Spring 2018 Syllabus Math 2412.030 Precalculus  
MCS212 MTThF@ 2:00-2:50 PM

Disclaimer
All items contained in this syllabus are subject to change as the semester progresses. Students will be notified in advance of any changes. For the most complete and up-to-date course information, contact the instructor.

Instructor
Juan Montemayor  
Office: MCS219F  
Phone #: 325-486-5438  
email: juan.montemayor@angelo.edu

Notice
You are encouraged to be in attendance during each class meeting. No make-ups will be given for missed quizzes or homework assignment. You will not be allowed to make-up any missed exam. It does not matter whether you have an excused or unexcused absence.

If you are late to class or leave early, you may be counted absent for the day. Student must attend the entire period to be counted present.

In the event that an exam is missed and a written excuse is given within a reasonable time that is acceptable to instructor, the student will be given the option of taking a comprehensive final exam to replace missed exam. The comprehensive exam will count as the missed exam and as the final exam. A second missed exam will be automatically entered as a zero.

Use of cell phone in class is strongly discouraged.

You are encouraged to put cell phone away when entering classroom. If you have a cell phone out of your pocket/backpack/purse during class lecture or reach and touch into your pocket or purse, you will be considered as making use of cell phone. If such an event occurs, you will be asked to leave the classroom. Disruptions of class lecture will be dealt in the same manner. Personal situations may require you to have cell phone available in case of emergencies – notify instructor of that possibility. Other class rules will be discussed on the first day of class.

<table>
<thead>
<tr>
<th>MCS 219F</th>
<th>Tentative Office Hours</th>
<th>Phone 325-486-5438</th>
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<tbody>
<tr>
<td>Monday</td>
<td>8:30 -10:00 AM 9:00 – 10:00 AM 7:00 – 7:45 PM</td>
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<td></td>
<td>1:00 – 2:00 PM       8:00 – 10:30 1:00 – 2:00 7:00 – 7:45 PM</td>
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<tr>
<td>Tuesday</td>
<td>8:30 -10:00 AM 9:00 – 10:00 AM 7:00 – 7:45 PM</td>
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<td>1:00 – 2:00 PM       8:00 – 10:30 1:00 – 2:00 7:00 – 7:45 PM</td>
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<tr>
<td>Wednesday</td>
<td>8:30 -10:00 AM 9:00 – 10:00 AM 7:00 – 7:45 PM</td>
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<td>1:00 – 2:00 PM       8:00 – 10:30 1:00 – 2:00 7:00 – 7:45 PM</td>
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<td>Thursday</td>
<td>8:30 -10:00 AM 9:00 – 10:00 AM 7:00 – 7:45 PM</td>
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<td>1:00 – 2:00 PM       8:00 – 10:30 1:00 – 2:00 7:00 – 7:45 PM</td>
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<td>Friday</td>
<td>8:30 -10:00 AM 9:00 – 10:00 AM 7:00 – 7:45 PM</td>
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<td>1:00 – 2:00 PM       8:00 – 10:30 1:00 – 2:00 7:00 – 7:45 PM</td>
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<table>
<thead>
<tr>
<th>Tentative Exam Dates</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>Exam 2</td>
</tr>
<tr>
<td>Thursday Feb.8</td>
<td>Thursday March 1</td>
</tr>
<tr>
<td>Exam 3 (Midterm)</td>
<td>Exam 4</td>
</tr>
<tr>
<td>Thursday March 8</td>
<td>Thursday April 5</td>
</tr>
<tr>
<td>Exam 5</td>
<td>Exam 6</td>
</tr>
<tr>
<td>Thursday April 25</td>
<td>Final Exam</td>
</tr>
<tr>
<td>Monday May 7</td>
<td>Monday May 7</td>
</tr>
<tr>
<td>10:30AM–12:30 PM</td>
<td>3:30 AM – 5:30 PM</td>
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</tbody>
</table>

Homework will be done from textbook or from handouts provided by instructor.

