MA110 PRECALCULUS

Spring 2002

TTH 9:30 – 10:50pm HH225

INSTRUCTOR: Dr. CHOCK Y. WONG

Office: Henry Hall 018 (Phone: 739-4682)

Office Hours: MW 11:40–12:50, TH 1:00–2:00, TH 2:00–3:30, or by appointments.

Course Description: Foundation for further study in mathematics. Primarily the preparatory course for Calculus I. Topics include basic concepts of functions and their graphs, polynomial and rational functions, exponential and logarithmic functions, trigonometric functions of real numbers and angles, analytic trigonometry, and other selected topics.

Prerequisites: MA103 or equivalent, or by placement test.

Text Book: PRECALCUS Mathematics for Calculus (3nd edition). By Stewart/Redlin/Watson. *Brooks/Cole Publishing Company.* ISBN 0-534-34502-2.

Objectives: This course is designed to prepare students for calculus courses. By taking this course, students will

(1) gain better understanding of the fundamentals of coordinate geometry;
(2) gain understanding of the concept of functions: (i)algebraic definition and graph of a function, and (ii)combinations of functions;
(3) develop algebraic and graphical skills to work with polynomial and rational functions;
(4) develop algebraic and graphical skills to work with exponential and logarithmic functions;
(5) gain better understanding of trigonometric functions of real numbers;
(6) gain better understanding of trigonometric functions of angles;
(7) develop skills in analytic trigonometry: Using trigonometric identities in simplification and evaluation of trigonometric expresions;
(8) develop skills to solve trigonometric equations;
(9) gain understanding of more advanced analytic geometry topics.

Topics: This course will cover 3 parts of contents:

(1) PART I. Functions and basic analytic geometry: §§1.8, 1.10, Chapter 2 (§§2.1, 2.2, 2.5–2.7), Chapter 3 (§§3.1, 3.2, 3.5), and Chapter 4 (selected sections).
(2) PART II. Trigonometry: Chapter 5, Chapter 6, Chapter 7 §§7.1–7.5).
(3) PART III. Advanced topics: Selected sections from Chapter 9.

Homework: In order to keep up with the progress of the course, many odd numbered (and occasionally even numbered) problems in each section being taught will be assigned for students' practice (**"on-your-own"** exercises) — please note that these problems are also in the "test bank" of the Quizzes to come. Some odd or even numbered problems,

as well as extra handout assignment worksheets, **may be collected and graded by the instructor** (TBA). To turn in a homework assignment, the guidelines below must be followed:

(1) It must be turn in **on time**. Grading penalty will be applied to late homework.
(2) Use regular 8 by 11 " ruled paper, and write on only **one side** of the paper.
(3) Use **pencil** to write your solutions and leave **spaces between problems**.
(4) All graphs must be drawn on **graph paper**.
(5) Staple all pages, and use the handout worksheet as the cover page.

Sometimes you may get back your homework with an "**R**" grade — this means the instructor requires you **redo** some of the problems, due to reasons such as you've made typical errors, or you've missed an important step, or your work is too messy to be graded. In most cases, an "R" grade is just giving you the second chance to work out a better solution thus to get a better grade. The redoing must be submitted in the next class meeting, together with the original work.

Quizzes and Exams:

There will be weekly quizzes (usually once per week, but 12 best scores will be counted towards your course grade), one mid-term exam (@ Week 8, to cover Chapter 1, 2, 3, and 4) and a accumulative Final Exam. To stress the importance of regular attendance for this course, **no** make-up quiz will be allowed in general.

Grading: (subject to changes)

HOMEWORK:	25% of the total
QUIZZES:	25% of the total
Mid-term EXAM:	17% of the total
FINAL EXAM:	33% of the total