Math 441: Linear Algebra II
Winter 2019 // CRN 21728 // TR 10:00-11:50 MNB 130

Professor:	Dr. Leanne Merrill
Office:	MNB 126
Phone:	(503) 838-9342 (calls only, no texts)
Office Hours:	Monday 9-10am, 12-1pm; Tuesday 12-2pm; Thursday 3-4pm; and by appt.
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Prerequisite: C- or better in Math 341.

Materials: Your textbook is *Linear Algebra Done Right*, Third Edition, by Sheldon Axler. This book is available from the bookstore, or you can order it online. You will actually need the book. You do not need a calculator for this class. You should have a pencil and notebook in class every day to take notes.

Course Goals: This course is an introduction to formal mathematical proofs. It is a writing-intensive course, and as such you will be doing a lot of writing. During this course:

1. Students will demonstrate the ability to make rigorous mathematical arguments in axiomatic and non-axiomatic systems.

2. Students will demonstrate effective written communication of mathematical concepts.

3. Students will intuitively understand vector spaces, linear transformations, canonical forms, the spectral theorem, and inner product spaces.

Course Structure

Homework: You will have regular homework assignments in this class, approximately one per week, consisting of problems from the textbook. Your homework must be typed or neatly written and completely answer the assigned question to receive full credit. If you do not receive full credit, you will have the opportunity to resubmit your homework to recover lost credit. You may work together on homework, but you must do your final write-up on your own (not looking at someone else's solution).

Quizzes: There will be six quizzes in this class, on Tuesdays of Weeks 4-9. These will be approximately 30 minutes long and concern the lectures and homework from the previous few weeks. These are the only timed, in-class evaluations I will give you. They will consist of definition/theorem statements, computations, and proofs.

Presentations: Most weeks, you will be responsible for giving a short class presentation on one or more exercises that I assign to you. These will be relatively informal, but you should expect to prepare your answers ahead of time.

Final Project: Instead of a final exam, we will have a final project. This is described in detail in the Final Project Document.

Grading: Your percentage grade will be calculated as follows:

- Homework: 25%
- Quizzes: 30%
- Class Presentations: 10%
- Final Project: 35%

Letter grades will be determined as follows:

A	93% - 100%	C	73% - 76%
A-	90% - 92%	C-	70% - 72%
B+	87% - 89%	D+	67% - 69%
B	83% - 86%	D	63% - 66%
B-	80% - 82%	D-	60% - 62%
C+	77% - 79%	F	0% - 59%

Course Policies and Resources

Absences and Late Work: If you know you are going to miss class due to a previously scheduled activity, you must notify me **before** the absence in order to be excused (and therefore eligible for make-up work). Except in the case of WOU-sanctioned activities, I reserve the right to not allow make-up work. If you miss class due to an unforeseen emergency, please notify me as soon as possible, and submit a report by going to www.wou.edu/advising/absence. Exams and classwork may not be made up unless one of these two channels is followed. You should also get the contact information for your group members and inform them of absences if possible. For individual homework assignments, 10% will be deducted from the score on the assignment for each weekday it is late, except in the cases of excused absences.

Incompletes: An Incomplete can only be granted for a student who is passing a class and has a documented emergency that prevents them from completing the course.

Accommodations: If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Disability Services, APSC 405, or at 503-838-8250, as early as possible in the term. Students needing medical or mental health care can access the Student Health and Counseling Center by calling 503-838-8313, emailing at health@wou.edu, or by walking in to schedule an appointment.

Veterans/Military: Veterans and Active Military Personnel with special circumstances are welcome and encouraged to communicate these, in advance if possible, to the instructor.

Student Success: If I determine your performance in this class is placing you at academic risk, you may be referred to a WOU Student Success Specialist. They will offer to work with you to address issues and develop a student success strategy. Regardless of whether a referral has or has not been made, you are ultimately responsible for tracking your own progress in this course. If you would like to talk with someone about academic challenges and tools for success, please contact the Academic Advising and Learning Center at 503-838-8428.

Course Policies and Resources

Email: Please use your WOU Gmail to send me an email; otherwise, it may be sent to my spam folder. I will respond to all emails within 48 hours, and usually within a 2-3 hours if you send the email before 5pm on a weekday. Likewise, **you must check your WOU Gmail at least once per weekday while you are enrolled in this course, and you must read my emails entirely.** When you are composing a message to me, please consider readability and tone. If you are asking a question about a particular math problem, it is helpful if you attach a picture of your work on that problem so far.

Moodle: At moodle.wou.edu you may access all course documents such as this syllabus, handouts, homework assignments, and keys. I may also post short videos or other resources that supplement what we've done in class and on homework. In addition, you may view your scores on previous assignments. I will post announcements relevant to this course in Moodle as well, and I will always duplicate such announcements in class.

Getting Help: The first line of defense is office hours. You do not need an appointment to attend my scheduled office hours – just drop in when it is convenient for you. If none of my office hours times work for you, please talk to me after class or send me an email to set up a different time. I am here to help you succeed, and have plenty of time to meet with you one-on-one.

Usually I write about the Math Center here. Well, many of you work at the Math Center at this point, so if you want to help each other there, go ahead. I do recommend forming a small group that works together outside of class.

Suggestions: Success in mathematics does not rest on innate ability, but rather upon diligent and careful work over time. Most of your learning will take place on your own and everyone will move at their own pace in understanding the material. Do not be discouraged if you don't get something the first, second, or even third time. Most of us didn't either. Mathematics is a habit of thought, and it takes time to develop this habit. Focus on understanding and appreciating the material and everything else will fall into place.