

Course Description: A study of the trigonometric functions with an emphasis on graphing, identities, inverse trigonometric functions, and solving equations. Additional topics include solving triangles, vectors, complex numbers, and polar coordinates.

In addition, this course satisfies the General Education requirement of the Mathematical Sciences General Education Foundation Category. This is described: “The development of formal reasoning and abstract thought have been defining characteristics of civilization. Through the study of the mathematical sciences, students will develop their ability to reason and solve problems with abstract ideas or quantitative information. Full participation in many professional and public policy discussions requires the ability to express scientific, economic, or social issues in quantitative terms. Study of the concepts, history, contexts, and methodologies of the mathematical sciences assists students in becoming mathematically or quantitatively literate. Courses in this category introduce students to the foundations of mathematical, logical, and quantitative reasoning. They will develop each student’s mathematical, statistical, quantitative, or logical reasoning skills in ways that allow these skills to be transferred or used in other content areas.”

Content Objectives: All courses in the Mathematical Sciences Category include the following content:

- 1) The introduction of mathematics as “way of knowing”, an examination of principles and questions that define the field
- 2) An understanding of how mathematicians think and how knowledge in these fields is created,
- 3) An analysis of problem solving, including recognition of key problem elements, the choice of suitable methods for solving a problem, and the appropriate application of these methods.

Skills Objectives: All courses in the Mathematical Sciences Category use teaching methods that help students become more proficient in the following skills:

- 1) To engage in articulate expression through effective speaking or writing,
- 2) To think critically and creatively through the solving of multiple step problems which require logic and reasoning skills, and the application of problem solving and logical reasoning skills to new problems;
- 3) To locate, evaluate, and use information effectively.

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Text: Trigonometry, Sixth Edition, by Michael Sullivan, Prentice Hall

Prerequisite: Mathematics 110 or by placement. MTH 122 may be taken concurrently.

Calculator: A graphing calculator is required. The Department of Mathematics and Statistics recommends that you use a Texas Instruments TI-82 or TI-83. A TI-85 or a TI-86 is also appropriate but will not be supported by the instructor. Mathematics and engineering majors who need to purchase a new calculator should purchase a TI-86.

Office Hours: 11:15am – 12:15pm and 3:45 – 4:15pm TTH

Course Content: Chapters 1-5.

Homework: Will be assigned but not collected. Questions on homework will be answered during class as time permits.

Quizzes, Activities Short unannounced quizzes may be given daily. **NO** make-ups will be given. Short in-class activities may also be given. If any combination of these worth more than 100 points are given, the lowest score(s) will be dropped.

Tests: There will be three tests worth 100 points each. These will be announced in advance. Make-ups or other arrangements will be at the discretion of the instructor and only if notified in advance.

Projects: There will be group projects worth 50 points. . The grading of the writing part of the projects will be based on the quality of the writing, the quality of the mathematical content, and the logical organization of the writing. The reports for projects must be double-spaced and typed, done on a word processor, or neatly written using only one side of each paper.

Writing: Writing is an important part of communicating mathematical results. The quizzes, tests, and projects will frequently require you to write solutions to mathematical problems. Writing mathematical solutions means more than writing formulas and circling an answer. It requires explanations of all significant steps taken in the solution of a problem. These explanations must be written in complete sentences and paragraphs with appropriate formulas and graphs included

Final Exam: The comprehensive final exam will be worth 150 points. There will be no make-ups on the final exam which will be given on Tuesday, December 9, 2003 at 4 pm or Wednesday, December 10, 2003 at 8 am.

Withdrawal: The last day to drop with a grade of W is October 17, at 5 pm. Paperwork on this is the responsibility of the student.

Absences: Students are expected to attend class regularly and are responsible for any material covered or announcements made when absent. Attendance will be taken daily.

<u>Grading:</u>	Quizzes	100 points	90-100%	A range
	Projects	50 points	80-89%	B range
	Tests	300 points	70-79%	C range
	Exam	150 points	60-69%	D range
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	Total	600 points		

