Math 443 Syllabus  Applied Linear Algebra
LEC 001 MWF 11-11:50AM: 115 Van Hise Hall

COURSE INFORMATION

The theory of single variable calculus
MATH 443 (3 Credits)
LEC - 65529
Fall 2019
Covers material in first and second semester calculus but it is intended to teach math majors to write and understand proofs in mathematics in general and in calculus in particular.
Repeatable for Credit: No

Prerequisite(s): (MATH 320, 340, 341, or 375) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Breadths: N Natural Science
Level: Advanced
L&S Credit: Counts as Liberal Arts and Science credit in L&S
Instruction Mode: Face to face
Description: Linear algebra and its applications.
Canvas and Website: https://canvas.wisc.edu/ http://www.math.wisc.edu/~jose/Teaching/M443/

Department: MATHEMATICS
College: Letters and Science

Location and Schedule: LEC-001 (65529) 115 Van Hise Hall MWF 11AM - 11:50PM
Credit Hours [Traditional Carnegie Definition] One hour (i.e. 50 minutes) of classroom or direct faculty/instructor instruction and a minimum of two hours of out of class student work each week over approximately 15 weeks, or an equivalent amount of engagement over a different number of weeks. This is the status quo and represents the traditional college credit format used for decades. If you have regular classroom meetings and assign homework, reading, writing, and preparation for quizzes and exams, make this choice.

Instructor: Prof. Jose Rodriguez jrodriguez43@wisc.edu, Van Vleck Hall 720
Office hours Mon 9:30 and by appointment
GRADING AND COURSE MATERIALS

Grading. The grade will be determined according to students’ performance on participation (4%), quizzes (25%), homework (25%), final exam (15%), and a class project (31%). Quizzes will be given in class and on Monday’s unless otherwise stated. The class project will be graded as follows:

- 10% Title, abstract, outline, bibliography (due at the beginning of November).
- 60% Final poster (2 sides A0 33.11 x 46.81 inches is preferred but this is negotiable).
- 12% Feedback: Provide feedback for at least three posters. Expectations for good feedback will be listed on the course website.
- 18% Fundamentals, Questions + Answers. This is a written document to accompany your poster and details will be given on the course website.

Final Exam. Books, notes, calculators, phones, will not be allowed during the final exam. The final exam is Dec 16, 2019 from 12:25PM - 2:25PM.

Quizzes. Books, notes, calculators, phones, will not be allowed during quizzes. There are no make up quizzes. Instead, I will drop your lowest quiz grade.


Outline. We will cover chapters 1-12 of the book, and other selected topics. Class projects are on a book chapter or topic that will be approved by me.

Student Body. For students whose main field of interest is not pure mathematics.

Course Learning Outcomes. Review of matrix algebra. Simultaneous linear equations, linear dependence and rank, vector space, eigenvalues and eigenvectors, diagonalization, quadratic forms, inner product spaces, norms, canonical forms. Discussion of numerical aspects and applications in the sciences.

ACADEMIC POLICIES

ACADEMIC INTEGRITY

By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison’s community of scholars in which everyone’s academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to https://conduct.students.wisc.edu/academic-integrity/

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

McBurney Disability Resource Center syllabus statement: “The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared
faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student’s educational record, is confidential and protected under FERPA.”

http://mcburney.wisc.edu/facstaffother/faculty/syllabus.php

DIVERSITY & INCLUSION

Institutional statement on diversity: “Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world.” https://diversity.wisc.edu/