

THE MOVIEGOER'S GUIDE TO THE FUTURE INFECTIOUS DISEASES

Summer B 2020
Online and iCourse

Instructors

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OVERVIEW

The Moviegoer's Guide to The Future is a unique introduction to the science, technology and social implications of infectious diseases. Taught by some of the country's leading experts on technology innovation and infectious diseases, the course uses six thought-provoking movies to explore emerging trends and challenges surrounding infectious diseases, their management and control, and their impacts on society.

Using movies like Contagion, World War Z, and Inferno, the course explores a broad array of challenges surrounding infectious diseases, from their history, spread and epidemiology, to the conspiracy theories they spawn, and the social risks and impacts they associated with. Through these and other movies, we'll dive into the increasing complex relationship between science, technology and society through the lens of infectious diseases, and drawing on input from a range of experts, begin to unpack how we can help build a better, more responsible, science and technology-based future in the face of an ever-changing infectious disease landscape.

The Moviegoer's Guide to The Future takes a hard look at how we might really mess up the future with science and technology, and how we can develop new technologies in ways that improve lives without causing harm - all through watching and discussing a bunch of kick-ass movies.

MOVIES YOU'LL BE WATCHING (SUBJECT TO CHANGE)

Outbreak (1995) • 93 Days (2016) • World War Z (2013) • Contagion (2011) • The Andromeda Strain (1971) • Inferno (2016) • Omega Man (1971) • The Girl with All The Gifts (2016)

REQUIRED READING

Participants are required to watch all of the movies as part of the class, and may need to pay streaming/rental costs; details of where to view/stream movies will be provided. We will also be posting other required readings and resources on Canvas.



WHAT YOU'LL LEARN IN THIS CLASS

KEY IDEAS AND CONCEPTS

Topics we will cover include:

- The emergence, spread and responses to infectious diseases from a global perspective
- Myths and realities surrounding infectious diseases
- The history, nature, purpose and challenges of quarantine
- The unique challenges faced by healthcare workers
- Vaccine development, use, acceptance, and rejection
- The roles and functions of infectious disease agencies, including the CDC and the WHO
- Zombies as a metaphor for disasters and infectious diseases
- Infectious disease research and the scientific process
- Infectious disease and public health/research and innovation ethics
- Lab containment and release
- Biosafety, biosecurity and bioterrorism
- Social responsibility and the complex relationships between science, technology, and society.
- The connections between infectious diseases, beliefs and religion
- How social and political behaviors influence disease impact.
- Social justice, equity, rights, and privilege.

LEARNING OBJECTIVES

Following the class, you will be able to:

- Use active viewing skills to gain insights on real-world infectious disease and science and technology-related challenges and opportunities from movies.
- Discuss how, individually and together, the movies in the class provide unique insights into the potential impacts of infectious diseases, and responses to these within society.
- Discuss key factors in researching, preparing for, and responding to infectious disease outbreaks.
- Discuss the ethics of infectious disease research and response.
- Discuss how personal, social and organizational beliefs, values and priorities impact responses to infectious diseases.



COURSE FORMAT AND CONTENT

CANVAS

You will be using Canvas to access videos, readings and web resources, engage with your course instructors and fellow students, and complete assignments. Please make sure you are fully familiar with the platform before the course starts.

MODULES

The course is built around eight movie-oriented modules. It starts with an orientation module (Module 0), and ends with a self-reflection where you identify how your knowledge and understanding has progressed against the course learning objectives. During the course, there will be class discussion boards. Each of the eight movie-oriented modules (Modules 1 - 8) will follow a similar pattern of activities and assignments.

A TYPICAL MODULE

Introduction and overview: Modules will begin with you watching short videos from the course instructors that introduce the film and the key concepts we will be exploring.

Pre-movie readings and viewing/listening: Ahead of the module's movie, you will read, view and/or listen to material that provides you with insights into the topics we will be covering in the module.

