Instructor Information
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Office Hours: Monday and Wednesday from 2:00-3:00 or by appointment
Division Office and Phone: Location P 330, 972-273-3500

Course Information
Course Title: Plane Trigonometry
Course Number: MATH 1316
Section Number: 78431
Semester/Year: Fall/2019
Credit Hours: 3
Class Meeting Time/Location: Online
Certification Date: 10/28/2019
Last Day to Withdraw: 11/27/2019

Course Prerequisites
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**
The textbook, Algebra and Trigonometry 3rd edition by Kirk Trigsted, is optional. You are required to have access to MyLabsPlus which is online software made by Pearson. An electronic text is available through the online software. Homework is also done through the software. I also highly recommend a calculator such as a TI 83 or TI 84. Calculators such as the TI 89 & TI 92, which perform algebraic operations, are not allowed. This includes most Casio models.

Your four chapter exams are taken at home through eCampus. You must have Respondus Lockdown Browser to take these exams. It is a free download. Instructions for downloading it are located in eCampus.
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.

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>Percentage of Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter Exams</td>
<td>50</td>
</tr>
<tr>
<td>Homework</td>
<td>25</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25</td>
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</tbody>
</table>

Final Grade

<table>
<thead>
<tr>
<th>Percentages</th>
<th>Letter Grade</th>
</tr>
</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>
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Description of Graded Work

Chapter Exams: The homework in MyLabsPlus is broken into 5 chapters. There will be four exams. Exam 1 covers chapter 6, exam 2 covers chapter 7, exam 3, is over chapters 8 and 9, while exam 4 is over chapter 10. The exams range from 20 to 30 questions and are multiple choice mixed with some free response questions.

Homework: The homework is assigned in MyLabsPlus. I do not accept any late homework so please pay close attention to the due dates and keep up with the assignments. If you miss a class, you are still responsible for the homework. The due dates are posted online and homework is always assigned for at least a week before it is due. There is no reason to miss your homework due date.

Final Exam: The final exam is comprehensive.
**Late Work Policy**

There are NO makeup exams. If the due date says “end of day,” that means you must complete and submit your exam by 11:59 PM on that day. Late work will receive a 10 point deduction for each day it is late up to 4 days. At that point, the exam access will end. The final exam will replace your lowest exam grade if it is higher than the exam grade. If you have one grade of zero, you can still pass the class as long as you take the final exam and do well on it.

**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.

[North Lake Institutional Policies](http://www.northlakecollege.edu/syllabipolicies)

**Tutoring and Testing**

The STEM Center, located in L137 and L139 provides assistance and resources free to students enrolled in mathematics and developmental mathematics classes at North Lake College. This is a great place to bring a study group, study quietly, get help with math classes, and use the center’s various resources. You can get tutoring in all math courses taught at North Lake and you will have access to computers for courses with online components. Graphing calculators are available as well as textbooks for use in the center. The STEM center also offers content workshops covering how to use graphing calculators, course topics, review sessions, and study skills.

Hours of Operation for the Stem Center are:

- Monday – Thursday: 9 a.m. – 6 p.m.
- Friday & Saturday: 9 a.m. – 2 p.m.

Manager: Camrunn Beck, Room L135, [Email Address for Mr. Beck](mailto:Camrunn.beck@dccc.edu)

The Testing Center is located on the central campus in Room L240

[For testing center hours and policies click here](http://www.northlakecollege.edu/testing_center)
# Course Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Assignments</th>
</tr>
</thead>
</table>
| Week 1 | Orientation  
6-1 Angles: Degree and Radian Measure  
6-2 Applications of Radian Measure  
6-3 Triangles                                      | Each topic listed in the topic column has a corresponding homework section in Connect Math. I will only list other assgnments in this column. |
| Week 2 | 6-4 Right Triangle Trigonometry  
6-5 Trigonometric Functions of General Angles  
6-6 Unit Circle                                      | SLO quiz 1  
Chapter 6 Exam |
| Week 3 | 7-1 Graphs of Sine and Cosine  
7-2 More Graphs of Sine and Cosine  
7-3 Graphs of Tangent, Cotangent, Cosecant, and Secant |                                                                                      |
| Week 4 | 7-4 Inverse Trigonometric Functions I  
7-5 Inverse Trigonometric Functions II  
8-1 Trigonometric Identities  
8-2 Sum and Difference Formulas                       | SLO quiz 2  
Chapter 7 Exam |
| Week 5 | 8-3 Double-Angle and Half-Angle Formulas  
8-4 Product-to-Sum and Sum-to-Product Formulas  
8-5 Trigonometric Equations  
9-1 Right Angle Applications 6-4 The Normal Approximation to the Binomial Distribution | SLO Quiz 3  
SLO Quiz 4 |
| Week 6 | 9-2 Law of Sines  
9-3 Law of Cosines  
10-1 Polar Coordinates and Polar Equations  
10-2 Graphing Polar Equations                         | SLO Quiz 5  
SLO Quiz 6  
Chapter 8 and 9 Exam |
| Week 7 | 10-3 Complex Numbers in Polar Form; De Moivre’s Theorem  
10-4 Vectors  
10-5 Dot Product                                       | Chapter 10 Exam |
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 8</td>
<td>Review for Final Exam</td>
<td>Final Exam</td>
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</tbody>
</table>