MATH 330 (Linear Algebra) Spring 2019 Section 1001

Time & Location: MWF 10:00am-10:50am in AB634
Instructor: He Wang
Email: hew@unr.edu
Office: MM 307
Office Hours: 2:30pm-5:30pm Wednesday, and by appointment.
MyMathLab Course ID: wang09714

Electronic/hardcopy Textbook (required):
David C. Lay, Steven R. Lay and Judi J. McDonald,
“Linear Algebra and its Applications”
ISBN-10: 032198238X.

Course Description: Linear Algebra is an extensive branch of modern mathematics. It grew out of the study of systems of linear equations and how to solve them. The course will start in exactly this way (Chapter 1), from where the notion of matrix and its associated algebraic operations arise (Chapters 2 & 3). Matrices are the first step in making systems of linear equations more abstract, leading to the notion of vector spaces (Chapter 4), which lie at the heart of many branches of modern science. The study of vector spaces and operators between vector spaces is the content of Chapters 5 & 6, with which we will conclude the course. If time allows we will cover select sections from Chapter 7, and explore symmetric matrices and their properties. A tentative schedule will be given latter.

Student Learning Outcomes: Upon completing this course, a student shall be able to
• Solve systems of linear equations.
• Perform matrix computations, including evaluating the determinant of a matrix.
• Know basic properties of vector spaces and operators between vector spaces, such as the notions of eigenvalues or eigenspaces.

Course Prerequisites and Corequisites: This course has Math 283 (Calculus 3) as a corequisite course.

Registering for MyMathLab: When you purchase the textbook (either the electronic or hard copy), you will receive a “Student Access Kit” which contains an access code. In addition to this ID, you will also need the “Instructor’s MyMathLab ID” which for this class is

MyMathLab Course ID: wang09714

You will need a valid email address. Point your web browser to www.mymathlab.com, click the “Register” or “Sign in” button for students and follow the onscreen instructions, entering the two ID numbers when prompted. For help regarding issues with MyMathLab, please consult the following resources:
Phone: 1-800-677-6337
Web http://247pearsoned.custhelp.com/app/home

Announcements, up-to-date syllabus, up-to-date schedule, lecture notes, solutions for exams, etc. will also be available on www.MyMathLab.com
Grading: The grade for this course is based on graded homework assignments, quizzes, two midterm exams, and a final exam. Each of these contributes a percentage of points to your course total, as described in the first table below.

| Homework  | 15%   | 90% -92%  A-;  93% -100%  A;  
| Quizzes   | 10%   | 80% -82%  B-;  83% - 86%  B;  87% -89%  B+;  
| Midterms (3) | 50%   | 70% -72%  C-;  73% -76%  C;  77% -79%  C+;  
| Final exam| 25%   | 60% -62%  D-;  63% -66%  D;  67% -69%  D+;  
|           |       | 0% - 59%  F. |

The table on the right indicates how your final course grade is determined based on your percentage of earned points.

- **Practice Homework and Graded Homework:**

At the end of each section in the textbook are *practice homework exercises*. The best way to learn math is to do math, and doing these exercises is the best approach to learning linear algebra. You do not have to turn in these problems for grading, they are for your benefit only, and they are the main tool for success in this class. Try to work through at least the first 15-20 problems in each section.

*Graded homework problems* will be assigned for every section we cover in class, and you will be given a week to complete them. Most graded homework will be assigned through MyMathLab online, and you will complete it and turn it in online. For graded homework you are given 3 attempts to answer each questions (2 attempts for multiple choice questions). Two of the lowest homework scores will be dropped at the end of the semester. Given these, and the generous amount of time to complete assignments, there will be no make-up homework possibilities. The **deadline** for graded homework will be on each **Wednesday** night.

- **Quizzes:**

Quizzes will be given on a roughly weekly basis during the semester and account for 10% of your final grade. They will take place during regular class time. These will be announced at least one class day ahead of time. There will be no makeup quizzes allowed. Instead, your two lowest quiz scores will be dropped at the end of the semester.

- **Exams:**

There will be 3 midterm exams (totaling 50% of your final grade) and a comprehensive final exam (worth 25% of your final grade). Please see the class schedule below for exam dates. The problems on the exams will be modeled on the homework problems from the textbook, making it all the more important to work through as many problems as time allows. Part of each test will be comprised of multiple choice questions, the other portion will be free response.

