Overview

Explore how social, technological, and sustainable systems are interacting to create the modern world.

About this course

Understand the impact of technology on sustainability and society, using relevant historical examples and current issues in the news, and gain insight on the cultural frameworks within which ideas such as sustainability and different technologies are understood and evolve. You’ll also explore emerging technologies from the Industrial Revolution through present day, leading to a future that will be complex and challenging, and in many ways look like science fiction.

Required prior knowledge and skills

To be successful in this course, we recommend English language fluency and computer literacy.

Learning Outcomes

- The importance of technology and technological systems in shaping the world and our future
- What issues face technologies companies today and how you might prepare for a career with a tech organization
- The social and environmental implications of design and management of technology systems
- How to identify and explain critical principles of complexity and complex systems
- How art and literature guide technological evolution
- The economic, environmental, and cultural issues arising from emerging technologies

Additional Info

This is a three credit hour course that counts toward the Humanities, Arts and Design (HU) General Studies requirement at Arizona State University. It is strongly encouraged that you consult with your institution of choice to determine how these credits will be applied to their degree requirements prior to transferring the credit.
Dr. Brad Allenby

At Arizona State University, Dr. Allenby has the following roles:

- President's Professor and Lincoln Professor of Engineering and Ethics, School of Sustainable Engineering and the Built Environment, Ira A. Fulton Schools of Engineering
- Professor at School of Sustainable Engineering and the Built Environment in Civil Engineering
- Distinguished Sustainability Scientist, Julie Ann Wrigley Global Institute of Sustainability
- Director, Center for Earth Systems Engineering and Management

Dr. Samuel Markolf

Dr. Samuel Markolf is an Assistant Research Professor within the School for Sustainable Engineering and the Built Environment (SSEBE) at Arizona State University. His research broadly focuses on urban infrastructure resilience to extreme events. In particular, current projects include characterizing vulnerabilities that arise in transportation systems via interdependencies with other infrastructure systems (e.g. the electricity grid); critically assessing the role of risk analysis in infrastructure resilience and the exploration of alternative approaches; and modeling disruption and resilience in regional transportation networks. In addition to research, Dr. Markolf has helped instruct courses within SSEBE for three years. He earned his B.S. from the University of Texas-Austin and his Ph.D. in Civil & Environmental Engineering and Engineering & Public Policy from Carnegie Mellon University.

When not working on ways to enhance the sustainability and resiliency of our cities, Dr. Markolf is most likely traveling, hiking, biking, or enjoying the company of his friends and family.