Syllabus: Math 12, Sec. 61 Fall 2016

Instructor: Dr. Bill Wilson
Office Hours: 5-6 Monday, Wednesday
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Required Materials:
Calculus and Its Applications (11th edition) by Bittinger, Ellenbogen, and Surgent
Graphing calculator

Course Description: Introduction to limits, differentiation, and integration of single variable functions. Differentiation of multivariate functions. Applications in business, economics, and social science.

Student Learning Outcome Statements (SLO) :

- Use correct notation and mathematical precision in the evaluation and interpretation of derivatives and integrals.
- Evaluate, solve, interpret and communicate business and social science applications using appropriate differentiation and integration methodologies.

Course Objectives
A. Identify the domain and range of functions
B. Evaluate limits and use them to determine continuity
C. Evaluate derivatives using the definition and using the sum, difference, product, quotient, power, and chain rules, and use derivatives to find rates of change and tangent lines
D. Differentiate implicit and inverse functions, exponential and logarithmic functions
E. Use derivatives to solve minimum and maximum problems
F. Use derivatives to assist in graphing functions
G. Interpret graphs and derivatives for the following real-life functions: demand, supply, cost, revenue, profit, exponential growth, and exponential (radioactive) decay
H. Use antiderivatives to solve first-order differential equations
I. Integrate functions using antiderivatives, properties of integrals, substitution method, and (optional) integration by parts; Approximate definite integrals as a (Riemann) sum
J. Apply integration techniques to solve such real-life problems as computation of area, volume, probability, annuities, and consumer/producer surplus
K. Identify convergence or divergence of improper integrals
L. Differentiate multivariate functions and use partial derivatives for solving maximum-minimum problems and constrained maximum-minimum problems

Homework: Homework will be assigned most classes.

Exams: Three exams will be given plus the final exam. There will be no makeups. If an exam is missed because of a valid excuse, an equivalent of the final exam score will be used as the score for the missed exam.

Quizzes: Regular quizzes will be given. You may correct and resubmit two quizzes for a higher score.

Final Exam: A comprehensive final exam will be given.

Accommodations: Students requiring accommodations are welcome in this class. Please notify me immediately if you have special learning requirements. We need to make arrangements with DSS as soon as possible. Go to https://www.deanza.edu/dss/ for more information.

Grading:
3 midterms @ 15% = 45%
homework and class work: 10%
quizzes: 15%
final exam: 30%

Scale:

A+: 97+	A: 93+	A-: 90+
B+: 87+	B: 83+	B-: 80+
C+: 77+	C: 70+	
D: 60+		
F: < 60		

ESL: If English is a second language, a print English translation dictionary is allowed for exams/quizzes.

Expectations of Students:

1. **Academic dishonesty will not be tolerated.** If a student is found cheating on an exam or quiz, he or she will receive a 0 for the item. Repeated instances of cheating may lead to failing the course and further action.
2. **Showing your work.** You need to show your work on homework and exams to receive full credit.
3. **Respect you fellow students.** Silence cell phones and tablets in class.