



WW-HUMN 333

How Fiction, Film and Popular Culture Represent Science and Mathematics

Online Course Syllabus

Worldwide 2022-03 March

Course Information

Credit Hours: 3

Delivery Method: Online (Internet/Canvas)

Required Course Materials

Title: Hidden Figures

Authors: Theodore Melfi, Director

Publisher: 20th Century Fox

Publication Date: 2016

Format: Film

Notes

You will need access to a movie rental, streaming service, or other means of viewing this film.

Title: Frankenstein: Annotated for Scientists, Engineers, and Creators of All Kinds

ISBN: 978-0262533287

Authors: Mary Shelley (Author) Ed Finn, David Guston (Editors)

Publisher: MIT Press

Publication Date: 2017

Format: Textbook

Suggested Course Materials

Title: Publication Manual of the American Psychological Association

ISBN: 978-1433832161 (Paperback), 9781433832185 (eBook)

Authors: American Psychological Association

Publisher: American Psychological Association (APA)

Publication Date: 2019-10-01

Edition: 7th

Catalog Course Description

Students will explore representations of mathematics and science in literature, film and popular culture. Traditional media (books, drama, film, and television) as well as web-based media (webcomics, YouTube series, and podcasts) will be the venues in which students discuss the portrayal of the lives of scientists and mathematicians as well as scientific theories and mathematics concepts.

Pre-Requisite: ENGL 123 and minimum of a 3-hour MATH course.

Prerequisite(s): HUMN 333 Prerequisite is ENGL 123

Course Goals

This interdisciplinary experience will allow students to integrate ideas and issues from diverse academic disciplines in order to expand their capacity for analysis and critical thinking. They will learn the language and methodologies commonly associated with various disciplines, both to understand their commonalities and also to appreciate their differences. They will learn how one discipline (humanities) perceives, interprets and discusses another (science and mathematics).

Student Learning Outcomes

Learning Outcomes:

1. Evaluate and write about the accuracy of the scientific/mathematical concepts depicted in works of fiction in various media.
2. Engage in integrative learning by making connections across disciplines.
3. Demonstrate critical thinking skills in discussions of literary elements.
4. Recognize and discuss how science/mathematics and the humanities influence each other in the intellectual environment of their time.
5. Demonstrate in writing an understanding of the portrayal of professional ethics in works that represent science and mathematics.

Grading

Scale	Grade
90 - 100	A (Superior)
80 - 89	B (Above Average)
70 - 79	C (Average)
60 - 69	D (Below Average)
0 - 59	F (Failure)

Evaluation Items & Weights

Participation	10%
Conversations	15%
Media Journals	15%
Analytical Papers	40%
H-STEM Trailer	20%
Total	100
	%

Structure of the Course: Engage, Learn, Converse, Accomplish

In this course, you will notice that each module includes two course pages: Essential Elements and Ticket to the Next Module. Each Essential Elements page has been created to guide you throughout the module in a condensed format, yet provides all of the information you need to succeed. Four verbs – Engage, Learn, Converse, and Accomplish – are used throughout the course to indicate the actions you will take to experience the course content.

Content in the **Engage** section of the Essential Elements page includes audio, visual, and text that is related to content in the other three sections. Your learning, conversations, and graded assessments will be deepened by thorough engagement with this preliminary content.

The **Learn** section contains three recordings from the instructors. One is from a Humanities perspective; one is from a STEM (science, technology, engineering, or mathematics) perspective, and one that includes both perspectives plus an embedded quiz.

Discussion forums are linked from the **Converse** section. These are your opportunities to connect with your peers, instructor, and the fiction/film/popular culture artifacts assigned to the module.

The **Accomplish** section contains links and lists of graded assignments. Besides the work due in the current module, there is an advance notice of assignments soon to come or preparation tasks such as which part of the novel to read.

Participation

Participation will be calculated in two ways: (1) assessments embedded in each module's dual-perspective presentation and (2) your "ticket to the next module" activities. These activities measure your level of engagement with each module's material.

