MA210-02 CALCULUS I (4)

Fall 2013 8/26 – 12/06/2013

MWF 10:30 – 11:20AM & T 1:30 -2:20PM, **HENR 107**

INSTRUCTOR: Dr. CHOCK Y. WONG

Office: WESS 109 (Phone #: 739-4682) cwong@chaminade.edu

Office Hours: W 11:30am – 12:30pm; TTH 10:00 - 12:00Noon; or by appointments.

Course Description: This is the first course in a three-semester sequence of differential and integral calculus. Major topics include limits and continuity, differentiation and integration of algebraic functions and trigonometric functions, and basic applications.

Prerequisites: Precalculus (MA110 or equivalent).

Text Book: Larson/Hoststler/Edwards:

CALCULUS Of A Single Variable (9th edition).

Objectives: By taking this course, the student will

(1) gain understanding of the concept of limits;
(2) gain understanding of the continuity of functions;
(3) gain understanding of the concept of the derivative, and how it is related to the behavior of a function;
(4) develop skills to compute derivatives, and demonstrate a comprehension to use 8 basic formulas and 5 general rules for differentiation;
(5) develop skills to use derivatives in the following applications: Critical point analysis, graph sketching, and optimization problems;
(6) gain understanding of the concepts of indefinite integration and definite integration, and the Fundamental Theorem of Calculus;
(7) develop skills to calculate integrals, and demonstrate a comprehension to handle the basic antidifferentiation formulas and the U-substitution method;
(8) develop skills to solve applied problems using integrals.

Standard writing format and basic algebraic skills will be emphasized throughout the course. Most assignments, quizzes and exams are not in multiple-choice format. Be ready (or learn how) to write solutions in step-by-step manner.

Topics: Chapters 1 to 4 and selected sections from Chapter 7 will be covered.

(1) Limits and continuity. (Ch.1)
(2) Differentiation. (Ch.2)
(3) The Mean Value Theorem and applications of differentiation. (Ch.3)
(4) Definite and indefinite integration. (Ch.4)
(5) (Optional) Applications of the integral in geometry: Areas, volumes, and arc lengths. (§§7.1–7.4)

Homework: Just to remind you the only way to reach success in this course is to attend and actively participate in all classes, and **do more exercises**. In order to keep up with the fast pace of the course, you are advised to do as many recommended *on-your-own* problems (they may be used as quiz problems) as you need for basic drills, meanwhile turn in all assignment worksheets **on time**. You are always encouraged to form study groups and seek help from the tutors in Students Service Center.

Follow the guidelines below when turning in your assignment worksheet:

(1) Most importantly, **be on time**. Grading penalty applies to late homework papers.

(2) Use regular (10.5 x 8 in.) ruled paper, and write on only **one side** of the paper.

(3) Use **pencil only** to write your solutions and leave **spaces between problems**.

(4) Use **graph paper** for graph sketching.

(5) Staple all pages with the assignment handout sheet (if there is one) as the **cover page**.

R-marks *given to homework papers*: If you get your homework back without a score but a "**R**-mark" (= "Redoing"), which indicates that you are required to **redo** some problems (will be indicated by circling on your paper) because of typical errors, or missing key steps, or the work was too messy to be graded — you need to **re-submit your redone work, together with the original paper, within a period of 3 working days**. Take the advantage of this "R-mark" design — for it actually provides a second chance for you to correct errors and obtain a higher score.

Calculator: A scientific calculator is required in class and is allowed in all quizzes and exams; graphic calculators are helpful, but not required. **Please note that cellular phones are not allowed to be used as calculators in all quizzes and exams.** [Also, "the use of cellular, wireless and other mobile telephones while in class" is prohibited — this is a policy of the Division of Natural Sciences & Mathematics, also see related sections in CUH Student Handbook; emergency calls shall be engaged in outside of the classroom.]

Quizzes and Exams:
Up to 10 quizzes will be given, with prior announced details for each quiz. To discourage absences from class, **no make-up quiz** will be allowed in general; please also be aware that some quizzes may be given in the 4th hour.

A mid-term exam will be given on Week 9, to cover Chapter 1 and 2. The Final Exam is expected to be accumulative.

Grading: (subject to changes)

ATTENDANCE:	8% of the total	**A:**	90 – 100%
HOMEWORK:	35% of the total	**B:**	80 – 89%
QUIZZES:	15% of the total	**C:**	70 – 79%
Mid-term EXAM:	14% of the total	**D:**	60 – 69%
FINAL EXAM:	28% of the total	**F:**	below 60%