

Differential Calculus 1 Spring 2024

Section 004 crn 10593

Monday Wednesday Friday 9:10 - 10:30 BR-08

Professor John Jernigan

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Office: B2-25C 17th and Spring Garden

Text: Stewart Calculus early Transcendental

The subject matter of the course (differential calculus) is difficult to master and will require your undivided attention if you are to succeed. Therefore, **cell phones must be turned off and put away for the duration of the class.** Anyone using a phone during class will be asked to put it away. Having to be told repeatedly (more than three times) will result in expulsion from the course. Phones, laptops, calculators, and notes are prohibited during exams. Lateness is rude and disruptive, and therefore not permitted.

Your syllabus, homework assignments, practice tests and quizzes are posted on the web under the address above. Please use this resource to your benefit. In particular, you may check the quizzes in advance by going to the site. I have also included several links you may find useful.

There will be three tests and a final exam, as well as a short (5 question) daily quiz selected from the homework exercises. The quizzes are intended as a check on your progress, and will be part of the grade. There will be absolutely no makeup quizzes given. Missing 6 or more quizzes will result in a failing grade. This also means that **missing more than 6 classes will result in an F** irrespective of grade. If an emergency arises and you cannot take a scheduled exam, you must contact me within 24 hours of the exam to arrange a make-up time. Otherwise the exam will not be made up and the grade will be 0.

Grading will be as follows: the total quiz score counts as one test and the final counts as two. Thus the formula for grading will be

$$\frac{\text{test 1} + \text{test 2} + \text{test 3} + \text{total quiz} + 2 \times \text{final}}{6}$$

Grades are 90 - 100 A; 80 - 89 B, 70 - 79 C, 60 - 69 D, < 60 F An "I" is only given if a student is currently passing, but cannot take the final due to a documented emergency. **It is your responsibility to keep track of how well you are doing in the class.** Keep all completed quizzes and exams in order to keep a record of your scores.

Please bring your textbook, pencil and paper to each class, as we will often do problems during the class period. We will cover a significant amount of material this semester. You are encouraged to read ahead to prepare for class, as well as complete the homework assignments.

Office hours are in BR-08. M W F 10:30 - 11:00 (i.e. after class) or M W 2:30 - 4:30, F 1:00 - 3:00

You are also encouraged to use the Learning Lab You can find help on the Main campus in the Learning Lab. Free, peer tutoring is available beginning with the second week of classes for all current CCP students. Free, weekly workshops, which begin in the third week of classes, are also available to all CCP students. For more information, go to [learning lab site](#)

Important dates can be found on the [Academic Calendar](#)

In the unlikely event that, due to an emergency, you cannot make it to a scheduled exam, you must contact me within 24 hours by email. Written documented proof is required for excused absences. Otherwise missing an exam will result in a 0. Students must be familiar with and adhere to the college's policy on [Academic Integrity](#).

Students who believe they may need an accommodation based on the impact of a disability should contact me privately to discuss their accommodation form and specific needs as soon as possible, but preferably within the first week of class. If you need to request reasonable accommodations, but do not have an accommodation form, please contact the Center on Disability, room BG-39, phone number 215-751-8050.

Every classroom has a poster with instructions on how to evacuate the room in an emergency. The poster shows how to go to the nearest exits, and where the nearest rescue area is located. You should read this poster carefully so you will know what to do in the event of an emergency evacuation. Also, if you need assistance to leave the building, you should let your instructor know. Someone will help you get to the nearest rescue area.

In the event of inclement weather you can check <http://www.ccp.edu> to determine if the school is closed.

Unit I

Chapter 2 Introduction to Differential Calculus, Introduction of Limit, Limit Laws and Limits of Functions, Precise Definition of Limit, Continuity, Limits at Infinity, Tangents and Rates of Change
Introduction to Derivative, Derivatives as functions
Unit I Exam covering material from Chapter 2

Unit II

Chapter 3 Derivatives of Polynomial and Exponential Functions, Product and Quotient Rules, Derivatives of Trigonometric Functions, Chain Rule, Implicit Differentiation, Higher-order Derivatives, Derivatives of Logarithmic Functions, Hyperbolic Functions, Related Rates
Unit II Exam covering material from Chapter 3

Unit III

Chapter 4 Local and Absolute Extreme Values, Mean Value Theorem, Derivatives and the Shape of a Graph, Limits of Indeterminate Forms, Curve Sketching, Optimization Problems
Chapter 5 Area Problems, Definite Integrals, Fundamental Theorem of Calculus, Indefinite Integrals, Integration by Substitution
Unit III Exam covering material from 4.1 - 4.10, 5.1 - 5.3

Final Cumulative Final Exam covering all material from previous units.