Kennesaw State University
Math 4260
Linear Algebra II
Dr. Dillon
Updated 5/7/17
Spring 2017

Prerequisite: C or better in Math 3260

Section 51: MWF 12:00-12:50 pm, D116

Classroom decorum: No screens and no headsets. If you have medical reasons for being unable to go 50 minutes without use of an electronic gadget, please supply a note from a medical professional. Otherwise, leave your electronics OFF and/or AWAY during the class meetings.

Links

Gil Strang’s paper, requires KSU login: The Fundamental Theorem of Linear Algebra

Solutions Page

INSTRUCTOR: Dr. M. Dillon
OFFICE: D246
OFFICE HOURS: MWF 1:00 -1:50 pm; also by appointment
PHONE: 470 578 4977
EMAIL: mdillon1@kennesaw.edu

COURSE DESCRIPTION: This is a second course in linear algebra. Students in this course should be familiar with matrices, systems of linear equations, and some of the theory of vector spaces, subspaces, and linear transformations. This course goes more deeply into the theory of finite dimensional vector spaces and inner product spaces. *This is a proof-based course.*


The plan is to cover Chapters 1-6 in the text, possibly with some supplementary material. The plan is subject to revision at any time!

TECHNOLOGY: None needed, required, or allowed on tests, quizzes, and homework.

GOALS: Upon completing this course students should be able to:

1. Understand the ideas, vocabulary, and basic theorems associated to vector spaces and subspaces.
2. Understand the ideas, vocabulary, and basic theorems associated to linear transformations.

ATTENDANCE POLICY: Class attendance is required for this course. Students are solely responsible for managing their enrollment status in a class; nonattendance does not constitute a withdrawal.

GRADING: Your course grade will be calculated based on the following components.

1. Two out of three in-class tests count towards 40% of your final grade.
2. The final exam will count towards 40% of your final grade.
3. Ten out of approximately 15 homeworks and quizzes will count towards 20% of your final grade.

Grading is on a 10 point scale: 90-100=A, 80-89=B, 70-79=C, 60-69=D, below 60=F

TESTS: Tests are scheduled for Wednesday, February 8; Friday, March 10; Wednesday, April 12. The lowest test grade is dropped so there are **NO MAKE-UP TESTS**.

QUIZZES/Homework: We will use a blend of (graded) homework and quizzes so that I can assess your daily progress in the course. A homework schedule is below. **Attempt all the problems assigned.** One or more times most weeks, I will announce which problems you will **hand in for the next class meeting.** Quizzes will be given with or without warning, also approximately once a week. Quizzes will be based on the assigned homework problems and you will have an opportunity at every class meeting to ask about the homework. Only the best 10 homework/quiz grades out of approximately 15 will count towards your grade, so approximately 5 homework/quiz grades will be dropped, thus, there are **NO MAKE-UPS FOR QUIZZES AND NO LATE HOMEWORKS WILL BE ACCEPTED. EVER**.

FINAL EXAM: The final is COMPREHENSIVE.

MAKE-UPS? NO, NONE, NEVER--- There are NO MAKE-UPS in this class!

WITHDRAW DATE: **Wednesday, March 1** is the last day to withdraw with a grade of “W.” (For current policy on the number of withdrawals permitted, see http://catalog.kennesaw.edu/content.php?catoid=24&navoid=2171#withdrawalfromclasses.)

RECORDING DEVICES: The use of any and all electronic recording devices during class meetings of this course is expressly forbidden. Electronic recording devices include, but are not limited to, cell phones, tape recorders, and video cameras. Under certain circumstances, students with special needs may request permission of the instructor to record classes. Permission granted under these circumstances will be strictly limited and all details will be in writing.

Accommodations: Any student with a documented disability or medical condition needing academic accommodations of class-related activities or schedules must contact the instructor immediately. Written verification from the KSU Student Disability Services (http://www.kennesaw.edu/stu_dev/dsss/welcome.html) is required. No requirements exist that
accommodations be made prior to completion of this approved University documentation. All discussions will remain confidential.