Conversations

Conversations are Discussion forums linked from the **Converse** section of each module. These are your opportunities to connect with your peers, instructor, and the fiction/film/popular culture artifacts assigned to the module. Initial posts to Conversation forums are expected by the fourth module day. Expectations for interacting with classmates are listed in each module.

Media Journals

You will submit four (4) media journals during this course. The media journal can be an audio presentation (such as a podcast) or a blend of audio and visual. You must submit at least two different types of media throughout the course. Your media journals should be based on examples of the connections between humanities and STEM that you observe in your everyday life. These examples might be from music, television, film, museum visits, newspaper/magazine articles, books, or scenic locations. You are required to submit four media journals; one media journal between Modules 1 and 2, Modules 3 and 4, Modules 5 and 6, and Modules 7 and 8. There are opportunities for submission in Modules 1-8; plan out your workflow by reviewing the Course Schedule at the end of the syllabus.

Analytical Papers

You will compose two analytical papers in this course. One will focus on the novel *Frankenstein* (due in Module 5), and the other will focus on your choice of a STEM-based film from a list of possible topics (due in Module 7). Each analytical paper will require the use of a primary source and at least one secondary source cited in APA format. The papers will be 750-1000 words each.

H-STEM Trailer

You will create a digital media project that serves as a “trailer” for a unique blend of humanities and STEM that you are promoting—a new film, an exciting proposed work of fiction, a television show, or a blog/webcomic. You will highlight what is creative, innovative, or unique about your H-STEM idea. H-STEM Trailers tend to be under two minutes long. After your submission in Module 8, you will have an opportunity to share and discuss your trailer with your peers in Module 9.

Disability and Special Needs

ERAU-WW is committed to the success of all students. It is a University policy to provide reasonable accommodations to students with disabilities, who qualify for services. If you would like to request accommodations due to a physical, mental or learning disability, please contact the Disability Services Support Office at 386-226-7334 or via email at wwdss@erau.edu. ALL DISCUSSIONS ARE CONFIDENTIAL.

Additional Information

APA Format

Go to the [APA website](#) for additional information about the *American Psychological Association Publication Manual*.

Library

Embry-Riddle Aeronautical University has one of the most complete library collections of aviation-related resources in the world. The Hunt Library is the library for all Worldwide students regardless of location. For help finding resources for your assignment, project, or topic, or to learn more about the library services available to you, please contact our librarians using the following information:

- [Hunt Library Worldwide: Information, Services, Help](#)
 - [Library Basic Training](#)
 - [Ask-a-Librarian](#)
 - [Library Hours](#)
- Contact Information
 - Email: library@erau.edu

Title IX

[Title IX of the Education Amendments of 1972](#) ("Title IX") is a Federal civil rights law that prohibits discrimination on the basis of sex in education programs and activities. All public and private elementary and secondary schools, school districts, colleges, and universities receiving any Federal funds must comply with Title IX.

The Title IX Office oversees compliance of Title IX Sexual Harassment in accordance with Federal Regulations as well as incidents falling under the University Sexual Misconduct policy. Policy violations can include sexual harassment or sexual violence,

such as rape, sexual assault, sexual misconduct, sexual battery, sexual coercion, and stalking.

Anyone **may** report suspected or known violations directly to the Title IX Office. However, there are certain persons / offices who **must** report incidents to the Title IX Office (mandatory). Those are Campus Safety & Security, Dean of Students (or designee), Vice President of Human Resources (or designee). Please refer to the policy and/or contact the Title IX Office for more specifics related to filing a report.

Phone: 386/226-6677; 386/481-9131; 386/241-1881

Email: wwtitle9@erau.edu or meyerspa@erau.edu

Website: <https://worldwide.erau.edu/administration/diversity>

Form: [Online Complaint Form](#)

Course Policies

Academic Integrity

Embry-Riddle is committed to maintaining and upholding intellectual integrity. All students, faculty, and staff have obligations to prevent violations of academic integrity and take corrective action when they occur. The adjudication process will involve imposing sanctions which may include, but are not limited to, a failing grade on the assignment, a failing grade in a course, suspension, or dismissal from the University, upon students who commit the following academic violations:

1. Plagiarism: Presenting the ideas, words, or products of another as one's own. Plagiarism includes use of any source to complete academic assignments without proper acknowledgment of the source. Reuse or resubmission of a student's own coursework if previously used or submitted in another course, is considered self-plagiarism, and is also not allowed under University policy.
2. Cheating: A broad term that includes, but is not limited to, the following:
 1. Giving or receiving help from unauthorized persons or materials during examinations.
 2. The unauthorized communication of examination questions prior to, during, or following administration of the examination.
 3. Collaboration on examinations or assignments expected to be, or presented as, individual work.