You must have your UNR student ID with you for all exams. In general, makeup exams will not be allowed. Missing an exam is a serious issue and accommodations will only be considered for serious circumstances with documentation. In these cases, accommodation can mean either a makeup exam or using the final exam score to replace the missed exam score, at the instructor's discretion.
Policies:

• **Calculators:** Only scientific calculators (that is calculators without the ability to graph) will be allowed during exams. No smartphone, tablets, computers or other electronic equipment is allowed for exam taking.

• **Attendance and Absences:** I will take 3-4 times attendance check before each exam. It is highly recommended that you attend class as the material in this course is at times challenging and may be difficult to master on your own. Missing a lecture is NOT an excuse for not knowing what material was covered that day, and what assignments were made or were due.

• **Make-up assignments:** Make-up exams will only be given for absences with a valid excuse, such as an illness. If you know in advance that you will be missing an exam date, notify the instructor at the earliest possible time. As the two lowest graded homework scores and the two lowest quiz scores will be dropped at the end of the semester, make-up homework assignments and make-up quizzes will only be given if the students missed several assignments/quizzes for valid reasons.

• **Drop deadline:** The last day to drop the class and receive 100% of your money back is Jan. 28. The last drop date with no money back and receiving a “W” is Apr. 2 (check again at the UNR website).

• **Academic misconduct:** You must work independently on all exams unless your exam instructions indicate otherwise. Any behavior inappropriate to test taking that may disturb other students will be considered cheating. You may not read notes or books while taking tests unless you have permission from your instructor. Homework is not a test therefore collaboration with your peers is permitted. If you are unclear as to what constitutes cheating, please consult with your instructor.

• **Equal opportunity and Students with a Disability:** The Department of Mathematics and Statistics encourages any student needing to request accommodations for a specific disability, to meet with their instructor at their earliest convenience, to ensure timely and appropriate accommodations.

• **Academic Success Services:** Your student fees cover usage of the
  - **Math Center** (784-4433 or [www.unr.edu/mathcenter/](http://www.unr.edu/mathcenter/)),
  - **Tutoring Center** (784-6801 or [www.unr.edu/tutoring](http://www.unr.edu/tutoring)),
  - University Writing Center (784-6030 or [http://www.unr.edu/writing_center](http://www.unr.edu/writing_center)).

These centers support your classroom learning and it is highly advised that you take advantage of their services. Keep in mind that seeking help outside of class is the sign of a responsible and successful student.

• **Audio and Video Recording:** The following is new University policy: “Surreptitious or covert videotaping of class or unauthorized audio recording of class is prohibited by law and by Board of Regents policy. This class may be videotaped or audio recorded only with the written permission of the instructor. In order to accommodate students with disabilities, some students may be given permission to record class lectures and discussions. Therefore, students should understand that their comments during class may be recorded.”
**Tentative** schedule of classes and exams (Math330-1001) Spring 2019

<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Tue</th>
<th>Wednesday</th>
<th>Thu</th>
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| Jan   | 21
tMartin Luther King Day | 22     | 23 Intro & §1.1 | 24     | 25 §1.1  |
|       | 28 §1.2              | 29     | 30 §1.2        | 31     | 1 §1.3   |
| Feb   | 4 §1.4               | 5      | 6 §1.5         | 7      | 8 §1.7   |
|       | 11 §1.8              | 12     | 13 §2.1        | 14     | 15 §2.2  |
|       | 18
tPresident’s Day | 19     | 20 §2.3        | 21     | 22 §2.5  |
|       | 25
tMidterm Exam 1   | 26     | 28 §3.1        | 28     | 1 §3.2   |
|       | 4 §4.1               | 5      | 6 §4.2         | 7      | 8 §4.3   |
|       | 11 §4.4              | 12     | 13 §4.5        | 14     | 15 §4.6  |
|       | 18
tSpring break    | 19     | 20
tSpring break | 21     | 22
tSpring break |
|       | 25
tMidterm Exam 2   | 26     | 27 §5.1        | 28     | 29 §5.1  |
|       | 1 §5.2               | 2      | 3 §5.3         | 4      | 5 §5.4   |
|       | 8 §5.5               | 9      | 10 §5.5        | 11     | 12 §5.7  |
|       | 15
tMidterm Exam 3   | 16     | 17 §6.1        | 18     | 19 §6.1  |
|       | 22 §6.2              | 23     | 24 §6.3        | 25     | 26 §6.4  |
|       | 29 §6.5              | 30     | 1 §6.5         | 2      | 3 §7.1   |
|       | 6
tReview for Final Exam | 7     | 8
tPrep Day    | 9     | 10
tFinal Exam |
|       | 13                   | 14     | 15             |        |          |

**Final exam:** 9:50 – 11:50 a.m. Friday, May 10