A 260-2F Intro. to Linear Algebra
Fall, 2018

Course Instructor: Christoph Fischbacher
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Phone: (205)-934-2154
Office Hours: MW: 1:30 – 2:15 p.m
or by appointment

Meeting Times and Location:
MA 260-2F meets Tuesdays and Thursdays, 3:30 to 4:45 PM. in Room HHB 221 of the Heritage Hall from Aug 27 through Dec 6 with final exam on Dec 11

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—FALL, 2018

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>Tuesday, August 28</td>
<td>First Day of Class</td>
</tr>
<tr>
<td>Monday, September 3</td>
<td>Labor Day Holiday</td>
</tr>
<tr>
<td>Near Thursday, October 4</td>
<td>Test 1</td>
</tr>
<tr>
<td>Friday, October 20</td>
<td>Last Day to Withdraw with a “W”</td>
</tr>
<tr>
<td>Near Thursday, November 15</td>
<td>Test 2</td>
</tr>
<tr>
<td>Thursday, December 6</td>
<td>Last Day of Class</td>
</tr>
<tr>
<td>Tuesday, December 11</td>
<td>Final Exam, 4:15-6:45 pm</td>
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</tbody>
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Methods of Teaching and Learning:
1️⃣ 28 class meetings of 75 minutes consisting of lectures, discussions of examples, and homework problems. Time for two in-class tests is also included.
2️⃣ Students are expected to undertake at least 8 hours of private study and homework per week.

Course Content:
1️⃣ Linear Equations: Gaussian Elimination
2️⃣ Matrices: Matrix Operations and Properties; Invertible Matrices and Inverses
3️⃣ Determinants: Cofactor Expansion; row Reduction; Cramer’s Rule
4️⃣ Euclidean Vector Spaces: Vectors, Norm, Dot Product and Distance; Orthogonality
5️⃣ General Vector Space: Real Vector Spaces; Subspaces; Linear Independence; Basis; Dimension
6️⃣ Eigenvalues and Eigenvectors
7️⃣ Diagonalization: Symmetric Matrices; Orthogonal Diagonalization
8️⃣ Selected Additional Topics
Course Policies:
① 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.
② If you wish to request a disability accommodation, please contact DSS at 934-4205 or at dss@uab.edu.
② 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.
② Allowed aides (e.g. calculators, note cards) for the tests will be discussed in classes
② Late homework will not receive full credit.

Assessment Procedures:
② Regular homework. Homework will be due each Tuesday.
② A project contributing 10%
② Homework contributes 30% to the course average.
② Two mid-term in-class tests. Each test contributes 15% to the course average.
② A 150-minute comprehensive final examination. The final contributes 30% to the course average.
② Your course performance is the maximum of your course average and your final exam grade (each is a number between 0 and 100
② 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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</table>

TIPS:
② Help is sometimes available in the Math Learning Laboratory, HHB 202
② By working steadily and regularly, you will increase your chances to succeed in this course.
② Remember, being a full-time student is a full-time job.
② 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.