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**BRAZOSPORT COLLEGE**

**MATH 1316 – TRIGONOMETRY**

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## **COURSE SYLABUS**

Term: Spring 2012  
Course #: 1316  
Course Schedule: MTW 08:00 – 08:50  
Course Location: AHS

Instructor: Dr. Calin Agut,  
Office: J-202, Department of Mathematics  
E-mail: [Calin.Agut@brazosport.edu](mailto:Calin.Agut@brazosport.edu)  
Phone: 230-3274  
Office Hours: (TBA) \_\_\_\_\_

Final Exam (tentative): 5/7 and 5/8/12, 08:00-08:50  
Withdraw last date: 3/30/12

## Course Description/Overview

The *Trigonometry* course is a basic computational college-level course in Mathematics. It studies the trigonometric functions and their properties, angles and their measurements, identities and equations. The course also contains applications of Trigonometry in Math, Physics, Science and real-life situations.

Credits: 3.

## Textbook

The course textbook is *Trigonometry-A Right Triangle Approach*, 5<sup>th</sup> Edition by Sullivan, The Pearson Prentice Hall Company. The students are required to have the textbook and use it during the class meetings.

## Calculator/Graphing utilities:

A Graphing Calculator, TI-83 or better is suggested to be used. The utility will be used most of the time in class and also for homework. It is the student's responsibility to have basic knowledge about using his/her own calculator. The work performed by calculator will not substitute the steps required for any assignment.

## Prerequisites:

Basic skills in college algebra are required. These include, but are not limited to, operations with numbers, set theory, logic and geometry.

## Format

The course is designed as a regular course.

In the lecture/teaching classes the student will perform regular activities, asked by the instructor. The corresponding lesson/work will be taught at this time.

The homework and/or projects will be performed outside of class.

## Assessments:

During the Semester there will be several unannounced quizzes, projects, challenge exercises, Tests and one Final Exam.

Any written open-answer assessment must contain all the steps performed in order to get the solution and must be presented in a mathematical methodical manner.

## Grading Policy/Evaluation:

The grades will be counted in the following way:

|                  |     |
|------------------|-----|
| Quizzes' Average | 30% |
| Tests' Average   | 40% |
| Final Exam:      | 30% |

## Final Exam

The Final Exam is mandatory and comprehensive. Any possible change will be announced in class and is the student's responsibility to be informed. Missing the Exam might be reflected as failure of the course.

No make-up is allowed for the Final, under any circumstances.

## Homework:

The instructor will regularly assign homework (see attach). Even the homework will NOT be collected, it is the students' responsibility to practice on all of the assigned exercises. Most of the questions on any Quiz, Class Assignment or Exam will be chosen from the homework sets, or similar.

The students are expected to prepare the next class' lesson listed on the attached schedule.

## Quizzes:

Several unannounced quizzes from the homework can be given at any time during the class. No make-up for quizzes is allowed, under any circumstances.

**Test(s)**

Several Tests will be administrated in the regular class. They might be on open-answer or multiply-choice format. If the tests will be open-answer tests and the students are required to show all the work performed on the tests' paper in a methodical manner. A poor mathematical presentation on the work may be reflected in a lower grade.

The dates for the Tests are stated on the Schedule (see attached), as tentative; the instructor will announce the exact date and time in the class, prior. For this reason, no make-up test is allowed, unless extraordinary circumstances. If so, the make-up must be completed within 3 days after the regular date for the test (in LAC).

**Grading Scale:**

Unless an announced in changes is made, the following scale will be applied for this course:

- A: 90-100;
- B: 80-89;
- C: 70-79.
- D: 60-69
- F: < 60.

**Attendance:**

The students are strongly encouraged to attend every lecture class. Each class meeting is considering as an entity. After 4 absences the instructor will consider "excessive absences" and may fail the student.

To avoid unnecessary class disruptions, the students are expected to arrive on time and remain seated until the class is dismissed. If a student is coming late in or is leaving earlier the class, the instructor may consider it as an absence or an obstruction to the academic process.

During the time spent in the class, the student will follow the instructor's directives and will respect the School's student conduct (including academic honesty, see attached). If the instructor will have any question regarding the cheating on any student's work, that student will be removed from the class indefinitely.

**Dropping policy**

No dropping will be initiated by the instructor at any time, unless extraordinary circumstances, official documented.

To be eligible for a reinstatement, the student must bring official documents and have an average of at least 70% in his/her class participation.

**Time requirement:**

Taking into account the volume of the information and the homework assigned, a minimum of 6 hours a week outside of class is required.

**Students with disabilities:**

Please address any request to the School Staff so that we can arrange for proper accommodation. It is my policy and priority to allow equal opportunity for every student.

**Miscellaneous**

No electronic recording device is allowed in the class. The students may only take written notes from the class.

