Freie Universität Bozen
Libera Università di Bolzano
Università Liedia de Bulsan

Syllabus
Course description

Course title	Histories of Science and Technologies
Course code	47214
Scientific sector	PHIL-02/B (ex M-STO/05)
Degree	Master in Critical Creative Practices (LM-65)
Semester	TBA
Year	1
Credits	6
Modular	no

Total lecturing hours	30
Total hours of self-study and / or other individual educational activities	120
Attendance	not compulsory
Prerequisites	/

Specific educational objectives	The course refers to a “caratterizzante” educational activity and is a mandatory course in the first study year. **Course description** This theoretical module explores the historical trajectories of science and technology, with a focus on their profound impacts on society, culture, and ethics. Centered on developments in the 20th century, the course examines how scientific and technological advancements shaped, and were shaped by, the values, ethics, and power dynamics of different world civilizations. Key topics include the evolution of science and technology across global contexts, the transformative effects of technological innovations on society, culture, and the environment, the reciprocal relationship between social and personal values and scientific progress, and the critical role of gender in shaping scientific practices and institutions. Special attention will be given to the interplay between technology, power, and globalization, as well as the ethical challenges posed by scientific progress. Students will also investigate major ethical dilemmas and controversies in science and technology, analyzing how these debates influenced public perception and policy. Through lectures, readings, and discussions, the

	course situates these topics within broader socio-political and ecological contexts, fostering critical perspectives on the responsibilities of scientists, technologists, and designers in addressing contemporary challenges. By engaging with case studies and theoretical frameworks, students will develop the analytical tools to critically assess the historical roots of current technological issues and to contextualize their creative and professional practices within the ethical and cultural dimensions of science and technology. **Educational objectives** *Understand the Evolution of Science and Technology Across Civilizations* Explore the historical trajectories of scientific and technological advancements, emphasizing their development in global contexts and their influence on world civilizations. *Analyze the Interplay Between Science, Technology, and Values* Examine how social and personal values, ethics, and power dynamics shaped—and were shaped by—scientific progress and technological innovation. *Critically Evaluate Gender and Representation in Science* Investigate the critical role of gender in shaping scientific practices, institutions, and the accessibility of technological advancements. *Address Ethical Dilemmas and Controversies in Science* Develop the ability to critically assess ethical challenges and controversies in science and technology, understanding their societal and policy implications. *Contextualize Contemporary Technological Challenges* Equip students with analytical tools to connect the historical roots of scientific and technological developments to current global, ecological, and cultural challenges, fostering informed and ethical professional practices.

Lecturer	TBA
Scientific sector of the lecturer	TBA

Teaching language	English
Office hours	TBA
List of topics covered	- Developments of Science and Technology in World Civilizations - The Interplay Between Science, Values, and Ethics - Science and Technology in the 20th Century - Gender and Science - Ethics and Controversies in Science and Technology
Teaching format	TBA

Learning outcomes	*The learning outcomes need to refer to the Dublin Descriptors:* ***Knowledge and understanding*** *knowing digital and analogue technologies and their applications in visual arts and design;* *possessing specific knowledge on the cultural, social and ethical implications of the use of technologies in artistic practices;* *understanding the processes of integrating technologies into creative contexts, analyzing them considering the connections with other fields of knowledge, such as the philosophy of technology, computer science and cognitive sciences.* ***Applying knowledge and understanding*** *using advanced software and digital techniques to create innovative works of art and design;* *experimenting with augmented reality, 3D printing, artificial intelligence and other technological tools to expand the boundaries of artistic practices;* *collaborating with engineers, programmers and other professionals to develop interdisciplinary projects that integrate art and technology.* ***Making judegments*** *collecting and interpreting cultural and material data from the fields of art, design, technology and spatial and curatorial practices, demonstrating the ability to place events, works and production operations in the historical context and current trends;* *grasping the authority and evaluating the reliability of the*

	various available sources; *reflecting and expressing an independent judgement, including on social, ethical and political-cultural issues;* *interpreting specific facts and events, within subject of their field of study.* ***Communication skills*** *writing scientific and technical articles and reports with clarity and effectiveness;* *presenting projects and ideas verbally in a professional and convincing manner.* ***Learning skills*** *strengthening the critical and operational autonomy of students;* *developing their ability to choose, compare and adapt to new knowledge and technologies.*

Assessment	*TBA*
Assessment language	English
Evaluation criteria and criteria for awarding marks	*TBA*

Required readings	*TBA*
Supplementary readings	*TBA*