**Artificial Intelligence**

MET CS 664

On Campus

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Office hours: by appointment

**Course Description**

Theories and techniques that enable computing systems to behave intelligently. Search, constraint propagation, knowledge representation, natural language, introduction to machine learning, and inference.

* **Prerequisites**

MET CS 248 and MET CS 341 -OR- MET CS 342 -OR- instructors consent.

* **Learning Objectives**

Students will accomplish the following.

(1) Understand the goals and applications of AI

(2) Apply principal AI technologies

(3) Implement more than one of these techniques in a significant manner

* **Syllabus**

1. Introduction

2. Searching for Solutions

3. Constraint Satisfaction

4. Reasoning in First-Order Logic

5. Planning

6.  Uncertainty

7. Fuzzy Logic

8. Introduction to Machine Learning

9. Reinforcement Learning

10. Interim project discussion

11. Natural Language

12. Integration of AI techniques

13. Presentations

**Textbook and Other Source Book**

"Artificial Intelligence: A Modern Approach" (Prentice Hall) Third Edition, by  Russell and Norvig

**Assignments and Evaluation**

Attendance at class: Class discussions and in-class group work is an important part of learning. The percentages below are predicated on virtually full attendance.

Labs (Pass/Fail--see below): 14%

Project 1 Proposal / Design: 15%

Project 1 Implementation / Report: 28%

Project 2 Proposal / Design: 15%

Project 2 Implementation / Report 28%

Labs (Pass/Fail--see below): 14%

**Evaluation of Student Work**

Work will be evaluated according to an evaluation matrix. Unless a matrix particular to an assignment is given, the default matrix [here](https://docs.google.com/spreadsheets/d/1O3HlJtcH9AjBNnuxMp4oUCL15VDs7dLXU6FwL8VWG-Q/edit?usp=sharing) will be used. Make sure that your work conforms well to each of the criteria.
The main goal of grading for the course is for each student to improve via feedback.

The average grade of MET graduate students is expected to be very good--B+.
The project phases are graded according to the attached evaluation matrix. These are averaged using A+=97, A=95, A-=93, B+=87, B=85 etc.

To get an A grade for the course, your weighted average should be

>93 for an A

>=90 for an  A-

>=87 for a B+

>83 for a B

>=80 for a B-  etc.

The lab grades are: Acceptably on track (1), Not yet acceptably on track (0), and Neither (0.5).

Late homework or lab will not ordinarily be accepted unless there is reason, given in advance if that is possible, why it is or was not reasonably possible to perform the work in the time. Extraordinary workloads, illness and emergency conditions will be accepted. Documentation will be required. If the reason is acceptable, missing work may be graded on a pass/fail basis.