



# INSTRUCTIONAL PACKAGE

MAT 111

College Trigonometry

Effective Term  
2020—2021 Academic Year

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## Part I: Course Information

Effective Term: 2020—2021 Academic Year

COURSE PREFIX: MAT 111

COURSE TITLE: College Trigonometry

CONTACT HOURS: 3.0

CREDIT HOURS: 3.0

### **RATIONALE FOR THE COURSE:**

College Trigonometry is designed for students who intend to transfer to a four-year institution or who intend to take Calculus, MAT 140. All skills are learned with an emphasis on application and developing problem solving skills which will be applied in future courses in surveying, engineering and calculus.

### **COURSE DESCRIPTION:**

This course includes the following topics: trigonometric functions; trigonometric identities; solution of right and oblique triangles; solution of trigonometric equations; polar coordinates; complex numbers, including DeMoivre's Theorem; vectors; conic sections; and parametric equations. (Prerequisite: College Algebra) This course is transferable to public senior institutions as part of the South Carolina Commission on Higher Education Statewide Articulation Agreement.

### **PREREQUISITES/CO-REQUISITES:**

COMPASS Algebra 75 or New ACCUPLACER Adv Algebra 270 or ACT Math 26 or SAT Mathematics 630 or New SAT Mathematics 650 or Credit level [MAT 110](#) Minimum Grade of C or Credit level [MAT 110](#) Minimum Grade of TC or Multiple Measures Math 1

\***Online/Hybrid** courses require students to complete the DLi Online Student Orientation prior to completing an online course. The DLi Online Student Orientation can be found in WaveNet, under the My Student tab.

### **REQUIRED MATERIALS:**

1. Please visit the Bookstore online site for most current textbook information. Use the direct link below to find textbooks.  
[BOOKSTORE](#).

Enter the semester, course prefix, number and section when prompted and you will be linked to the correct textbook.

2. Scientific/Graphing Calculator

### **ENTRY LEVEL COMPETENCIES:**

1. Solve, graph, and use polynomial and rational functions over the real numbers and solve polynomial functions over the complex numbers as well.
2. Solve, graph, and apply both exponential and logarithmic functions.
3. Solve and apply systems of linear and higher degree equations and inequalities.

### **TECHNICAL REQUIREMENTS:**

Access to Desire2Learn (D2L), HGTC's student portal for course materials.  
WaveNet and D2L email access.

### **STUDENT IDENTIFICATION VERIFICATION**

Students enrolled in online courses will be required to participate in a minimum of one (1) proctored assignment and/or one (1) virtual event to support student identification verification. Please refer to your Instructor Information Sheet for information regarding this requirement.

### **CLASSROOM ETIQUETTE:**

As a matter of courtesy to other students and your professor, please turn off cell phones and other communication/entertainment devices before class begins. If you are monitoring for an emergency, please notify your professor prior to class and switch cell phone ringers to vibrate.

**NETIQUETTE:** is the term commonly used to refer to conventions adopted by Internet users on the web, mailing lists, public forums, and in live chat focused on online communications etiquette. For more information regarding Netiquette expectations for distance learning courses, please visit [Online Netiquette](#).

## **Part II: Student Learning Outcomes**

### **COURSE LEARNING OUTCOMES and ASSESSMENTS\*:**

The student should be able to:

1. Use right triangles to evaluate trigonometric functions
2. Recognize and use the fundamental identities
3. Solve applied problems using right triangle trigonometry, the fundamental identities, and the inverse trigonometric functions
4. Solve right triangles
5. Verify trigonometric identities
6. Use the sum, difference, double-angle, power-reducing, and half-angle formulas
7. Solve trigonometric equations
8. Solve oblique triangles and applied problems using the Law of Sines and the Law of Cosines
9. Find the area of an oblique triangle

10. Understand the polar coordinate system and be able find and plot polar coordinates for a given point and convert between the polar and rectangular coordinate systems. \*\*
11. Recognize, graph and write equations of conic sections.

