Math 1316.020 Trigonometry and Analytic Geometry  
J Montemayor

MCS 214 @ 8:00 – 9:15 AM TTh

Disclaimer
This syllabus is current and accurate as of its posting date, but will not be updated. For the most complete and up-to-date course information, contact the instructor.

Instructor
Juan Montemayor  
Office: MCS 219 F  
Phone #: 325 – 486 – 5438  
Email: juan.montemayor@angelo.edu

Office Hours
Tentatively set as MWF: 9:30 – 10:00 and 3:00 – 5:00 on MW, TTh: 9:30 – 11:00 and 4:00 – 5:30

Math Lab Hours – may not begin till after Aug. 27
Located on the third floor of the library room C302
Monday – Thursday: 9:00 AM – 8:00 PM, Friday: 9:00 AM – 12:00 PM, and Sunday 4:00 – 8:00 PM

Notice
You are encouraged to be in attendance during each class meeting. No make-ups will be given for missed quizzes, homework assignments, or exams. If you leave early, come late, leave the classroom you may be counted absent for the day. There are only two major exams to be given in the classroom. If you miss the midterm exam, a meeting between student and instructor will be held to see if anything can be done to alleviate the problem. Student must initiate the conversation with a written valid excuse stating the reason for missing exam. If the excuse is deemed to be valid by the instructor, then a solution will proposed by the instructor. In most cases a comprehensive final exam will be given and grade will replaced missed exam. Otherwise, the grade for missed exam will become a zero.

Cell Phone Use
Use of cell phone in class is strongly discouraged. Put phone away when entering classroom. You may be asked to leave the class if you are seen making use of your cell phone in any manner. Touching, glancing, and leaving the classroom to answer the phone will all be considered instances of disruption to the class and any disruption of class will result in immediate dismissal from class. You may return to class only after a meeting with instructor outside of class time. In case you have a need for your phone – emergencies – let me know and an exception will be made for that case.

Important Dates
Midterm Exam:  
October 11, 2018
Final Exam:  
December 11, 2018
Drop Day:  
Thursday November 1, 2018

Textbook
Trigonometry A Unit Circle Approach tenth edition by Michael Sullivan
Grading Periods
There will be two grading periods (each will count 50 % of semester grade).
Each grading period will consist of two take-home exams, a daily grade average, and a mid-semester in class exam. More will be said in class about the grading process.

Percentage
Daily grade is 12 % of semester grade, 6 % for each half of the semester.
Two take-home exams in each half of semester with each take-home worth 6 % of semester grade.
Mid semester exam and final exam, will each count 32 % of semester exam.

Daily Grade
You will be given daily grades during each half of the semester. The lowest two grades in each half of the semester will be dropped. The remaining daily grades will be averaged to give you a daily grade average for each half of the semester. Daily grade consists of a quiz, a homework assignment, attendance and class participation. More will be discussed on the first day of class.

Homework
Each homework assignment is 40 % of daily grade. Grading process will be discussed in class.
Homework cannot be turned in late but it can be turned in early or on time.
No make-ups on missed assignments. I reserve the right to grade part or the entire homework assignment.

Quizzes
A quiz is worth 40 % of the daily grade. You must be in class to get any credit on quiz.
No make-ups on missed quizzes.

Attendance and Class Participation
Attendance is worth the remaining 20 % of daily grade. You must be on time and not leave class early.
Leaving the classroom for any reason during lecture may decrease your daily grade.

Take Home Exams
An exam will be assigned and due at some future date, normally next class meeting. You must use a copy of the exam posted on blackboard. You are allowed – even encouraged – to work together. You can get help. My only suggestion is that you make an attempt to answer as many questions as you can in one sitting with no help from any source. This will give you an idea of how much of the material you actually know. If you work hard, you can learn the remaining material. If you do not, the grade on the midterm exam will be a good indication of how much you knew before you started to get help.

Midterm and Final Exam
These two exams are the most important part of your grade, they make up 64 % of your semester grade. No makeups or time extensions will be given. No additional ways to get bonus points will be available.
Semester Letter Grade
A semester average will be computed based on daily grades, take-home exams, and in class exams. An in-person explanation of the grading process will be given on first day in class.

