A. COURSE INFORMATION

Course number/section: MATH 2312.001
Class meeting time: MWF 12:00-12:50 PM
Class location: CS 114
Course Website: https://bb9.tamucc.edu/

B. INSTRUCTOR INFORMATION

Instructor: Dr. Beate Zimmer
Office location: CI 310
Office hours: MW 11:00 AM – 12:00 noon and 1:00PM -2:00 PM
F 11:00 AM – 12:00 noon
Telephone: (361) 825-2682
e-mail: beate.zimmer@tamucc.edu
Appointments: e-mail to make appointments outside the announced office hours

C. COURSE DESCRIPTION

Catalog Course Description
A more rapid treatment of the material in MATH 1314 (College Algebra) and MATH 1316 (Trigonometry), this course is designed for students who wish a review of the above material, or who are well prepared. Functions, graphs, trigonometry, and analytic geometry.

Extended Course Description
Precalculus is a hybrid course between College Algebra and Trigonometry that goes less in depth than either of those courses. If you have already passed College Algebra, then Trigonometry may be a better option for you than Precalculus.

D. PREREQUISITES FOR THE COURSE

Prerequisites
MATH 1314 or placement into MATH 2312.

Corequisites
None.

E. REQUIRED TEXTBOOK(S), READINGS AND SUPPLIES

Required Textbook(s)
The textbook for the course is Lial, Precalculus, 6th edition. You do need MyLabsPlus access that should have come bundled with the book or can be bought as a standalone
access card. Through the online homework system you get access to an electronic copy of the textbook, but at the end of the semester this access ceases. Some students have managed to work with just the online materials; it is your call whether you want to buy the book.

A scientific calculator is required for this class. This does not include graphing calculators.

The homework is in MyLabsPlus, accessed through BlackBoard (bb9.tamucc.edu). To register you need the MyLabsPlus access card that was bundled with the book. You may print out the online homework, but don’t have to do so.

Exam solutions will be available on BlackBoard, you may print them, but don’t have to print them. Costs for required printouts should not exceed $10.

Supplies
A scientific calculator is required for this class.

The homework is in MyLabsPlus, accessed by logging into BlackBoard https://bb9.tamucc.edu/. Clicking the MyLabsPlus button on the top left should take you directly into MyLabsPlus. You will need the access code that comes with the book or you can buy an access code online. There is an initial grace period where you can use the system without an access code, so “I don’t have the textbook yet” is not a valid excuse not to do homework right away. Homework is due the day of the next lecture at 3 PM and there are no extensions - the drop grades take care of any emergencies.

Exam solutions will be available on BlackBoard. You may print them, but don’t have to print them.

An outline of the notes for class will be available in BlackBoard. These notes have the statements of the theorems and the problems and during class I will fill in the missing work for all the examples. It may help to bring a copy of the provided notes to class to spend less time taking notes. The full notes will not be handed out, as students tend to skip class if they don’t have to take notes. Every Friday the notes for the next week will become available. Costs for required printouts should not exceed $10, or $30 if you print the notes before class for easier note taking.

F. STUDENT LEARNING OUTCOMES AND ASSESSMENT

Assessment is a process used by instructors to help improve learning. Assessment is essential for effective learning because it provides feedback to both students and instructors. A critical step in this process is making clear the course’s student learning outcomes that describe what students are expected to learn to be successful in the course. The student learning outcomes for this course are listed below. By collecting data and sharing it with students on how well they are accomplishing these learning outcomes students can more efficiently and effectively focus their learning efforts. This information can also help instructors identify challenging areas for students and adjust their teaching approach to facilitate learning.
By the end of this course, students should be able to:

1. Demonstrate and apply knowledge of properties of functions.

2. Recognize and apply algebraic and transcendental functions and solve related equations.

3. Apply graphing techniques to algebraic and transcendental functions.

4. Compute the values of trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians.

5. Prove trigonometric identities.

6. Solve right and oblique triangles.

In more detail this says that at the end of the course the student should be able to:

1. Work with some basic concepts:
   - multiply and factor polynomials
   - work with rational expressions
   - simplify rational exponents
   - rationalize fractions