<table>
<thead>
<tr>
<th>Last Day to Drop Monday April 2</th>
<th>Spring Break March 12 – March 16</th>
<th>Spring Holiday Friday March 30</th>
<th>Final Exam Monday May 7 @ 3:30 AM – 5:30 PM</th>
</tr>
</thead>
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**Math Lab Hours**

<table>
<thead>
<tr>
<th>Days</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Monday – Thursday</td>
<td>9:00am-8:00pm</td>
</tr>
<tr>
<td>Friday</td>
<td>9:00am-12:00pm</td>
</tr>
<tr>
<td>SUNDAY</td>
<td>4:00 PM – 8:00 PM</td>
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<td>(Starting Sunday, January 21)</td>
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</table>

**Math Lab is located**

on the third floor of the library

Room C302

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**Prerequisite**

Mathematics 1314 with a grade of “C” or better, or a score of 26 or higher on the mathematics section of the ACT, or a score of 600 or higher on the mathematics section of the SAT if taken before March 2016, or a score of 620 or above on the mathematics section of the SAT if taken in March 2016 or after, or a sufficient score on a placement examination.

**Testing Periods**

You will have six testing periods during the semester. Each of the periods will be worth 1/6 of your semester grade. Four of the testing periods will consist of an exam and a daily grade. The exam is 88% of the testing period grade and the remaining 12% will come from a daily grade. Midterm and final exam will not have a daily grade. The entire grade for those two testing periods will consist of the exam grade. Further explanation will be given on the first day of class.

**Exams**

You will have a total of six exams given during the semester including a final exam at the end of the semester. **It is up to the discretion of the instructor** whether final exam grade or midterm exam grade will replace a single missed exam. Your midterm and final exams are comprehensive. Final Exam and Midterm Exam are comprehensive and not optional – all students must take them. Date and time for final exam is not negotiable. You have more than a fifteen-week notice of when the final exam is scheduled. The grade on exam for testing period will be 88% of testing period grade. Midterm and Final exam make up a full 100% of the grade for their corresponding testing period. Exams will normally be given on Tuesdays or Thursdays to allow for extra time in case a student needs it.

**Daily Grade**

There will be six daily grades per testing period – none for midterm or final exam testing periods. The lowest of the six daily grades in a testing period will be dropped and the rest will be averaged to get the daily grade for testing period. The daily grade obtained will make up 12% of testing period. You will get a daily grade twice per week; each Thursday and Monday of the week.

**Homework**

Each daily homework grade is worth 30% of daily grade. Homework assignments can be turned in early but not late. It will be due at the beginning of class.

**Quiz**

Each daily quiz grade is worth 50% of daily grade. No make-up grades. If you miss class for any reason at all, the quiz grade becomes a zero for that day.

**Class Participation**

Grade for class participation is worth 20% of daily grade. Attendance is included as part of this grade. Grade is subjective – up to instructor what grade is given.
Grading
An average of the six testing periods will be computed. This average will be your semester grade and will determine your semester letter grade. Standard grading for this class will be used. See below. An average of

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

More explanation on grading of homework, quizzes and class participation will be given in class.

Miscellaneous

1. You are encouraged to collaborate on your homework assignments with other classmates, but each student must turn in his or her own homework.

2. Calculators are not allowed on quizzes or tests. All answers must be non-calculator based – exact solutions are required. Algebraic work must be shown. No cell phones may be used at any time.

3. See instructor for additional information on course rules, assignments, and other procedures.

4. Internet/Email
I plan to post assignments and other documents on Blackboard and send you information via email. All current students are required to maintain an ASU email account
Course Content
An intensive overview of topics from algebra, trigonometry, and analytic geometry that are needed for calculus, including equations and inequalities, functions and inverse functions, trigonometric functions and equations, powers and roots of complex numbers, conic sections, parametric equations, polar coordinates, and applications. We will cover selected sections from Chapters 1, 2, 3, 4, 5, 6, 7 and 10. Refer to the attached Student Learning Outcomes and Content sheet for additional information on the topics covered in this course.

Mathematics 2412 – Precalculus
Student Learning Outcomes

1. **The students will demonstrate an understanding of 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 precalculus pertaining to the real numbers; exponents and radicals; polynomials, factoring, and rational expressions; equations and inequalities; functions; polynomial and rational functions; inverse functions; exponential and logarithmic functions; graphs and their transformations; six trigonometric functions; types of angle measure and notation; parts of triangles and circles; parabolas, ellipses, and hyperbolas; asymptotes; and vectors.

2. **The students will describe the fundamental principles including the mathematical rules 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, rules of exponents, exponential and logarithmic properties, the quadratic formula, slope and formulas for the equations of lines, the fundamental trigonometric identities, properties of angles and triangles, characteristics of the trigonometric functions and inverse trigonometric functions, formulas of the conic sections, translation of axes, and formulas relating polar and rectangular coordinates.