4. Fraud and deceit, that include knowingly furnishing false or misleading information or failing to furnish appropriate information when requested, such as when applying for admission to the University.

Note: The Instructor reserves the right to use any form of digital method for checking plagiarism. Several electronic systems are available and other methods may be used at the Instructor's discretion.

Online Learning

This course is offered through Embry-Riddle Online (Canvas) and runs nine (9) weeks. The first week begins the first day of the term and ends at midnight EDT/EST (as applicable) seven days later. Please note that all assignments, unless otherwise indicated, are due by 11:59p.m. EDT/EST on the date shown. Success in this course requires in-depth study of each module as assigned, timely completion of assignments, and regular participation in forum discussions.

Late work should be the exception and not the rule and may be downgraded at the discretion of the Instructor, if accepted at all. Unless all work is submitted, the student could receive a failing grade for the course. Extensions may be granted for extenuating circumstances at the discretion of the Instructor and only for the length of time the Instructor deems appropriate. The most important element of success in an online course is to communicate with your Instructor throughout the term.

Conventions of "online etiquette," which include courtesy to all users, will be observed. Students should use the Send Message function in Canvas for private messages to the Instructor and other students. The class discussion forums are for public messages.

It is highly recommended that students keep electronic copies of all materials submitted as assignments, discussion posts and emails, until after the end of the term and a final grade is received. When posting responses in a discussion forum, please confirm that the responses have actually been posted after you submit them.

Course Specific Policies

Late Work Policy: All course work is expected to be completed on time and should be submitted before 11:59 PM ET on the date indicated in the Course Schedule below. Unless otherwise specified in this document, late work will be downgraded 10% for each day it is past due, up to 5 days beyond the deadline. After that, a permanent score of zero (0) will be entered in the Canvas Grades area (Note: please look in the “Assignments” section of the syllabus for more instructions). Please coordinate with the instructor as soon as possible if you know your assignment will be late. In some special cases, a penalty-free extension might be granted if you provide your expected date of submission in addition to the reason you cannot make the deadline (expect to provide supporting documentation). Keep in mind that you are always allocated a sufficient time to complete your assignments, so difficulties encountered less than 24 hours prior to the deadline will not be viewed in a favorable light.

Exceptions: Instructors may choose to develop and implement their own policies regarding the following:

1. Discussion boards (initial posts and replies to classmates)
2. Assignments submitted after the last class day
3. Assignments submitted using third-party integrations

Any such deviations must be clearly posted in the announcements, instructor bio, and online office (as well as any other appropriate location).

Course Schedule

Module 1 – The Odd Couple

Learn: Natural Philosophy
Converse: Meet Your Peers
Converse: Walt Whitman
Accomplish: Media Journal Submission
Get Your Ticket to Module 2

Module 2 – IT'S ALIVE!!!!

Learn: Spark of Life!
Converse: The Creation
Accomplish: Media Journal Submission
Get your Ticket to Module 3

Module 3 – What's in a Name?

Learn: From Point A to Point B
Converse: Who is the Monster?
Accomplish: Media Journal Submission
Get Your Ticket to Module 4

Module 4 Don't Be Like Victor

Learn: The End?
Converse: What is "Scary"?
Accomplish: *Frankenstein* Topic & Outline
Accomplish: Media Journal Submission
Get Your Ticket to Module 5

Module 5 – Science in Storytelling

Learn: Crime Scene Investigation
Converse: Just Because We Can...
Accomplish: *Frankenstein* Analytical Paper
Accomplish: Media Journal Submission
Get Your Ticket to Module 6

Module 6 – Hidden No More

Learn: Space Race
Converse: Who Runs the World?

