



Computer Science Department
Course Syllabus
CS340 - Artificial Intelligence

Catalog Description: In this course we will cover in depth the central topics of Artificial Intelligence. Namely, a large part of this course will be devoted to problem solving and knowledge representation and reasoning. Some selected topics will also be covered such as reasoning under uncertainty and machine learning.

Credit Hours: **3 Credit hours:** 3 Lectures per week 0 Labs. per week 0 Recitation per week

Prerequisites: CS 215: Design and Analysis of Algorithms

Course Learning Outcomes:

1. Students will learn the basic skills needed in AI, namely, Searching, Reasoning, Learning, Planning, Knowledge Representation & Intelligent Agent.
2. Students will be able to use, develop, and maintain Intelligent systems in many real world applications.
3. Students should be familiarized with advanced topics in AI using appropriate tools & Programming languages.
4. The students will have clear understanding about the state of the art in AI, the key issues in AI and which way AI is headed.

Major Topics:

- Introduction (Artificial Intelligence & Agents)
- States & Search (uninformed, informed, adversarial search [games])
- Features & Constraints
- Knowledge Based Systems
- Representing & Reasoning
- Propositions & Inference (including Predicate Logic, prolog)
- Reasoning under Uncertainties
- Learning & Planning (includes Machine Learning)
- Projects
- Present and Future of AI

Text Books:

- Artificial Intelligence: A Modern Approach, S. Russell and P. Norvig, 3rd edition, Prentice Hall, 2009.
- Artificial Intelligence: Foundations of Computational Agents, David Poole et al, 2010



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Grading:

- ⦿ The grading scale for this course is:
 - . 95 - 100 A+ Passing
 - . 90 - 94 A Passing
 - . 85 - 89 B+ Passing
 - . 80 - 84 B Passing
 - . 75 - 79 C+ Passing
 - . 70 - 74 C Passing
 - . 65 - 69 D+ Passing
 - . 60 - 64 D Passing
 - . 0 - 59 F Failing

- ⦿ Final grades will be determined based on the following components:
 - . 60% Semester Work
 - . 40% Final Exam

- ⦿ Students may not do any additional work for extra credit nor resubmit any graded activity to raise a final grade.

- ⦿ Late submissions will not be accepted for any graded activity for any reason.

- ⦿ Students have one week to request the re-grading of any semester work.

Attendance Policy:

Students should attend 80% of the overall course hours taught in the semester as per the University regulations.

If a student fails to achieve this portion, he/she shall not be allowed to appear in the final exam and shall be awarded "DN" grade and repeat the course.

Cheating and Plagiarism Policy:

The instructor will use several manual and automated means to detect cheating and/or plagiarism in any work submitted by students for this course.

When a student is suspected of cheating or plagiarism, the instructor raises the issue to the disciplinary committee.



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Communications: Registered students will be given access to a section of the Blackboard Learning System for this course. Bb will be used as the primary mechanism to disseminate course information, including announcements, lecture slides, assignments, and grades.

Communication with the instructor on issues relating to the individual student should be conducted using CIS email, via telephone, or in person.