A 260-2B  Intro. to Linear Algebra
Spring, 2019

Course Instructor: Dr. Jeanne S. Hutchison
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Meeting Times and Location:
MA 260-2B meets Tuesdays and Thursdays, 9:30 to 10:45 AM, in Room HHB 221 of the Heritage Hall from Jan 8 through Apr 18 with final exam on Apr 24.

Prerequisite: Grade of C or better in MA 126 Calculus II

By Howard Anton and Chris Rorres, Wiley, 2013, 2014
Sections 1.1-1.8; 2.1-2.3; 3.1-3.3; 4.1-4.5, 5.1-5.2, 7.1-7.2

Topics: Linear equations and matrices; real vector spaces, basis and linear independence, linear transformations; light treatment of determinants, eigenvalues and eigenvectors; diagonalization, and selected additional topics.

MA 260 CLASS CALENDAR—SPRING, 2019

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>Tuesday, January 8</td>
<td>First Day of Class</td>
</tr>
<tr>
<td>Monday, January 24</td>
<td>Last Day to Drop/Add (without paying full tuition and fees)</td>
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<tr>
<td>Monday, January 21</td>
<td>Martin Luther King Holiday</td>
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<tr>
<td>Near Tuesday, February 7</td>
<td>Test 1</td>
</tr>
<tr>
<td>Friday, March 1</td>
<td>Last Day to Withdraw</td>
</tr>
<tr>
<td>Near Tuesday, March 26</td>
<td>Test 2</td>
</tr>
<tr>
<td>Thursday, April 18</td>
<td>Last Day of Class</td>
</tr>
<tr>
<td>Wednesday, April 24</td>
<td>Test 3 (Final Exam), 1:30 – 4:00 PM</td>
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</tbody>
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Methods of Teaching and Learning:
- 27-28 class meetings of 75 minutes consisting of lectures, discussions of examples, and homework problems. Time for quizzes and two in-class tests is also included.
- Students are expected to undertake at least 8 hours of private study and homework per week.

Course Content:
- Linear Equations: Gaussian Elimination
- Matrices: Matrix Operations and Properties; Invertible Matrices and Inverses
- Determinants: Cofactor Expansion; row Reduction; Cramer’s Rule
- Euclidean Vector Spaces: Vectors, Norm, Dot Product and Distance; Orthogonality
- General Vector Space: Real Vector Spaces; Subspaces; Linear Independence; Basis; Dimension
- Eigenvalues and Eigenvectors
- Diagonalization: Symmetric Matrices; Orthogonal Diagonalization
- Selected Additional Topics
Course Policies:

- Please make sure that you are able to receive e-mail through your Blazer-ID account. Official course announcements may be sent to that address.
- If you wish to request a disability accommodation, please contact DSS at 934-4205 or at dss@uab.edu.
- If a test is missed due to a serious verifiable circumstance or official university business, the test grade will be replaced with the properly rescaled final exam score. You have to advise the instructor of such circumstances at the earliest possibility.
- No books or notes will be allowed during any of the tests or quizzes.
- No make-up for missed quizzes.
- Late homework will not receive full credit.

Assessment Procedures:

- Regular homework. Homework will be due each Tuesday.
- Quizzes (some announced, some unannounced). Quizzes contribute 16% to the course average.
- Homework contributes 18% to the course average.
- Two mid-term in-class tests. Each test contributes 18% to the course average.
- A 150-minute comprehensive final examination. The final contributes 30% to the course average.
- Your course performance is the maximum of your course average and your final exam grade (each is a number between 0 and 100)
- Your final grade is determined according to the following table:

<table>
<thead>
<tr>
<th>Course Performance</th>
<th>88-100</th>
<th>75-87</th>
<th>62-74</th>
<th>50-61</th>
<th>Below 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Grade</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>F</td>
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TIPS:

- Help is sometimes available in the Math Learning Laboratory, HHB 202.
- By working steadily and regularly, you will increase your chances to succeed in this course.
- Remember, being a full-time student is a full-time job.
- The Mathematics Department participates in the Early Alert Program. If you receive an Early Alert because your instructor is worried about your attendance and/or performance, consider taking advantage of the services suggested by your instructor, your advisor, and the Early Alert Program.

MA 260-2B Homework Assignments Chapters 1

Section Problems

Chapter 1

1.1 1, 3c, 4c, 7b, 9 b, 12, 13b, 16a, 21; T-F
1.2 1, 3b, 5 & 9, 7 & 11, 17, T-F
1.3 1; 3 b,c,j; 5 a,b,g; 12b, 13 b, 25 a,b; T-F
1.4 1, 2a, 4a, 6, 10, 15, 25-26; 37, 43, T-F
1.5 1-2; 3 a,d; 5b; 7 a,c; 11a, 12a, 16; 19 a,b; 23, 25, 27, T-F
1.6 2, 3, 9, 15, 21-23, T-F
1.7 1-5, 9-11, 13-17, 20, 24, 32-33, 35, T-F
1.8 1-5(b); 7a, 10; 14 a,d; 16, 18a, 22a, 23b, 27, 29, 31. T-F

8/28/2017