

PHILOSOPHY OF ARTIFICIAL INTELLIGENCE SYLLABUS



SECTION ONE COURSE INFORMATION

Philosophy of Artificial Intelligence, PHIL189
 Fall 2017, Carroll College
 Monday, Wednesday, Friday, 10:00am-10:50, 045 St Charles; 3 credit hours

Instructor: Dr. Wm Mark Smillie, Professor, Philosophy Department
 Office ~ 142 St Charles Hall; Email ~ msmillie@carroll.edu; Ph ~ 447-5416

Communications and availability

Fall 2017 Office Hours: MW, 2:30-4:30; Th, 2:30-4:30; Fri, 2:00-3:30; & by appointment.

For issues about this course, students can contact me before/after class, at my office hours (posted above), by phone or email (either Carroll email or through Moodle email). I will respond to email and phone inquiries within one business day (Saturdays and Sundays are not business days). I will post notifications about the course in the Moodle News Forum. Students should also be aware of the Moodle Calendar that announces assignment deadlines.

Reading Materials

Boden, Margaret. *AI: Its Nature and future*. Oxford University Press, 2016. Up-date and sanguine analysis of the state of Artificial Intelligence and the philosophical issues arising around it by a top philosopher and cognitive scientist.

Boden, Margaret A. *The Philosophy of Artificial Intelligence*. Oxford University Press; 1990. *An anthology of classic readings covering most of the history of philosophical reflection on Artificial Intelligence. \$42.50*

Lanier, Jaron. *You are Not a Gadget*. Vintage, 2011. Virtual reality researcher's case against the singularity and artificial intelligence.

Kurzweil, Ray. *The Singularity is Near*. Penguin Books; 2006. Famous futurist's argument that machine intelligence will match and outstrip human intelligence, and then the two will merge in a mutually beneficial "singularity" in the year 2045. Kurzweil is an optimist, believing that the machines will welcome human merging, rather than try to destroy humans.

Course Description

A philosophical look at the philosophical implications of artificial intelligence. Course will consider the arguments about the possibility of creating artificial intelligence, as well as the metaphysical, ethical and social implications of human interaction with intelligent machines. Course includes a study of several recent films broaching these questions. This course makes an excellent introduction to philosophy, and, in addition to its content, promises to develop student skills in reading, analysis, and reasoning, promote student respect for facts, evidence, and argument, and foster appreciation for opposing points of view and of those who hold them.

SECTION TWO COURSE ELEMENTS AND GOALS

Learning Objectives

As a result of reading course texts, participating in lecture presentations and class discussions, students will formulate and evaluate philosophical positions about human intelligence and artificial intelligence, as well as the implications of the latter, by completing course activities, by writing essays, by completing exams, and by producing a final project.

Readings

After purchasing the required course texts or accessing them on moodle, students will identify and summarize philosophical positions relevant to fundamental areas of human being, though mindful reading of assigned material prior to class.

Activities

After studying assigned readings, students will summarize, analyze and critically evaluate philosophical ideas by participating in class discussions, completing in-class activities, and diverse on-line activities.

Tests

After participating in class discussions, reading assigned texts and completing course activities, students will synthesize and express their understanding of philosophical ideas, by completing tests consisting of matching, true/false, and essay questions.

Written paper

Having mastered techniques of philosophical argumentation and reviewed course material and assigned question prompts, students will formulate and defend philosophical positions in written argumentative essays.

Movie Review

After completing course readings and activities, student will demonstrate their understanding of the philosophy of artificial intelligence, by presenting a "philosophical review" of a major motion picture about artificial intelligence.

Disclaimer regarding these objectives:

- 1) Students may vary in their competency levels on these abilities.
- 2) Students can expect to acquire these abilities only if they honor all course policies, attend class regularly, complete all assigned work on time and in good faith, and meet all other course requirements and expectations.

Fulfillment and Assessment of the Learning Objectives

Course Activities 15%. Students will receive credit for these activities based on their responses to the particular questions and assignments. These will include reading summaries, reflective questions, quizzes. Two lowest scores will be dropped prior to calculation of the final grade.

Written Analysis 20%. Students will receive a grade using rubrics that will be made available in advance of the assignment.