Accomplish: STEM Movie & Outline
Accomplish: Media Journal Submission
Get Your Ticket to Module 7

Module 7 – Scientists Are People, Too

Learn: Breaking the Stereotypes
Converse: The Hollywood Treatment
Accomplish: STEM Movie Analytical Paper
Accomplish: Media Journal Submission
Get Your Ticket to Module 8

Module 8 – STEM in Popular Culture

Learn: Bazinga!
Converse: Math, Science, and the Web
Accomplish: H-STEM Trailer
Accomplish: Media Journal Submission
Get Your Ticket to Module 9

Module 9 – Revenge of the Nerds

Converse: Why Do Some Nerds Become Famous?
Converse: Reflection
Converse: Share Your H-STEM Trailer

Summary

- Before you begin the course, read the Important Course Information and other items in the Start Here module. If you have any questions, please contact your instructor.
- Visit the Modules area for an overview of the course structure and direct navigation to all course content.
- All assignments due by 11:59 pm ET.

Date Due	Name (link)	Event Type	Points
3/27	Humanistic-STEM Survey	Quiz	0
3/27	Get Your Ticket to Module 2	Quiz	100
3/27	Module 1 - Converse: Meet Your Peers	Discussion	100
3/27	Module 1 - Converse: Walt Whitman	Discussion	100
4/3	Get Your Ticket to Module 3	Quiz	100
4/3	Modules 1-2 - Accomplish: Media Journal Submission 1	Discussion	100
4/3	Module 2 - Converse: The Creation	Discussion	100
4/10	Get Your Ticket to Module 4	Quiz	100
4/10	Module 3 - Converse: Who is the Monster?	Discussion	100
4/17	Module 4 - Accomplish: Frankenstein Topic & Outline	Discussion	100
4/17	Module 4 - Converse: What is "Scary"?	Discussion	100
4/17	Modules 3-4 - Accomplish: Media Journal Submission 2	Discussion	100
4/17	Get Your Ticket to Module 5	Quiz	100
4/17	Module 1 - Learn: Natural Philosophy	Assignment	100
4/24	Module 5 - Converse: Just Because We Can...	Discussion	100

Date Due	Name (link)	Event Type	Points
4/24	Module 2 - Learn: Spark of Life!	Assignment	100
4/24	Get Your Ticket to Module 6	Quiz	100
4/24	Module 5 - Accomplish: Frankenstein Analytical Paper (PLG1).	Assignment	100
5/1	Modules 5-6 - Accomplish: Media Journal Submission 3	Discussion	100
5/1	Module 6 - Accomplish: STEM Movie & Outline	Discussion	100
5/1	Module 3 - Learn: From Point A to Point B	Assignment	100
5/1	Module 6 - Converse: Who Runs the World?	Discussion	100
5/1	Get Your Ticket to Module 7	Quiz	100
5/8	Get Your Ticket to Module 8	Quiz	100
5/8	Module 7 - Converse: The Hollywood Treatment	Discussion	100
5/8	Module 4 - Learn: The End?	Assignment	100
5/8	Module 7 - Accomplish: STEM Movie Analytical Paper (PLG1).	Assignment	100
5/15	Module 8 - Converse: Math, Science, and the Web	Discussion	100
5/15	Module 5 - Learn: Crime Scene Investigation	Assignment	100
5/15	Modules 7-8 - Accomplish: Media Journal Submission 4	Discussion	100
5/15	Get Your Ticket to Module 9	Quiz	100
5/15	Module 8 - Accomplish: H-STEM Trailer	Assignment	100
5/22	Module 9 - Converse: Reflection	Discussion	100

Date Due	Name (link)	Event Type	Points
5/22	Module 6 - Learn: Space Race	Assignment	100
5/22	Module 9 - Converse: Share Your H-STEM Trailer	Discussion	100
5/22	Module 9 - Converse: Why Do Some Nerds Become Famous?	Discussion	100
5/29	Module 7 - Learn: Breaking the Stereotypes	Assignment	100
6/5	Module 8 - Learn: Bazinga!	Assignment	100
	Online Office	Discussion	0
	Student Lounge	Discussion	0