

Cuyamaca College

Math 180 – Analytic Geometry & Calculus I Section 1724 – Summer 2015

Instructor: Dan Curtis

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Class Times: MTWTh 8:30 am – 12:00 pm

Room: H114

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WebAssign Course Code: **cuyamaca 0342 7716**

Prerequisites: A grade of C or better in (Math 170 and Math 175) OR Math 176 or the equivalent.

Text and Materials:

- **Calculus, Early Transcendentals**, Seventh Edition, Stewart
- A graphing calculator is required. The TI 84+, TI 89, Voyage 200 or TI-92+ are highly recommended.

Course Description: Graphic, numeric and analytic approaches to the study of analytic geometry, limits and continuity of functions, and introductory differential and integral calculus. Applications involving analysis of algebraic, exponential, logarithmic, trigonometric and hyperbolic functions from a variety of disciplines including science, business and engineering. First of three courses designed to provide serious science students with a solid introduction to the theory and techniques of analysis.

<u>Important Dates:</u>	Last day to add classes/Last day to drop and qualify for a refund and to drop without receiving a “W”	Thursday, June 25
	Last day to file a petition for credit/no credit	Thursday, June 25
	Last day to drop with a ‘W’	Wednesday, July 16
	Final Exam (Cumulative)	Thursday, July 30 9:30-11:30am

It is the student’s responsibility to take care of any administrative procedures involved in dropping should he/she stop attending class.

Grading: Your final grade will be based on the percentage of total points you earned, using the standard scale: A = 90% and above, B = 80-89.9%, C = 70-79.9%, D = 60-69.9%, F = below 60%.

<u>Grading Summary:</u>	Exams (3 @ 17% each):	51%
	WebAssign Homework:	20%
	<u>Final Exam:</u>	<u>29%</u>
	Total	100%

Exams: There will be three one-hour exams (each worth 17%) during the semester. Exam questions will be based on the homework, and I will review the material covered on the exam during class on the last class day before the exam. No makeup exams will be given, but if you contact me **before** the day of an exam, I may be able to make arrangements for an alternate time for you to take the exam. The final exam (worth 29%) will be cumulative. Cell phones, or other communication devices, are not allowed on exams. Put them in your pocket or purse. If I catch you with one out, I will take your exam away and you will only receive credit for what you have completed. **Calculators will not be allowed on Exam #2.**

Homework: Homework assignments (worth 20% of your overall grade) will be completed using WebAssign and all homework will have a due date of the day of the final. Although you can receive credit on the homework all the way up until the day of the final, because the material from this course builds on itself, it is important to keep up with the homework assignments as they are covered.

Class Schedule (Exam days are subject to change as necessary)

Exam #1:	Wednesday, July 1st:	Chapter 2
Exam #2:	Tuesday, July 7th:	3.1-3.6, 3.11 (No Calculators)
Exam #3:	Thursday, July 23rd:	3.9, 4.1-4.4, 4.7
Final Exam:	Thursday, July 30th	All sections listed in WebAssign

STEM Achievement Center: To support your efforts to succeed in this class, I refer you to the STEM Achievement Center (H-Building). The STEM Achievement Center is a resource center that provides individual assistance in mathematics and science. Instructors and student tutors are available to answer homework questions, give confidence, and support math students. Students also have access to graphing calculators, textbooks, instructional videos, and computer tutorial programs. Computers are also available for student use. The hours for the STEM Achievement Center will be announced the first day of class.

Course Objectives (Expected Student Learning Outcomes)

To successfully complete this course, students must demonstrate the ability to:

- Define and evaluate the derivative both graphically as the slope of the tangent line to the graph of a function at a point and numerically as a limit of difference quotients.
- Evaluate the second derivative and use it to interpret the concavity of a function at a point.
- Use differentiation to solve application problems involving velocity and acceleration.
- Identify and apply formulas for derivatives of common functions including power, exponential, trigonometric, and inverse trigonometric functions.
- Identify and apply rules for differentiation including the product and quotient rules, the chain rule, and implicit differentiation.
- Identify local maxima and minima of a function using critical points.
- Use critical points and points of inflection to graph a function.
- Solve application problems requiring the use of the derivative including the effect on economic applications and optimization.
- Identify the definition of the definite integral as the limit of Riemann sums and interpret the definite integral in terms of area.
- Use the definite integral to solve application problems involving distance traveled and average value of a function.
- Reconstruct a function from its derivative and employ various methods including integration of power functions and substitution to find antiderivatives.
- Select and apply appropriate technology including but not limited to computer programs and graphing utilities to model, analyze and interpret a collection of data or to solve real-world application problems requiring the use of analytic geometry and calculus.

Attendance: Good attendance is a must for success in this class. College policy states that a student may be dropped from the course for excessive absences or tardies.

My Policy: Four absences during the first four weeks or six absences during the entire semester and you may be dropped – arriving significantly late or leaving significantly early counts as half an absence.

Disability Support Services: Academic accommodations are available for students with disabilities. Please identify yourself to your instructor and to DSPS staff so that the appropriate accommodations can be ensured. DSPS is at A-300, LRC (660-4239)

Academic Honesty: Academic dishonesty of any type by a student provides grounds for disciplinary action by the instructor or college. If you cheat, there will be consequences: I may give you a zero on the assignment or a zero in the course, or other additional consequences, regardless of whether you were the giver or receiver of the cheating.

Misconduct: Disruptive or threatening behavior or any conduct that interferes with my ability to teach or another student's ability to learn will not be tolerated. Such actions could result in a warning, removal from the class, or referral to the Dean for disciplinary action. Please turn off your cell phones during class.