

DVC – MATH 182 – SYLLABUS



*“You can’t
direct the wind –
but you can adjust
the sails.”*

Course: Math 182 – Calculus: Management/Life Science &
Social Science

Section: 2581

Term: Spring 2020

Time: MW 2:30 pm – 4:35 pm

Room: Math–251

Instructor: Mr. Narin

Office Hour: Wed, 1–2, Math Lab [NO MORE]

Class Website: www.mathwithsteve.com

My Email: stevenarin314@gmail.com

DVC Math Lab Hours

Monday–Thursday: 8:00am – 8:20pm

Friday: 10:00am – 1:50pm



Academic Proctoring Center – BFL-210 (for make-up tests)

When I have confirmed to you that a make-up test is ready for you, you just go to the Proctoring Center at your convenience, and allow up to 2 hours for the test. The last day make-ups can be taken is May 15.

Mon: Closed

Tue: 9:00am – 12:00pm

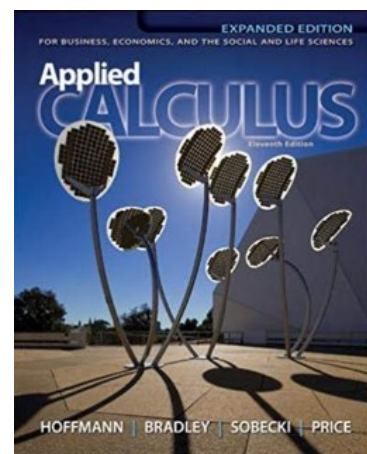
Wed: 1:00pm – 6:00pm

Thu: 4:30pm – 7:30pm

Fri: 10:00am – 3:00pm

Required

Text: You are responsible for having the exact book (not an online book) and solutions manual that the DVC bookstore sells -- where you buy (or rent) them is up to you.



Calculator: You must bring a calculator to every class meeting. A simple scientific calculator will be perfect – just look for the LOG button – TI recommended; it's about \$13. As much as I hate students using calculators, I'm going to allow a scientific calculator on every quiz and test.



A *graphing calculator* (or any calculator that does algebra) would be a good learning tool and a good investment for the future, but will not be allowed on quizzes or tests in my section of Math 182. Also, no cell-phone calculators (or any wireless devices) are allowed.

Email: As a DVC college student, you are required to check your school email account on a regular basis.



Homework

Homework will be assigned, primarily from the text, after each class meeting, sometimes in class, but usually in the Schedule at the class website. Although homework will not be collected and is not part of your grade, you are nevertheless expected to do it, and I reserve the right to request to see your homework at any time. But don't sweat it: If it appears that you are being successful in the class – as indicated by attendance, punctuality, quizzes, tests, and class participation – I won't be nagging you to see your homework.

The problems I assign are designed to inform you as to what skills and concepts you are supposed to be gaining from this class. In other words, you need to do as much homework as you need to do, in order to achieve the degree of success that you desire. This might mean you do just a few of each type of problem until you understand the concept well; it might mean you do most or all of the problems, or even more than all the problems. In short, it's up to you to discover the homework strategy that suits your personal learning style.

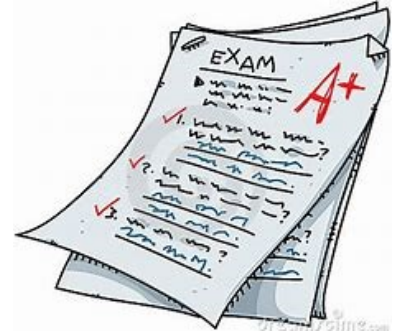
Grading Components

Tests

~~60%~~

[Now 80%]

There will be four major tests, the first three on Mondays (purpose: to give you the weekend to study for the tests), and the fourth on Wednesday (since it's the last day of the semester). The tests will contain a combination of multiple-choice questions and "show your work" questions (with partial credit possible). ~~Every test will have a couple of extra credit questions.~~



~~One of the first three tests can be made up once—anytime during the semester, even if passed (no penalty, but no extra credit). Your score will be the greater of the original test and the make-up test. If you miss one of the first three tests, that will obviously be your one make-up test, but it must be taken within two weeks of the day the test was returned to the class.~~

I will drop your lowest test.