## **CHAPTER 6 Trigonometry**

- 6.1 Angles and Their Measure
- 6.2 Right Triangle Trigonometry
- 6.3 Trigonometric Functions of Any Angle
- 6.4 Graphs of Sine and Cosine Functions
- 6.5 Graphs of Other Trigonometric Functions
- 6.6 Inverse Trigonometric Functions
- 6.7 Applications and Models

## **CHAPTER 7 Analytic Trigonometry**

- 7.1 Using Fundamental Identities
- 7.2 Verifying Trigonometric Identities
- 7.3 Solving Trigonometric Equations
- 7.4 Sum and Difference Formulas
- 7.5 Multiple Angle and Product-to-Sum Formulas

## **CHAPTER 8 Additional Topics in Trigonometry**

- 8.1 The Law of Sines
- 8.2 The Law of Cosines
- 8.3 Vectors in the Plane\*\*
- 8.4 Vectors and Dot Products\*\*
- 8.5 The Complex Plane
- 8.6 Trigonometric Form of a Complex Number
- Supplemental: Polar Coordinates\*\*

## **CHAPTER 4 Conics**

- 4.3 Conics
- 4.4 Translations of Conics

\*\*As time permits.

***\*Students – please refer to the Instructor’s Course Information sheet for specific information on assessments and due dates.***

## **Part III: Grading and Assessment**

### **EVALUATION OF REQUIRED COURSE MEASURES/ARTIFACTS\***

***\*Students, for the specific number and type of evaluations, please refer to the Instructor's Course Information Sheet.***

### **GRADING SYSTEM:**

- A 90-100%
- B 80-89%
- C 70-79%
- D 60-69%
- F Below 60%

Grades earned in courses impact academic progression and financial aid status. Before withdrawing from a course, be sure to talk with your instructor and financial aid counselor about the implications of that course of action. Ds, Fs, Ws, WFs and Is also negatively impact academic progression and financial aid status.

The Add/Drop Period is the first 5 days of the semester for **full term** classes. Add/Drop periods are shorter for accelerated format courses. Please refer to the academic calendar for deadlines for add/drop ([ACADEMIC CALENDAR](#)). You must attend at least one meeting of all of your classes during that period. If you do not, you will be dropped from the course(s) and your Financial Aid will be reduced accordingly.

### **Part IV: Attendance**

Horry-Georgetown Technical College maintains a general attendance policy requiring students to be present for a minimum of 80 percent (80%) of their classes in order to receive credit for any course. Due to the varied nature of courses taught at the college, some faculty may require up to 90 percent (90%) attendance. Pursuant to 34 Code of Federal Regulations 228.22 - Return to Title IV Funds, once a student has missed over 20% of the course or has missed two (2) consecutive weeks, the faculty is obligated to withdraw the student and a student may not be permitted to reenroll. **Instructors define absentee limits for their class at the beginning of each term; please refer to the Instructor Course Information Sheet.**

**For online and hybrid courses**, check your Instructor's Course Information Sheet for any required on-site meeting times. Please note, instructors may require tests to be taken at approved testing sites, if you use a testing center other than those provided by HGTC, the center may charge a fee for its services.

## Part V: Student Resources



### The Student Success and Tutoring Center (SSTC)

The SSTC offers to all students the following **free** resources:

- 1. Academic coaches** for most subject areas, **Writing Center Support**, and **college success skills**.
- 2. On-line student success and academic support resources.**

Visit the SSTC website: [Student Success & Tutoring Center](#) and visit the student services tab in your WaveNet account to schedule appointments using TutorTrac. For more information, call: SSTC Conway, 349-7872; SSTC Grand Strand, 477-2113; and SSTC Georgetown, 520-1455 or go to the [Online Resource Center](#) to access on-demand resources any time.

### TECH Central – Student Information Center



TECH Central provides quality enrollment and collegiate guidance for students, faculty, and staff. Services include phone, walk-in, and online technical support for technology training and troubleshooting. Additionally, we offer support in Office 365, Outlook E-mail setup, and ID cards.

**Phone:** 843-349-5340

**Email:** [techcentral@hgtc.edu](mailto:techcentral@hgtc.edu)

**Text:** 843-357-8552

**TECH Talk (Live Chat):** Located on the "Home" tab in WaveNet.

**Website:** [www.hgtc.edu/techcentral](http://www.hgtc.edu/techcentral)

#### **Locations:**

Conway Building 1100, Room 132D

Grand Strand Building 200, Room 136

### **Student Testing:**

Testing in an **online/hybrid** course may be accomplished in a variety of ways:

- Test administered within D2L
- Test administered in writing on paper
- Test administered through Publisher Platforms

Furthermore, tests may have time limits and/or require a proctor.

