



# STARK STATE COLLEGE

## GENERAL SYLLABUS

### Course Information

**Course Name:** Trigonometry  
**Course Number:** MTH130

### Required Materials

**Textbook(s):** Precalculus- A Right Triangle Approach, 5<sup>th</sup> edition; Ratti, McWaters, Skrzypek, Bernards, & Fresh; Pearson, 2023  
 ISBN (instant access): 9780137519217

**Required Readings:** None

**Additional Materials:** A graphing calculator is required.

### Course Outline/Calendar

The date of coverage and order of coverage may be modified based on the faculty member and events beyond the control of faculty members that interfere with class times and teaching.

#### 16 Week Calendar

Week	Chapter/Topic/Lab
1	<b>Chapter 5 – Trigonometric Functions</b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Angles and Their Measures</li> </ul>
2	<b>Chapter 5 – Trigonometric Functions</b> <ul style="list-style-type: none"> <li>• Right Triangle Trigonometry</li> </ul>
3	<b>Chapter 5 – Trigonometric Functions</b> <ul style="list-style-type: none"> <li>• Trigonometric Functions of Any Angles; The Unit Circle</li> <li>• Graphs of the Sine and Cosine Functions</li> </ul>
4	<b>Chapter 5 – Trigonometric Functions</b> <ul style="list-style-type: none"> <li>• Graphs of Other Trigonometric Functions</li> <li>• Inverse Trigonometric Functions</li> </ul>
5	<b>Chapter 6 – Trigonometric Identities and Equations</b> <ul style="list-style-type: none"> <li>• Exam – Chapter 5</li> <li>• Trigonometric Identities</li> </ul>
6	<b>Chapter 6 – Trigonometric Identities and Equations</b> <ul style="list-style-type: none"> <li>• Sum and Difference Formulas</li> <li>• Double-Angle and Half-Angle Identities</li> </ul>

7	<b>Chapter 6 – Trigonometric Identities and Equations</b> <ul style="list-style-type: none"> <li>• Double-Angle and Half-Angle Identities</li> <li>• Product-to-Sum and Sum-to-Product Formulas</li> </ul>
8	<b>Chapter 6 – Trigonometric Identities and Equations</b> <ul style="list-style-type: none"> <li>• Exam – Section 6.1 – 6.4</li> </ul>
9	<b>Chapter 6 – Trigonometric Identities and Equations</b> <ul style="list-style-type: none"> <li>• Trigonometric Equations I</li> <li>• Trigonometric Equations II</li> </ul>
10	<b>Chapter 7 – Applications of Trigonometric Functions</b> <ul style="list-style-type: none"> <li>• The Law of Sines</li> <li>• The Law of Cosines</li> </ul>
11	<b>Chapter 7 – Applications of Trigonometric Functions</b> <ul style="list-style-type: none"> <li>• Areas of Polygons Using Trigonometry</li> <li>• Exam – Sections 6.5, 6.6, 7.1 – 7.3</li> </ul>
12	<b>Chapter 7 – Applications of Trigonometric Functions</b> <ul style="list-style-type: none"> <li>• Vectors</li> </ul>
13	<b>Chapter 7 – Applications of Trigonometric Functions</b> <ul style="list-style-type: none"> <li>• The Dot Product</li> <li>• Polar Coordinates</li> </ul>
14	<b>Chapter 7 – Applications of Trigonometric Functions</b> <ul style="list-style-type: none"> <li>• Polar Coordinates</li> <li>• Polar Form of Complex Numbers; DeMoivre’s Theorem</li> </ul>
15	<b>Chapter 7 – Applications of Trigonometric Functions</b> <ul style="list-style-type: none"> <li>• Polar Form of Complex Numbers; DeMoivre’s Theorem</li> <li>• Review</li> </ul>
16	<b>Final Exam</b>

### 8 Week Calendar

Week	Chapter/Topic/Lab
1	<b>Chapter 5 – Trigonometric Functions</b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Angles and Their Measures</li> <li>• Right Triangle Trigonometry</li> </ul>
2	<b>Chapter 5 – Trigonometric Functions</b> <ul style="list-style-type: none"> <li>• Trigonometric Functions of Any Angles; The Unit Circle</li> <li>• Graphs of the Sine and Cosine Functions</li> <li>• Graphs of Other Trigonometric Functions</li> <li>• Inverse Trigonometric Functions</li> <li>• Exam I</li> </ul>
3	<b>Chapter 6 – Trigonometric Identities and Equations</b> <ul style="list-style-type: none"> <li>• Trigonometric Identities</li> <li>• Sum and Difference Formulas</li> <li>• Double-Angle and Half-Angle Identities</li> </ul>
4	<b>Chapter 6 – Trigonometric Identities and Equations</b> <ul style="list-style-type: none"> <li>• Product-to-Sum and Sum-to-Product Formulas</li> <li>• Exam – Sections 6.1 – 6.4</li> </ul>
5	<b>Chapter 6 – Trigonometric Identities and Equations</b> <ul style="list-style-type: none"> <li>• Trigonometric Equations I</li> <li>• Trigonometric Equations II</li> </ul>

Week	Chapter/Topic/Lab
6	<b>Chapter 6 – Trigonometric Identities and Equations</b> <ul style="list-style-type: none"> <li>• The Law of Sines</li> <li>• The Law of Cosines</li> <li>• Areas of Polygons Using Trigonometry</li> <li>• Exam – Sections 6.5, 6.6, 7.1 – 7.3</li> </ul>
7	<b>Chapter 7 – Applications of Trigonometric Functions</b> <ul style="list-style-type: none"> <li>• Vectors</li> <li>• The Dot Product</li> <li>• Polar Coordinates</li> </ul>
8	<b>Chapter 7 – Applications of Trigonometric Functions</b> <ul style="list-style-type: none"> <li>• Polar Form of Complex Numbers; DeMoivre’s Theorem</li> <li>• Final Exam</li> </ul>