Instructor: Mrs. Autumn Hoover
Office: MCS 220M
Fax: (325) 942 – 2503
Office Phone: (325) 486-5431
Office Hours:
- Monday 9:00 – 10:00
- Tuesday 8:30 – 9:30
- Wednesday 9:00 – 10:00
- Thursday 8:30 – 9:30
- Friday 9:00 – 10:00

Prerequisite: You must satisfy one of the following:
- Mathematics 1314 with a grade of “C” or better,
- a score of 26 or higher on the mathematics section of the ACT,
- 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,
- a suitable score on a placement exam.

Textbook: Precalculus: Functions and Graphs, 12e, by Swokowski and Cole. (Do not need the access code.)

Math Lab: There is a math learning lab available on campus to provide free math tutoring. Please utilize this great resource – no appointment is required.
- MATH LAB – LIB C302
  - Monday – Thursday: 9:00 am – 8:00 pm
  - Friday: 9:00 am – 12:00 pm
  - Sunday: 4:00 pm – 8:00 pm (beginning 9/10/17)

Blackboard/Email:
- I plan to post your daily assignments, class notes, class announcements and other documents on Blackboard. I will expect you to print these documents and bring them to class with you.
- Blackboard can be accessed through RamPort or by visiting http://blackboard.angelo.edu.
- I may send you information via email. It is your responsibility to regularly check your angelo.edu email account.

Attendance:
- Class attendance will be taken daily.
- Absences are reported to the administration and play an important role in suspension considerations.
- You are expected to attend all scheduled class meetings, arrive on time, and stay for the entire class period.
- You will be marked absent if you are more than 10 minutes late or if you leave early. I will count three tardies as an absence.

Homework:
- There will be daily assigned exercises from the textbook and will follow the Homework Guidelines attached to this syllabus.
- Homework is due at the BEGINNING of class and NO LATE HOMEWORK will be accepted for any reason, including absences. If you have trouble completing a homework assignment, see me for assistance before it is due.
- If you are absent, it is your responsibility to contact me or view Blackboard in order to get the new homework assignments.
- You may send your homework to class with a friend, scan or take a picture of it and email it to me or fax it to the office. They must be received prior to the beginning of class.
- I will drop 3 homework grades. This is the leeway you are given to allow for unavoidable absences. Do not waste them.
Exams:
• We will have three regular exams and a comprehensive final exam on **Thursday, December 14, 2017 10:30am – 12:30pm.**
• Calculators are NOT allowed on any exam.
• If you miss an exam, you need to get in touch with me immediately!
• I will replace your lowest exam score with your final exam, if it is to your benefit. You are given this second chance to allow for unavoidable absences. You need to think of this as your insurance in case you get sick or have a family emergency.
• You may take an exam early ONLY if I excuse the absence.
• If you leave the room during an exam, I may take your test and grade it AS IS!

Grading Scheme:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework Average</td>
<td>15%</td>
</tr>
<tr>
<td>Exam Average (20% each)</td>
<td>60%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25%</td>
</tr>
</tbody>
</table>

The following table determines how letter grades will be assigned in this course.

<table>
<thead>
<tr>
<th>Percentage Range</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90% and above</td>
<td>A</td>
</tr>
<tr>
<td>80% to 89%</td>
<td>B</td>
</tr>
<tr>
<td>70% to 79%</td>
<td>C</td>
</tr>
<tr>
<td>60% to 69%</td>
<td>D</td>
</tr>
<tr>
<td>less than 60%</td>
<td>F</td>
</tr>
</tbody>
</table>

Common Courtesy:
• Turn off all cell phones or any other electronic devices before entering the classroom. Place these items in your backpacks. I do not want to see them on your desk or in your laps. THIS MEANS NO TEXTING DURING CLASS! I reserve the right to ask you to leave class if I catch you on your phone.
• Please refrain from carrying on personal conversations once class has started. Be courteous to your peers when they are responding in class by listening to what they have to say.

Homework Guidelines for written work from the textbook:
1. Fold your homework in **half vertically** with your name and row number visible on the outside.
2. No spiral paper is allowed.
3. Write legibly. Clearly indicate the problem number, write the problem, show all work in an organized manner. If your answer cannot be read, it’s WRONG. Your homework assignment should not look like scratch paper.
4. **STAPLE** your work. Staple your homework before folding it vertically.
5. You CAN use both sides of a sheet of paper.
6. Box or highlight your answers.
7. Show your work. Plus signs, minus signs, “=0”, radicals, and denominators should not disappear in the middle of your work, only to mysteriously reappear at the end. **Each step should be complete.** Use mathematical notation correctly.

In general, write your homework as though you’re trying to convince someone that you know what you’re talking about. Completely worked and corrected homework exercises make excellent study guides. If students develop good habits while working on the homework, they generally perform better on the exams.