Tests 45%. There are two semester tests, plus a final comprehensive exam scheduled for this course. Each is worth 15% of the final grade. Students will receive credit for correct answers on "objective" questions (questions with predetermined answers; I typically employ matching questions and T/F questions); on written (essay) questions, students will receive a grade based on a rubric made available in advance of the test. The final exam is scheduled for this course by the College registrar.

Movie Review (20%). Students will receive a grade based on a rubric made available in advance of the project.

Final Grade Calculation

Letter grades for the course are assigned as follows.

Percentage pts	Grade	Percentage pts	Grade	Percentage pts	Grade
93-100.....	A	80-82	B-	60-69	D
90-92.....	A-	77-79	C+	Below 60	F
87-89.....	B+	73-76	C	P/F Grade	D (60)
83-86.....	B	70-72	C-		

Course Routine and Participant Expectations

This class works on a three-week cycle. There are five iterations of this cycle during the semester. The four-week cycle takes precedence over holidays, etc, so class meetings are equal in each cycle.

W	DATE	TOPIC
1	M	Complete Reading and complete Activity 1 by 9:30 Monday Attend Class.
	W	Complete Reading. Attend Class
	F	Complete Reading. Attend Class
2	M	Complete Reading and complete Activity 2 by 9:30 Monday. Attend Class.
	W	Complete Reading. Attend Class
	F	Complete Reading. Attend Class
3	M	Complete Reading and complete Activity 3 by 9:30 Monday. Attend Class. Student Presentations (Cycle 5)
	W	Review for test (cycle 2 and 4 only) or topic from schedule. (Writing Practice in Cycle 3) Student Presentations (Cycle 5)
	F	Test during Class Period (Cycle 2 and 4 only) Paper due one week from Sunday Night (Cycle 3). Student Presentations (Cycle 5)

Course Calendar

C	DATE	TOPIC
1	ARTIFICIAL INTELLIGENCE AND ARTIFICIAL LIFE	
	Aug 28	Introduction to course
	Aug 30	What is philosophy? Read Plato's Apology (link on Moodle)
	Sep 1	"What is artificial intelligence?" Read AI: Ch1
	Sep 4	Labor Day: NO CLASS
	Sep 6	"General Intelligence as the Holy Grail." Read AI: Ch2. Complete Activity #1.1 by 9:30
	Sep 8	"Language, Creativity, Emotion." Read AI: Ch3
	Sep 11	"Artificial Neural Networks." Read AI: Ch4. Complete Activity #1.2 by 9:30
	Sep 13	"Robots and Artificial Life." Read AI: Ch5.
	Sep 15	"Artificial Life" by Christopher Langton (provided on Moodle)
2	WHAT IS INTELLIGENCE?	
	Sep 18	Overview: "But is it Intelligence, Really?" Read: Ch6 in AI. Complete Activity #2.1 by 9:30
	Sep 20	"A Logical Calculus of the Ideas Immanent in Nervous Activity." Read Ch1 in PAI
	Sep 22	Watch Blade Runner (on your own)
	Sep 25	What makes a machine intelligent? The Turing Test. "Computing Machinery and Intelligence." Read Ch2 in PAI. Complete Activity #2.2 by 9:30
	Sep 27	Replies to Turing: Dreyfus. Read Dreyfus article on Wikipedia. Link is on Moodle
	Sep 29	Replies to Turing: "Minds, Brains, and Programs" by John Searle. Read Ch3 in PAI
	Oct 2	Replies to Turing: "Escaping from the Chinese Room" by Margaret Boden. Read Ch4 in PAI. Complete Activity #2.3 by 9:30
Oct 4	Review for Test Day	

