

**MAT 212 Survey of Calculus 14132 MW 2:00PM-3:15PM 4-118**  
**14133 Online**

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.

**Instructor:** Dr. Dave Graser

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**Office Hours:** Mon/Tues 11:00AM – 2:00PM, Weds/Thurs 12:30PM -2:00PM

**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 14132* is a section that meets twice each week, but also has a significant component online. You are expected to work through problems online 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. The online materials for the course are located at <http://my.yc.edu> (look for the MyLabsPlus link).

*Section 14133* is an online section. The content for this section is delivered through the course website at <http://my.yc.edu> (look for the MyLabsPlus link). 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 phone, email or during online office hours.

You are also required to complete projects and technology assignments. More information on the course requirements can be found in the Common Course Policies. The materials for the course are available at <http://my.yc.edu> (look for the MyLabsPlus link) with supplemental materials like handouts and videos at <http://www.whyseemath.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). If you have used this textbook for another course, you will be able to reuse the license you have already student access code for the textbook. Contact me for more details.