COURSE OUTLINE
MATH 181 – ELEMENTS OF CALCULUS II
UNM-VALENCIA – SPRING 2016
A129 – TTh 1200-1315 HRS

TEXT: Calculus with Applications, 10th ed.   INSTRUCTOR: Tim Brown
    By Lial, Greenwell & Ritchey   EMAIL: TLB.mathematician2@gmail.com

PREREQUISITES: A grade of C or better in MATH 180.

COURSE SCOPE: A study of integration, some methods of integration, multivariable calculus, simple differential equations and a basic review of probability and its relation to calculus.

Unit 1   Integration   (Chapters 7)
1. Antiderivatives
2. Substitution
3. The Fundamental Theorem of Calculus
4. The Area Between Two Curves

Unit 2   Further Techniques and Applications of Integration   (Chapters 8)
1. Integration by Parts
2. Volume and Average Value
3. Continuous Money Flow
4. Improper Integrals

Unit 3   Multivariable Calculus   (Chapters 9)
1. Functions of Several Variables
2. Partial Derivatives
3. Maxima and Minima
4. Lagrange Multipliers
5. Double Integrals

Unit 4   Differential Equations   Chapters 10)
1. Solutions of Elementary and Separable Differential Equations
2. Linear First-Order Differential Equations
3. Euler's Method
4. Applications of Differential Equations

Unit 5   Probability and Calculus   (Chapter 11)
1. Continuous Probability Models
2. Expected Value and Variance of Continuous Random Variables
3. Special Probability Density Functions

METHOD OF EVALUATION: The course consists of homework assignments, chapter tests and a comprehensive final examination covering Chapters 7-11. Assignments from MyMathLab, although strongly recommended, are At the discretion of the student and are not graded.

Homework	300 points
Tests (best 4 of 5)	400 points
Final Examination	300 Points
MAXIMUM POINTS	1,000 points

STUDENTS WITH DISABILITIES: UNM accommodates students with disabilities. During the first two weeks of the semester, those students should inform me of their particular needs.