CS 5110/6110 Multi Agent Systems Fall 2016 Course Information

Instructor:

Dr. Vicki Allan, Vicki.Allan@usu.edu, 429 Old Main, 797-2022. Send me email directly rather than relying on the canvas system.

Office Hours:

MWF 10:30-12:30   Other hours by appointment. Send email to set up.

Prerequisites:

Prerequisite: You are expected to be able to program well and be able to pick up a new language, if needed. Some appreciation for parallelism is expected.

Tardiness

There is absolutely no reason to come to this class late. I feel very strongly about this. This has been a problem in the past and I will not allow it! When you come to class late, every person in the room is distracted by your entrance (including your professor). You miss important material. You are saying to your professor, ``My time and my schedule are more important than what you have to teach me.''! On the job, if you don't come to work, you will be fired. If you come late, you will be reprimanded. Come to class and come on time! It is good practice for the real world.

Cell Phones:

Please turn off cell phones before coming to class. When a cell phone goes off, it disturbs your instructor and everyone else in the class. **The penalty for allowing your cell phone to go off in class is that you will be expected to bring treats for the whole class the next period!**

Texts:

An Introduction to Multiagent Systems, Second Edition, Wiley Press, Wooldridge, 2009 (required). The second edition is quite different from the first, so make sure you have the right edition.

Written Homework:

Written homework may be done independently or with one or two other people. Since programming has a high overhead in terms of program entry and debugging, all important topics in this course cannot be covered via programming projects. Written homework exercises allow students to learn important material without a high time investment. Although the point value is low, the benefits are great.

Preparation:

Preparation is necessary for learning. For this class, preparation includes attending class regularly (90% of the time), coming on time, remaining focused until class is dismissed, asking timely questions, trying problems at your seats when directed to do so, answering questions when called upon, completing homework questions, paying attention during lecture, and reading appropriate text material before coming to class.

Programming Assignments:

Programming assignments will be written in Python. Many of you do not know Python, but it will be easy to pick up. It will be a good skill to have. Programming assignments are due at midnight on the date posted. I like to be flexible about due dates at the graduate level. Thus, you are allowed to turn in assignments a total of 7 days late (for all programming assignments). No other late assignments will be accepted.

We will be using Canvas to turn in programming assignments.

Submit a single zip file containing the following:

- A short screencast which illustrates the running of the program, explains design decisions, answers any report questions, and gives running instructions.

- The complete project needed to run the program.

Each assignment is to be your own work. To the extent you copy the framework or the idea from any source (including the book), be sure to acknowledge that source. Undoubtedly, some parts of the assignments we do will exist somewhere on the web. Copying is *not* permitted.

Programming assignments are graded giving half the points for correct output and half the points for complete, well designed, and documented code. I rarely alter the due date of an assignment, and will not do so unless all students can be informed of the change at least two days before the original due date. Any changes in date would be announced via canvas.

Exams:

There will be two midterm exams (each worth 100 points) held October 12th and November 18th. *I do not give make up exams*. **Please verify that you will be able to take the exams at the given times.** Exams will de-emphasize memorization and encourage critical thinking.

Rough Grading:

Assignments	40%
Exams	40%
Project	20%

The average grade for this class is designed to be a 3.4, but grades can be higher or lower depending on class performance.   Grades **typically** fit the following pattern

% of points	Grade	% of points	Grade	% of points	Grade
95-100	A	90-94	A-	87-89	B+
83-86	B	80-82	B-	76-79	C+
70-75	C	65-69	C-	60-64	D+
50-59	D	<50	F		

Class Project:

You will complete a research project using current articles as a foundation. The project will consist of the motivation for your experiment and a working program which yields interesting results. The major reason for doing the project is to study current articles. See the web for a more complete description of this project. In lieu of a final exam, we will present our projects in a demo session during final week.

Academic Integrity – "The Honor System": Each student has the right and duty to pursue his or her academic experience free of dishonesty. The Honor System is designed to establish the higher level of conduct expected and required of all Utah State University students.

The Honor Pledge: To enhance the learning environment at Utah State University and to develop student academic integrity, each student agrees to the following Honor Pledge: "I pledge, on my honor, to conduct

myself with the foremost level of academic integrity." A student who lives by the Honor Pledge is a student who does more than not cheat, falsify, or plagiarize. A student who lives by the Honor Pledge:

- Espouses academic integrity as an underlying and essential principle of the Utah State University community;
- Understands that each act of academic dishonesty devalues every degree that is awarded by this institution; and
- Is a welcomed and valued member of Utah State University.

Plagiarism and Cheating:

For this course, it is almost never appropriate to copy code from the book or another source. When you graduate, you will often pull code from another source, but at this stage in your development, you need to write it! When I ask you to write code that has been written by thousands of others before you, you still need to write it so you appreciate it, so you learn the associated lessons. You learn next to nothing by copying code from elsewhere. Using the standard template library is also not allowed (without specific permission from your instructor).

