

MAT 212 Survey of Calculus    31035 MW 2:00-3:15 PM, Room 4-116  
31036 Online

MAT 212. Survey of Calculus. Credit Hours: (3) Introduction to the theory, techniques and applications of the differential and integral calculus of elementary functions with emphasis on applications in business, life, and social sciences. PREREQUISITE: MAT 152 or satisfactory score on mathematics skills assessment. Three lecture.

**Instructor:** Dr. Dave Graser

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**Office Hours:** MW 10:00 -11:00AM, 12:15-2:00PM, TTh 10:00-11:45AM

**Course Compass Course ID:** graser23688

**COURSE CONTENT:**

1. Limits and continuity
2. Derivatives
3. The laws of differentiation
4. Integration
5. The Fundamental Theorem of Calculus

**LEARNING OUTCOMES:**

**Upon successful completion of this course, the learner will be able to:**

1. Evaluate, graph and define functions.
2. Evaluate limits.
3. Evaluate derivatives using the rules of differentiation.
4. Determine maxima and minima of functions by applying differentiation.
5. Use calculus to analyze and graph functions.
6. Define derivatives and definite integrals.
7. Use basic integration techniques to evaluate integrals.

**Course Format:** *Section 31035* is a section that meets twice each week, but also has a significant component on the Internet. You are expected to work through problems on the Internet outside of class and then to use the class meetings to ask questions during class. Once you have completed the homework online, you'll also need to complete a quiz over the content.

*Section 31036* is an online section. The content for this section is delivered through the course website. You will complete homework problems to help you learn the material and then take a quiz to demonstrate that you have learned the course content. You have the opportunity to ask questions via email or through the courses Discussion Board. You may also attend the class meeting of section *31035* if you need more help.

In both sections, you'll be required to complete projects and technology assignments.

All the materials for the course are available at <http://www.coursecompass.com>. The textbook for the course is "Finite Mathematics and Calculus with Applications" by Lial, Greenwell, Ritchey (8<sup>th</sup> edition 2008). This book is available in the Yavapai College bookstore and is bundled with a special student access code. The textbook is also available online via a student access code that you can purchase online from within the class website (or use the one bundled with your textbook).