Proctoring can be accomplished either face-to-face at an approved site or online through RPNOW, our online proctoring service. To find out more about proctoring services, please visit the [Online Testing](#) section of the HGTC's Testing Center webpage.

The **Instructor Information Sheet** will have more details on test requirements for your course.

## **Disability Services:**

HGTC is committed to providing an accessible environment for students with disabilities. Inquiries may be directed to Beth Havens, Director of Student Development on the Conway Campus Jaime Davis, Counselor/Advisor on the Georgetown Campus or Kristin Griffin, Counselor on the Grand Strand Campus. These individuals will review documentation of the student's disability and, in a confidential setting with the student, develop an educational accommodation plan.

Note: It is the student's responsibility to self-identify as needing accommodations and to provide acceptable documentation. After a student has self-identified and submitted documentation of a disability, accommodations may be determined, accepted, and provided.

## **Statement of Equal Opportunity/Non-Discrimination Statement**

Horry-Georgetown Technical College prohibits discrimination and harassment, including sexual harassment and abuse, on the basis of race, color, sex, national or ethnic origin, age, religion, disability, marital or family status, veteran status, political ideas, sexual orientation, gender identity, or pregnancy, childbirth, or related medical conditions, including, but not limited to, lactation in educational programs and/or activities.

Inquiries regarding the non-discrimination policies: Students and prospective student inquiries concerning Section 504, Title II, and Title IX and their application to the College or any student decision may be directed to the Vice President for Student Affairs, Dr. Melissa Batten, VP Student Affairs, Title IX Coordinator, Building 1100, Room 107A, Conway Campus, PO Box 261966, Conway, SC 29528-6066, 843-349-5228, [Melissa.Batten@hgtc.edu](mailto:Melissa.Batten@hgtc.edu). Employee and applicant inquiries concerning Section 504, Title II, and Title IX and their application to the College may be directed to the Vice President for Human Resources, Jacquelyne Snyder, VP Human Resources, Section 504, Title II, and Title IX Coordinator, Building 200, Room 212A, Conway Campus, PO Box 261966, Conway, SC 29528-6066, 843-349-5212, [Jacquelyne.Snyder@hgtc.edu](mailto:Jacquelyne.Snyder@hgtc.edu).

## **Title IX Requirements**

All students (as well as other persons) at Horry-Georgetown Technical College are protected by Title IX—regardless of their sex, sexual orientation, gender identity, part- or full-time status, disability, race, or national origin—in all aspects of educational programs and activities. Any student, or other member of the college community, who believes that he/she is or has been a victim of sexual harassment or sexual violence may file a report with the college’s Chief Student Services Officer, campus law enforcement, or with the college’s Title IX Coordinator, or designee.

\*Faculty and Staff are required to report incidents to the Title IX Coordinators when involving students. The only HGTC employees exempt from mandatory reporting are licensed mental health professionals (only as part of their job description such as counseling services).

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| <p><b>Inquiries regarding the non-discrimination policies:</b></p>   |   |
| <p>Student and prospective student inquiries concerning Section 504, Title II, and Title IX and their application to the College or any student decision may be directed to the Vice President for Student Affairs.</p>  | <p>Employee and applicant inquiries concerning Section 504, Title II, and Title IX and their application to the College may be directed to the Vice President for Human Resources.</p>  |
| <p><b>Dr. Melissa Batten, VP Student Affairs</b><br/> <i>Title IX Coordinator</i></p> <p>Building 1100, Room 107A, Conway Campus<br/>         PO Box 261966, Conway, SC 29528-6066<br/>         843-349-5228<br/> <a href="mailto:Melissa.Batten@hgtc.edu">Melissa.Batten@hgtc.edu</a></p> | <p><b>Jacquelyne Snyder, VP Human Resources</b><br/> <i>Section 504, Title II, and Title IX Coordinator</i></p> <p>Building 200, Room 212A, Conway Campus<br/>         PO Box 261966, Conway, SC 29528-6066<br/>         843-349-5212<br/> <a href="mailto:Jacquelyne.Snyder@hgtc.edu">Jacquelyne.Snyder@hgtc.edu</a></p> |