FIS 338

THE MOVIEGOER'S GUIDE TO THE FUTURE

Tuesday 4:30 — 7:15 PM Room: CDN60

Professor Andrew Maynard

AN INTRODUCTION TO EMERGING TECHNOLOGIES AND RESPONSIBLE INNOVATION LIKE NO OTHER!

Step into the world of The Moviegoer's Guide to the Future, a

one-of-a-kind learning experience that explores the intersection of film, cutting-edge technology, and social responsibility. If you're passionate about science, engineering, social sciences, humanities, business, design, film, the arts, or practically any other field, this is the perfect elective for you! Not only will you get to watch

twelve iconic movies in class, but you'll also gain a deeper understanding of transformative technologies and their potential impacts on society.

Join Professor Andrew Maynard, scientist, author, and expert on emerging technologies, as we delve into groundbreaking films like Jurassic Park, Ghost in the Shell, and Transcendence. We'll examine a wide array of topics, from genetic engineering and human enhancement to nanotechnology and artificial intelligence. But it's not just about the tech – we'll also explore the human side of innovation, discussing the ethics of cloning with Never Let Me Go, predictive justice with Minority Report, and the perils of unchecked ambition with Ex Machina. And tackling some of today's most pressing challenges, we'll use The Day After Tomorrow as a lens to examine climate change and Carl Sagan's Contact to address the relationship between science and belief.

Throughout the course, you'll gain valuable insights into the increasingly complex relationship between science, technology, and society, preparing you to navigate and shape the future responsibly and with confidence. Through this journey, you'll not only engage with the captivating world of sci-fi cinema but also gain the critical skills needed to evaluate emerging technologies and their ethical implications. By the end of the course, you'll be equipped to make informed decisions and contribute to a better future for all.

So, if you're a sci-fi enthusiast, a technology aficionado, or simply someone who dreams of making a lasting impact on the world, don't miss out on this extraordinary opportunity! Join The Moviegoer's Guide to the Future and embark on a cinematic adventure that will challenge, inspire, and empower you to be a catalyst for positive change.

MOVIE SCHEDULE

Jurassic Park (August 29)

- When Dinosaurs Ruled the Earth. Gene editing, complexity, and social responsibility.
- De-Extinction. The technology of bringing back extinct species.
- Could We, Should We? The ethics and responsibility of cutting edge science.
- The Butterfly Effect. "Chaos theory", and developing new technologies within complex and chaotic systems.
- Visions of Power. Innovation in an age of mega entrepreneurs, and profit-driven science.

Never Let me Go (September 5)

- Sins of Futures Past. Cloning, human rights, social norms, and moral cowardice.
- Cloning. The science, technology, and ethics, human reproductive cloning.
- Genuinely Human? Evaluating the rights of individuals in the face of transformative technologies.
- Too Valuable to Fail? Technology innovation and the moral imperative.

Minority Report (September 12)

- Criminal Intent. Predicting intent, pre-emptive justice, ethics of innovation, and the law.
- The "Science" of Predicting Bad Behavior. The use of science and technology in attempts to predict criminal tendencies.
- Criminal Brain Scans. fMRI, behavior prediction, and the ethics of pre-emptive justice.
- Machine Learning Based Precognition. Using Al-based techniques to attempt to predict and prevent criminal behavior.
- Big Brother, Meet Big Data. The challenges of making sense of privacy in a data- rich, interconnected world.

Limitless (September 19)

- A Pill for Everything. Cognitive enhancement, equity, and intelligence.
- The Seduction of Self-Enhancement. Introducing chemical substance-based approaches to chemical enhancement, and the drivers behind their development and use.
- Nootropics. The science and technology of using pharmaceuticals to alter cognitive abilities.
- If You Could, Would You? The ethics and norms of personal cognitive enhancement.
- Privileged Technology. Social equity and differential access to future cognitive enhancements.
- Our Obsession with Intelligence. Exploring the nature and value of intelligence.

Elysium (September 26)

- The Poor Shall Inherit The Earth. Social justice and access to technology innovation.
- Bioprinting our Future Bodies. The emerging technologies behind 3D printing tissues and organs, and the opportunities and challenges they raise.
- The Disposable Workforce. Workplace safety and justice in a technologically advanced future.
- Living in an Automated Future. The challenges and opportunities of automation.

Ghost in the Shell (October 3)

- Through a Glass Darkly. Augmentation, cyber-convergence, and identity.
- Body Hacking. Cyber-augmentation and transhumanism.
- More than "Human"? The challenges and opportunities of physical and neural augmentation.
- Plugged In; Hacked Out. Cybersecurity and the connected brain.
- Your Corporate Body. Who will own your augmented self?

Ex Machina (October 17)

- Plato's Cave. Artificial intelligence (Al), permissionless innovation, and emergent risk.
- The Lure of Permissionless Innovation. The pros and cons of innovation without checks and balances.
- Technologies of Hubris. The myths, realities, opportunities, and dangers, of technological hubris.
- Superintelligence. Framing the plausible challenges and opportunities of Al.
- Artificial Manipulation. How vulnerable are we to being psychologically and socially manipulated by future AI?

Transcendence (October 24)

- Visions of the Future. Technological convergence and existential risk.
- Technological Convergence. The emergence, nature of, and implications of, converging technologies and the Fourth Industrial Revolution.
- Enter the Neo-Luddites. Exploring the moral boundaries between promoting and resisting innovation.
- Techno-Terrorism. The myths and realities of direct action opposing technology innovation.
- Exponential Extrapolation. The dangers of extrapolating non-linear trends in tech innovation into the future.
- Make-Believe in the Age of the Singularity. Avoiding the lure of the fantastical and scientifically implausible when considering the future.

The Man in the White Suit (October 31)

- There's Plenty of Room at the Bottom. Nanotechnologies, and control of the material world.
- Mastering the Material World. Emerging trends in nanoscale science and engineering.
- Myopically Benevolent Science. The potential consequences of well-intentioned but ill-conceived science and technology.
- Never Underestimate the Status Quo. The tension between innovation and social/ economic resistance.
- It's Good to Talk. The importance of multi-stakeholder engagement in technology innovation.

Inferno (November 7)

- Decoding Make-Believe. Ideology, biotech, harmful intent, and responsible innovation.
- Weaponizing the Genome. Genetic manipulation, dual-use innovation, gain-of- function research, and nefarious intent.
- Immoral Logic? Bioethics, and the danger of justifying extreme actions on the basis of future extrapolation.
- The Honest Broker. Bridging the divide between science and politics.
- Dictating the Future. Exploring who decides which technological futures play out.

The Day After Tomorrow (November 14)

- Our Changing Climate. Climate change, geoengineering and social/technical transitions.
- Fragile States. The challenges of surviving and thriving on a dynamic and precarious planet.
- A Planetary "Microbiome". Exploring the balance and coupling between planetary systems and society.
- The Rise of the Anthropocene. Introducing and exploring the concept of the anthropocene.
- Building Resiliency. The nature of resiliency in a dynamic world.
- Geoengineering the Future. The technology, ethics, and potential impacts, of geoengineering.

Contact (November 21)

- An Awful Waste of Space. Science, belief, curiosity, wonder, and meaning.
- More than Science Alone. The dynamic between belief, passion, vision, purpose, and science.
- Occam's Razor. Tempering imagination with critical thinking, and grappling with the limits of evidence.
- What if we're not alone? What the possibility of extra terrestrial life says about us and our future.