

Minds, Robots, and the End of Humanity

FYS-1FS-G [Fall 2017]

MWF 10:00-10:50 AM, Academic Center 146

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Office Hours: Anytime I'm not in class or a committee (see my weekly schedule) — just drop by!

Course Description

In a 2014 interview with the BBC, the eminent physicist Steven Hawking claimed that “the development of full artificial intelligence could spell the end of the human race.” This is not a new idea in the world of film and literature, where we find computer code that re-writes and improves itself, controls robotic machines to manipulate the physical environment (including, of course, the building of more robots), and eventually becomes independent of human oversight and turns on us — is any of that possible? As it turns out, parts of this story are already happening, and something like the Hollywood storyline appears to many increasingly plausible.

This seminar explores some of the key ideas and concepts behind these events (What are Turing machines? What is a mind and can a machine have one? What do we mean by “free will” and can this be emulated in a machine?) while considering the larger question of the end (or purpose) of humanity in the face of its possible end (or demise).

The *First Year Seminar in Critical Thinking* is one of three foundational skills courses in the Manchester Core Curriculum, and focuses on the development of analytical and critical thinking skills and practice college-level writing. In general, your FYS should help you integrate into the university.

Required Materials

All readings will be available online (see the web syllabus). Those for class discussion must be printed out and brought to class (reading them in class on your electronic device is not allowed). Other materials will be available as reference materials online.

In addition, you should consider purchasing a weekly or monthly planner for keeping track of exams, due dates for papers and other projects, etc.

Learning Goals

The two clusters of goals for all sections of the FYS are to develop your writing skills and your analytical and critical thinking skills. More specifically, you will develop your ability to write Standard English, clearly and appropriately; analyze critically, through organized and persuasive writing; and use appropriate citation for both primary and secondary sources.

You also should begin or continue to develop certain habits that will improve your chance of flourishing in college and beyond: time management, personal responsibility, being courteous to others (especially those with whom you disagree), and making good and efficient use of the available resources.

We will be reading, discussing, and writing about articles (mainly from the popular press) on the interdisciplinary topic of artificial intelligence, which is both fascinating and of increasing social importance, but it is primarily a vehicle for developing these other skills.

Occasional Writing

There will be a dozen or so short writing assignments, including a set of brief “summary and response” essays on some of our class readings. About once each week, at the beginning of class, a one to two page essay on the day’s reading (or some similar assignment) will be due, or else there will be a brief in-class writing on the day’s reading. This also includes a one page summary of your research paper, to be distributed to your classmates.

Three Formal Essays

- 1. Definition Essay (first draft due Monday, Sep 18; final draft due Monday, Sep 25).** The purpose of this three-page essay is to clarify some significant concept related to artificial intelligence. No outside sources needed. 1000 words. [20%]
- 2. Analysis Essay (first draft due Monday, Oct 16; final draft due Monday, Oct 23).** Here you will analyze a film related to the topic of artificial intelligence. Make use of at least two outside sources. 1300 words. [20%]
- 3. Research Essay (first draft due Monday, Nov 13; final draft due Mon, Dec 4).** This will be an argumentative essay involving some research in the literature. Make use of at least four outside sources. 1500-1600 words. [20%]

Grading

You will receive a **C** in this class if your work is consistently adequate and meets all minimum requirements for assignments. Just showing up and getting the work done should get you to this level.

A **B** reflects an above average commitment to coursework, efforts toward improvement, and positive contribution to the classroom environment.

An **A** means that you have exhibited excellence in every area of coursework. This have consistently written polished, thought-provoking, and inventive essays and shown a genuine interest in the subject matter and a consistent willingness to ask and answer difficult questions inside and outside of class. An **A** student is an independent, critical thinker who reads and analyzes texts beyond the surface level and incorporates lessons learned from previous assignments to improve upon future ones.

