

CS 730/830: Introduction to Artificial Intelligence, Spring 2025

revision of January 20

<http://www.cs.unh.edu/~ruml/cs730/>

lectures Tuesdays and Thursdays 8:10-9:30am in Parsons N114

recitations Fridays 3:10-4pm in Parsons N114

Overview

By the end of the this class, you will:

- understand the fundamental techniques for **building intelligent systems**, including combinatorial search and decision making, knowledge representation and reasoning, planning, reasoning under uncertainty, and learning.
- be able to embody these concepts in working programs that 1) interact with other programs (for example, the course testing harness) and 2) are delivered on time.
- have an appreciation for the breadth of the field of artificial intelligence.

You will implement these concepts and algorithms as complete working programs. You should already be a fluent programmer, understand common data structures, and be familiar with basic complexity analysis and big-O notation. This class counts as ‘implementation-intensive’ in the UNH CS curriculum.

Contact Info

Prof. Wheeler Ruml, ruml@cs.unh.edu, Kingsbury N215D, 603-862-2683

Office hours: TBD: check [piazza](#)

TA Stephen Wissow, sjw@cs.unh.edu

Office hours: TBD: check [piazza](#)

Please feel free to drop by our office hours for any reason, including just to chat about AI. If you can’t make office hours, contact us to set up a time to meet.

If you have questions about homework, or a question that you’d like answered quickly, post on the forum at [piazza.com](#). If you email either of us directly with a question regarding an assignment, we will probably just ask you to post on piazza (this way, everyone in the class gets the same information). I recommend setting piazza to send you email for new posts — important announcements are sometimes made!

Required Text

Stuart Russell and Peter Norvig, *Artificial Intelligence: A Modern Approach*, fourth edition, Pearson, 2021. Sorry it’s so expensive, but at least it’s a good book. If you try to find a used copy (try [used.addall.com](#)), please be sure to select the fourth edition (US version has a lavender cover).

Evaluation

The breakdown is tentative and can change at any time.

75% 12 programming assignments.

25% final project, including proposal, oral presentation, and final paper.

Please note that assignment deadlines are not flexible and there will be no credit for late work. This allows us to discuss solutions promptly after the deadline. The schedule indicates when assignments are due so that you can plan your work in advance.

Class attendance is required only for the project presentation. However, useful stuff is discussed in class, so I recommend attending! Please don’t come to class if you are going to sleep, eat, or use a phone or laptop.

Except for the final project, which may be done in a team, all your work in this class should be your own. Any collaboration must be cleared with me in advance and you must cite all sources you use in preparing

your work, other than the textbook, lectures, and recitations. Using AI coding assistants (e.g., GitHub CoPilot) is not allowed (just as it would not be in a coding interview). If you consult a website or talk to others in depth about the concepts for an assignment, you should list them on your assignment. Do not talk about your assignment code with others. If you cheat, you will be given a failing grade for the class and be reported to the Department Chair and the CEPS Dean.

If you find emotional or mental health issues affecting your performance, don't hesitate to contact the counseling center www.unh.edu/pacs — they are often helpful! A resource for time-management skills is www.unh.edu/cfar. If a religious commitment will interfere with your completing assignments on time, please let me know at the start of the semester so that I can provide proper accommodations. If you are registered with student accessibility services, have them send me a letter and please talk with me as soon as possible so that I can provide proper accommodation. If you need to isolate or quarantine due to illness, please let me know as soon as possible when you expect to be able to return to class.

Mechanics

Programming assignments:

You may use any programming language you wish in this course. We will often give you example inputs for your programs, but they are only examples, not an exhaustive exploration of all important cases that your solutions might be tested on. Your code must run on `agate.cs.unh.edu`. See the submission information on the web page for `make` script requirements and instructions for submitting. You will use our `submit` script for both your source code and your answers to the written questions for each assignment. Please hand in a hardcopy of the written answers to the TA in class, but don't bother printing your source code. Please include in your code submission a transcript of your code running that provides evidence for each aspect that works. We will also ask you to clearly explain in your written answers which aspects of your code do not work.

It is in your best interest that your code be clear and concise, so that we can quickly understand it if we are trying to give you partial credit. You want your grader to be happy! Please bring any questions regarding grades or your work to our attention as soon as possible. You may ask that any of your work be regraded up to 7 days after it is handed back, but the new grade will replace the old one whether it is higher or lower.

Final project:

See the separate sheet for information about the final project, presentation, and paper.