PREREQUISITES: MTH 101 or satisfactory placement score
EVALUATION: Homework, quizzes, midterms, common final
READINGS: Munem and Foulis, ALGEBRA AND TRIGONOMETRY
DESCRIPTION: MTH 102 is a course in elementary functions, including logarithmic, exponential and trigonometric functions and their graphs. It is a prerequisite for MTH 201. The trigonometric protion of MTH 102 is not needed for MTH 207. The objectives of this course are to learn the basic properties of the logarithmic exponential, and trigonometric functions, to learn to use them in calculations and to gain some perspective on their use in science and technology. Hand calculators are required.
COMMENTS: One section at 9:30 MUWF is open only to students approved by the Minority Council.

MTH 121 MATHEMATICS FOR ELEMENTARY TEACHERS (3)
Brougher, 204 DEA

MEETS: 9:30 MWF
FORMAT: Lecture/Lab/Discussion
AVERAGE CLASS SIZE: 30
WEEKLY READING: 6 Hours
PREREQUISITES: MTH 100 or satisfactory placement score
EVALUATION: All sections will have a final exam and some of the following: hour tests, weekly quizzes, and project.
READINGS: Billstein, Libeskind, and Lott, PROBLEM SOLVING APPROACH TO MATHEMATICS FOR ELEMENTARY SCHOOL TEACHERS
DESCRIPTION: This term's topics will include a study of basic ideas relating to sets, basic ideas relating to place value, including the study of other number bases; properties of whole numbers and integers and property of other systems both arithmetic and geometric; number sequences; prime and composite numbers. Emphasis will be on active problem solving approach. Concrete materials and calculators will be used.

MTH 150 INTRO TO PROBABILITY (3)
Barnes

MEETS: 10:30 MWF, 307 DEA
FORMAT: Lecture/Discussion
AVERAGE CLASS SIZE: 40
WEEKLY READING: 15-20 Pages
PREREQUISITES: MTH 100 or satisfactory placement test score
EVALUATION: Final, Homework, 5-1/2 hour exams
READINGS: Mosteller, O'Rourke, and Thomas, PROBABILITY WITH STATISTICAL APPLICATIONS
DESCRIPTION: An elementary survey with the emphasis on basic concepts. The level of mathematical manipulation will be held to a minimum, but some abstractions will be involved.
COMMENTS: Not open to students who have had MTH 232 or any higher level course in probability or statistics.

MTH 201 CALCULUS (4)

MEETS: Various. See Time Schedule
FORMAT: Lecture/Discussion
AVERAGE CLASS SIZE: 35-40
WEEKLY READING: 6-8 Hours
PREREQUISITES: MTH 102, MTH 115 or satisfactory placement score
EVALUATION: Homework, 2 Midterms,

and Final Exam
READINGS: Salas and Hille, CALCULUS OF ONE AND SEVERAL VARIABLES
DESCRIPTION: MTH 201 is the first term of the standard introductory sequence in calculus; it covers differentiation and applications. Despite its lower number, MTH 201 is a more extensive course than MTH 207. It is designed for a broad spectrum of students such as mathematicians, physicists, chemists and students who will do graduate work in economics or the social sciences. Any student who might continue math beyond calculus should take this course instead of MTH 207.

MTH 202 CALCULUS (4)

MEETS: Various. See Time Schedule
FORMAT: Lecture/Discussion
AVERAGE CLASS SIZE: 45
WEEKLY READING: 6-8 Hours
PREREQUISITES: MTH 201 or equivalent
EVALUATION: 2 Midterms, Final, Homework
READINGS: Salas and Hille, CALCULUS OF ONE AND SEVERAL VARIABLES
DESCRIPTION: This is second quarter of a three term first year calculus course. It focuses on integration from both the theoretical and computational standpoint. The trigonometric functions are extensively used. Applications include areas, volumes of surfaces of revolutions, center of mass, lengths of curves, etc.