2. Solve equations and inequalities:
   - solve linear equations
   - solve quadratic equations
   - determine and graph the solution set of an inequality
   - solve absolute value equations
   - solve exponential and logarithmic equations
   - solve trigonometric equations
   - solve systems of linear equations

3. Graph functions and circles
   - graph circles whose equation needs to be simplified first
   - determine whether a given graph is the graph of a function
   - graph linear functions
   - recognize the graphs of some basic functions
   - use graphing techniques, such as shifts and stretches
   - determine from a polynomial how its graph will look
   - find axis-intersects for polynomials
   - be able to graph trigonometric functions and their translations

4. Work with inverse functions and polynomials
   - determine from the graph of a function whether it has an inverse
• check whether two functions are inverses of each other
• find the equation of the inverse of a function
• use continuous compounding and exponential functions
• use logarithms as inverse functions of exponential functions
• simplify logarithmic expressions
• graph and find values for the inverse circular functions

5. Have a solid base in trigonometry
• convert between degrees and radians
• know the values of the basic trig functions for special angles
• solve right triangles
• use the circular functions to find coordinates of points on the unit circle
• have the fundamental trigonometric identities memorized
• be able to verify trigonometric identities
• simplify trig expressions using the double angle identities

G. INSTRUCTIONAL METHODS AND ACTIVITIES

Methods and activities for instruction include: Lectures, calculator demonstrations and group activities.

H. MAJOR COURSE REQUIREMENTS AND GRADING

The methods of evaluation and the criteria for grade assignments are:
Homework through MyLabsPlus will be assigned every class and is due at the start of the next class. At the start of each class I will answer homework questions for at most 10 minutes. Office hours are a great opportunity to ask more questions about homework. On-campus free tutoring in the CASA is another way of getting help with the homework. Late homework receives no credit. The weekly quizzes are given online. You can take them anytime between midnight and midnight of the Friday of the quiz and you have two attempts to do each quiz. The quizzes are similar to the homework but have no help options available. Of course you may not get any help with the quizzes. Missed quizzes can not be made up, but the lowest three quizzes get dropped. The lowest three homework grades get dropped. No exam grades get dropped.

Calculator policies and partial credit:
For the exams and the final exam scientific calculators are permitted. All exams do have partial credit. The final exam is a departmental exam that is part multiple-choice and part short-answer.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>% of FINAL GRADE</th>
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<tbody>
<tr>
<td>Three exams</td>
<td>50%</td>
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<tr>
<td>Homework</td>
<td>15%</td>
</tr>
<tr>
<td>Best 10 Quizzes</td>
<td>10%</td>
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<tr>
<td>Final Exam</td>
<td>25%</td>
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</tbody>
</table>
Grading Scale: Grades will be no stricter than
A = 90.00 – 100%
B = 80.00 – 89.99%
C = 70.00 – 79.99%
D = 60.00 – 69.99%
F = below 60%

