

# MATH 2210Q: Applied Linear Algebra

## Course Syllabus

Spring 2018

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## Contact Information

**Instructor:** Lisa Naples

**Email Address:** lisa.naples@uconn.edu

**Office:** MONT 115

**Office Hours:** TBA

*For the first week of the semester: Tuesday 4:00-5:00pm, Wednesday 10:00-11:00 am, Friday 10:00-11:00 am, and by appointment*

## Course Information

**Class Schedule:**

**Class Location:**

**Class Textbooks:** *Linear Algebra and its Applications*, 5th addition, David C. Lay

## Course Overview

The following is from the course catalog: *Systems of equations, matrices, determinants, linear transformations on vector spaces, characteristic values and vectors, from a computational point of view. The course is an introduction to the techniques of linear algebra with elementary applications.*

This course will cover textbook section: 1.1-1.5, 1.7-1.9, 2.1-2.3, 2.5, 3.1, 3.2, 4.1-4.4, 5.1-5.4. 6.1-6.4 as well as selected topics from chapter 7. Linear algebra has many real world applications and is particularly useful for computer-based modeling. Due to time constraints, class periods will primarily be spent covering theoretical and computational aspects of the subject. However, students are invited to discuss applications with the instructor outside of class.

## Grading Policy

Grades for this course will be calculated using the following distributions:

Assignment Category	Percentage of Grade (Method 1)	Percentage of Grade (Method 2)
True/False Questions	5%	5%
Homework Completion	5%	5%
Graded Homework	10%	10%
Quizzes	10%	10%
Midterm Exam 1	20%	15%
Midterm Exam 2	20%	15%
Final Exam	30%	40%

Course grades will be assigned based on the higher of Method 1 and Method 2 averages and the following letter distribution:

A: [93,100], A-: [90,93)  
B+: [87,90), B: [83,87), B-: [80,83)  
C+: [77,80), C: [73,77), C-: [70,73)  
D+: [67,70), D: [63,67), D-: [60,63)  
F: [0,60)

## Important Dates

Quizzes: Every other Thursday (alternating with graded homework, as posted on course calendar)  
Graded Homework and Homework Completion: Every other Thursday (alternating with quizzes, as posted on course calendar)

Midterm Exam I: February 22, 2018

Midterm Exam II: April ,12 2018

Final Exam: Date determines by registrar

**In case of cancellation due to inclement weather midterm exams will be rescheduled to the next class period. Similarly homework due dates will be rescheduled to the next class period. Quizzes may be rescheduled to the next class period or given as take-home assessments; specific details will be provided via email on the morning of cancellation.**

## Assignment Descriptions

### True/False Questions

At the beginning of class every Tuesday, students will be asked to complete a brief assignment composed of true/false questions from the previous week's material. After the assignment is turned in, the class will discuss the answers to the questions. A grade for true/false questions will be assigned at the end of semester out of a 5 point scale according to the following guidelines:

5 points	100%-85% of questions correct
4 points	85%-75% of questions correct
3 points	75%-65% of questions correct
2 points	65%-60% of questions correct
1 point	60-55% of questions correct
0 points	less than 55% of questions correct

## Homework

Homework will be assigned for each section of the textbook and due every other week. The exercises will be divided into two types: "Completion" and "Graded". Completion homework will consist of odd numbered exercises from the textbook and will be graded for completion only. While it is in the student's best interest to complete all of the suggested homework problems, a student will get full credit for completion as long as at least half of the exercises for each section are complete. Many of the final answers to these problems can be found in the back of the textbook. Since these exercises are only graded for completion, it is the instructor's expectation that the student will check answers and ask questions as they arise. Graded homework will consist of carefully selected even numbered exercises. Each exercise will be graded for accuracy on a 0-1-2 scale where 2 points will be earned for completely correct solutions which are fully justified by included work, and 1 point will be earned for solutions with minor errors which follow from the included work. For both types of homework,

students may work together or seek help from the instructor. However, each student should write their final solutions independently. **All scratch and/or algebraic work must be turned in with solutions to receive credit.**