3. **The students will apply course material using techniques and procedures covered in this course to solve problems.** Students will utilize the facts, formulas, and the techniques learned in this course to simplify algebraic expressions; graph functions; solve equations; prove trigonometric identities; solve trigonometric equations; solve various types of triangle problems; and recognize and graph trigonometric and inverse trigonometric functions, conic sections, algebraic curves, polar equations, and parametric equations.

4. **The students 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 in precalculus necessary for success in calculus.
Course Content


1. **Topics from Algebra**: Exponents and Radicals; Algebraic Expressions; Equations; Inequalities.

2. **Graphs and Functions**: Rectangular Coordinate Systems; Graphs of Equations; Lines; Definition of Function; Graphs of Functions; Quadratic Functions; Operations on Functions.

3. **Polynomials and Rational Functions**: Polynomial Functions of Degree Greater Than 2; Rational Functions.

4. **Inverse, Exponential, and Logarithmic Functions**: Inverse Functions; Exponential Functions; The Natural Exponential Function; Logarithmic Functions; Properties of Logarithms; Exponential and Logarithmic Equations.

5. **The Trigonometric Functions**: Angles; Trigonometric Functions of Angles; Trigonometric Functions of Real Numbers; Values of the Trigonometric Functions; Trigonometric Graphs; Additional Trigonometric Graphs; Applied Problems.

6. **Analytic Trigonometry**: Trigonometric Equations; The Addition and Subtraction Formulas; Multiple-Angle Formulas; The Inverse Trigonometric Functions.

7. **Applications of Trigonometry**: The Law of Sines; The Law of Cosines; Vectors; The Dot Product.

10. **Topics from Analytic Geometry**: Parabolas; Ellipses; Hyperbolas; Plane Curves and Parametric Equations; Polar Coordinates.

Tentative Schedule with tentative exam dates

Please note that this schedule is subject to change on a daily basis; check Blackboard for up-to-date information.

<table>
<thead>
<tr>
<th>Week</th>
<th>Topics</th>
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<tbody>
<tr>
<td>1</td>
<td>Sections 1.1, 1.2, 1.3, 1.4,</td>
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<tr>
<td>2</td>
<td>Sections 1.6, 2.1, 2.2,</td>
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<tr>
<td>3</td>
<td>Sections 2.3, 2.4, 2.5,</td>
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<tr>
<td>4</td>
<td>Sections 2.7 3.1, <strong>Exam 1</strong></td>
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<tr>
<td>5</td>
<td>Sections 3.5, 4.1, 4.2,</td>
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<tr>
<td>6</td>
<td>Sections 4.3, 4.4, 4.5,</td>
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<tr>
<td>7</td>
<td>Sections 4.6, 5.1, <strong>Exam 2</strong></td>
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<tr>
<td>8</td>
<td>Sections 5.2,5.3, (Exam 3 - <strong>midterm</strong>)</td>
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<tr>
<td>9</td>
<td>Sections 5.4, 5.5, 5.6,</td>
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<tr>
<td>10</td>
<td>Sections 5.7, 6.1, 6.2</td>
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<tr>
<td>11</td>
<td>Sections 6.2, 6.3, (<strong>Exam 4</strong>)</td>
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<td>12</td>
<td>Sections 6.4, 6.6, 7.1</td>
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<tr>
<td>13</td>
<td>Sections 7.2, 7.3, 7.4</td>
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<tr>
<td>14</td>
<td>Section 10.1, 10.2, (<strong>Exam 5</strong>)</td>
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<tr>
<td>15</td>
<td>Sections 10.3, 10.5, 10.4</td>
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<tr>
<td>16</td>
<td><strong>Final Exam</strong></td>
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</table>
Syllabus Statements

Attendance
Attendance will be taken regularly. Please inform me of any absences prior to the absence whenever possible.

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 Observance 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 [Grading 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 of disciplinary action and possible expulsion from ASU.

The College of Science and Engineering adheres to the Statement of [Academic Integrity](#).

*Plagiarism*

Plagiarism is a serious topic covered in ASU’s [Academic Integrity policy](#) 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](#).

*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\(^v\)
  - Angelo State University Catalog\(^vi\)

- 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 for help. Most times I will be near my office during my office hours (or there will be a note telling you when I will be back). In some cases, I may have an appointment or meeting elsewhere. 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)

\(^iii\) Academic Integrity: [http://www.angelo.edu/student-handbook/community-policies/academic-integrity.php](http://www.angelo.edu/student-handbook/community-policies/academic-integrity.php)

\(^iv\) 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/)