	Oct 6	Test #1
3	DO MACHINES HAVE MINDS?	
	Oct 9	"Cognitive Wheels: The Frame Problem of AI" by Daniel Dennet. Read Ch7 of PAI. Complete Activity #3.1 by 9:30
	Oct 11	"The Naïve Physics Manifesto" by Patrick Hayes. Read Ch8 of PAI
	Oct 13	"A Critique of Pure Reason" by Drew McDermott. Read Ch9 of PAI
	Oct 16	Fall Break: NO CLASS
	Oct 18	Machine Emotions. "Motives, Mechanisms, and Emotions" by Aaron Sloman. Read Ch10 of PAI
	Oct 20	Watch I Robot (on your own)
	Oct 23	Conscious Robots: Reading TBA. Complete Activity #3.2 by 9:30
	Oct 25	Writing Papers in Philosophy: Practice Day one. Reading TBA
	Oct 27	Writing Papers in Philosophy: Practice Day two. Paper #2 assigned. (Ch5 and 6 of PAI)
4	THE SINGULARITY	
	Oct 30	Overview: "The Singularity." Read AI, Ch7. Complete Activity #4.1 by 9:30.
	Nov 1	"The Singularity is Near" by Ray Kurzweil. (Link on Moodle)
	Nov 3	Singularity: S-believers versus S-skeptics. Reading TBA
	Nov 6	Singularity: S-believers versus S-skeptics. Reading TBA. Complete Activity #4.2 by 9:30
	Nov 8	Singularity-Skeptics. Lanier: You are not a Gadget. Read Chs1-8
	Nov 10	Singularity-Skeptics. Lanier: You are not a Gadget. Read Chs9-11
	Nov 13	Singularity-Skeptics. Lanier: You are not a Gadget. Read Chs12-14. Complete Activity #4.3 by 9:30
	Nov 15	Review for Test Day
	Nov 17	Test #2
5	IMPLICATIONS: MACHINES AS FRIENDS, CHILDREN, LOVERS, ETC.	
	Nov 20	"Connectionism, Competence, and Explanation" by Andy Clark. Read Ch12 in PAI. Complete Activity #5.1 by 9:30
	Nov 22-24	Thanksgiving Break
	Nov 27	"Making a Mind versus Modelling the Brain: Artificial Intelligence Back at a Branch Point" by Hubert I Dreyfus and Stuart E Dreyfus. Read Ch13 in PAI. Complete Activity #5.2 by 9:30
	Nov 29	"Some Reductive Strategies in Cognitive Neurobiology" by Paul M Churchland. Read Ch14 in PAI.
	Dec 1	The ethics of machine intelligence. Read TBA
	Dec 4	Is creating artificial intelligence immoral?
	Dec 6	Movie Review presentations
	Dec 8	Movie Review presentations
	Dec 11	Movie Review presentations
	Dec 14	Final Exam 800-945am (Thurs)

SECTION THREE COURSE POLICIES

What is a philosophy class? How do I study for this class?

As I understand it, the goal of a philosophy class is to introduce students to some topic of philosophical interest, to identify philosophical questions typically asked about this topic, help students understand how the particular questions that have arisen, and to study (some) particular answers proposed by philosophers to those questions. A related goal, especially for a philosophy class, is to have students critically think about these answers, and even formulate their own views about how valuable those answers might be. So in this class there will be both "material" to be learned as well as skills to be mastered, and you can expect the examinations (and other assignments) in these classes to test you both on the material and on your ability with the skills.

When studying therefore, you should be concerned about to identify:

- The particular topic you are studying and its philosophical issues
 - The responses philosophers have given to these philosophical issues or questions
 - The defenses offered for these responses and the typical objections to these defenses
- What you think (at least right now) about these responses, and why you think this.

Basic Etiquette

All students should practice good manners in class and show civility to all. Please come to class on time. A positive attitude and professional demeanor are always appreciated! Please remain alert (and awake!) in class, allow others to speak without interrupting them, and limit private conversations, texting, checking email and social media sites on your phones and computers. Drinks are allowed in class, but please no food.

In team or group situations, students should cooperate with their team members and obtain their input when working on group exercises and projects. Some group work involves a required peer assessment of each individual's contribution to the group.

Absolutely no electronic devices are allowed during exams, and this includes cell phones, laptops and mp3 players. Laptops are allowed at other times during class, with the expectation that you are using them to participate in the class and not as a distraction.

Attendance and Tardiness

Attendance of itself does not fulfill any of the student learning goals of this course, so consequently, I do not evaluate or grade your attendance in this class. According to the College Catalogue, students are "expected to attend the first and each meeting of a course" (Carroll College Catalogue, pg 11). I keep attendance regularly and expect to be informed if some legitimate excuse keeps you from attending class. Students missing more than nine class sessions may be asked to drop the class. Tardiness is disruptive to other members of the class, so please be on time! Even if you miss a class, you are still responsible for learning about upcoming work and assignments; check the calendar in moodle or else contact me.

Making up missed work

Assignments are considered late if they are turned in after the deadline time set on Moodle. I reserve the right to penalize late assignments.

