Exam 1 (In-person)

- **Date and Time:** Fri Oct 27, 2:00 to 4:30 pm. Please arrive a few minutes early for seating.
- **Location**: RH 215
- **Format:** Exam is closed-book and closed notes. You are allowed a piece of paper **8.5 x 5.5 inches** and write whatever you want on it (front and back.) *Points will be deducted from your exam if your cheat sheet is larger than the specified size.*
- **Please bring:** a pen, pencil, eraser and a basic calculator.
- **Not allowed:** PCs, tablets and cell phones.

What to Study

- **Lecture slides** : Intro & Agents, Solving Problems by Searching, Adversarial Search. (Constraint Satisfaction Problems will be in the next exam.)
- **Homework**: Solutions to HWs 1 and 2.
- **Reading in textbook**: See **Reading Assignments** section on BrightSpace.

List of Topics

- Introduction
  - Four different views of AI
- Intelligent Agents
  - Simple reflex agents
  - Model-based reflex agents
  - Goal-based agents
  - Utility-based agents

List of Topics

- Solving Problems by Searching
  - State space formulation
  - Uninformed search
    - breath-first; depth-first; depth limited search; uniform-cost search, iterative deepening search.
    - performance measures: completeness, optimality; space and time complexities
    - tree-like search and graph search

List of Topics

- Informed Search
  - Greedy search
    - f(n) = h(n)
  - A* Search
    - f(n) = g(n) + h(n)
  - Weighted A* search
  - Admissible and consistent heuristic functions
  - Inventing and learning heuristic functions

List of Topics

- Adversarial Search
  - Game trees
  - Minimax algorithm
  - Alpha-Beta pruning
  - Cutting off search and evaluation function