COURSE LEARNING OUTCOMES

DEPARTMENT: Mathematics

COURSE #: 19500 **COURSE TITLE: Pre-Calculus** CATEGORY: Prerequisite to course required of all majors TERM OFFERED: Spring 2007 PRE-REQUISITES: a grade of C or higher in Mathematics 19000 or . placement by the department PRE/CO-REQUISITES HOURS/CREDITS: 4 hrs./ week; 3 credits. DATE EFFECTIVE: 1/23/07 COURSE COORDINATOR: Stanley Ocken	**CATALOG DESCRIPTION** Intervals, inequalities, operations on functions, inverse functions, graphing polynomial and rational functions, binomial theorem, exponential and logarithmic functions, trigonometric functions and formulas. **Required Text:** Precalculus: Mathematics for Calculus, 7th edition; by Stewart, Redlin, Watson, Brooks-Cole, ISBN# 0-495-10997-5:

COURSE LEARNING OUTCOMES

Please describe below all learning outcomes of the course, and indicate the letter(s) of the corresponding Departmental Learning Outcome(s) (see list at bottom) in the column at right.

After taking this course, the student should be able to:	Contributes to Departmental Learning Outcome(s):
1. solve rational equations and inequalities in one real variable;	a
2. graph linear, polynomial, trigonometric, exponential, and logarithmic equations;	a, b
3. work with transformations of, and translate between, graphs and equations;	a, b
4. determine whether a graph is the graph of a function;	a, b, e1
5. demonstrate fluency with function notation, including composite and inverse functions;	a, b
6. construct a quadratic polynomial model of appropriate real-world problems;	a, b, c
7. find maximum /minimum values for a quadratic function and apply to optimization problems;	a, b, c
8. state and apply trigonometric identities;	a, b
9. represent and solve real-world problems involving exponential growth and decay	a, b, c
10. solve other problems appropriate for a course in pre-calculus	

COURSE ASSESSMENT TOOLS

Please describe below all assessment tools that are used in the course.
You may also indicate the percentage that each assessment contributes to the final grade.

1. Final exam: 40%
2. In-class exams: 40%
3. In-class quizzes: 20%

DEPARTMENTAL LEARNING OUTCOMES *(to be filled out by departmental mentor)*

The mathematics department, in its varied courses, aims to teach students to

a. perform numeric and symbolic computations
b. construct and apply symbolic and graphical representations of functions
c. model real-life problems mathematically
d use technology appropriately to analyze mathematical problems
e. state (e1) and apply (e2) mathematical definitions and theorems
f. prove fundamental theorems
g. construct and present (generally in writing, but, occasionally, orally) a rigorous mathematical argument.