I. COURSE CONTENT/SCHEDULE

<table>
<thead>
<tr>
<th>DATE</th>
<th>QUIZ</th>
<th>SECTIONS</th>
<th>TOPICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 M 8/26</td>
<td></td>
<td>R3 - R5</td>
<td>Polynomials, Factoring</td>
</tr>
<tr>
<td>2 W 8/28</td>
<td></td>
<td>R6, R7</td>
<td>Polynomials, Rational Expressions</td>
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<tr>
<td>3 F 8/30</td>
<td>Q1 on R3-R5</td>
<td>1.1</td>
<td>Rational Exponents, Radical Expressions</td>
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<tr>
<td>4 W 9/4</td>
<td></td>
<td>1.4</td>
<td>Linear Equations</td>
</tr>
<tr>
<td>5 F 9/6</td>
<td>Q2 on R6-R7, 1.1</td>
<td>1.7</td>
<td>Quadratic Equations</td>
</tr>
<tr>
<td>6 M 9/9</td>
<td></td>
<td>1.8</td>
<td>Inequalities</td>
</tr>
<tr>
<td>7 W 9/11</td>
<td></td>
<td>2.1, 2.2</td>
<td>Rectangular Coordinates and Graphs, Circles</td>
</tr>
<tr>
<td>8 F 9/13</td>
<td>Q3 on 1.4 - 1.8</td>
<td>2.3</td>
<td>Functions</td>
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<tr>
<td>9 M 9/16</td>
<td></td>
<td>2.4</td>
<td>Function Operations and Composition</td>
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<tr>
<td>10 W 9/18</td>
<td></td>
<td>2.6</td>
<td>Graphs of Basic Functions</td>
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<tr>
<td>11 F 9/20</td>
<td></td>
<td>2.7</td>
<td>Graphing Techniques</td>
</tr>
<tr>
<td>12 M 9/23</td>
<td></td>
<td>2.8</td>
<td>Exam # 1, covering sections R1–2.7</td>
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<tr>
<td>13 W 9/25</td>
<td></td>
<td>3.1</td>
<td>Quadratic Functions</td>
</tr>
<tr>
<td>14 F 9/27</td>
<td>Q4 on 2.1 - 2.4</td>
<td>3.4</td>
<td>Graphs of Polynomial Functions</td>
</tr>
<tr>
<td>15 M 9/30</td>
<td></td>
<td>3.5</td>
<td>Rational Functions</td>
</tr>
<tr>
<td>16 W 10/2</td>
<td></td>
<td>4.1</td>
<td>Inverse Functions</td>
</tr>
<tr>
<td>17 F 10/4</td>
<td>Q6 on 2.8 - 3.4</td>
<td>4.2</td>
<td>Exponential Functions</td>
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<tr>
<td>18 M 10/7</td>
<td></td>
<td>4.3</td>
<td>Logarithmic Functions</td>
</tr>
<tr>
<td>19 W 10/9</td>
<td></td>
<td>4.4</td>
<td>Evaluating Logarithms</td>
</tr>
<tr>
<td>20 F 10/11</td>
<td>Q7 on 3.5 - 4.2</td>
<td>4.5</td>
<td>Exponential and Logarithmic Equations</td>
</tr>
<tr>
<td>21 M 10/14</td>
<td></td>
<td>9.1</td>
<td>Systems of Linear Equations</td>
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<tr>
<td>22 W 10/16</td>
<td></td>
<td>9.1</td>
<td>Systems of Linear Equations</td>
</tr>
<tr>
<td>23 F 10/18</td>
<td>Q8 on 4.3 - 4.5</td>
<td>5.1, 5.2</td>
<td>Angles, Trigonometric Functions</td>
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<td>24 M 10/21</td>
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<td></td>
<td>Exam # 2, on sections 2.7 – 4.5, 9.1</td>
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<tr>
<td>25 W 10/23</td>
<td></td>
<td></td>
<td>Evaluating Trigonometric Functions</td>
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<tr>
<td>26 F 10/25</td>
<td>Q9 on 9.1</td>
<td>5.3</td>
<td>Solving Right Triangles</td>
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<tr>
<td>27 M 10/28</td>
<td></td>
<td>5.4</td>
<td>Radian Measure</td>
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<tr>
<td>28 W 10/30</td>
<td></td>
<td>6.1</td>
<td>The Circular Functions</td>
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<tr>
<td>29 F 11/1</td>
<td>Q10 on 5.1 - 5.4</td>
<td>6.2</td>
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## J. COURSE POLICIES

### Attendance/Tardiness
Attendance will be taken each class. For most students attending class is a faster way of learning the material than trying to catch up on missed material solely from the book. Tardiness is often disruptive to the whole class and is not appreciated. If you are delayed and arrive late for class please do so quietly. Usually the topic/technique of the day is introduced in the first few minutes of class; missing that part usually means that you will be lost all class.

### Late Work and Make-up Exams
Missed homework assignments or quizzes can not be made up; the drop grades accommodate those. Make-up exams will not be given. If a student misses an exam and has a valid excuse, the final exam score will serve as the score for that exam.

### Extra Credit
There is no extra credit in this class.

### Cell Phone Use
Cell phones and such must be turned off before class. Each time your phone rings during class, your course grade goes down by 1%.

