

COCONINO COMMUNITY COLLEGE  
COURSE OUTLINE

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General Education Criteria Reviewed by: Kate Kozak  
General Education Outcomes reviewed:  
Revised by: Kate Kozak  
Revised by: Kathryn Kozak  
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December 4, 1991  
October 28, 1998  
October 28, 1998  
March 23, 2001  
October 22, 2010  
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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. and 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.