

MTH 380

SYLLABUS

SUMMER 1995

Calculus with Business Applications 4.5 credit hours **Prerequisite:** Math 336

**Text:** Barnett, Raymond A. & Ziegler, Michael R.(1993). Calculus For Business, Economics, Life Sciences, and Social Sciences(6<sup>th</sup> ed.) New York: Macmillan

**Class Meets:** Tuesdays 5:30 - 10:00 P.M. in room 201

**Instructor:** Laura A. Shears

**phone:** 484-2600

**office hour:** Tuesday 4:00 - 5:00 P.M.  
or by appointment

**office location:** in the back of  
the administration building

**I'll also be in the Academic Enrichment Center** on M, W, Th from 5:00 - 8:00 P.M.

**Academic Enrichment Center:** Take advantage of this center in the back of the library to receive free help and take exams. It is open Monday through Thursday from 9:00 A.M. until 8:00 P.M. and on Fridays from 9:00 A.M. until 4:00 P.M. .

### Course Description:

This course examines the concepts of rate of change (differentiation), limits, and integration, and applies them to applications from business. These applications include inventory control, population growth, physical plant construction, and basic economic principles.

### Learning Objectives:

By the end of the course the student will be able to...

- evaluate one and two-sided limits of functions, both algebraically and graphically
- determine whether a given function has any asymptotes, and if so, use them as aids in graphing and problem solving
- determine whether a function is continuous at a point, on an interval, or on a domain
- differentiate polynomial, rational, exponential and logarithmic functions
- use derivatives as aids in graphing and solving applied problems
- integrate polynomial, rational, exponential and logarithmic functions
- use integration to solve applied problems

**Davenport College Success System®:** Students should be able to understand and apply;

1. Oral and written communication and basic literacy skills, as demonstrated by
  - performance on problems requiring students to summarize the work done in solving a problem, as well as interpreting the solution of the problem in the original context.
2. Problem solving, as demonstrated by
  - performance on problems that require students to determine the appropriate means for solving the problem
  - carrying out the solution of the problem
3. Meeting deadlines, as demonstrated by
  - completing all assignments, projects and take-home tests by the designated due date
4. Self-initiative, as demonstrated by
  - effectively using faculty office hours
  - performance on problems that require several different tools to be used together for solution
5. Reliability, as demonstrated by
  - participation in group work
  - timely completion of homework and or take-home tests

## Format of the class:

Lecture portions will be broken up into one or two topics followed by some time to try out some problems on that topic.

When trying out topics you will be expected to help each other, ask questions, learn, and have fun. You get points for active participation. If I find that the class is too quiet, I may have to collect problems to grade for your participation points. I would much rather see you working together, thus giving me the opportunity to come around and help you and your group. Exchanging phone numbers is encouraged.

Quizzes will be open homework and open note, but not open book, neighbor, neighbor's homework, or neighbor's notes.

For each of the first three tests, I will write two exams. The first will be given in class. If you don't perform to your standards you may take a second test during the week between when you get the test back and the next class session. The second score will be the one used in figuring your grade even if it is lower. Make sure you understand your mistakes and have practiced more problems before you take the test again. If you miss an exam you will only have one opportunity to take the test and it will be the second test. I will keep the second exams, but give you an opportunity to see how you did.

I strongly urge you to come see me on a night between classes to get your questions answered. There will be a little time at the beginning of each week to answer questions over the last week's material, but experience tells me that students learn better when they have more time to assimilate information.

## Grading:

quizzes	$30 \times 3$	90
class participation	$20 \times 8$	160
tests	$150 \times 3$	450
final	300	<u>300</u>
		1000

## Grading Scale: (percent)

90-100	A	78-81	B	68-71	C	56-61	D
85-89	A-	75-77	B-	65-67	C-	55-57	D-
82-84	B+	72-74	C+	62-64	D+	54&↓	NC

**Attendance:** Attendance is very important for class participation points, tests and quizzes, and so you know where the class is at. The schedule is only tentative.

**Suggested Study Schedule** (Keep a list of problems that you have difficulties with so you can ask about them if needed and go over them again.)

Tuesdays:	class (broken into four sessions)
Wednesday:	Review trouble spots and do 1 <sup>st</sup> sessions homework.
Thursday:	Review trouble spots and do 2 <sup>nd</sup> sessions homework.
Friday or Saturday:	Review trouble spots and do 3 <sup>rd</sup> sessions homework.
Sunday:	Review trouble spots and do 4 <sup>th</sup> sessions homework.
Monday:	Redo homework that you had troubles with. Try to do the problems without your notes or book. If you still need assistance get it, but remember to come back to that homework and try it again without help later.