Math 12, Applied Calculus  
Section 70717, Fall 2021, 4 units

Class Meetings  
This class is asynchronous (no scheduled class meetings), from August 30 to December 9, and on December 13 for the final exam.

Information about your Instructor  
- Instructor: Betty Weiss  
- WVC Faculty webpage for Betty Weiss  
- For more information, please login to Canvas.

Communication Plan  
- You can reach me by email or by using the Canvas Inbox and I will respond within 24 hours, often sooner. You can also email me from within the xyzhomework system. Remember to let me know your name and what class you are in (I teach 3 math classes, so please mention Math 12). 
- You can leave voicemail at (408) 741–2596. Include your full name and what class you are in. 
- Student hours to meet with me one-on-one are MW 9-10:15 am, and Tuesdays 3-4 pm. To visit, go to the Canvas Calendar and click on Find Appointment, then choose a time slot. 
- I will grade and give you feedback on any work submitted in Canvas within one week, often sooner. Assignments, quizzes, and exams in xyzhomework are graded immediately. 
- Please check Canvas at least once a week to see class announcements, or even better, set your Canvas notification preferences to receive class announcements either by email or text.

Why Take Math 12?  
Applied calculus helps students understand rates of change, in order to analyze the fluctuating costs, revenues, and profits of a business, to make decisions and predictions, as well as to track trends. It can help prepare you for future coursework or careers in business, finance, management, and economics.

Required Materials  
- Purchase access to xyzhomework (this includes an electronic textbook and homework, quizzes, exams, and videos). Register for xyzhomework and use the Course ID 29377. 
- You will need a graphing calculator, either physical or online (desmos.com works well)

Graded Coursework  
- **Homework**: You will be doing your homework online through xyzhomework. It will help with your questions and give you instant feedback on your graded answers. You will get unlimited attempts for each homework problem. Homework can be turned in earlier than the due date, or turned in late if you activate one of your 10 “late passes”; there is a 10% penalty on late homework problems. Due dates will be shown in xyzhomework, but expect to have homework due every Sunday at 11:59 pm starting Sunday, Sept. 5. 
- **Quizzes**: You will be taking 9 quizzes online through xyzhomework, which will give you instant feedback on your graded answers. Quizzes will be timed (40 minutes), and you will get TWO attempts for each quiz problem. Due dates will be shown in the calendar in Canvas and in xyzhomework. Quizzes are due on Mondays, at 11:59 pm, except Quiz 1 will be Tuesday, Sept. 7 due to the Labor Day holiday. The lowest two quizzes will be dropped. Quizzes can be turned in
earlier than the due date, or turned in late if you activate one of your 10 "late passes"; there is a 10% penalty on late quiz problems.

- **Discussion forums**: We will have some graded Canvas Discussions. Check in early each week (before Wednesday) to see what that week’s discussion is about and make an initial post. Check back later in the week (Wednesday to Sunday) to read other’s posts and reply.

- **Exams**: You will be taking 4 exams online through xyzhomework, (all on Mondays: **September 20, October 11, November 1, November 22**) which will give you instant feedback on your graded answers. Exams will be timed (2 hours), and you will get TWO attempts for each exam problem. You can take the exam in any 2 hour time period on the exam day; you cannot stop partway through and continue later. No exams will be dropped. Exams must be completed by 11:59 pm on their scheduled date. If you miss one exam with a valid excuse, I will replace that exam score with your final exam score. If you need to take an exam earlier than the due date, contact me to discuss.

- **Final exam**: The 2 hour cumulative final exam will be **Monday, December 13, due at 11:59 pm**. The final exam will be taken in xyzhomework, in any 2 hour time block that day, and you will get TWO attempts per problem.

**About due dates**: Due dates are very important, both to help you keep on track to learn the material and to be fair to all students. Keep an eye on both the xyzhomework calendar (for homework, quizzes, and exams) and the Canvas calendar (for discussions). However, if you have extenuating circumstances let me know as soon as possible. We can work together to find solutions if you are not able to meet certain due dates.

**Grading**
Your grade will be a weighted average of homework (10%), quizzes (10%), discussion forums (5%), exams (60%), and the final exam (15%). The grade scale will be 90–100% A, 80–89% B, 70–79% C, 60–69% D, 0-59% F. Grades will be recorded in the Canvas gradebook; check there to track your progress.

**Accommodations for a Disability**
West Valley College is here to support you, and we want to make all learning experiences as accessible as possible. If you think you may run into academic barriers because of your disability (including permanent disabilities or chronic or temporary medical conditions), please let me know so we can privately discuss your options and create a plan that works for you. You may also want to register with the Disability and Educational Support Program (DESP). West Valley College’s DESP program is known for going the extra mile to support students, and they will work with you to establish reasonable accommodations for qualifying disabilities.