Tests and exams should be taken on the dates and place assigned. Tests missed for legitimate reasons will be retaken at the ARC, within one week of the exam date. Students must make their own arrangements with the director of the ARC, and then inform me of their scheduled makeup date prior to making up the exam. Final exams are scheduled and conducted according to the policies set in the College Catalogue (see pg 24).

Students having good reasons for missing a deadline or test should contact me in advance of the deadline. Good reasons include documented medical reasons, documented court obligations, and athletic team or other Carroll College commitments, family emergencies. Deadlines will be reset to mutually agreed times in these situations.

Returning Work

As an educator, I believe in the value of prompt feedback. My goal is to grade and/or return all assignments within 2 weeks of their due dates, if not sooner.

Academic Honesty

Academic Honesty is very important! Carroll College's policy on Academic Integrity is stated in both the CC Catalogue and in the Student Handbook. The policy reads: "Students at Carroll College are expected to have high standards of integrity. Any student who cheats or plagiarizes on examinations or assignments, falsifies college records, or fails to give requested academic information on admission documents is subject to dismissal or other appropriate disciplinary action by the College." Students violating the policy will be referred to the Vice President for Academic Affairs. Please see these publications for the correct procedures to follow if you have questions concerning the conduct of this class or the grading procedures (other than a final grade).

Plagiarism is an act of fraud and will not be tolerated. Plagiarism is both stealing someone else's work and lying about it. It includes the following

- Turning anyone else's work (including other students') as your own
- Copying without giving credit (including copying from the internet)

- Not putting quotations in quotation marks
- Incorrectly identifying the source of a quotation

Plagiarism also includes copying the sentence structure of a source, even if you changed words, and copying so many words or ideas from a source that it makes up the majority of your work, whether you give credit or not.

All suspected cases of plagiarism will be investigated, and where verified, will be penalized; the penalty can be as severe as immediate failure in the course. If you are unsure about whether some actions constitute plagiarism, please ask me.

Campus Support Services

If you believe that you may need an accommodation based on the impact of a disability, please contact Kevin Hadduck, in order to discuss your specific needs and to determine a reasonable accommodation plan. You may contact Kevin Hadduck in the Academic Success and Disability Services Office, Borromeo Hall, Room 118 (phone: x4504; email: khadduck@carroll.edu).

Copyright Statement

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Office Hours

Office hours are not just for those in trouble. My office hours are a time for you to come talk to me informally, to ask questions about the material or assignments, to review graded work, to get suggestions for further reading, to discuss other topics related to the course. And if you are having trouble with the course work, we can talk about that too, of course. Make an appointment if you wish, or drop by during the posted times!

About Your Professor

I am not an artificial intelligence but a full professor in the Philosophy Department at Carroll for over 20 years, starting in 1995. I received a B.A. from Thomas Aquinas College in California, in 1983; and a Ph.D. in 1992, from the University of Notre Dame. I have taught at over a half-dozen institutions before I came to Carroll College.

I have taught many philosophy courses here at Carroll, and I regularly teach Philosophy of Human Being, Business Ethics, Bioethics, Environmental Ethics, and Medieval Philosophy. I have also led seminars in the Honors Scholars Program, and taught Latin and Greek classes for Classical Studies. I like teaching Philosophy of Human Being because questions about the nature of human consciousness and the existence of the soul have always interested me. My dissertation examined the nature of human imagination. My research interests are in Medieval Philosophy, especially the philosophy of St. Thomas Aquinas, and applied ethics. I have given papers/presentations on: Thomas Aquinas, Catholic Identity, God's Omnipotence, Environmental Ethics, End of Life Decision-Making, using technology in the classroom.

I've been married 31 years and have eight children (including a Carroll grad, class of 2008 and a freshman this year!). I am involved in various community organizations in Helena and enjoy visiting historical sites, hiking, photography, building things from time to time (and even house remodeling).

Final Comments

I welcome everyone to the course. I'm glad you've chosen this class, and I promise to do my best to make it meaningful, useful, and enjoyable. Please feel comfortable giving me any comments or suggestions about the progress of the course as we go along. I am happy to make any adjustments to the course that I can.

Concluding Disclaimer

The above schedule, policies, and assignments in this course are subject to change in the event of extenuating circumstances or by mutual agreement between the instructor and the students.