Course Description
Systems of linear equations, algebra of matrices, inverses, determinants, vector spaces with emphasis on Euclidean vector spaces, bases, subspaces, transformations, eigenvalues and eigenvectors, and quadratic forms.

Prerequisites
MATH 132 or MATH 107 or HONR 132

Instructor: Dr. Breeanne Swart
Office: TH 328
Email: breeanne.swart@citadel.edu
Telephone: 953-5048
Office Hours: MWF 10-11am
T 9-11am
or by appointment

Text: Elementary Linear Algebra: Applications Version, 11ed by Howard Anton & Chris Rorres
Lectures: MWF 9:00-9:50am
Room: TH 315

You are encouraged to take advantage of office hours. You MUST come to my office with questions at least once by Friday, January 30. This will count as part of your participation grade.

Attendance
You will be accountable for attendance and tardiness. If you miss 20% of scheduled classes, you may receive an F. I encourage you to ask questions at any time. You need to come to class prepared. That means you need to read the section before class and attempt all homework problems. No cell phones, laptops, or other electronic devices are to be used during class.

Homework
Homework will be collected every Wednesday. Problems will be assigned for each section. Additional practice exercises will be assigned but not turned in. It is expected that you complete ALL of these exercises. Each problem turned in will be graded out of 5 points.

In addition, there will be Proof-A-Day which is exactly what it sounds like. Every day, a proof (or two) will be turned in. They will be graded on a 4 point scale:
- 0 = did not turn in
- 1 = tried but didn’t have the right idea
- 2 = right idea but failed execution
• 3 = some minor mistakes

• 4 = “practically perfect”

These are to improve your proof writing skills. Additionally, they will need to be typed using \LaTeX. Details will be discussed in class and posted on CitLearn.

Proof Workshops

There will be several proof workshops. These will entail you writing proofs and exchanging with classmates to improve proof writing, proof reading, and critical thinking.

Participation

Participation is REQUIRED in this course. Participation includes actively working in groups, being prepared for class through readings and homework assignments, and contributing to class discussions. Attendance of major (ie Math or CS) club meetings, Sigma Xi talks, and other mathematical culture events is required. You need to attend at least three events throughout the semester. After each event you attend, you will need to turn in a short report about the event. The reports need to be typed and address the questions posed on CitLearn. At most one event will be accepted per week. Such events will be announced in class.

Project

There will be a group project completed throughout the semester. In a group of 3, you will choose an application from Chapter 10 in the book. At most 1 group can choose any section. By Friday, February 20, you must submit a written (typed) project proposal. By Friday, March 20, you must submit a typed rough draft. By Monday, April 13, you must submit a final project. Time permitting, each group will present their topic during class. Details will be posted on CitLearn and discussed in class.

Exams

There will be three 50-minute exams given during regular class time and a cumulative final exam. Each exam will include computational problems as well as proof problem(s). They are scheduled as follows:

<table>
<thead>
<tr>
<th>Exam</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam 1</td>
<td>Wednesday, February 11</td>
</tr>
<tr>
<td>Exam 2</td>
<td>Wednesday, March 4</td>
</tr>
<tr>
<td>Exam 3</td>
<td>Wednesday, April 8</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Friday, May 1, 1-4pm</td>
</tr>
</tbody>
</table>

Make-Up Policy

Exams: In order to be considered for a make-up exam, the following rules hold:

1. Severe personal illness or emergency/death in the immediate family.

2. The instructor must be notified prior to the exam.

3. Ample documentation of circumstances is required.

Note that optional events and guard duty are not valid excuses for missing an exam.
Grades

Your grade for this course will be based on a total of 1000 points.

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>150</td>
</tr>
<tr>
<td>Participation</td>
<td>150</td>
</tr>
<tr>
<td>Project</td>
<td>150</td>
</tr>
<tr>
<td>Exam 1</td>
<td>100</td>
</tr>
<tr>
<td>Exam 2</td>
<td>100</td>
</tr>
<tr>
<td>Exam 3</td>
<td>100</td>
</tr>
<tr>
<td>Final Exam</td>
<td>250</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course Grading Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>A</td>
</tr>
<tr>
<td>B</td>
</tr>
<tr>
<td>C</td>
</tr>
<tr>
<td>D</td>
</tr>
<tr>
<td>F</td>
</tr>
</tbody>
</table>

Communication

You are expected to check your Citadel email regularly. You are expected to check CitLearn regularly for additional announcements and class materials.

Accommodations for students with disabilities

If you anticipate issues related to the format or requirements of this course, please meet with me. I would like us to discuss ways to ensure your full participation in the course. If you determine that formal, disability related accommodations are necessary, it is very important that you register with the Academic Support Center (117 Thompson Hall, 843-953-1820) and notify me of your eligibility for reasonable accommodations. We can then plan how best to coordinate your accommodations.

Important Dates

- Wednesday, January 14 – First day of class
- Monday, January 19 – MLK Day – NO CLASS
- Tuesday, January 20 – Drop/Add Ends
- Friday, January 30 – Deadline for office visit
- Wednesday, February 11 – Exam 1
- Friday, February 20 – Project proposal due
- Wednesday, March 4 – Exam 2
- Friday, March 13 – Leadership Symposium – NO CLASS – I recommend you use this time to work on your project.
- Wednesday, March 18 – Last day to drop with a “W”
- Friday, March 20 – Rough draft due
- Monday, March 23-Friday, March 27 – Spring Break
- Wednesday, April 8 – Exam 3
- Monday, April 13 – Final draft due
- Friday, May 1 – Final Exam 1-4pm