Artificial Intelligence I
(CS 411)
3 or 4 credit hours
Spring 2019

Instructor: Dr. Brian Ziebart	CRNs: 38549, 38550
Office: LIB 3190H	Lectures: TuTh 3:30-4:45pm
(312) 355-1733	Classroom: Lecture Center C04
bziebart@uic.edu	Office hours: Wed 3:30-5pm

Teaching Assistants	
Sankul Rawat	Office hours: TuTh 11-12pm
	Location: SEO 1108
Jack Blandin	Office hours: M4-6pm
	Location: SEO 1108

Course webpage: https://piazza.com/uic/spring2019/cs411/home

Course description:

The aim of this course is to introduce students to the field of Artificial Intelligence (AI). Specifically, the course will provide the theoretical foundations that underlie AI, and practice in building components of rational agents.

COURSE PREREQUISITES

CS 251 (or equivalent)

COURSE MATERIALS

Suggested Text

Stuart J. Russell and Peter Norvig. Artificial Intelligence — A Modern Approach. Third Edition. Prentice Hall, 2010. URL: http://aima.cs.berkeley.edu/

Course Website

Lecture notes, assignments, and a discussion board will be available via Piazza:
https://piazza.com/uic/spring2019/cs411/home

TENTATIVE SCHEDULE

Lecture 1. Introduction
Lectures 2 & 3. Uninformed & Informed Search
Lectures 4 & 5. Constraint Satisfaction Problems
Lectures 6 & 7. Adversarial and Randomized Search
Lectures 8 & 9. Markov Decision Processes
Lectures 10 & 11. Reinforcement Learning
Lectures 12 – 15. Probability, (Hidden) Markov Models, and Particle Filters
Lectures 16 – 20. Bayesian Networks
Lectures 21 – 24. Machine Learning
Lectures 25+. Special Topics & Reviews

EXAMS:

Midterm 1: Week 6 (Lectures 1–9) on Tuesday, February 19th during class

Midterm 2: Week 11 (Lectures 10–17) on Thursday, April 4th during class

Final: Week 16 (Comprehensive) on Friday, May 10th

COURSE POLICIES

Homework

There will between three and five homework assignments. In general, no late assignments will be accepted. Requests for an extension will almost always be denied, except for extenuating circumstances, which must be requested at least a day before the due date of the assignment.

Your homeworks must be submitted on Gradescope.

You can submit a PDF, MSWord or a JPEG file. You can generate it electronically (from LaTeX, for example) or scan or take a legible picture of your handwritten homework.

Academic Integrity

Discussion of assignments with other students is permitted. However, each student must submit his or her own independent summary and fully understand what he or she submits. Exceptions for any closer collaboration are only allowed if explicitly stated in the assignment itself.

If you discuss an assignment with other students, you <u>must</u> list the students you worked with. If you consult any web page while working on an assignment, you <u>must</u> reference that website in your submitted homework.

If your assignment is highly similar to another students' assignment (e.g., more than 50% as determined by the similarity checking software) then we will consider you to be guilty of cheating. Similarly, if your assignment is highly similar to other source material then we will consider you to be guilty of plagiarism, which is also a form of cheating.

Cheating will not be tolerated.

Not only is cheating a violation of the campus code of integrity, which might incur a reduced grade, expulsion from the class or university, it is also a slight against the other students in the class who will give you dirty looks. Refer to the UIC Student Disciplinary Policy for guidelines and policy on student integrity and possible repercussions. Cheating is plagiarism, taking credit for somebody else's work and is taken very seriously.

The minimum penalty for any cheating will be a grade of zero for the assignment in question, along with a warning. The minimum penalty for cheating after a warning has been given will be an F for the course. In both cases, the maximum penalty is expulsion from the University. See https://dos.uic.edu/studentconductprocess.shtml for more details.

Document Privacy
You must keep private and not email, post on the web, or share in any way:
1. Any solutions to assignments that we give you.
2. Any lecture notes not posted on the class website.

Electronic Communication
We will use Piazza for organizing course materials and facilitating discussions. Please post general questions about the course content, assignments, etc. to Piazza (after reading existing discussions). Questions of a personal nature (e.g., involving grading of specific assignments) should be sent via private email to TA and/or professor.

RELIGIOUS HOLIDAYS
Students who wish to observe their religious holidays shall notify the faculty member by the tenth day of the semester of the date when they will be absent. The faculty member shall make every reasonable effort to honor the request, not penalize the student for missing the class, and if an examination or project is due during the absence, give the student an exam or assignment equivalent to the one completed by those students in attendance. If the student feels aggrieved, he/she may request remedy through the campus grievance procedure.
http://oae.uic.edu/religious-calendar/

METHODS OF EVALUATION, & GRADING POLICIES

Evaluation Criteria
Student understanding of course material and synthesis of knowledge shall be evaluated using typed/written homework assignments, two midterm examination, and a final examination.

Grading Policy
The overall course grade of each student will be determined based on:
    Homework assignments: 30% (6%-10% each)
    Midterm exam: 40% (20% each)
    Final exam: 30%

Letter grade assignments will be based on a curved grading scale to reflect the difficulty of the homework assignments and examinations.