100 – 90 is an A, 80-89 is a B, 70-79 is a C, 60 – 69 is a D, any average below 60 is an F.

Use of calculators
You will not be allowed to use calculators in class when completing quizzes or exams. If work is done at home, you may use a calculator but your answers cannot be calculator based.

Mathematics 1316 – Trigonometry with Analytic Geometry
Student Learning Outcomes

1. The students will demonstrate factual knowledge including the mathematical notation and terminology used in this course. Students will read, interpret, and use the vocabulary, symbolism, and basic definitions used in trigonometry including definitions of the six trigonometric functions; types of angle measure and notation; equations of conic sections; representing equations in polar coordinates; and the definition of vectors.

2. The students will describe the fundamental principles including the laws and theorems arising from the concepts covered in this course. Students will identify and apply the laws and formulas that result directly from the definitions; for example, the fundamental identities, properties of angles and triangles, characteristics of the trigonometric functions, inverse trigonometric functions, polar equations (including graphs), and formulas for converting between polar and rectangular coordinates.

3. Students will apply course material along with techniques and procedures covered in this course to solve problems. Students will use the facts, formulas, and techniques learned in this course to prove identities and solve trigonometric equations; and solve various types of triangle problems, distance and navigation problems, and linear and angular velocity problems.

4. The Student will develop specific skills, competencies, and thought processes sufficient to support further study or work in this field or related fields. Students will acquire a level of proficiency in the fundamental concepts and applications necessary for further study in academic areas requiring trigonometry as a prerequisite, or for work in occupational fields requiring a background in trigonometry. These fields might include education, business, finance, marketing, computer science, physical sciences, and engineering, as well as mathematics.
Course Content

Textbook: *Trigonometry: A Unit Circle Approach*, Tenth Edition, by Sullivan. The following chapters including the particular sections listed are covered. (See textbook “Contents.”)

1. **Graphs and Functions.** Graphs of Equations in Two Variables; Circles; Functions and Their Graphs; Properties of Functions; Library of Functions; Piecewise-defined Functions; Graphing Techniques: Transformations; One-to-one Functions; Inverse Functions

2. **Trigonometric Functions.** Angles and Their Measure; Trigonometric Functions: Unit Circle Approach; Properties of the Trigonometric Functions; Graphs of the Sine and Cosine Functions; Graphs of the Tangent, Cotangent, Cosecant, and Secant Functions; Phase Shift; Sinusoidal Curve Fitting

3. **Analytic Trigonometry.** The Inverse Sine, Cosine, and Tangent Functions; The Inverse Trigonometric Functions (continued); Trigonometric Equations; Trigonometric Identities; Sum and Difference Formulas; Double-angle and Half-angle Formulas; Product-to-Sum and Sum-to-Product Formulas

4. **Applications of Trigonometric Functions.** Right Triangle Trigonometry; Applications; Law of Sines; Law of Cosines; Area of a Triangle

5. **Polar Coordinates; Vectors.** Polar Coordinates; Polar Equations and Graphs; Vectors; The Dot Product; Vectors in Space; The Cross Product

6. **Analytic Geometry.** The Parabola; The Ellipse; The Hyperbola; Polar Equations of Conics; Plane Curves and Parametric Equations

Tentative Schedule

Please note that this schedule is subject to change on a daily basis and very likely will Check Blackboard for up-to-date information or ask in class.