Movie pre-reflections: Before watching each movie, you'll be asked to submit a list of **three ideas or topics** you'll be focusing on while watching the module's movie. These should draw from the week's reading, the course learning objectives, and your own interests.

Movie-watching: In each of the main modules, you'll use "active watching" (see below) as you watch a specific movie, and observe how the movie provides insights into the concepts, ideas and issues you identified in your pre-reflection.

Post-movie video content: Following the movie, you'll watch short interviews/discussions with experts on key topics around infectious diseases that are relevant to the movie or illuminated by it.

Movie post-reflections: Following each movie, you'll be asked to post a short reflection on Canvas. Here, you will be required to write about new ideas or insights that stood out for you from the movie, the discussions, and the reading. **Your reflection should explicitly relate to the the course learning objectives.**



ASSIGNMENTS

Your final grade in this class will depend on completing staged assignments that will be posted on Canvas (see the next section for the grade structure). These will include:

SELF-INTRODUCTION

You will be required to post a brief entry on a discussion board introducing yourself, why you are interested in this course, and what you hope to get out of it. Maximum of 10 points for successful completion.

ORIENTATION QUIZ

You will be required to complete a short quiz demonstrating your familiarity with key resources and expectations associated with the course. Maximum of 10 points for completion.

MODULE OVERVIEW QUIZ

After watching the introduction and overview to each of the main modules, you will be required to complete a short, graded quiz. There will be eight module overview quizzes. Maximum of 10 points each for completion.

PRE-MOVIE CONTENT QUIZ

After reading, watching and/or listening to the pre-movie content, you will be required to complete a short, graded quiz on the material. There will be eight pre-movie content quizzes. Maximum of 10 points each for completion.

PRE-REFLECTION

Before watching each movie, you will be required to submit a list of three ideas or topics you'll be focusing on while watching the module's movie. These should draw from the week's reading, the course learning objectives, and your own interests. There will be eight pre-reflections required. Maximum of 10 points each for completion.

MOVIE

After watching each movie, you will be required to complete a short, graded quiz that covers the movie, and some of the themes that it addresses. We will be watching six movies in class, and there will be eight movie quizzes. Maximum of 5 points each for completion.

POST-MOVIE CONTENT QUIZ

After reading, watching and/or listening to the pre-movie content, you will be required to complete a short, graded quiz on the material. There will be eight post-movie content quizzes. Maximum of 10 points each for completion.

POST-REFLECTION

After watching each movie and engaging with the post-movie material, you will be required to submit a short reflection to a movie discussion board that highlights new ideas or insights that stood out for you from the movie, the discussions, and the reading. Your reflection should explicitly relate to the the course learning objectives. It should be longer than 200 words, but no longer than 500 words. These reflections will be visible to everyone in the class, and you are encouraged to read and comment on other people's reflections. However, you should not, under any circumstances, copy other people's reflections and post as your own work. There will be eight post-reflections required. Maximum of 10 points each for completion.

DISCUSSION BOARDS

For each of the eight movies, you will be required to post at least one comment on the movie discussion board, in response to someone else's post-reflection. Maximum points: 5 points per movie for posting at least one comment.

SERENDIPITY

You will be required to post a short (30 - 60 second) video capturing an idea or thought or reflection that has been inspired in some way by the module, and any related events that are associated with it. These can be as serendipitous as you like — drawing on and delighting in unexpected connections. 5 points per module.

SELF-ASSESSMENT

At the end of the course, you will be required to submit a self-reflection where you identify how your knowledge and understanding has progressed against the course learning objectives. Maximum points: 100.



