

CSE 327 Artificial Intelligence: Theory and Practice

Spring 2020 • Section 010 • Professor Daniel Lopresti

1:35 pm – 2:50 pm TuTh • Packard Lab 416

Syllabus

Description This course provides an introduction to the field of artificial intelligence. Over the semester we will cover the theory and application of some of AI's most important underlying concepts, including propositional logic; first-order logic; the limitations of logic; logic programming; search, games, and problem solving; reasoning with uncertainty; machine learning and data mining; neural networks; and reinforcement learning. The ethics and implications of AI will be a constant theme throughout the course. As time permits, a few more advanced topics will also be discussed.

After successfully completing the course, students will have:

- An understanding of basic AI;
- Knowledge of some examples of the state of the art;
- An understanding of the important issues and techniques in the subfields of AI.

Also cross-listed as COGS 327. Prerequisites: CSE 17 and CSE 140 (or CSE 261). This course is not open to students who have already received credit for CSE/COGS 127.

Instructor **Professor Daniel Lopresti**
Email dal9@lehigh.edu ~ Ext 85782
Office Hours 2:00 pm – 4:00 pm on Wednesdays (or by appointment) in Building C 337

Grading Assistant **Matthew West**
Email mcw220@lehigh.edu
Office Hours 3:00 pm – 5:00 pm on Mondays in CITL (lower level of Fairchild-Martindale)

Text *Introduction to Artificial Intelligence, Second Edition*, Wolfgang Ertel, Springer, 2017
ISBN-13: 978-3319584867

CourseSite Course materials and discussion forums will be available @ <http://coursesite.lehigh.edu/>

Grading	• Homework assignments (10)	50%
	• In-class quizzes (2)	25%
	• Take-home final exam	25%

Homework Policy All aspects of homework assignments will be handled via CourseSite. The following is our due date policy:

- No late penalty if submitted by the deadline on the due date.
- Homework submitted after this deadline but less than 24 hours late will lose 10 points.
- Homework submitted more than 24 hours but less than 48 hours late will lose 20 points.
- Homework submitted later than this will not be graded and will receive a zero.

This strict policy enables the course to be fair to all students, and for homework to be returned early enough for you to use the feedback to prepare for quizzes. No exceptions will be made.

CourseSite enforces strict deadlines, so please verify that your work has actually been uploaded (forgetting to click “Submit” is a frequent error). Failure to upload successfully is

not a valid excuse for late work.

Students are advised to back up their files to the university-supported H drive, a USB drive, cloud service, and/or an external hard disk on a regular basis. Because the H drive is easily accessible as a backup, failure of one's personal machine is not an acceptable excuse for late work. There are numerous university and departmental labs available to you as an alternative if your personal machine should fail.

Quizzes and Final Exam

There will be two in-class quizzes and a comprehensive take-home final exam. They will be based on the material covered in lectures and the assigned readings. Makeup quizzes will be considered only for extreme circumstances. Any make-up requests will be handled on a case-by-case basis, with no guarantees, and will require evidence of your hardship.

Collaboration Policy

Unless explicitly stated in the problem specification, all homework assignments and the take-home final exam are to be an individual effort. You are encouraged to discuss assignments with one another, your friends, and with the instructor and grader for the course. Indeed, this may be the most effective method of learning. You may share concepts, approaches, and strategies for producing a solution. However, all work submitted in your name must be your own. You may not copy in whole or in part from another student or from a website. Violations will be considered as cases of academic dishonesty and referred to the University Committee on Discipline. If you are found guilty, you may be given the failing grade WF in the course.

If any aspect of this policy is not clear to you, do not make assumptions; consult with the instructor.

Students with Disabilities

If you have a disability for which you are or may be requesting accommodations, please contact both your instructor and the Office of Academic Support Services, Williams Hall, Suite 301 (610-758-4152) as early as possible in the semester. You must have documentation from the Academic Support Services office before accommodations can be granted.

Principles of Our Equitable Community

Lehigh University endorses The Principles of Our Equitable Community. We expect each member of this class to acknowledge and practice these Principles. Respect for each other and for differing viewpoints is a vital component of the learning environment inside and outside the classroom.