Receiving a grade of **D** means that your work has not been consistently adequate nor does it meet minimum requirements for assignments. An **F** indicates that the work for the course is incomplete or inadequate; *in addition, an F may be given for academic dishonesty (plagiarism or cheating).*

Assignments and their grade values		93-100% A
10%	Attendance at FYS events. Library Modules (complete these in the first few weeks, and no later than Sept. 18) Study Skills Workshop, Career Expo/Skills Assessment, Title IX Training In-Class Presentations: Writing Center & Registrar's Office Two Activities (from the Faith, Diversity, Service, Community, Integrity lists)	90-92% A- 87-89% B+ 83-86% B 80-82% B- 77-79% C+
20%	Occasional Writing (short assigned writings and reading quizzes)	73-76% C 70-72% C- 67-69% D+
60%	Three essays (3pp; 4pp; 5-6pp) [20% + 20% + 20%]	63-66% D
10%	Final exam	60-62% D- ≤ 59% F

Plagiarism

This is quite serious, so pay close attention! Plagiarism means presenting in your own work another person's specific words or ideas – wholly or partially, intentionally or unintentionally – without giving proper credit to the source. We will discuss proper citation as a group, but if you have any questions at any time about how to cite an idea or piece of information, ask me about it in class so that others can benefit from the discussion. You may also consult your anthology or a guide like Diane Hacker's *A Writer's Reference* if you are unsure of what constitutes plagiarism. The penalties for unintentional and deliberate plagiarism are outlined in the Manchester catalog. In the courses I teach, deliberate plagiarism (as well as cheating) results in an **F** for that work as well as (normally) an **F** for the course as a whole.

Other Stuff

Cell Phones. All cell phones must be silenced and put away. Thank you.

Laptops. I have yet to meet the student who took good notes on a laptop. Apart from that, various studies have shown that handwritten notes are much more conducive to learning, remembering, and synthesizing new

information. Unless you have a documented disability that requires the use of a laptop or tablet, prepare to take notes the old fashioned way, with paper and pencil.

Late work is not normally accepted. Assignments must be handed in at the beginning of class on the day that they are due – if *you* are late, that means your *work* is also late. If you anticipate any kind of difficulty meeting a deadline, see me as soon as possible to discuss an extension or to make special arrangements. If you know ahead of time that you cannot be present when something is due, you must contact me *before* class to discuss alternatives (this usually means handing in an assignment sooner rather than later).

Starfish. Beginning this year, the University will be using a new software program called “Starfish,” which gathers together information for your advising and scheduling, as well as for you and others to “throw a flag” if there’s a problem or worry of any kind (falling behind in class or not showing up, feeling depressed or anxious, and so on). You may receive alerts from this system, and you can also initiate alerts.

Academic Support. Manchester University has a commitment to the success of its students; therefore, the Success Center services will serve you well! Whether you are in the honors program, need a little help getting started with an essay, or need some extensive tutoring for a math class, familiarize yourself with the Success Center on the second floor of the Switzer Center!

Accommodations. If you have a documented disability, you should contact Bonnie O’Connell in the Success Center (phone extension 5076) within the first week of classes to discuss required legal documentation, necessary accommodations, and notification to instructors. **It is your responsibility** to bring the necessary paperwork to your professors. You should schedule a meeting with your professors to discuss needed, reasonable accommodations.

When life happens... If circumstances in your life occur that affect your performance in class (e.g., childcare issues, unreliable transportation, a sick grandparent, expected recurring absences for any reason), you should talk to me and to your other professors immediately. We can figure something out.