GRADING

GRADING

The following grade points will be available through the class assignments:

Self-introduction	5 points
Orientation quiz	5 points
Module overview quizzes (8)	80 points in total
Pre-movie content quiz (8)	80 points in total
Pre-reflection (8)	80 points in total
Movie quiz (8)	80 points in total
Post-movie content quiz (8)	80 points in total
Post-reflection (8)	80 points in total
Discussion board comments (8)	40 points in total
Serendipity (8)	40 points in total
Self-Assessment	100 points

There is a maximum of 650 possible in the class. Individual assignments are not given a letter grade, and points received should not be interpreted as representing a letter grade. The class as a whole will be letter-graded according to the grading scheme below:

GRADING SCHEME (POINTS)

A-/A/A+	603-619/620-656/657-670
B-/B/B+	536-552/553-585/586-602
C/C+	469-518/519-535
D	402-468
E	<402
XE	Failure due to Academic Dishonesty

[Note: in order to receive University Distribution requirement credit you must earn at least a "C."]

GRADING SCHEME (PERCENTAGE)

A-/A/A+	90.0-92.4/92.5-97.9/98-100
B-/B/B+	80.0-82.4/82.5-87.4/87.5-89.9
C/C+	70.0-77.4/77.5-79.9
D	60.0-69.9

E	<60	Failure
XE		Failure due to Academic Dishonesty

[Note: in order to receive University Distribution requirement credit you must earn at least a "C."]

ASSIGNMENT DEADLINES

This course is compressed into a short space of time (6 weeks) and requires a considerable time-commitment, focus, and planning to complete successfully. Please be prepared to complete roughly two modules per week, and reach out to the course instructors if you find yourself struggling.

Each module should be completed by the dates below:

Module 0:	July 5, 2020
Module 1:	July 12, 2020
Module 2:	July 12, 2020
Module 3:	July 19, 2020
Module 4:	July 19, 2020
Module 5:	July 26, 2020
Module 6:	July 26, 2020
Module 7:	August 2, 2020
Module 8:	August 2, 2020
Self-assessment:	August 10, 2020

All assignments must be completed by August 10th at the absolute latest—assignments submitted after this will not be graded.

INCOMPLETES

A mark of "I" (incomplete) can be given by the instructor when you are otherwise doing acceptable work but are unable to complete the course because of illness or other conditions beyond your control. If you request an "I", you are required to agree with the instructor what you need to do to complete the course requirements. The arrangement must be recorded using the form at <http://students.asu.edu/forms/incomplete-grade-request>. Students should be proactive and discuss this with their instructor and TA before the end of the semester. Students who do not complete this form before the end of the semester cannot be given an incomplete and will be awarded a grade based on the work they have completed.

GRADE APPEALS

ASU has formal and informal channels to appeal a grade. If you wish to appeal any grading decisions, please see: <http://catalog.asu.edu/appeal>



ACTIVE VIEWING

Sometimes (let's be honest, most times) it's great to sit down and let a movie wash over you — to experience it without thinking too much.

This is not how you'll be watching movies in this class. But don't worry — most of the movies we'll be watching together are even better when you're concentrating on what they're saying, and what insights we might get from them.

We'll be using an approach called *active viewing*. This involves paying close attention and taking notes while watching the movies. But to help you, here are some simple guidelines:

Come prepared. Make sure you are primed before each movie, by having read the week's chapter and completed the pre-reflection.

Pay attention. Every aspect of a movie — from the music, to the atmosphere, to the subtle expressions and body language of actors — can convey information, and spark new ideas. Pay attention to everything!

Focus. Before each movie, you should have identified three ideas or topics in your pre-reflection. Actively look for anything in the movie that is relevant to these, and that stimulates interesting and new insights into them.

Be inspired. Embrace the serendipity of new and novel ideas and insights that you weren't expecting.

Make connections. Look for common threads between different movies. These might be similar ideas, or different perspectives on the same idea. But they could also be as simple as the same actor, or producer, or composer, being associated with different movies, or similar settings or locations, or narrative arcs. Be imaginative in the connections you make!

Listen to more than the words. The soundscape (including the music) of a movie carries with it an amazing amount of information, and can change how you perceive the movie!