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Material from Appendix A, sections 1.1, 1.2, 1.3 , and 1.4</th>
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</thead>
<tbody>
<tr>
<td>Week 2</td>
<td>Sections 1.5, 1.6, and 1.7</td>
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<tr>
<td>Week 3</td>
<td>Sections 2.1, 4.1, 2.2 and 2.3</td>
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<tr>
<td>Week 4</td>
<td>Take Home Exam , sections 2.4 and 2.5</td>
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<tr>
<td>Week 5</td>
<td>Sections 2.6, 3.1, 3.2, and 3.3</td>
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<tr>
<td>Week 6</td>
<td>Sections 3.3, 3.4, and 3.5</td>
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<tr>
<td>Week 7</td>
<td>Take Home Exam , Sections 3.6 and Sections 3.7</td>
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<tr>
<td>Week 8</td>
<td>Finish Chapter 3 and Midterm Exam ( in class exam )</td>
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<tr>
<td>Week 9</td>
<td>Sections 4.2, 4.3, and 4.4</td>
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<tr>
<td>Week 10</td>
<td>Sections 5.1, 5.2, and 5.4</td>
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<tr>
<td>Week 11</td>
<td>Sections 5.5 , 5.6, and 5.7  Take Home Exam</td>
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<tr>
<td>Week 12</td>
<td>Finish Chapter 5 and Begin Chapter 6</td>
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<tr>
<td>Week 13</td>
<td>Sections 6.2 and 6.3</td>
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<tr>
<td>Week 14</td>
<td>Sections 6.4, 6.6, and 6.7  Take Home Exam</td>
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<tr>
<td>Week 15</td>
<td>Finish chapter 6 and get ready for final exam</td>
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<td>Week 16</td>
<td>Final Exam - Tuesday Dec. 12, 2018 @ 8:00 AM – 10:00 AM</td>
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**Student Responsibilities**

The student is *solely* responsible for:

- Completing each assignment by the specified due date.
- Obtaining assignments and other materials for classes from which they are absent.
  - Utilizing, as needed, all available study-aid options (including meeting with the instructor, referring to outside texts, etc.) to resolve any questions that they might have regarding homework, course material, etc.
- Realizing from the beginning of the course the grade that they may need or want to graduate, maintain a scholarship, stay in athletics, etc. … and give as much effort as it takes to obtain this grade.

**Student Disability Services**

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA), and subsequent legislation.

The Office of Student Affairs is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability, and it is the student’s responsibility to initiate such a request by contacting:

Dallas Swafford  
Director of Student Disability Services  
Office of Student Affairs  
325-942-2047  
dallas.swafford@angelo.edu

**Title IX**

Angelo State University is committed to the safety and security of all students. If you or someone you know experience sexual harassment, sexual assault, domestic or dating violence, stalking, or discrimination, you may contact ASU’s Title IX Coordinator:

Michelle Boone  
Director of Title IX Compliance  
325-486-6357  
michelle.boone@angelo.edu

**Student Absence for Observance of Religious Holy Days**

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. The full details can be found in ASU Operating Policy OP 10.19 Observe of Religious Holy Days.

**Incomplete Grade Policy**

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 Graduation Procedures for more information.


**Student Conduct Policies**

**Academic Integrity**

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject to disciplinary action and possible expulsion from ASU.

The College of Science and Engineering adheres to the Statement of [Academic Integrity](http://www.angelo.edu/student-handbook/community-policies/academic-integrity.php)iii

**Plagiarism**

Plagiarism is a serious topic covered in ASU’s [Academic Integrity policy](http://www.angelo.edu/content/files/14197-op-1011-grading-procedures) in the Student Handbook. Plagiarism is the action or practice of taking someone else’s work, idea, etc., and passing it off as one’s own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality via Turnitin. Resources to help you understand this policy better are available at the [ASU Writing Center](http://www.angelo.edu/dept/writing_center/academic_honesty.php)iv.

**Copyright Policy**

Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.

**General Policies Related to this Course**

- All students are required to follow the policies and procedures presented in these documents:
  - [Angelo State University Student Handbook](http://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of)iii
  - [Angelo State University Catalog](http://www.angelo.edu/catalogs)vi

- In the event that the university is closed for a scheduled class time, whatever was scheduled for that day and/or whatever was due that day will be scheduled and/or due on the next scheduled class time.
- All electronic correspondence will be sent to your ASU e-mail account unless other arrangements are made.
- Feel free to come by my office at any time for help. I will definitely be near my office during my office hours (or there will be a note telling you when I will be back). If my office hours are not convenient for you, meet with me to arrange for another time that is more convenient.

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i Observance of Religious Holy Days: [http://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of](http://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of)

ii Grading Procedures: [http://www.angelo.edu/content/files/14197-op-1011-grading-procedures](http://www.angelo.edu/content/files/14197-op-1011-grading-procedures)


iv ASU Writing Center: [http://www.angelo.edu/dept/writing_center/academic_honesty.php](http://www.angelo.edu/dept/writing_center/academic_honesty.php)


vi University Catalog: [http://www.angelo.edu/catalogs/](http://www.angelo.edu/catalogs/)