Quizzes

~~35%~~

[Now 15%]

A quiz will be given at the end of every class meeting (except for the first day of class and the four test days) and will always include an extra credit question. The quizzes cover primarily the lecture from the previous class meeting, but might also include previous material. Only the first 9 quizzes are counted toward your grade.



~~I will drop your four lowest quizzes lowest quiz, but neither of the last two. There are NO make-ups on quizzes; if you miss a quiz, that will be one of the four that will be dropped.~~

Power Test 5% [Everyone gets a 10]

The Power Test is a 2-minute, multiple-choice test containing 10 questions, no calculator allowed. This test must be passed (but just once!) in order to pass this class. A passing grade is a perfect score of 10. The Power Test will be offered at almost every class meeting once I start giving them later in the semester.

Super Quiz 0%

In order to receive a **grade of A** in this class, you must do some independent study on a topic of your choice, chosen from a few that I will specify. Competence in that topic will be ascertained by a Super Quiz, on which you must score essentially 100%. You may take this quiz more than once if needed.

Letter Grades

- A – 90% and up
- B – 80% to 89%
- C – 70% to 79%
- D – 60% to 69%
- F – below 60%

*Live as if you were to
die tomorrow.*

*Learn as if you were to
live forever.*

Mahatma Gandhi

Drop Policy

It is the student's responsibility to drop the course; however, I am mandated to drop any student who does not attend the first class meeting. I have the right to drop any student by the end of the fifth week of the semester if the student is not making adequate progress due to excessive absences or tardiness.

Student Learning Outcomes and Course Content

From the DVC Catalog:

This is the first in a two-term calculus sequence for management, life science, and social science majors. Topics include the derivative and its applications (including curve sketching, optimization, and rates of change), an introduction to the integral (including Riemann sums and the Fundamental Theorem of Calculus) and its applications. C-ID MATH 140, CSU, UC (credit limits may apply to UC-see counselor)

Student Learning Outcomes

- A. Find the derivatives of polynomial, rational, exponential, and logarithmic functions.
- B. Find the derivatives of functions involving constants, sums, differences, products, quotients, and the chain rule.
- C. Sketch a 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.
- D. Analyze the marginal cost, profit, and revenue when given the appropriate function.
- E. Determine maxima and minima in optimization problems using the derivative.
- F. Use derivatives to find rates of change and tangent lines.
- G. Use calculus to analyze revenue, cost, and profit.
- H. Find definite and indefinite integrals by using the general integral formulas, integration by substitution, and other integration techniques;
- I. Use integration in business and economics applications.

Course Content:

- A. Functions and their graphs (including exponential and logarithmic functions)
- B. Limits and applications drawn from business, economics, the social sciences, biology, health and medicine, and/or environmental studies
- C. Slopes (including tangent lines) and rates of change and applications drawn from business (marginal cost, profit and revenue), economics, the social sciences, biology, health and medicine, and/or environmental studies
- D. The Derivative, including intuitive limit definition
- E. Techniques of differentiation, product, quotient, and chain rule, implicit differentiation
- F. Applications of the derivative to graphing, optimization problems, and related rates problems
- G. Derivatives and integrals involving exponential and logarithmic functions, and applications of these drawn from business, economics, the social sciences, biology, health and medicine, and/or environmental studies
- H. The indefinite integral
- I. Multiple techniques of integration including substitution
- J. Riemann sums, the definite integral, approximating the definite integral as a sum, the fundamental theorem of calculus
- K. Applications of the definite integral drawn from business, economics, the social sciences, biology, health and medicine, and/or environmental studies
- L. Computing areas, the area between curves, and applications drawn from business, economics, the social sciences, biology, health and medicine, and/or environmental studies.

"Wisdom
begins
in wonder."

Socrates