Be critical — but don't get lost in your critique. Be critical of the movie — challenge its assumptions, its plausibility, its use or misuse of reality and fiction, its story telling. But don't let these spoil your enjoyment — “bad” movies can still inspire great ideas!

Make notes. Don't assume you'll remember any of those great ideas that struck you in the middle of a scene, if you didn't write them down.

Enjoy the movie. Active viewing should never mean boring viewing!



MODULES

MODULE 0: INTRODUCTION, OVERVIEW AND ORIENTATION

LEARNING OBJECTIVES

- Describe course learning objectives
- Describe course expectations
- Demonstrate familiarity with the course format and resources
- Demonstrate ability to find and watch movies
- Demonstrate understanding of active viewing

MODULE RESOURCES

- Video: Welcome to the course
- Video: Learning objectives
- Video: Preparing for success
- Video: Navigating the syllabus
- Video: Active viewing
- Canvas: Active viewing guide
- Video: Intro to the movies
- Canvas: Movie resources

ASSIGNMENTS

- Self-introduction
- Orientation quiz

MODULE 1: OUTBREAK (1995)

“You know, fear gets a bad rap, Salt. I don't want anybody working with me who isn't scared. Okay?” -- Sam Daniels

THEME: High Risk Infectious Diseases

LEARNING OBJECTIVES

- Describe the levels of biosafety labs, and the differences between them.
- Describe how various routes of transmission affect the spread of an infectious disease
- Discuss how social and political behaviors influence disease impact

MODULE RESOURCES

- Video: Introduction to class
- Video: Introduction to movie
- Video: Introduction to key learning objectives
- Canvas: Readings, video resources, websites
- Movie watching information
- Video: Discussion with experts on key topics

ASSIGNMENTS

- Module overview quiz
- Pre-movie content quiz
- Pre-reflection
- Movie quiz
- Post-movie content quiz
- Post-reflection
- Serendipity
- Discussion board comment

MODULE 2: 93 DAYS (2016)

"Infectious diseases bring interesting people together in interesting places" -- Dr. David Brett-Major

THEME: Healthcare Workers

LEARNING OBJECTIVES

- Describe differences between real-world responses to hemorrhagic disease outbreaks compared to fictional ones

- Discuss the unique risks healthcare workers experience in an infectious disease outbreak
- Discuss the importance and role of African voices with respect to African epidemics

MODULE RESOURCES

Video: Introduction to class

Video: Introduction to movie

Video: Introduction to key learning objectives

Canvas: Readings, video resources, websites

Movie watching information

Video: Discussion with experts on key topics

ASSIGNMENTS

- Module overview quiz
- Pre-movie content quiz
- Pre-reflection
- Movie quiz
- Post-movie content quiz
- Post-reflection
- Serendipity
- Discussion board comment

MODULE 3: WORLD WAR Z (2013)

“Most people don't believe something can happen until it already has. That's not stupidity or weakness, that's just human nature.” -- Jurgen Warmbrunn

THEME: Institutional Response to Infectious Disease

LEARNING OBJECTIVES

- Describe the history and social relevance of SARS

- Discuss international investigative responses to infectious disease outbreaks
- Describe how zombies can be used as a useful metaphor for infectious diseases
- **MODULE RESOURCES**
 - Video: Introduction to class
 - Video: Introduction to movie
 - Video: Introduction to key learning objectives
 - Canvas: Readings, video resources, websites
 - Movie watching information
 - Video: Discussion with experts on key topics

ASSIGNMENTS

- Module overview quiz
- Pre-movie content quiz
- Pre-reflection
- Movie quiz
- Post-movie content quiz
- Post-reflection
- Serendipity
- Discussion board comment

MODULE 4: CONTAGION (2011)

“The average person touches their face 2- or 3000 times a day. Three to five times every waking minute. In between, we're touching doorknobs, water fountains, elevator buttons and each other. Those things become fomites.” -- Dr. Erin Mears