No cell phones are allowed to be used during the class, quizzes, tests or exams. Please turn off any electronic device which may disturb the class activity.

No food is allowed to be brought into the class and be consumed, at any time.

No other electronic device, including laptop, palm, iPod is allowed to be brought and used in class, at any time.

If the student does not comply with those requirements, an academic action may be immediately taken by the instructor (mark absent for the entire meeting, grade of 0 for the assignment, invite to leave the class, removed from the class indefinitely, etc).

**IMPORTANT:**

Any further information will be presented in class by the instructor and is the student's responsibility to be informed.

**Course Outcomes:**

Upon completion of the course, the student will be able to:

1. Identify co-terminal and reference angles
2. Convert between radian and degree measure,
3. Define and evaluate the six trig functions using a right triangle.
4. Define and evaluate the six trig functions using a unit circle.
5. Evaluate any of the six trig functions of the common angles.
6. Graph a sinusoidal function and identify period, amplitude and phase shift.
7. Graph the non-sinusoidal trigonometric functions
8. Establish trigonometric identities using the 8 fundamental identities.
9. Use identities to find exact values of trigonometric functions.
10. Find the exact value of an inverse trigonometric expression.
11. Solve equations involving a single trig function
12. Solve trig equations using identities or advanced techniques.
13. Solve right triangle problems including applications using right triangle trigonometry.
14. Solve oblique triangles using the law of *sin* and law of *cos*.
15. Solve application problems using the law of *sin* and law of *cos*.

**Academic Honesty:**

Brazosport College assumes that students eligible to perform on the college level are familiar with the ordinary rules governing proper conduct including academic honesty. The principle of academic honesty is that all work presented by you is yours alone. Academic dishonesty including, but not limited to, cheating, plagiarism, and collusion shall be treated appropriately. Please refer to the BC Student Guide for more information, this is available online at <http://www.brazosport.edu> , click on the link found on the left side of the homepage.

**Students with disabilities:**

Brazosport College is committed to providing equal education opportunities to every student. Brazosport College offers services for individuals with special needs and capabilities including counseling, tutoring, equipment, and software to assist students with special needs. Please contact Phil Robertson, Special Populations Counselor, 979-230-3236 for further information.

**Other student Services Information:**

Your course on WebCT: <http://webster.brazosport.edu>

Information about study skills and tutoring for math, reading, writing, biology, chemistry and other subjects is available in the Learning Assistance Center (LAC), see [www.brazosport.edu/~lac](http://www.brazosport.edu/~lac) or call 979-230-3253.

The Student Services provides assistance in the following:

|                         |              |
|-------------------------|--------------|
| Counseling and Advising | 979-230-3040 |
| Financial Aid           | 979-230-3294 |
| Student Activities      | 979-230-3355 |

To reach the Information Technology Department for computer, email, or other technical assistance call the Help Desk at 979-230-3266.

## TRIGONOMETRY

### MATH 1316

#### LESSONS/HOMEWORK SUMMARY

| Lesson       | Homework         | Schedule (Tentative) |
|--------------|------------------|----------------------|
| 2.1          | 1-108            | Week 1-10            |
| 2.2          | 1-61             | Week 1-10            |
| 2.3          | 1-65             | Week 1-10            |
| 2.4          | 1-109            | Week 1-10            |
| 2.5          | 1-89             | Week 1-10            |
| 2.6          | 1-81             | Week 1-10            |
| 2.7          | 1-37             | Week 1-10            |
| 2.8          | 1-18 odds        | Week 1-10            |
| Review       | Will be provided | Week 1-10            |
| Test 1       |                  | 2/27/2012            |
| 3.1          | 1-68             | Week 1-10            |
| 3.2          | 1-66             | Week 1-10            |
| 3.3          | 1-98             | Week 1-10            |
| 3.4          | 1 to 82          | Week 1-10            |
| 3.5          | 1-61             | Week 1-10            |
| 3.6          | 1-36             | Week 1-10            |
| 3.7          | 1-52             | Week 1-10            |
| 3.8          | 1-58             | Week 1-10            |
| 4.1          | 1-37             | Week 1-10            |
| 4.2          | 1-53             | Week 1-10            |
| 4.3          | 1-49             | Week 1-10            |
| 4.4          | 1-37             | Week 1-10            |
| Review       | Will be provided | Week 1-10            |
| Test 2       |                  | 4/25/2012            |
| Final Review | Will be provided |                      |
| Final Exam   | Regular time     | 5/7 and 5/8/2012     |

The exercises for all the homework are those numbered

**$4n+1$ , unless specified.**

**Note:** start with  $n=0$

For  $4n+1$ : 1,5,9,13,17,...

**Note:**

All the sections/lessons are from the book:

*"Trigonometry-A Right Triangle Approach"*, 5e, by Sullivan

The Schedule for the Tests and Final Exam is just a **tentative**.

The instructor may operate changes at any time.