Schedule

<u><i>Artificial Intelligence: The Very Idea</i></u>		<u><i>Will Robots Take Our Jobs?</i></u>
Wed. Aug 30 Research & How to Cite Research <ul style="list-style-type: none">• Purdue OWL, “Research and Citation”	Mon. Sep 11 Turing Machines <ul style="list-style-type: none">• Naragon, “Artificial Intelligence”	Wed. Sep 27 The Luddites <ul style="list-style-type: none">• Kestenbaum/Goldstein, “When Luddites Attack”
Fri. Sep 1 Summary and Paraphrase <ul style="list-style-type: none">• Purdue OWL, “Paraphrasing and Summary”	Wed. Sep 13 Can Machines Think? (1) <ul style="list-style-type: none">• Law, “Could a Machine Think?”	Fri. Sep 29 The Automation of Work <ul style="list-style-type: none">• Lanchester, “The Robots are Coming”
Mon. Sep 4 Thinking Things <ul style="list-style-type: none">• Naragon, “Thinking Things”	Fri. Sep 15 Thesis drafting Thesis Paragraph Due (bring paper copy to class).	Mon. Oct 2 — Fall Break
Wed. Sep 6 Conscious Machines <ul style="list-style-type: none">• Pinker, “Can a Computer Be Conscious?”	Mon. Sep 18 Workshop: Definition Essay First Draft Due: Definition essay (bring paper copy to class).	Wed. Oct 4 What is Work For? <ul style="list-style-type: none">• Thompson, “A World Without Work”
Fri. Sep 8 Criteria of Mindedness <ul style="list-style-type: none">• Descartes, <i>Discourse on Method</i> (selection)	Wed. Sep 20 - Fri. Sep 22 No class: Individual meetings.	Fri. Oct 6 A.I. in Cinema & Thesis Drafting <ul style="list-style-type: none">• Mendelsohn, “The Robots are Winning!”
	Mon. Sep 25 Final Draft Due: Definition essay (submit on Canvas). Can Machines Think? (2) <ul style="list-style-type: none">• Searle, “The Myth of the Computer”	

Creating Creatures, Becoming Cyborgs

Mon. Oct 9

Early Creation Stories in the Western Tradition

- Selections from Homer, Hesiod, the Hebrew Bible, Ovid, etc.

Thesis Paragraph Due (bring paper copy to class).

Wed. Oct 11

Artificial Life as Mechanical Simulation

- Riskin, "The Defecating Duck"

Fri. Oct 13

Becoming Cyborgs

- House, "The Real Cyborgs"

Mon. Oct 16

Workshop: Analysis Essay

First Draft Due: Analysis essay (bring paper copy to class).

No class: Individual meetings

Wed. Oct 18 - Fri. Oct 20

No class: Individual meetings

Mon. Oct 23

Final Draft Due: Analysis essay (submit on Canvas).

- In-class Presentation by the Registrar's Office on registering for spring courses.

What is a Person?

Wed. Oct 25

Dualism

- Naragon, "Cartesian Dualism"

Fri. Oct 27

Physicalism

- Naragon, "Physicalism"
- Bisson, "They're Made Out of Meat"

Mon. Oct 30

Consciousness

- Koch, "Is Consciousness Universal?"
- Marcus, "How Much Consciousness does an iPhone Have?"

Wed. Nov 1

Research Strategies/Evaluating Sources

- Meet in the library.

Fri. Nov 3

Due: Topic proposal and thesis for research essay (bring paper copy to class)

Thesis Drafting

Mon. Nov 6

Locating the Self

- Dennett, "Where Am I?"

Wed. Nov 8

Due: Annotated bibliography (at least two sources). Bring paper copy to class)

Personal Identity

- Naragon, "Personal Identity"

Can We Live with this Technology?

Fri. Nov 10

Is A.I. Dangerous?

- Scharf, "Is A.I. Dangerous? That Depends...."

- Comments by Bostrum, Gates, Hawking, Musk, and Stuart.

Mon. Nov 13

Workshop: Research Essay

First Draft Due: Research essay (bring paper copy to class).

Wed. Nov 15 - Fri. Nov 17

No class: Individual meetings.

Mon. Nov 20

What is the Singularity?

- Vinge, "The Coming Technological Singularity"

Wed-Fri. Thanksgiving Holiday

Mon. Nov 27

Reaching the Singularity

- Urban, "The Road to Superintelligence"

Wed. Nov 29

"All Watched Over by Machines of Loving Grace"

- Urban, "Our Immortality or Extinction"

Fri. Dec 1

Can We Program Robots to be Moral?

- Marcus, "Moral Machines"
- Marcus, "Teaching Robots to be Moral"

Mon. Dec 4

Final Draft Due: Research essay (submit on Canvas)

- Final exam strategies

Wed. Dec 6-Fri. Dec 8

Presenting your research

Finals Week: Exam