**Academic Dishonesty:** There is a zero tolerance policy on cheating in this course. The use of any electronic devices, including phones, is expressly forbidden during tests and quizzes. Every KSU student is responsible for upholding the provisions of the Student code of Conduct, as published in the Undergraduate and Graduate catalogs. The Student Code of Conduct addresses the University’s policy on academic honesty, including provisions regarding plagiarism and cheating, unauthorized access to University materials, misrepresentation/falsification of University records, or academic malicious/intentional misuses of computer facilities and/or services, and misuse of student identification cards. Incidents of alleged academic misconduct will be handled through the established procedures of the Student Conduct and Academic Integrity department, which includes either an “Informal” resolution by a faculty member, resulting in a grade adjustment, or a formal hearing procedure, which may subject a student to the Code of Conduct’s minimum one semester suspension requirement.

### Course Schedule with Homework Problems

Subject to change!

The date to the left is the day of the assignment. Try to get each assignment done before the next class meeting. You will be asked to hand in a proper subset of the problems listed here.

We have 45 meetings, which includes three test days. Every meeting counts. **Please come to class every day with your work prepared but if it isn’t, come to class anyway.** The way you learn the material in this course is by doing homework daily.

You should spend 1-2 hrs per day on homework. If you work problems every day, your endurance will improve. It is most important to keep working.

1. 1/9: Section 1.A, p. 11: 1, 4, 7, 10, 12, 14; Section 1.B p. 17: 1, 2, 4, 6
2. 1/11: Section 1.C, p. 24: 1, 3, 5-8, 10, 11, 12
4. **1/16: MLK Jr. DAY, NO CLASS**
5. 1/18: Section 2.A, p. 37: 1, 3, 5, 6
6. 1/20: Section 2.A, p. 38: 8, 13, Section 2.B, p. 43: 2, 3, 6
7. 1/23: Section 2.A, p. 37: 7, 9, 10
8. 1/25: Section 2.A, p. 38: 14; Section 2.B, p. 43: 4, 7; Section 2.C, p. 48: 1
9. 1/27: Section 2.C, p. 48: 4, 5, 8
10. 1/30: Section 2.C, p. 48: 11, 12, 13
11. 2/1: Section 2.C, p. 48: 14, 15, 16; Section 2.B, p. 43: 5, 8
12. 2/3: Section 1.C, p. 25: 15, 16, 19
13. **2/6: REVIEW DAY**
14. 2/10: Section 3.A, p. 57, 1-4
15. 2/13: Section 3.A, p. 57, 5-7, 10, 11*, 14
16. 2/15: Section 3.B, p. 67, 1, 2, 3*, 5, 6, 9*, 10*
17. 2/17: Section 3.B, p. 68: 11*(n=2 is enough), 12*, 13*, 15*
18. 2/20: Section 3.C, p. 78, 2, 3, 12*; Section 3.D, p. 88, 1*
19. 2/22: Section 3. D, p. 88, 2, 3 (read carefully!), 7, 8, 10, 18
20. 2/24: **Supplementary**
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<td>Section 3.E, p. 99: 8, 9</td>
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<td>3/3</td>
<td>LAST DAY TO WITHDRAW WITH A W&lt;br&gt;Section 3.E, p. 99: 11a, 17; Section 3.F, p. 113: 1, 2, 3, 4</td>
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<td>3/6</td>
<td>Section 3.F, p. 113: 6, 7, 8</td>
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<td>REVIEW DAY</td>
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<td>TEST 2: Sections 3A-3E</td>
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<td>3/13</td>
<td>Work on problems in 3F</td>
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<td>Supplementary problems, due 3/17</td>
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<td>Section 3F, p. 114: 13-15</td>
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<td>Section 3F, p. 114: 17-22</td>
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<td>Chapter 4, p. 129: 2, 3, 4, 7, 11, Supplementary problems due 3/27</td>
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<td>3/27</td>
<td>Section 5A, p. 139: 1-5, 7-11</td>
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<td>4/1-7</td>
<td>Spring Break</td>
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<td>REVIEW DAY</td>
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<td>Review: have questions ready about the course.</td>
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<td>5/1</td>
<td>LAST DAY OF CLASS; Review: have questions ready about the course.</td>
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