Instructor: José Luis Palacios (jpalacios@unm.edu)

This is a face-to-face course in Differential Equations and Linear Algebra. In addition to the classical analytical methods, the Laplace transform will be used. Linear equations, vector spaces, matrices and their eigenvalues and eigenvectors will be studied and applied to the solution of systems of linear differential equations. We will following closely the textbook "Worldwide Differential Equations with Linear Algebra" (Robert McOwen) and cover its seven chapters with some minor exclusions. For MATLAB, the recommended textbook is "Ordinary Differential Equations using MATLAB, third edition" (John C. Polking, David Arnold).

Important dates: Midterm 1. Tuesday February 20, 11:00-12:15. Midterm 2. Tuesday March 26, 11:00-12:15. FINAL. T. B. D. The second Midterm and the Final will be cumulative, in the sense that the material previously covered will be assumed known, but the emphasis will be on the chapters marked above.

Grading. Homeworks 30%, Midterms: 20% each; Final: 30%. FINAL GRADE: If FS is the final score then you will get A if FS > m + s, where m = average of all final scores; s = standard deviation of all final scores; B if m < FS < m + s; C if m - s < FS < m; D if FS < m - s.

Specific Course Policies.

- 1. Assignments will be handed out and collected using UNM Canvas; assignments should only be submitted through Canvas, not email or other means. If you are unable to submit assignments on Canvas due to technical difficulties, please email me the submission and we will coordinate a resubmission once the technical difficulties are resolved.
- 2. Students are responsible for turning in assignments on time. Unexcused late assignments will only be accepted by prior arrangement with the instructor before the due date/time, with significant penalties determined by this instructor. Late assignments will be accepted without penalty only in the case of documented extraordinary circumstances that make prior arrangement impossible. If you know that you will be unable to make a turn-in date due to circumstances outside of your control (e.g. illness, death in the family, etc.), please make arrangements with me either in person, by email, or by phone as soon as possible for an extension.

- 3. No make-up or extra credit assignments or tests will be given. If you must miss a midterm, your final exam grade will count for that midterm grade as well. (E.g.: you missed the second midterm, then the final will count for 50% of the grade) If the test is taken, there is no possibility of considering it as "missed" later on.
- 4. Requests for regrades of assignments must be made within two weeks from when the assignment is returned. Assignments will not be regraded after that point.
- 5. Assignments and tests for which a regrade is sought will be regraded in their entirety. Therefore the new grade could be lower or higher than the original grade (before regrading).
- 6. This course falls under all UNM policies for last day to drop courses, as described at \\ \{\text{http:// www.unm.edu/studentinfo.html}\}\ and in the UNM Course Catalog. Please see the UNM academic calendar for course dates, the last day to drop courses without penalty, and for financial disenrollment dates.
- 7. Any requests to drop the class or change grade mode (e.g. audit, CR/NC) with instructor permission must be made on or before the last regular class/lab meeting. Such request made after this date will not be approved except in the case of documented, extraordinary circumstances.

Accommodation statement: UNM is committed to providing equitable access to learning opportunities for students with documented disabilities. As your instructor, it is my objective to facilitate an inclusive classroom setting, in which students have full access and opportunity to participate. To engage in a confidential conversation about the process for requesting reasonable accommodations for this class and/or program, please contact Accessibility Resource Center at arcsrvs@unm.edu or by phone at 505-277-3506. Support: Contact me at jpalacios@unm.edu or in office/check-in hours and contact Accessibility Resource Center (https://arc.unm.edu/) at arcsrvs@unm.edu or (505) 277-3506.

Credit-hour statement: This is a three credit-hour course. Class meets for two 75-minute sessions of direct instruction, plus a 50-minute lab, for fifteen weeks during the Fall 2022 semester. Please plan for a minimum of six hours of out-of-class work (or homework, study, assignment completion, and class preparation) each week. **Support:** Resources to support study skills and time management are available through Student Learning Support at the Center for Teaching and Learning.

Academic Integrity Statement: Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or otherwise fails to meet the standards. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course. Academic dishonesty includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.

Responsible Learning and Academic Honesty: We all have shared responsibility for ensuring that learning occurs safely, honestly, and equitably. Submitting material as your own work that has been generated on a website, in a publication, by an artificial intelligence algorithm (AI), by another person, or by breaking the rules of an assignment constitutes academic dishonesty. It is a student code of conduct violation that can lead to a disciplinary procedure. Please ask me for help in finding the resources you need to be successful in this course. I can help you use study resources responsibly and effectively. Off-campus paper writing services, problem-checkers and services, websites, and AIs can produce incorrect or misleading results. Learning the course material depends on completing and submitting your own work. UNM preserves and protects the integrity of the academic community through multiple policies including policies on student grievances (Faculty Handbook D175 and D176), academic dishonesty (FH D100), and respectful campus (FH CO9). These are in the Student Pathfinder (https:// pathfinder.unm.edu) and the Faculty Handbook (https://handbook.unm.edu). **Support**: Many students have found that time management workshops or work with peer tutors can help them meet their goals. These and are other resources are available through Student Learning Support at the Center for Teaching and Learning.

