Welcome to Math 1430

APPLICATIONS OF CALCULUS I

INSTRUCTOR:
Precious Andrew
pandrew@unm.edu
Office: AS123

TUTORING/OFFICE HOURS:
Tuesdays 12:30-1:30pm and Tuesdays and Thursdays 4:15-5:45pm, or by appointment.

OFFICE: Arts and sciences 123 (A123). Zoom hours will be facilitated using the link posted in Canvas.

COURSE DESCRIPTION:
An algebraic and graphical study of derivatives and integrals, with an emphasis on applications to business, social science, economics and the sciences. Meets New Mexico General Education Curriculum Area II: Mathematics and Statistics. (3 Credit Hours).

PREREQUISITES:
C or better in Math 1220, 1240, or 1250 or an appropriate placement test. Check with your advisor to make sure you meet the requirements.

START BY EXPLORING OUR COURSE AT CANVAS.UNM.EDU
Here you will find course information and our textbook: Calculus with Applications,12th edition, by Lial, M. L., Greenwell R. N., & Ritchey N. P. Pearson Publishing. **In Canvas you can also access your online MyMathLab homework.**

MYMATHLAB COURSE ID: andrew18232

THE GRADE YOU EARN WILL BE BASED ON THE FOLLOWING ASSIGNMENTS AND SCALE:

2 Exams (100 pts. each)	**200 points**
MyMathLab Onine HW	**100 points**
Additional Assignments	**100 points**
Final Exam	**150 points**
Total	**550 points**

A+: 97-100%	**A: 93-96%**	**A-: 90-92%**
B+: 87-89%	**B: 83-86%**	**B-: 80-82%**
C+: 77-79%	**C: 73-76%**	**C-: 70-72%**
D+: 67-69%	**D: 63-66%**	**D-: 60-62%**
F: < 60%		

FOR THIS CLASS, YOU WILL NEED reliable internet access, access to MyMathLab a a printer, a scanner or scanner app like AdobeScan or Camscanner, and a scientific calculator.

LATE WORK is generally not accepted, but please contact me if you have special circumstances.

ATTENDING CLASS IS ESSENTIAL. Please commit to attend every class meeting, unless there is an emergency. If you miss three classes, you may be dropped from the course. This is because students who miss this many class meetings rarely successfully complete the course. In an online course, not submitting an assignment will be regarded as an absence. Please communicate any special circumstances with me.

MECS DIVISION CHAIR:
Andrew Taylor
ataylor19@unm.edu

ABOUT YOUR INSTRUCTOR:
I hope to see you in office hours! For now, here is a little about me. My name is Precious Andrew. Most students call me my first name, Precious, or Ms. Andrew if you prefer. I have been teaching mathematics at UNM since 2007. I have lived in New Mexico since I was a child, I studied at UNM,I love red chile, and I enjoy powerlifting.

Tutoring:
You can schedule an appointment for free in-person or online tutoring. Stop by the Learning Center in the UNM-Valencia Campus library, email tutor@unm.edu, call (505)228-8860, or visit the link to schedule an appointment –

https://outlook.office365.com/book/TESTLearningCommons@unmm.onmicrosoft.com/

Grade mode and Withdrawals: You must select your grade mode (Letter Grade, CR/NC, or Audit) within the first 2 weeks of the semester. Students who withdraw after the deadline will receive a grade of W. If you do not withdraw (but stop attending), you may receive a failing grade. Make sure to drop the class on my.unm if you wish to do so. See the list of all deadlines: www.registrar.unm.edu

"You can totally do this!"

Here are some additional resources:

UNM Valencia Library - http://valencia.unm.edu/library/

UNM Valencia Life Resources - http://valencia.unm.edu/students/student-resources.html

Veteran's Resource Center - vrc@unm.edu

PASOS Resource Center - (505) 925-8546, pasos@unm.edu. The Resource Center is an on-campus center that serves as a "one-stop" for all non-academic needs of UNM-Valencia students.

Here are some of the student learning outcomes:

By the end of the semester, students should be able to:

A. State, motivate and interpret the definitions of continuity, the derivative, and the definite integral of a function, including an illustrative figure, and apply the definition to test for continuity and differentiability. In all cases, limits are computed using correct and clear notation. Student can interpret the derivative as an instantaneous rate of change, and the definite integral as an averaging process.

B. Use the derivative to graph functions, approximate functions, and solve optimization problems. In all cases, the work, including all necessary algebra, is shown clearly, concisely, in a well-organized fashion. Graphs are neat and well-annotated, clearly indicating limiting behavior. English sentences summarize the main results and appropriate units are used for all dimensional applications.

