MATH 1316 Syllabus
Brookhaven College

Instructor Information
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Office Location: Not on campus this summer
Office Hours: No in person office hours. Contact me to meet virtually.
Division Office and Phone: Science, Mathematics, and Engineering.
Room K224. 972-860-4750

Course Information
Course Title: Plane Trigonometry
Course Number: MATH 1316
Section Number: 26401
Semester/Year: Summer 2020
Credit Hours: 3
Class Meeting Time/Location: Online only
Certification Date: July 9th
Last Day to Withdraw: July 29th

Course Prerequisites
Required: MATH 1314 or equivalent.

Course Description
In depth study and applications of trigonometry including definitions, identities, inverse functions, solutions of equations, graphing, and solving triangles. Additional topics such as vectors, polar coordinates, and parametric equations may be included. (3 Lec.)

Student Learning Outcomes
Upon successful completion of this course, students will:
1. Compute the values of trigonometric functions for key angles in all quadrants of the unit circle measured in both degrees and radians.
2. Graph trigonometric functions and their transformations.
3. Prove trigonometric identities.
4. Solve trigonometric equations.
5. Solve right and oblique triangles.
6. Use the concepts of trigonometry to solve applications

**Texas Core Objectives**

The College defines essential knowledge and skills that students need to develop during their college experience. These general education competencies parallel the Texas Core Objectives for Student Learning. In this course, the activities you engage in will give you the opportunity to practice two or more of the following core competencies:

1. **Critical Thinking Skills** - to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
2. **Communication Skills** - to include effective development, interpretation, and expression of ideas through written, oral, and visual communication
3. **Empirical and Quantitative Skills** - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
4. **Teamwork** - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal
5. **Personal Responsibility** - to include the ability to connect choices, actions, and consequences to ethical decision-making
6. **Social Responsibility** - to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities

**Required Course Materials**

**TEXT:**  *Trigonometry, 11th edition, Lial, Hornsby, Schneider, Daniels*

**ISBN:**  9780134306025

Note: A student of this institution is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

**GRAPHING CALCULATOR:**  A TI-83 or TI-84 calculator is required for the course.
**Graded Work**

The tables below provide a summary of the graded work in this course and an explanation of how your final course grade will be calculated.

**Summary of Graded Work**

<table>
<thead>
<tr>
<th>Assignments</th>
<th>Points</th>
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</thead>
<tbody>
<tr>
<td>Homework Average</td>
<td>15%</td>
</tr>
<tr>
<td>Quiz Average</td>
<td>35%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>25%</td>
</tr>
<tr>
<td>Comprehensive Final Exam</td>
<td>25%</td>
</tr>
</tbody>
</table>

**TOTAL: 100%**

**Final Grade**

<table>
<thead>
<tr>
<th>Percentages</th>
<th>Letter Grade</th>
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</thead>
<tbody>
<tr>
<td>90-100%</td>
<td>A</td>
</tr>
<tr>
<td>80-89%</td>
<td>B</td>
</tr>
<tr>
<td>70-79%</td>
<td>C</td>
</tr>
<tr>
<td>60-69%</td>
<td>D</td>
</tr>
<tr>
<td>0-59%</td>
<td>F</td>
</tr>
</tbody>
</table>

**Testing Procedures**

The Midterm Exam and Final Exam must be proctored, and your identification will be verified. Due to COVID – 19 the campus testing center is not an option for testing, thus every student is required to use Respondus Monitor provided by DCCCD.  

**Detailed information is posted in eCampus → Getting Started → Assessments**

This does require you to have access to a web cam within a private space. Your identification will be verified and your exam will be monitored via web cam. No notecards, formulas, or cheat sheets will be allowed on the Midterm and Final Exams.
Late Work Policy
No make-up tests will be given and there will be no extensions of deadlines unless arrangements are made prior to the test deadline and for good reason. Quizzes can be completed after the due date for 50% credit.

Other Course Policies
Incomplete grades are given when an unforeseen emergency prevents a student from completing the work in a course. The division Dean must approve all “I” grades. A student must be passing at the time of the drop date for an incomplete to be considered.

Institutional Policies
Institutional Policies relating to this course can be accessed using the link below. These policies include information about tutoring, Disabilities Services, class drop and repeat options, Title IX, and more. Brookhaven Institutional Policies

Course Schedule of Assignments
1.1 Angles
1.2 Angle Relationships and Similar Triangles
1.3 Trigonometric Functions
1.4 Using the Definitions of the Trigonometric Functions
Quiz #1
2.1 Trigonometric Functions of Acute Angles
2.2 Trigonometric Functions of Non-Acute Angles
2.3 Finding Trigonometric Functions Values Using a Calculator
2.4 Solving Right Triangles
2.5 Further Applications of Right Triangles,
Quiz #2
3.1 Radian Measure
3.2 Applications of Radian Measure
3.3 The Unit Circle and Circular Functions
3.4 Linear and Angular Speed,
Quiz #3
4.1 Graphs of the Sine and Cosine Functions
4.2 Translations of the Graphs of the Sine and Cosine Functions,
4.3 Graphs of the Tangent and Cotangent Functions
4.4 Graphs of the Secant and Cosecant Functions,
Quiz #4
Midterm Exam
5.1 Fundamental Identities,
5.2 Verifying Trigonometric Identities,
5.3 Sum and Difference Identities for Cosine,
5.4 Sum and Difference Identities for Sine and Tangent
5.5 Double-Angle Identities
5.6 Half-Angle Identities,

Quiz #5
6.1 Inverse Circular Functions,
6.2 Trigonometric Equations I
6.3 Trigonometric Equations II,

Quiz #6
7.1 Oblique Triangles and the Law of Sines
7.2 The Ambiguous case of the Law of Sines
7.3 The Law of Cosines
7.4 Geometrically Defined Vectors and Applications
7.5 Algebraically Defined Vectors

Quiz #7
8.1 Complex Numbers
8.2 Trigonometric (Polar) Form of Complex Numbers
8.3 The Product and Quotient Theorems
8.4 De Moivre’s Theorem; Powers and Roots of Complex Numbers

Quiz #8
Final Exam