Title IX statement: Our classroom and our university should always be spaces of mutual respect, kindness, and support, without fear of discrimination, harassment, or violence. Should you ever need assistance or have concerns about incidents that violate this principle, please access the resources available to you on campus. Please note that, because UNM faculty, TAs, and GAs are considered "responsible employees" any disclosure of gender discrimination (including sexual harassment, sexual misconduct, and sexual violence) made to a faculty member, TA, or GA must be reported by that faculty member, TA, or GA to the university's Title IX coordinator. For more information on the campus policy regarding sexual misconduct and reporting, please see: https://policy.unm.edu/university-policies/2000/2740.html.

Support: LoboRESPECT Advocacy Center, the Women's Resource Center, and the LGBTQ Resource Center all offer confidential services.

Land Acknowledgement: Founded in 1889, the University of New Mexico sits on the traditional homelands of the Pueblo of Sandia. The original peoples of New Mexico Pueblo, Navajo, and Apache since time immemorial, have deep connections to the land and have made significant contributions to the broader community statewide. We honor the land itself and those who remain stewards of this land throughout the generations and also acknowledge our committed relationship to Indigenous peoples. We gratefully recognize our history.

Citizenship and/or Immigration Status: All students are welcome in this class regardless of citizenship, residency, or immigration status. Your professor will respect your privacy if you choose to disclose your status. As for all students in the class, family emergency-related absences are normally excused with reasonable notice to the professor, as noted in the attendance guidelines above. UNM as an institution has made a core commitment to the success of all our students, including members of our undocumented community. The Administration's welcome is found on our website: http://undocumented.unm.edu/.

Safety: UNM offers several resources to help keep Lobos safe. LoboGuardian, https://loboguardian.unm.edu is a mobile app that increases user safety by creating a virtual safety network of friends and family. The entire UNM campus has blue light emergency phones. UNM Police Department, tel.: (505) 277-2241, offers a free escort service for safety. Lobo Alerts https://loboalerts.unm.edu is UNM's emergency text messaging system that can inform you of any occurrences that impact safety. Get Help Now at https://loborespect.unm.edu/ Get%20Help%20now/ index.htmlLoboRespect Advocacy Center, for concerns such as sexual misconduct, hate/bias, bullying, hazing. Student Health Services https://shac.unm.edu provides counseling and health services to all students.

Respectful Conduct Expectations: I am committed to building with you a positive classroom environment in which everyone can learn. I reserve the right to intervene and enforce standards of respectful behavior when classroom conduct is inconsistent with University expectations [and/or classroom community agreements]. Interventions and enforcement may include, but are not limited to, required meetings to discuss classroom expectations, written notification of expectations, and/or removal from a class meeting. Removal from a class meeting will result in an unexcused absence. Six or more unexcused absences may result in permanent removal and a drop from the course (see attendance policy). The University of New Mexico ensures freedom of academic inquiry,

free expression and open debate, and a respectful campus through adherence to the following policies: D75: Classroom Conduct, Student Code of Conduct, University Policy 2240 – Respectful Campus, University Policy 2210 – Campus Violence.

Connecting to Campus and Finding Support: UNM has many resources and centers to help you thrive, including opportunities to get involved, mental health resources, academic support such as tutoring, resource centers for people like you, free food at Lobo Food Pantry, and jobs on campus. Your advisor, staff at the resource centers and Dean of Students, and I can help you find the right opportunities for you. Wellness: If you do need to stay home due to illness or are experiencing a wellness challenge, please take advantage of the resources below. You can communicate with me at jpalacios@unm.edu; I can work with you to provide alternatives for course participation and completion. Let me, an advisor, or another UNM staff member know that you need support so that we can connect you to the right resources. UNM is a mask friendly, but not a mask required, community. If you are experiencing COVID-19 symptoms, please do not come to class. Support: Student Health and Counseling (SHAC) at (505) 277-3136. If you are having active respiratory symptoms (e.g., fever, cough, sore throat, etc.) AND need testing for COVID19; OR If you recently tested positive and may need oral treatment, call SHAC. TimelyCare: Free 24/7 virtual care services (medical, emotional support, health coaching, self-care, basic needs support. Go to http://timelycare.com/unm. LoboRESPECT Advocacy Center (505) 277-2911 can offer help with contacting faculty and managing challenges that impact your UNM experience.