CS/EE 710 Artificial Intelligence
Professor Susan McRoy
Course taught partially on-line.

REVISED: new days, new room: KENWOOD 1130

Class Meeting times:

THURSDAYS Sept 5 to Nov 21, Tues & Thurs Dec 3-17 5:30 PM-7:30
SPECIAL NOTES:
  We will be online only for Oct 1-4 and Nov 26-29
  In class mandatory: Midterm: Oct 24th 5:30 – 7:30
  In class mandatory: Project Presentations Dec 10 and Dec 12
  In class mandatory: Final: Dec 17th 5:30 – 7:30

Other days will be a combination of discussion/overview of assignment writeups, clarification of recorded material, and office hour. 6:45-7:30 will usually be office hour only, except for project presentations and final exam.

Description: Artificial intelligence (AI) is the intelligence exhibited by machines or software. The course is organized around the problem of designing an intelligent agent, which is a system that perceives its environment and takes actions that maximize its chances of achieving some goal. AI systems address problems that are typically too hard for a direct solution, using “heuristics” to direct the algorithms to a likely solution. Core tasks include the representation of knowledge and data and algorithms for searching the representations.

Topics:

1. Intro
2. Problem conceptualization: Agent vs Model based
3. Search and constraint-based systems (e.g. for synthesis and diagnosis)
4. Classification based systems (Linear vs nonlinear, decision trees, neural networks)
5. Inference and logic (terminological systems and ontologies)
6. Agent based systems (planning, collaboration, NL dialog)


Grading Homework (30%), a term (software) project (25%), a midterm exam (15%) and online quizzes (15%). and a Final (15%)

Other Course Information:

The instructor will provide accommodation for students with disabilities, religious observances, calls to active military service following UWM policies. The instructor will also address misconduct, complaints, and requests for incompletes according to standard policies and procedures.
Students with Disabilities: Students who have special needs requiring special accommodations please contact the instructor. The Student Accessibility Center Mitchell 112, 414-229-5822) is also an excellent resource and staff is available to discuss concerns.

Religious Observances and military duty: Students will be allowed to complete examinations or other requirements that are missed because of a religious observance or call to active military duty, if prearranged with the instructor.

Discriminatory conduct. Discriminatory conduct will not be tolerated by the University. It poisons the work and learning environment of the University and threatens the careers, educational experience, and well-being of students, faculty, and staff.

Title IX/Sexual Violence. Title IX is a federal law that prohibits sex discrimination in education program or activities, and UWM policy prohibits such conduct (see Discriminatory Conduct, above). This includes sexual violence, which may include sexual harassment, sexual assault, relationship violence, and/or stalking in all educational programs and education-related areas. UWM strongly encourages its students to report any instance of sex discrimination to UWM’s Title IX Coordinator (titleix@uwm.edu). Whether or not a student wishes to report an incident of sexual violence, the Title IX Coordinator can connect students to resources at UWM and/or in the community including, but not limited to, victim advocacy, medical and counseling services, and/or law enforcement. For more information, please visit: https://uwm.edu/sexual-assault/

Academic misconduct. Cheating on exams or plagiarism are violations of the academic honor code and carry severe sanctions, including failing a course or even suspension or dismissal from the University. Submitting work previously submitted for another course, at any institution, is not acceptable for this course.

Incompletes. A notation of incomplete may be given in lieu of a final grade to a student who has carried a subject successfully until the end of a semester but who, because of illness or other unusual and substantiated cause beyond the student’s control, has been unable to take or complete the final examination and/or to complete some limited amount of term work.

Complaint procedures. Students may direct complaints to the head of the academic unit or department in which the complaint occurs. If the complaint allegedly violates a specific university policy, it may be directed to the head of the department or academic unit in which the complaint occurred or to the appropriate university office responsible for enforcing the policy.

Grade appeal procedures. A student may appeal a grade on the grounds that it is based on a capricious or arbitrary decision of the course instructor. Such an appeal shall follow the established procedures adopted by the Graduate School.

LGBT+ resources. Resources to support inclusivity of students who identify as LGBT+ in the learning environment can be found online at http://uwm.edu/rgbtrc/