COCONINO COMMUNITY COLLEGE  
COURSE OUTLINE

Revised by: Kate Kozak  October 28, 1998
General Education Criteria Reviewed by: Kate Kozak  October 28, 1998
General Education Outcomes reviewed:  March 23, 2001
Revised by: Kate Kozak  October 22, 2010
Revised by: Kathryn Kozak  January 14, 2016
Status: Permanent
Effective: Fall 2016

A. Identification:
   1. Subject Area: Math (MAT)
   2. Course Number: 211 SUN #MAT 2212
   3. Course Title: Business Calculus
   4. Credit Hours: 4
   5. Course Description: Integral and differential calculus, including multidimensional, with business and social science applications. General Education: Mathematics. Prerequisite: MAT 151 or placement. General Education: Mathematics. Four lecture. Spring.

B. Course Goal: To build student mastery of the fundamental principles and concepts of brief calculus in relation to business and social science in theory and application.

C. Course Outcomes: Upon completion of this course, student will be able to:
   1. evaluate limits;
   2. identify continuous and not continuous functions;
   3. identify differentiable functions;
   4. differentiate functions of one and several variables;
   5. determine maxima and minima of functions;
   6. solve optimization problems utilizing Lagrange multipliers;
   7. integrate functions of one and several variables;
   8. employ concepts in course to analyze and graph functions in 2D and 3D;
   9. and solve application situations related to methods presented in this course.

D. Course Outcomes Assessment will include:
   1. course grades determined by the instructor as outlined in the course syllabus;
   2. a comprehensive final exam.

E. Course Content will include:
   1. review of algebra and functions;
   2. limits and continuity;
   3. differentiation;
   4. integration;
   5. techniques of integration;
   6. functions of several variables including 3D surfaces;
   7. partial differentiation;
   8. optimization problems in both single variable and multivariable;
   9. Lagrange multipliers;
   10. double integrals;
   11. and applications.