MIT Press.

Sadowski, Jathan. 2020. *Too Smart: How Digital Capitalism is Extracting Data, Controlling our Lives, and Taking over the World*. Cambridge, MA: MIT Press

Siebers, Tobin. 2009. What Can Disability Studies Learn from the Culture Wars. In *The Design Culture Reader*, edited by B. Highmore. New York: Routledge, 132-140

Thomas, K. (2022). "Historicizing Algorithmic Bias." *Technology and Culture*, 63(1), 1-26.

Wajcman, J. (1991). *Feminism Confronts Technology*. Cambridge: Polity Press.

Weizman, E. (2007). *Hollow Land: Israel's Architecture of Occupation* (Ch. 5: "Evacuations" and Ch. 9: "The Wall"). London: Verso.

Wendling, A. (2009). *Karl Marx on technology and alienation*. Springer.

Winner, L. (1980). "Do Artifacts Have Politics?" *Daedalus*, 109(1), 121-136.





Wolfe, P. (2006). "Settler Colonialism and the Elimination of the Native." *Journal of Genocide Research*, 8(4), 387-409

(6) Connection to the Sustainable Development Goals

5, 8, 9, 10,











TAGS (choose 2 to 5)

TARGETS	Choose from the suggested words
	<div>Poverty Social protection Social cohesion Equal human rights Social resilience Social vulnerability</div> <div>Social shocks/disasters Environmental shocks/disasters Development cooperation</div> <div>Developing countries Least developed countries</div>
	<div>Hunger Access to food Nutrition Agricultural income Food production Food security</div> <div>Agricultural practices Ecosystems Climate change and adaptation Extreme weather Land quality</div> <div>Soil quality Species variety Rural infrastructures Gene banks (plant and/or livestock)</div> <div>Developing countries Least developed countries</div>
	<div>Mortality (maternal and/or newborns) Epidemics Mental health Use of alcohol and/or narcotic drugs</div> <div>Road traffic accidents Sexual/reproductive health</div> <div>Universal health coverage (including medicines and vaccines) Pollution (air/water/soil)</div> <div>Health services management (financing and/or workforce development)</div> <div>Health risks (early warning, risk reduction, management)</div>
	<div>Equitable access to education (primary, secondary, technical, vocational, university)</div> <div>Early childhood (development and pre-primary education)</div> <div>Skills (technical and/or vocational) Inclusive education Teachers' qualifications and training</div> <div>Lifelong learning</div>

TARGETS

Choose from the suggested words

5 GENDER EQUALITY 	Discriminations against making Exploitation of women Women's inclusion in decision- Gender Empowerment of women and girls
6 CLEAN WATER AND SANITATION 	Drinking water Sanitation and hygiene Water quality Water recycling/reuse Water resources management Water-related ecosystems
7 AFFORDABLE AND CLEAN ENERGY 	Renewable energy Energy mix Energy efficiency Clean energy Energy technologies Fossil fuels Developing countries Least developed countries
8 DECENT WORK AND ECONOMIC GROWTH 	Economic growth Technology upgrading and creation Labour-intensive sectors Job Entrepreneurship Creativity and innovation Micro-, small- and medium-sized enterprises Financial services and/or institutions Resource efficiency Sustainable consumption and/or production Decent Unemployment Slavery and human trafficking Child labour Labour Health and safety in workplace Migrants Sustainable tourism Developing countries Least developed countries
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	Resilient infrastructures Industrialization (inclusive and sustainable) Employment Least developed Developing countries Value chains and markets Resource- use efficiency Technologies (clean and environmentally Research and development Innovation Industrial diversification
10 REDUCED INEQUALITIES 	Inclusion (social, economic and and/or policies Inequalities reduction Non-discrimination Social Social protection policies Financial markets and institutions monitoring Migration and mobility policies
11 SUSTAINABLE CITIES AND COMMUNITIES 	Affordable housing Transportation systems (inclusive and sustainable) Sustainable urbanization Human settlement planning Cultural heritage Natural heritage Mortality caused by environmental disasters Urban footprint Urban air quality Urban waste management Public spaces (safe, inclusive, accessible, green) Regional development planning Least developed countries
12 RESPONSIBLE CONSUMPTION AND PRODUCTION 	Sustainable consumption Sustainable production Developed countries Developing countries Natural resources management Food waste Food losses Waste management (prevention, reduction, recycling, reuse) Pollution management

TARGETS

Choose from the suggested words

Reporting sustainability information Public procurement

Sustainable tourism



Climate-related hazards Natural disasters Climate-change measures

Climate-change capacity (mitigation, adaptation, impact reduction, early-warning)



Marine pollution Marine ecosystems Coastal ecosystems Ocean acidification

Overfishing

Fishing practices Aquaculture Tourism Marine technology Marine biodiversity



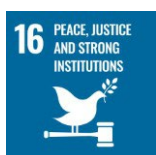
Terrestrial ecosystems Forest management Desertification Land degradation

Biodiversity

Deforestation Afforestation and/or reforestation Species in threat

Species under protection (flora and/or fauna) Wildlife products Invasive alien species

Local livelihood opportunities



Accountable institutions Inclusive institutions Transparent institutions Violence

Eliminate exploitation of children Equal access to justice Organized crime Corruption and/or bribery

Non-discriminatory laws



Multi-stakeholder partnerships Developing countries Tax collection Debt sustainability

Debt financing Cooperation on science/technology/innovation

Technology (development, transfer, dissemination, diffusion)

Technology and innovation capacity-building