

Technological Advances and Society

Student Learning Outcome: Students will describe, analyze, and evaluate the impact of technology on society within a domain.

The Value of Technological Advances and Society

Technological changes have driven societal change since ancient times. These changes continue to accelerate in the contemporary world, creating both opportunities and challenges. Technological literacy is essential to navigating the challenges humanity faces. Technological Advances and Society courses explore how the dynamics of technological advancements impact society on almost every level and in all areas of our lives. These courses give student an understanding of the evolution of technology and the ways that technological change

impact society, both positively and negatively. Understanding the relationship between technological change and society fosters a relational understanding about the impacts, intended and unintended, of innovation on human beings and their environments, and this, in turn, helps students to understand the problems and challenges of our world and helps them conceive of solutions to those challenges.

Supporting Skills

1. Students will describe the impact of a particular technology or set of technologies on a given society or societal context.
2. Students will analyze the impact of a particular technology or set of technologies on a given society or societal context.
3. Students will evaluate the impact of a particular technology or set of technologies on a given society or societal context.

Course Content Criteria

1. Courses in this category have, as a primary focus, the relationship between technology and society.
2. Courses in this category explain the nature, structure, and/or use of a particular technology or technologies.
3. Courses in this category explore the impact of technology on a particular domain.
4. Courses in this category explore the impact of technological change on society.
5. Courses in this category include an assessment assignment that requires students to demonstrate each of the skills in the Technological Advances and Society Assessment Rubric (below). This assessment assignment should be one of the following: an objective exam, an essay question on an exam, an essay, or a research paper.

Glossary

1. **Domain:** A specified sphere of activity or knowledge (*Oxford English Dictionary*, Oxford University Press, 2020).
2. **Technological change:** The overall process of invention, innovation, and diffusion of technology (E.M. Rogers, 1962).
3. **Technological literacy:** One's ability to use, evaluate, and understand technology (ITEA, 2000–2002).
4. **Technology:** The application of scientific knowledge for practical purposes, especially in industry, or machinery and equipment developed from the application of scientific knowledge (e.g., “advances in computer technology”), or the branch of knowledge dealing with engineering or applied sciences (*Oxford English Dictionary*, Oxford University Press, 2020).

Technological Advances and Society Assessment Rubric

Supporting Skills	Exemplary 5	Accomplished 4	Developing 3	Beginning 2	Absent 1
Describe the impact of a particular technology or set of technologies on a given society or societal context.	Clearly identifies and describes, with nuance and sophistication, the impact of technology on society.	Clearly identifies and describes, in some detail, the impact of technology on society.	Identifies and demonstrates a developing ability to describe the impact of technology on society.	Demonstrates a limited ability to identify the impact of technology on society, and is unable to describe the impact of technology on society.	Is unable to recognize the impact of a particular technology or set of technologies on society.
Analyze the impact of a particular technology or set of technologies on a given society or societal context.	Clearly analyzes, with nuance and sophistication, the impact of technology on society.	Clearly analyzes, in some detail, the impact of technology on society.	Demonstrates a developing ability to analyze the impact of technology on society.	Demonstrates a limited ability to analyze the impact of technology on society.	Is unable to analyze the impact of a particular technology or set of technologies on society.
Evaluate the impact of a particular technology or set of technologies on a given society or societal context.	Clearly evaluates, with nuance and sophistication, the impact of technology on society.	Clearly evaluates, in some detail, the impact of technology on society.	Demonstrates a developing ability to evaluate the impact of technology on society.	Demonstrates a limited ability to evaluate the impact of technology on society.	Is unable to evaluate the impact of a particular technology or set of technologies on society.