THEME: Pandemics

LEARNING OBJECTIVES

- Describe key elements of the emergence, spread and management of infectious diseases

- Discuss vaccine development and use
- Discuss social responsibility and the containment and control of pandemics

MODULE RESOURCES

- Video: Introduction to class
- Video: Introduction to movie
- Video: Introduction to key learning objectives
- Canvas: Readings, video resources, websites
- Movie watching information
- Video: Discussion with experts on key topics

ASSIGNMENTS

- Module overview quiz
- Pre-movie content quiz
- Pre-reflection
- Movie quiz
- Post-movie content quiz
- Post-reflection
- Serendipity
- Discussion board comment

MODULE 5: THE ANDROMEDA STRAIN (1971)

"The defense system is perfect, Mark. It'll even bury our mistakes!" -- Dr. Jeremy Stone

THEME: Biosafety

LEARNING OBJECTIVES

- Describe basic concepts and procedures in ensuring biosafety
- Discuss the scientific process with respect to investigating infectious diseases
- Discuss debates around infectious agent releases from research labs.

- **MODULE RESOURCES**

- Video: Introduction to class
- Video: Introduction to movie
- Video: Introduction to key learning objectives
- Canvas: Readings, video resources, websites
- Movie watching information
- Video: Discussion with experts on key topics

ASSIGNMENTS

- Module overview quiz
- Pre-movie content quiz
- Pre-reflection
- Movie quiz
- Post-movie content quiz
- Post-reflection
- Serendipity
- Discussion board comment

MODULE 6: INFERNO (2016)

"It took the Earth's population 100,000 years to reach a billion people. And then just 100 more to reach two billion." -- Bertrand Zobrist

THEME: Bioterrorism

LEARNING OBJECTIVES

- Discuss emerging issues in biosecurity
- Discuss myths and concerns around bioterrorism
- Discuss the challenges of navigating conspiracy theories

MODULE RESOURCES

- Video: Introduction to class
- Video: Introduction to movie
- Video: Introduction to key learning objectives
- Canvas: Readings, video resources, websites

- Movie watching information
- Video: Discussion with experts on key topics

ASSIGNMENTS

- Module overview quiz
- Pre-movie content quiz
- Pre-reflection
- Movie quiz
- Post-movie content quiz
- Post-reflection
- Serendipity
- Discussion board comment

MODULE 7: OMEGA MAN (1971)

“Definition of a scientist: a man who understood nothing, until there was nothing left to understand” -- Matthias

THEME: Infectious Diseases and Belief

LEARNING OBJECTIVES

- Discuss connections between infectious disease and religion
- Discuss challenges associated with a "white savior" approach to social challenges
- Discuss the anti-vaccination movement and its social relevance and implications

MODULE RESOURCES

- Video: Introduction to class
- Video: Introduction to movie
- Video: Introduction to key learning objectives
- Canvas: Readings, video resources, websites
- Movie watching information
- Video: Discussion with experts on key topics

ASSIGNMENTS

- Module overview quiz
- Pre-movie content quiz
- Pre-reflection
- Movie quiz
- Post-movie content quiz
- Post-reflection
- Serendipity
- Discussion board comment

MODULE 8: THE GIRL WITH ALL THE GIFTS (2016)

"I just want to live, everyone wants that." — Melanie

THEME: Research Ethics and Infectious Diseases

LEARNING OBJECTIVES

- Discuss the ethics of emergency research
- Discuss the ethics of human experimentation
- Discuss social recovery from disasters

• MODULE RESOURCES

- Video: Introduction to class
- Video: Introduction to movie
- Video: Introduction to key learning objectives
- Canvas: Readings, video resources, websites
- Movie watching information
- Video: Discussion with experts on key topics

ASSIGNMENTS

- Module overview quiz
- Pre-movie content quiz
- Pre-reflection
- Movie quiz
- Post-movie content quiz

- Post-reflection
- Serendipity
- Discussion board comment