### Laptop Use
You may use a laptop to take notes during lecture. Distracting other students by surfing the web is not acceptable behaviour.
Food in Class
No food in class (except during the final, where non-noisy foods are OK).

Missed Exam
If you have to miss an exam, it is your responsibility to contact me no later than the day of the exam. Failure to contact me on or before the exam day results in a grade of zero points for the exam. This also applies to the final exam. For missed final exams due to an acceptable excuse the university rules about I (Incomplete) grades apply and the make-up is at the instructor’s convenience early in the next long semester. Only extreme emergencies or official university business are acceptable reasons to miss exams and documentation will be required. Car trouble, routine doctor’s appointments, family reunions or graduations of siblings etc. are not valid reasons to miss exams. If your reason to miss the exam is not a valid one, your exam score is 0 points. Be sure to check before missing an exam whether your reason is acceptable.

Participation
Participation is not part of the grade, but you learn more by interacting, than by watching passively.

K. COLLEGE AND UNIVERSITY POLICIES

- **Academic Integrity (University)**
  University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such as illicit possession of examinations or examination materials, falsification, forgery, complicity or plagiarism. (Plagiarism is the presentation of the work of another as one’s own work.) In this class, academic misconduct or complicity in an act of academic misconduct on an assignment or test will result in a failing grade.

- **Classroom/Professional Behavior** Texas A&M University–Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in article VII of the Student Code of Conduct. Students engaging in unacceptable behavior may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.

- **Statement of Civility**
  Texas A&M University–Corpus Christi has a diverse student population that represents the population of the state. Our goal is to provide you with a high quality educational experience that is free from repression. You are responsible for following the rules of the University, city, state and federal government. We expect that
you will behave in a manner that is dignified, respectful and courteous to all people, regardless of sex, ethnic/racial origin, religious background, sexual orientation or disability. Behaviors that infringe on the rights of another individual will not be tolerated.

**Deadline for Dropping a Course with a Grade of W (University)** The grade of W will be assigned to any student officially dropping a course. Please consult with the instructor before you decide to drop to be sure it is the best thing to do. Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class. Should dropping the course be the best course of action, visit the Office of the University Registrar for the Course Drop Form that must submitted. No student is eligible to receive a W without completing the official drop process by this deadline. Please consult the Academic Calendar (http://www.tamucc.edu/academics/calendar/)

**Grade Appeals (College of Science and Engineering)** As stated in University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures, a student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is upon the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, see University Procedure 13.02.99.C2.01, Student Grade Appeal Procedures. These documents are accessible through the University Rules website at http://www.tamucc.edu/provost/university_rules/index.html, and the College of Science and Engineering Grade Appeals webpage at http://sci.tamucc.edu/students/GradeAppeal.html

For assistance and/or guidance in the grade appeal process, students may contact the chair or director of the appropriate department or school, the Office of the College of Science and Engineering Dean, or the Office of the Provost.

**Disability Services**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please call (361) 825-5816 or visit Disability Services in Corpus Christi Hall 116. If you are a returning veteran and are experiencing cognitive and/or physical access issues in the classroom or on campus, please contact the Disability Services office for assistance at (361) 825-5816.
http://disabilityservices.tamucc.edu/

- **Statement of Academic Continuity** In the event of unforeseen adverse event, such as a major hurricane and classes could not be held on the campus of Texas A&M University–Corpus Christi this course would continue through Blackboard and/or e-mail. In addition the syllabus and class activities may be modified to allow continuation of the course. University Facilities (i.e. e-mail, web sites, and Blackboard) will be operational within two days of closing the physical campus. However, students need to make certain that the course instructor has a primary and secondary way of contacting each student.

**L. OTHER INFORMATION**

- **Academic Advising** The College of Science & Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. Meetings are by appointment only; advisors do not take walk-ins. Please call or stop by the Advising Center to check availability and schedule an appointment. The College’s Academic Advising Center is located in Center for Instruction 350 or can be reached at (361) 825-3928.

**GENERAL DISCLAIMER**

I reserve the right to modify the information, schedule, assignments, deadlines, and course policies in this syllabus if and when necessary. I will announce such changes in a timely manner during regularly scheduled lecture periods.