TEXAS A&M UNIVERSITY-Corpus Christi
Department of Mathematics and Statistics

MATH 2312.W01 Pre Calculus Summer I, 2014

I. COURSE INFORMATION

- Meeting Time & Place: Internet Web Instruction
- Professor: Gordon Dean Haley
- Office Phone: 361-825-3754
- Office Address: CI 301
- E-MAIL Address: ghaley@islander.tamucc.edu
- Web Page Address: TBA
- Office Hours: TBA
- Virtual Office Hours: Anytime via E-mail.

II. COURSE DESCRIPTION

A more rapid treatment of the material in MATH 1314 and MATH 1316, this course is designed for students who wish a review of the above material, or who are very well prepared. Functions, graphs, trigonometry, and analytic geometry. Prerequisite: MATH 1314 or placement into MATH 2312.

III. PREREQUISITES for the COURSE

MATH 1314 or placement into MATH 2312 by departmental test.

IV. TEXT and OTHER SUPPLIES REQUIRED

- A TI Nspire Graphing Calculator (Other models may be used but will not be supported by the instructor).
- MyMathLab access is required (The access key is included with the purchase of the required text book above).
- Internet access
- PC System Configuration - Certain computer programs are required to complete the online assignments in this course. Please utilize the browser check, once you are logged in, to verify that all of the necessary programs and plug-ins are properly installed on your system before attempting an assignment. There are labs on the TAMU-CC campus which are properly configured to use with this delivery method, however not every computer on campus will be compatible.
V. COURSE OBJECTIVES

On successful completion of this course you should be able to do the following [corresponding text book section numbers in brackets]:

Course Objectives:

1. Define when a relation is a function.
2. Define, analyze, and synthesize information relating to the complex number system including all operations, structure, and representations.
3. Identify polynomial functions and their degree
4. Graph polynomial functions using transformations
5. Identify the zeros of a polynomial function and their multiplicity
6. Analyze the graph of a polynomial function
7. Understand and exhibit differences between the real number system and the complex number system.
8. Find the domain of a rational function
9. Find the vertical, horizontal, or oblique asymptotes of a rational function
10. Define and graph a quadratic function, polynomial function, and rational function.
11. Define and graph exponential and logarithmic functions
12. Use properties of logarithms to condense or expand logarithmic expressions
13. Solve exponential and logarithmic equations
14. Solve application models involving the exponential and logarithmic functions
15. Define radian measure and degree measure.
16. Define the trigonometric functions using the unit circle.
17. Define the trigonometric functions using right angle trigonometry.
18. Graph the trigonometric functions.
19. Define the inverse trigonometric functions.
20. Verify trigonometric equations.
21. Solve problems involving exponential growth and decay.
22. Solve trigonometric equations.
23. Solve on oblique triangle by using the law of sines and law of cosines.
24. Perform basic vector operations and represent them graphically.
25. Find the dot product of vectors.
26. Understand slope as a rate of change.
27. Write the trigonometric form of a complex number.
28. Graph the conic sections: parabolas, ellipses, and hyperbolas as well as their transformations, rotations, & inverses.
29. Simplify the equation of a second degree equation by performing a rotation of axes.
30. Sketch a curve that is represented by a set of parametric equations.
31. Rewrite a set of parametric equations as a single rectangular equation.
32. Graph a polar equation.
33. Write equations of conic sections in polar form.
34. Prepare for 2313 (Calculus I).
VI. INSTRUCTIONAL METHODS AND ACTIVITIES

The instructional method is a via internet delivery for instructions and activity based problems. Students are expected to participate through virtual class online activities, discussion boards, hand written & online homework, quizzes, and exams.

VII. EVALUATION AND GRADE ASSIGNMENT

Course grades will be based on homework (10%), group/daily work (10%), qualitative assessments (30%), 1 Midterm Exam 25%, 1 Final exam (25%). NOTE: To receive a passing grade for this course, the Midterm and Final exams must average to a passing grade in addition to having an overall passing average for all work.

- **Homework** will be assigned online prior to the beginning of each week. It will be due one week from the date assigned. It will be scored based on percentage correct. It is important to keep your work in a binder for review, although the answers and problems are submitted online.
- **Daily Work** will be based on virtual class attendance. Daily work also includes preparation for class through specific reading assignments, power point reviews, as well as guided practice reviews. Discussion board assignments are not optional and will be used as extra credit towards the midterm or final exam (up to 10%).
- **Qualitative Assessments** (Quizzes) will be made for each Chapter. They will be timed test and will require you to work independently to solve the problems.
- The **Midterm Exam** – Time and Location TBA.
- The **Final Exam** – Time and Location TBA.

Grading Scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>90-100%</td>
<td>80-90%</td>
<td>70-80%</td>
<td>60-70%</td>
<td>Below 60%</td>
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VIII. TENTATIVE COURSE SCHEDULE

Attached

IX. CLASS POLICIES

- This class is run for the mathematical development of all participants. All students must accept responsibility for participating and consequences of not participating.
- You are the only person responsible for your registration. No one will drop you for not attending class. Please make sure that you drop the class yourself if you are not able to
continue coming to class. Please note that the last day to drop the class with a grade of "W" is ___________.

- Please turn off phones and beepers before coming to class.
- Your online attendance is expected. Please notify by phone or email if you cannot login to your account for an extended period of time. If a sudden emergency keeps you from an assignment or test, please notify me when you are able.
- All absences from assessments and exams will be considered unexcused unless they are documented in advance as excusable with the instructor or as soon as possible in the case of emergencies. No credit will be awarded for unexcused absences from assessments.
- Help is available from the Tutoring and Learning Center on the second floor of the Bell Library, your classmates, CASA, MyMathLab, as well as my office hours. Wherever you get it, please do not wait until the last minute.
- This class takes place during hurricane season. Announcements will be posted for the online class on the entry page of your class. Keep in mind the following as found on the university’s website:
  - Listen to radio/TV for announcements of when to return to campus, or contact the University via the Public Information Hotline, (361) 825-0000.
  - Note: Radio Station KEYS (AM 1440) KZFM (95.5), KNKN (101.3), are the Emergency Alert Systems (EAS) stations for the Corpus Christi area, NOAA Weather Radio (Corpus Christi 162.44 MHZ).
  - # Students that are calling from out of the Corpus Christi area can call the Public Information Hotline at: 1-361-825-0000 or Toll Free 1-888-234-4887.

X. ACADEMIC HONESTY

Academic Honesty: 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, forgery or plagiarism.

XI. 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 reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Disability Services Office at (361) 825-5816 or go to the office at Driftwood 101.

XII. GRADE APPEALS PROCESS

Grade Appeals (College of Science and Engineering Version): 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 (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.