**WARNING: POINTS MAY BE DEDUCTED IF THESE STANDARDS ARE NOT FOLLOWED!!**

Drop Date:
Friday, November 3, 2017 is the last day to drop a course with a W or withdraw from ASU.
University Policies:

- **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. ([http://www.angelo.edu/opmanual/](http://www.angelo.edu/opmanual/)) You are still responsible for completing all course work missed on that day.

- **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

- If you have any simpler needs (like needing me to speak louder, needing to sit in a certain location, needing a larger font, etc.), let me know immediately.

- **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

- **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](#)
- [Angelo State University Catalog](#)

**Mathematics 2312 – 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; and asymptotes.

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; solve trigonometric equations; and recognize and graph trigonometric and inverse trigonometric functions, conic sections, and algebraic curves.

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; Inequalities.
2. **Graphs and Functions**: Rectangular Coordinate Systems; Graphs of Equations; Lines; Definition of Function; Graphs of 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.
6. **Analytic Trigonometry**: Trigonometric Equations; The Addition and Subtraction Formulas; Multiple-Angle Formulas; The Inverse Trigonometric Functions.
10. **Topics from Analytic Geometry**: Parabolas; Ellipses; Hyperbolas; Plane Curves and Parametric Equations; Polar Coordinates.
The subject matter schedule listed below is tentative, and subject to change and adaptation. For current, updated information about course topics, contact the instructor or see Blackboard.

**Fall 2017 (TR)**

<table>
<thead>
<tr>
<th>Course day</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Syllabus, 1.2 Exponents and Radicals</td>
</tr>
<tr>
<td>2</td>
<td>1.3 Algebraic Expressions</td>
</tr>
<tr>
<td>3</td>
<td>1.3 Algebraic Expressions, 1.4 Equations</td>
</tr>
<tr>
<td>4</td>
<td>1.4 Equations, 1.6 Inequalities</td>
</tr>
<tr>
<td>5</td>
<td>2.2 Graphs of Equations, 2.3 Lines</td>
</tr>
<tr>
<td>6</td>
<td>2.3 Lines, 2.4 Definition of Functions</td>
</tr>
<tr>
<td>7</td>
<td>2.4 Definition of Functions, 2.5 Graphs of Functions</td>
</tr>
<tr>
<td>8</td>
<td>2.5 Graphs of Functions, 2.6 quadratic Functions, 2.7 Operations on Functions</td>
</tr>
<tr>
<td>9</td>
<td>Test 1 (9/26/2017)</td>
</tr>
<tr>
<td>10</td>
<td>2.7 Operations on Functions, 3.1 Polynomial Functions</td>
</tr>
<tr>
<td>11</td>
<td>3.5 Rational Functions</td>
</tr>
<tr>
<td>12</td>
<td>4.1 Inverse Functions, 4.2 Exponential Functions</td>
</tr>
<tr>
<td>13</td>
<td>4.2 Exponential Functions, 4.3 The Natural Exponential Function, 4.4 Logarithmic Functions</td>
</tr>
<tr>
<td>14</td>
<td>4.5 Properties of Logarithms, 4.6 Exponential and Logarithmic Equations</td>
</tr>
<tr>
<td>15</td>
<td>4.6 Exponential and Logarithmic Equations, 5.1 Angles</td>
</tr>
<tr>
<td>16</td>
<td>5.2 Trigonometric Functions of Angles</td>
</tr>
<tr>
<td>17</td>
<td>5.3 Trigonometric Functions of Real Numbers</td>
</tr>
<tr>
<td>18</td>
<td>Test 2 (10/26/2017)</td>
</tr>
<tr>
<td>19</td>
<td>5.4 Values of the Trigonometric Functions, 5.5 Trigonometric Graphs</td>
</tr>
<tr>
<td>20</td>
<td>5.5 Trigonometric Graphs, 5.6 Additional Trigonometric Graphs</td>
</tr>
<tr>
<td>21</td>
<td>6.1 Verifying Trigonometric Identities, 6.2 Trigonometric Equations</td>
</tr>
<tr>
<td>22</td>
<td>6.2 Trigonometric Equations, 6.3 The Addition and Subtraction Formulas</td>
</tr>
<tr>
<td>23</td>
<td>6.4 Multiple Angle Formulas, 6.6 The Inverse Trigonometric Formulas</td>
</tr>
<tr>
<td>24</td>
<td>6.6 The Inverse Trigonometric Formulas</td>
</tr>
<tr>
<td>25</td>
<td>10.5 Polar Coordinates</td>
</tr>
<tr>
<td>26</td>
<td>10.1 Parabolas, 10.2 Ellipses</td>
</tr>
<tr>
<td>27</td>
<td>Test 3 (11/30/2017)</td>
</tr>
<tr>
<td>28</td>
<td>10.3 Hyperbolas, 10.4 Plane Curves and Parametric Equations</td>
</tr>
<tr>
<td>29</td>
<td>Review for Final Exam</td>
</tr>
<tr>
<td>30</td>
<td>Final Exam <strong>Thursday, December 14, 2017 10:30am – 12:30pm</strong>.</td>
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