## Quizzes

A short timed quiz (10-15 minute) will be given at the start of class every other Thursday as indicated on the course calendar. Quizzes will be graded in the following way: On first grading, a completely correct answer will earn full; an answer with any mistake (conceptual or computational) will earn no credit. Graded quizzes will be returned in a timely manner, and students will have the opportunity to correct and resubmit quizzes in order to earn back points. For each point lost, students can earn up to 3/4 points back. The following policies applies

- Resubmitted solutions must be turned at the start of class one week from the class period during which the quizzes were originally returned. Late resubmissions will not be accepted. If the student is not in class when the quizzes are returned it is the student's responsibility to obtain the quiz from the instructor before the resubmission deadline.
- Resubmitted solutions should be numbered, neatly written and **stapled to the original quiz**. Resubmitted solutions which are not attached to the original quiz will not be accepted.
- Resubmitted solutions must be completely correct in order to earn back credit. Please note that since there are less time constraints for writing up corrections the instructor's expectations for resubmitted solutions may be higher.
- While students may discuss potential corrections with classmates or with the instructor, final write-ups should be done independently.
- A student who does not take the quiz in class initially cannot earn credit for resubmitted solutions.

## Midterm Exams

While midterm exams will emphasize the most recent material, this course is by nature cumulative, so ideas discussed earlier in the semester may appear. More details regarding the format of the exams will be provided later in the semester.

## Final Exam

The final exam is cumulative and covers all of the course material.

## Class Preparation and Attendance

While attendance does not contribute to the overall course grade, the instructor's expectation is that students attend class on a regular basis. If a student choose not to attend class for an undocumented reason, it is the student's responsibility learn the material from the missed class period. Before the instructor answers questions or review material from the date of absence the student will be require to demonstrate that he or she has made significant progress in trying to learn the material on his or her own by, for example, obtaining notes from a classmate or reading the appropriate sections in the textbook.

## **Make-up Policy**

No make-up assignments will be given during the course of the semester. One quiz grade and one homework grade will be dropped at the end of the semester to account for emergency absences. If a midterm exam is missed for an officially acceptable reason (for example, a university sanctioned event that cannot be rescheduled or a documented medical event) the weight of the midterm will be redistributed to the final exam. Students who are sick on the day of a midterm are encouraged to see a doctor to obtain necessary documentation.

## **CSD Accommodations**

The University of Connecticut has issued the following policy regarding Academic Honesty: *The University of Connecticut is committed to protecting the rights of individuals with disabilities and assuring that the learning environment is accessible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. Students who require accommodations should contact the Center for Students with Disabilities, Wilbur Cross Building Room 204, (860) 486-2020, or <http://csd.uconn.edu/>*

Please note that accommodations cannot be provided until appropriate verification has been provided by CSD.

## **Academic Honesty**

The University of Connecticut has issued the following policy regarding Academic Honesty: *This course expects all students to act in accordance with the Guidelines for Academic Integrity at the University of Connecticut. Because questions of intellectual property are important to the field of this course, we will discuss academic honesty as a topic and not just a policy. If you have questions about academic integrity or intellectual property, you should consult with your instructor. Additionally, consult UConn's guidelines for academic integrity.*

Cheating or plagiarizing on an assignment may result in a zero for that assignment and/or failure in the course. If you have any questions regarding a particular assignment, please see the instructor before the deadline.

## **Extra Help**

### **Office Hours**

Students are welcomed to attend office hours as needed. Since MATH 2210Q does not have a corresponding discussion section, students are encouraged to use office hours as problem solving sessions. Students may come in groups and work on homework together, or bring more specific questions. MATH 2210Q is cumulative by nature so it is essential that students address any confusion as soon as possible.

### **Q Center**

Students seeking additional help beyond office hours may consider visiting UConn's Quantitative Learning Center. The Q Center offers free tutoring Sunday through Friday. However, a tutor for MATH 2210Q may not be staffed at all times. Please remember to plan in advanced.

## **Piazza**

Piazza is educational platform that will be used in this course. Any questions related to course material should be posted on Piazza (anonymously if preferred) rather than emailed to the instructor. The instructor will check Piazza regularly and respond to questions, but students may answer classmates' questions as well.

## **Disclaimer**

The instructor reserves the right to make changes to the syllabus at any point during the semester. Any changes made to the syllabus will be announced in class, and an updated syllabus will be posted the course HuskyCT page. Students can obtain a printed copy of the updated syllabus from the instructor.