**Disability and Educational Support (DESP) Contact Information**
The **DESP office** is in the Student Services building. Their phone number is (408) 741-2010 (voice) or (408) 741-2658 (TTY).

**Student Help and Support**
West Valley College has many **Student Services** that are here to support your success and help you achieve your goals. College students often experience issues that may interfere with academic success such as stress, juggling responsibilities, life events, relationship concerns, sleep problems, or feelings of anxiety, hopelessness, or depression. All of us benefit from support during times of struggle – you are not alone. Helpful, effective resources are available for all students, and an important part of the college
experiences are learning how to ask for help. Getting help is the smart and courageous thing to do – for yourself, and for those who care about you.

- You can learn more about the broad range of confidential, mental health services for students on the Health Services webpage, including tele-mental health, anonymous online screenings, training and resources such as TAOConnect and Kognito, and online/local information and resources.
- National Suicide Prevention Lifeline (800) 273-TALK (8255)
- National Crisis Text Line: text “COURAGE” to 741741

**Learning Support/Tutoring**

West Valley College’s Success Center and Math Resource Center offer FREE tutoring! Visit their websites for more information about tutoring support available to you online. To receive free tutoring through the Math Resource you must add the free 0-unit course LRSV 110M, CRN 71461 through the Portal and then access tutoring through their Canvas course shell. NetTutor in Canvas is a free online tutoring service available 24/7.

**Course Information**

**Catalog Description:**

This course presents a study of the techniques of calculus with emphasis placed on the application of these concepts to business and management related problems as well as applications for social and life science majors. The applications of derivatives and integrals of functions including polynomials, rational, exponential and logarithmic functions are studied. This course is not equivalent to Math 3A.

Prerequisites: Math 106 or 106R or qualifying score on Placement Test and proof of Algebra II.

**Course Objectives:**

- Find the derivatives of polynomial, rational, exponential, and logarithmic functions.
- Find the derivatives of functions involving constants, sums, differences, products, quotients, and the chain rule.
- Sketch the graph of functions using horizontal and vertical asymptotes, intercepts, and first and second derivatives to determine intervals where the function is increasing and decreasing, maximum and minimum values, intervals of concavity and points of inflection.
- Analyze the marginal cost, profit and revenue when given the appropriate function.
- Determine maxima and minima in optimization problems using the derivative.
- Use derivatives to find rates of change and tangent lines.
- Use calculus to analyze revenue, cost, and profit.
- Find definite and indefinite integrals by using the general integral formulas, integration by substitution, and other integration techniques.
- Use integration in business and economics applications.
- Solve optimization problems in one and two variables.

**Student Learning Outcomes:**

- Use the concepts of limits to compute a derivative and instantaneous rate of change.
- Use differentiation to solve application problems (like optimization).
West Valley College Policies

It’s important for you to be aware of policies in the West Valley College Catalog. Below are a few key policies from the Rights and Responsibilities section you should know about.

- Attendance: Know that instructors may drop any student who does not attend the first class, who has missed any one class (or online assignment) during the first three weeks of instruction, or who has missed more than 10% of the total class hours (or classwork) for the semester. Stay engaged in this online course through Canvas! It is up to you to stay motivated and on track.
- Registration and Drops: Understand that it is your responsibility to make sure you are registered and/or dropped from any class by the deadlines listed in the schedule of classes.
- Withdrawal from a class: Make sure you know the last day to drop with a W (put that date in your calendar!). Even if you ask an instructor to drop you, it is still your responsibility, so double-check your enrollment status in the Portal. It’s important to know that instructors are required to issue a grade for any student still enrolled after the last day to drop.
- Academic Dishonesty: Understand what this means—it includes in-class cheating, out-of-class cheating, plagiarism, helping another student in cheating or plagiarism, or knowingly giving false information to college staff, faculty, administrators or other officials. You can receive a failing grade for the assignment if there is reasonable proof or documentation of academic dishonesty. Please seek help with your coursework from your instructor or a tutor instead of cheating.

Important Dates

- Last day to ADD this class: September 12
- Last day to DROP this class without a “W” and with a refund: September 12
- Last day to DROP this class with a “W:” November 18
- FINAL EXAM for this class: Monday, December 13

West Valley College Nondiscrimination Statement

The District, and each individual who represents the District, shall provide access to its services, classes and programs without regard to national origin, religion, age, sex or gender, race, color, medical condition, ancestry, sexual orientation, marital status, physical or mental disability, or because he/she is perceived to have one or more of the foregoing characteristics, or based on association with a person or group with one or more of these actual or perceived characteristics.