In English, if you are to write a paper, you are not allowed to find a good one on the web and turn it in. In CS, it is a little different, because you are encouraged not to reinvent the wheel. However, in this class, I want you to "invent the wheel." If you don't know how the wheel was build, you can't improve upon it. Learning must be done in layers. I can't teach you how to code exotic programs unless you have done the simpler things. Writing the simpler things yourself is necessary to form the correct foundation for what you need for later algorithms.

In any course, you should never use someone else's product without clearly stating where it came from. To use someone else's creation without giving them credit is cheating. Here's the approach I would try. Study the book. When an assignment is given, try to do the assignment without looking at anything. If you can't, study the book again - but before you start coding, shut the book. Then, you know that you have retained the most critical parts of the design.

The penalty for cheating is intended to have a punitive effect. If the penalty is so light, students can look at the penalty they receive and the probability of being caught and maximize their expected utility. So the thinking could be, "If I cheat, I will only get caught 5% of the time. When I'm caught it may lower my grade from a C+ to a C. However, the 95% of the time I don't get caught, I win. I save 10 hours a week in effort and get a better grade than I would have otherwise." Fill in your own parameters, but if the probability of being caught is low, unless the penalty for cheating is high, people assume they come out ahead by cheating. I do not intend to let that happen. If I don't punish cheating, I disadvantage those who are honest. I create a climate where cheating appears to be the better option. Otherwise honest people feel they have to cheat to be competitive.

Plagiarism includes knowingly "representing, by paraphrase or direct quotation, the published or unpublished work of another person as one's own in any academic exercise or activity without full and clear acknowledgment. It also includes the unacknowledged used of materials prepared by another person or agency engaged in the selling of term papers or other academic materials." The penalties for plagiarism are severe. They include warning or reprimand, grade adjustment, probation, suspension, expulsion, withholding of transcripts, denial or revocation of degrees, and referral to psychological counseling.

This course adheres to the cheating policy for courses in the Department of Computer Science posted on the bulletin board outside the CS office on the 4th floor of Old Main and posted online at http://cs.usu.edu/htm/cheating-policy/.

Incompletes: Students are required to complete all courses for which they are registered by the end of the semester.
In some cases, a student may be unable to complete all of the coursework because of extenuating circumstances, but not due to poor performance or to retain financial aid. The term 'extenuating' circumstances includes: (1) incapacitating illness which prevents a student from attending classes for a minimum period of two weeks, (2) a death in the immediate family, (3) financial responsibilities requiring a student to alter a work schedule to secure employment, (4) change in work schedule as required by an employer, or (5) other emergencies deemed appropriate by the instructor.

Learning Aids: Lecture notes and other useful information will be available in electronic form on the class's section of the Canvas system. Please check the class's news and notes sections on a regular basis.

The Computer Science Department is a member of the Microsoft's DreamSpark program. Through this program, students in CS courses can obtain and use a number of Microsoft's operating and software packages. If you are interesting in downloading any of this software for your use, please follow the directions found on the department's website. cs.usu.edu/htm/elms.

ADA Statement: Students with ADA-documented physical, sensory, emotional or medical impairments may be eligible for reasonable accommodations. Veterans may also be eligible for services. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, (435)797-2444. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print, digital, or audio) are available with advance notice.

Sexual Harassment: Sexual harassment is defined by the Affirmative Action/Equal Employment Opportunity Commission as any "unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature." If you feel you are a victim of sexual harassment, you may talk to or file a complaint with the Affirmative Action/Equal Employment Opportunity Office located in Old Main, Room 161, or call the AA/EEO Office at 797-1266.

Academic Freedom and Professional Responsibilities (Faculty Code): Academic freedom is the right to teach, study, discuss, investigate, discover, create, and publish freely. Academic freedom protects the rights of faculty members in teaching and of students in learning. Freedom in research is fundamental to the advancement of truth. Faculty members are entitled to full freedom in teaching, research, and creative activities, subject to the limitations imposed by professional responsibility. Faculty Code Policy #403 further defines academic freedom and professional responsibilities: USU Policies Section 403

Add Date: The last day to add this class is the 15th day of the semester. Attending this class beyond that date without being officially registered will not be approved by the Dean's Office. No assignments or tests of any kind will be graded for students whose names do not appear on the class list.

There are several reasons for this rule. Students who attend classes without registering have an unfair advantage over those who are registered. The unregistered student can chose not to register if their academic performance is poor. There will be no record that the student "withdrew." The registered student

must drop the course along with the ramifications of small or no refund in tuition and a possible "W" on his/her transcript.

The university does not receive the headcount credit from the State for students who add any class after the 15th day. We lose a significant amount in support funding for those students not registered prior to day 15. Students who attend classes without registering/paying are utilizing campus resources even though they have not paid tuition and fees. Students who are attending classes but not enrolled in them are not subject to the Student Code of Conduct. Thus, we are asked not to allow students to "sit in" on classes for which they are not enrolled.

Drop Date: The last day to drop classes (with the ``W'' notation on transcript) is Oct 31 . If you are considering dropping, you should talk to me about the desirability of such a decision. Sometimes students drop when they would actually do well with a different strategy. Other times students who should drop, do not. It is wise to consult your instructor in your decision as she may have a different reading on your situation.