MTH 203 CALCULUS (4)

MEETS: See Time Schedule
FORMAT: Lecture/Discussion
AVERAGE CLASS SIZE: 40
PREREQUISITES: MTH 202
EVALUATION: 2-3 Midterms, Final, Homework
READINGS: Salas and Hille, CALCULUS OF ONE AND SEVERAL VARIABLES
DESCRIPTION: This is the third quarter of a three term first year calculus course. It covers infinite series, expansions of functions, convergence and divergence of series, power series and Taylor's theorem.

MTH 207 CALCULUS FOR THE NONPHYSICAL SCIENCES (4)

MEETS: Various. See Time Schedule
FORMAT: Lecture/Discussion
PREREQUISITES: MTH 101 or satisfactory placement score.
EVALUATION: Midterms, Final, Homework, Quizzes
READINGS: Goldstein, Lay, and Schneider, CALCULUS AND ITS APPLICATIONS
DESCRIPTION: MTH 207 is the first term of a sequence of calculus courses designed for students whose major field is in the social or managerial sciences and whose programs do not require upper division courses in calculus. Despite its high number MTH 207 is a less advanced course than MTH 201. All students who subsequently expect to take MTH 331-333 or who intend to pursue graduate study should take MTH 201.
COMMENTS: One section at 9:30 MUWF is open only to students approved by the Council for Minority Education.

MTH 208 CALCULUS FOR THE NONPHYSICAL SCIENCES (4)

MEETS: See Time Schedule
FORMAT: Lecture/Discussion
PREREQUISITES: MTH 207
EVALUATION: Midterms, Final, Quizzes, Homework
READINGS: Goldstein, Lay, and Schneider, CALCULUS AND ITS APPLICATIONS
DESCRIPTION: The second term of a calculus sequence begun by MTH 207. This term includes integration and functions of several variables. Applications to business and the social sciences will be used.
COMMENTS: One section at 8:30 MUWF is open only to students approved by the Council for Minority Education.

MTH 209 PROB/STAT WITH CALCULUS (4)

MEETS: Various. See Time Schedule
FORMAT: Lecture/Discussion
PREREQUISITES: MTH 208 or MTH 202
EVALUATION: Midterms, Final, Quizzes, Homework
READINGS: Madsen and Moeschberger, STATISTICAL CONCEPTS WITH APPLICATIONS TO BUSINESS AND ECONOMICS
DESCRIPTION: Introduction to probability and statistics using calculus as a foundation, including discrete and continuous probability, sampling distributions, descriptive statistics, and estimation.

MTH 231 ELEMENTS OF DISCRETE MATHEMATICS (4)
Wolfe, 334 FEN

MEETS: 9:30 MWF, 208 DEA
FORMAT: Lecture/Discussion
AVERAGE CLASS SIZE: 120
WEEKLY READING: 30 Pages
PREREQUISITES: MTH 101 or satisfactory placement score
EVALUATION: 20%-Homework; 40%-2 Midterms; 40%-Final
READINGS: Ross and Wright, DISCRETE MATH
DESCRIPTION: This course provides an introduction to concepts needed in computer science and other areas. The following topics are covered: sets, mappings, mathematical induction, elements of logic, semigroups, and combinations. Homework assignments are a very important part of the course.

MTH 410 PROBLEM POSING/SOLVING (3)
Walter, 204 Friendly

MEETS: 14:00-15:20 UH, 105 Fenton
FORMAT: Lecture/Discussion
AVERAGE CLASS SIZE: 20
PREREQUISITES: Mth 344 and Mth 341 or 157 or consent of instructor.
READINGS: Polya, HOW TO SOLVE IT; Brown and Walter, THE ART OF PROBLEM POSING AND ASSIGNED OTHER READINGS
DESCRIPTION: Students will engage in and explore techniques for generating and solving problems and will examine the connection between these activities. Various problems posing and solving techniques will be discussed. The instructor will introduce some problems and situations for investigation and students will learn to pose their own problems. Students will write papers alone and in groups and will constructively criticize each other's papers.
COMMENTS: Open only to education students working toward a math endorsement or to qualified teachers.