C. Graph, differentiate, optimize, approximate and integrate functions containing parameters, and functions defined piecewise. Differentiate and approximate functions defined implicitly.

D. State the main theorems of calculus correctly, including all conditions, and give examples of applications. These include the Intermediate Value Theorem, the Extreme Value Theorem, and the Fundamental Theorem of Calculus.

E. Compute integrals using the method of substitution, including changing the bounds in the case of definite integrals.

University Policies:

Title IX:

The University of New Mexico and its faculty are committed to supporting our students and providing an environment that is free of bias, discrimination, and harassment. The University's programs and activities, including the classroom, should always provide a space of mutual respect, kindness, and support without fear of harassment, violence, or discrimination. Discrimination on the basis of sex includes discrimination on the basis of

assigned sex at birth, sex characteristics, pregnancy and pregnancy related conditions, sexual orientation and gender identity. If you have encountered any form of discrimination on the basis of sex, including sexual harassment, sexual assault, stalking, domestic or dating violence, we encourage you to report this to the University. You can access the confidential resources available on campus at the LoboRESPECT Advocacy Center (https://loborespect.unm.edu), the Women's Resource Center (https://women.unm.edu), and the LGBTQ Resource Center (https://lgbtqrc.unm.edu).

If you speak with an instructor (including a TA or a GA) regarding an incident connected to discrimination on the basis of sex, they must notify UNM's Title IX Coordinator that you shared an experience relating to Title IX, even if you ask the instructor not to disclose it. The Title IX Coordinator is available to assist you in understanding your options and in connecting you with all possible resources on and off campus. For more information on the campus policy regarding sexual misconduct and reporting, please see https://policy.unm.edu/university-policies/2000/2740.html and CEEO's website.

If you are pregnant or experiencing a pregnancy-related condition, you may contact UNM's Office of Compliance, Ethics, and Equal Opportunity at ceeo@unm.edu. The CEEO staff will provide you with access to available resources and supportive measures and assist you in understanding your rights.

Credit-hour statement: This is a three credit-hour course. Class meets for two 75-minute sessions for fifteen weeks during the Spring 2026 semester. Please plan for a minimum of 6 hours of out-of-class work each week.

Accommodations:

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 arcsrvs@unm.edu or 505-277-3506.

Our classroom and university should foster mutual respect, kindness, and support. If you have concerns about discrimination, harassment, or violence, please seek support and report incidents. Find confidential services at LoboRESPECT Advocacy Center, the Women's Resource Center, and the LGBTQ Resource Center. UNM prohibits discrimination on the basis of sex (including gender, sex stereotyping, gender expression, and gender identity). All instructors are "responsible employees" who must communicate reports of sexual harassment, sexual misconduct and sexual violence to Compliance, Ethics and Equal Opportunity. For more information, please see UAP 2720 and UAP 2740.

Schedule of Topics:

Week of	Topics
Jan 19	Selected Review
Jan 26	Sec. 3.1: Limits
	Sec. 3.2: Continuity
Feb 2	Sec. 3.3: Rates of Change
	Sec. 3.4: Definition of the Derivative
Feb 9	Sec. 4.1: Techniques for Finding Derivatives
Feb 16	Sec. 4.2: Derivatives of Products and Quotients
	Sec. 4.3 The Chain Rule
Feb 23	Sec. 4.4: Derivatives of Exponential Functions
	Review
Mar 2	**Exam #1**
	Sec. 4.5: Derivatives of Logarithmic Functions
Mar 9	Sec. 5.1: Increasing and Decreasing Functions
	Sec. 5.2: Relative Extrema
	Sec. 5.3: Higher Derivatives, Concavity, and the Second Derivative Test
Mar 16	**Spring Break**
Mar 23	Sec. 5.4 Curve Sketching
	Sec. 6.2: Applications of Extrema
Mar 30	Sec. 6.4: Implicit Differentiation
	Sec. 6.5: Related Rates
Apr 6	Review
	Exam #2
Apr 13	Sec. 7.1: Antiderivatives
	Sec. 7.2: Substitution
Apr 20	Sec. 7.2: Substitution (finish)
	Sec. 7.3: Area and the Definite Integral
Apr 27	Sec. 7.4: The Fundamental Theorem of Calculus
	Sec. 7.5: The Area Between Two Curves
May 4	Review
May 11	Final Exam Tuesday, May 12th, 3:00-5:00pm