MTH 133.002, Plane Trigonometry
Department of Mathematics and Statistics
Class Policy Sheet and Syllabus—Fall 2018

Professor: Dr. Lynn Greenleaf
Office: 340 Mathematics building
Email: greenleaf@sfasu.edu
Office Phone: 936.468.1882
Office Hours: or by appointment

Class Times & Place: 10:00-10:50 MWF, Room 212, Math Building

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<th>Monday</th>
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Course description: The course revolves around the study of the six trigonometric functions and their relationships to one another, as well as their applications to other areas of mathematics and problems in the physical world. This course of study should assist the student in making the transition from manipulative skills to an understanding of mathematical concepts. Our study will include radian measure of angles, the trigonometric functions, inverse trigonometric functions, graphs of trigonometric functions, trigonometric identities, trigonometric equations, solution of triangles, vectors in the plane, complex numbers, and a polar coordinate system for the plane.

Text and Materials: The required textbook is *Trigonometry*, by Mark Dugopolski, 4th edition, ISBN 321923480. For exams, students may use a scientific or graphing calculator, but not symbolic calculators. For example, you may use a TI -83/84, but not a TI-89. If you have any questions about your calculator, please see me.

Exam Schedule: Please note that the dates for our in-class exams below are subject to change. If you need to change the date of your exam, you must get it approved through Student Rights & Responsibilities, sfajudicial@sfasu.edu. The final is university scheduled and cannot be taken at a different time without permission of the Dean of the College of Sciences and Mathematics. Please schedule your end-of-semester travel plans accordingly.

<table>
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<th>Exam</th>
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<tr>
<td>Exam 1</td>
<td>Friday, September 21</td>
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<td>Exam 2</td>
<td>Friday, October 19</td>
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<td>Exam 3</td>
<td>Friday, November 16</td>
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<td>Final</td>
<td>Wednesday, December 12, 10:30 am-12:30 pm in our regular classroom</td>
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Course Requirements:
- **Three in-class exams**—If a student must miss an exam due to an excused absence, special arrangements should be made in advance. You must get it approved through Student Rights & Responsibilities, sfajudicial@sfasu.edu. Cell phones are not allowed out during exams, even if that is all you brought. Students are responsible for bringing their own calculator to exams, see above for restrictions on calculators. No music (even through headphones) is allowed during exams.
- **Weekly homework** -- Weekly homework will be handed out in class and will be collected for a grade. Exceptions may be made because of exams. No late homework will be accepted for a grade. Once homework has been returned to the class, none will be accepted even with an excuse. You can hand in an assignment early, or put it in the box outside my office door.
- **Weekly quizzes** -- Weekly quizzes will be given every Friday, unless there is an exam on that day or if it is dead week.
- **A comprehensive final exam**—The final exam is Wednesday, December 10, 10:30 am-12:30 pm.
- **Class attendance and participation**—Students are expected to attend all class meetings, arriving on time. If you are absent, you are responsible for determining what you missed and for being prepared for class when you return. Leaving class early without notifying the professor in advance will result in your being counted absent for the class session. Students that sleep in class, send or receive text messages, or conduct other online activities not directly related to class will be counted absent.
- **Preparing for class**—Students should be prepared to invest several hours per day outside of class reading the text, practicing examples, and working homework exercises. Material to be discussed in class should be read before coming to class. Check your university email regularly, as I may send reminders, assignments, or announcements.
- **Other**—There will be no extra credit or alternate credit assignments for this class.

Grading Policy: 60% Three in-class Exams 10% Homework 5% Quizzes 25% Comprehensive Final Exam
Grading Scale: 90% - 100%: A 80% - 90%: B 70% - 80%: C 60% - 70%: D Below 60%: F
The first page of this document is a synopsis for your quick reference of class policies, dates and contact information for MTH 133.001. My complete course policy sheet and syllabus containing other important university and college policies can be found online in your MTH 133 course in d2l. You are responsible for reading the entire course policy sheet online.

Learning Group ___________________. Meeting Place ________________________________

Course outline: Approximate time spent

Angles and definitions of trigonometric functions 15%
- Angles
- Trigonometric functions

Graphs of trigonometric functions 15%
- Basic graphs of the trigonometric functions
- Modified graphs of the trigonometric functions

Inverse Trigonometric Functions and Solving Equations 15%
- Definitions and graphs of inverse trigonometric functions
- Calculations with inverse trigonometric functions
- Solving trigonometric equations

Identities 20%
- Logic and techniques for proving various types of trig identities

Solving Triangles 15%
- Solving right triangles using Law of Cosines and Law of Sines

Vectors, Complex Numbers, and Polar Coordinates 20%
- Vectors
- Complex number system
- Polar coordinate system

Per SFA policy 5.4, your schedule should reflect that there is (1) an amount of student work per credit hour that reasonably approximates not less than one hour of class or direct faculty instruction and two hours of out-of-class student work per week for fifteen weeks over a long semester, or the equivalent amount of work over a different amount of time; or (2) at least an equivalent amount of work as outlined in item 1 above for other academic activities as established by the institution including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

Student Learning Outcomes
At the end of MTH 133, a student who has studied and learned the material should be able to:
- State and use the unit circle and ratio definitions of the six trigonometric functions.
- Recall and use exact values of the trigonometric functions at integer multiples of π/4 and π/6 in various contexts, especially in graphing trigonometric functions.
- Graph the trigonometric functions, and graph transformations of trigonometric functions by recognizing amplitude, changes in period, vertical translations, and phase shifts.
- Use appropriate trigonometric identities in solving equations involving trigonometric functions and in calculating trigonometric function values.
- Use logical reasoning and known trigonometric identities to verify that an equation is a trigonometric identity.
- Use inverse trigonometric functions in applications and in solving equations.
- Determine unknown measures of sides and/or angles of triangles for which some specific measures are given.

Program Learning Outcomes
All general education mathematics sequences in the state of Texas should equip students:
- To apply arithmetic, algebraic, geometric, higher-order thinking, and statistical methods to modeling and solving real-world situations.
- To represent and evaluate basic mathematical information verbally, numerically, graphically, and symbolically.
- To expand mathematical reasoning skills and formal logic to develop convincing mathematical arguments.
- To use appropriate technology to enhance mathematical thinking and understanding and to solve mathematical problems and judge the reasonableness of the results.
- To interpret mathematical models such as formulas, graphs, tables and schematics, and draw inferences from them.
- To recognize the limitations of mathematical and statistical models.
- To develop the view that mathematics is an evolving discipline, interrelated with human culture, and understand its connections to other disciplines.
**Academic Integrity (A-9.1)**

Please copy and paste the following information regarding Academic Integrity into your syllabus. In addition, you may include your own guidelines for academic integrity as appropriate.

Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

**Definition of Academic Dishonesty**

Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one’s own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.

Please read the complete policy at [http://www.sfasu.edu/policies/academic_integrity.asp](http://www.sfasu.edu/policies/academic_integrity.asp)

**Withheld Grades Semester Grades Policy (A-54)**

Please copy and paste the following information regarding Withheld Grades into your syllabus. Add additional information as needed to meet your departmental or course needs.

Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

**Students with Disabilities**

Please copy and paste the following statement and place in your course syllabus.

To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to [http://www.sfasu.edu/disabilityservices/](http://www.sfasu.edu/disabilityservices/).