Syllabus for CMSC 722, AI Planning

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Instructor and TAs

- Instructor: Dana S. Nau, nau@cs
  - Office: Room 3241 AVW
  - Office hours: after class until about 5:30pm; other times by appointment
  - Telephone: 301-405-2684

- The department allocated ½ of a TA position for this class

- There will be two TAs, each working ¼ time:
  - Ron Alford
  - Vikas Shivashankar
Communication

- Web page:
  - Syllabus, lecture notes, homework assignments, etc.

- Piazza page:

- When you have questions, please post them to Piazza
  - You’ll get answers faster that way
  - Someone else may have an answer, others may like to see it

- Piazza will also let you
  - post questions anonymously
  - post private questions to just the TAs and me
Prerequisites

- CMSC 421 (Intro to AI) or equivalent, or permission of instructor

- Things I’ll assume you know:
  - state-space search, backtracking, the A* algorithm
  - propositional logic, first-order logic, unification, resolution, Horn clauses
  - basic complexity theory
    - big $O$, $\Theta$
    - $P$, $NP$, $NP$-hardness, $NP$-completeness
  - some experience reading/writing mathematical proofs
    - proof by contradiction, mathematical induction, quantifiers
Textbook

  May 2004
  ISBN 1-55860-856-7

- An errata sheet is at [http://www.laas.fr/planning](http://www.laas.fr/planning)

- Lecture notes for each chapter are on the class web page
  - They’re from Spring 2008
  - I’ll post updated copies as we go along
Exams and Homeworks

- Midterm exam: Wednesday, March 28

- Final exam: Tuesday, May 15, 1:30–3:30 PM
  - [http://www.testudo.umd.edu/soc/exam201201.html](http://www.testudo.umd.edu/soc/exam201201.html)

- During the last class session before each exam, I'll review what we've covered, to help you prepare

- On the class web page is a homework assignment for each chapter
  - Please start each assignment as soon as I finish the chapter
  - You’ll usually have about a week to complete it

- We won’t grade the homeworks
  - Please discuss the questions and answers on Piazza
  - You will need to present your answers in class
    - You each will need to do this about 2 times during the semester
Term Projects

- To be done by teams of 3 people each
  - Like a miniature version of the research projects you’ll probably do repeatedly during your career

- Schedule:
  - mid-February: your teams should be formed by this time
  - March 4: term-project proposals due by noon
  - March 7, 12, 14: present your proposals in class
  - April 29: term-project reports due by noon
  - May 2, 7, 9: present your reports in class

- Start thinking about whom you’d like to team with
  - Do you feel comfortable with them?
  - Do their interests and abilities complement yours?
  - Do you think you can depend on them?
  - Do you think you can work well together?
Grading

- Term project: 30%
- Exams: 70%

On the final exam, I’ll ask you how much you want me to allocate to each of your exams. You may choose any of the following:
  - 20% for the midterm and 50% for the final
  - 30% for the midterm and 40% for the final
    » This is roughly proportional to the length of each exam
  - 40% for the midterm and 30% for the final

If you’d prefer, I can make the choice for you
  - Whatever will give you the higher score
Password-Protected Web Page

- Name: …
- Password: …

What will be on the page
- To help you prepare for the exams
  » Some copies of old exams and answers
  » Don’t look at the answers until you’ve written your own
- To help you prepare your term projects
  » Some copies of old term-project reports
- After we’ve finished discussing the homework assignments, I’ll post answers
First Homework Assignment

- Login to the Piazza page for CMSC 722
- Go to the message that’s titled
  - **Homework 1 - post your messages here**
- Post a message telling us the following
  - Who you are
  - Why you’re interested in taking this course
  - What you hope to get out of it