# TECHNICAL MATHEMATICS

**MTH 115-35**

## INSTRUCTOR INFORMATION

Name: Travis Coake  
Email: tcoake@nr.edu  
Phone: 540-674-3600, ext. 4299  
Office: Godbey 50, Mall 105A  
Office hours: Posted in Blackboard

### IMPORTANT:
- ✓ The recommended browser to use with the current version of Blackboard is Mozilla Firefox. Other browsers are inconsistent in their performance with Blackboard. When taking tests or quizzes, **USE a wired connection.**
- ✓ Check your VCCS email regularly and respond/keep in touch with your instructor.

## COURSE DESCRIPTION

**Description:** Presents algebra through exponential and logarithmic functions, trigonometry, vectors, analytic geometry, and complex numbers. Prerequisites: A placement recommendation for MTH 115 and Algebra I and Geometry, or Algebra I and Algebra II, or equivalent.

**Credits:** 3

**Submissions:**
- There are 26 sections covered with MyMathLab; homework due for each of them. There are five chapters covered with two online quizzes for each chapter, for a total of 10 quizzes. There will be four proctored tests, and one cumulative final exam that will be proctored.

**Proctored Assessments:** 4

**Online Activities:** Required

**Prerequisite:** MTT 6

## COURSE MATERIALS

**Text & Edition:** Basic Technical Mathematics, Tenth Edition  
Author: Allyn J. Washington  
Publisher: Pearson Prentice Hall  

**Calculator:** The TI-30XII, TI-30XIIS, or TI36X Pro are recommended and are the only calculators permitted for use on proctored tests.

**Note:** NRCC assumes no liability for virus, loss of data, or damage to software or computer when a student downloads software for classes.

NRCC Bookstore is located in Martin Hall, Dublin Campus. Books/materials can also be purchased online - [http://www.nrbookstore.com/](http://www.nrbookstore.com/).

*The Student’s Guide to Distance Education* is available at [http://www.nr.edu/de/pdf/stuguide.pdf](http://www.nr.edu/de/pdf/stuguide.pdf)
COURSE INFORMATION

Prepared By:  Travis Coake  
Approved By:  Dr. Janice Shelton

A. INTRODUCTION

This is a Distance Education course designed specifically for those students whose learning styles are best served by providing instructional opportunities beyond the traditional classroom setting.

B. COURSE OBJECTIVES

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

1. Use a scientific calculator
2. Round-off numbers correctly
3. Identify significant digits
4. Use scientific notation
5. Understand/use line and angle relationships
6. Understand/use terms related to an angle(s)
7. Classify triangles by their sides/angles
8. Calculate the perimeter of a polygon
9. Calculate the circumference of a circle
10. Calculate the area of a polygon
11. Calculate the area of a circle
12. Apply concepts of sector and arc length of a circle
13. Recognize various geometric solids such as cylinder, cone, pyramid, prism, sphere
14. Calculate surface area and volume of various geometric solids
15. Understand/use the concept of similar triangles
16. Know/apply the fact that $180^\circ = \pi$ radians
17. Define the trigonometric functions and their values
18. Solve right triangles and their applications
19. Understand the signs of the trigonometric function of angles greater than $90^\circ$
20. Determine trigonometric functions of any angle
21. Solve problems using radian measure and its applications
22. Understand vectors and their components
23. Solve applications involving vectors
24. Solve oblique triangles using law of sine and/or law of cosines
25. Understand complex numbers and their basic operations
26. Convert between forms of rectangular, polar, and exponential complex numbers
C. **GRADING/EVALUATION**

1. The final grade for the course will be determined as follows:

   **Tests:** There will be four (4) proctored tests assessed in Blackboard. Each proctored test will have a corresponding due date; however, you may take a test anytime before the due date. There will be no makeup tests. The lowest of the 4 attempted proctored tests will be dropped. If you missed a test, then that test will be recorded as a zero and will NOT be dropped. Every test must be completed. All tests must be taken in a proctored setting at any of the NRCC approved sites, or on campus in the testing center.

   **Homework:** There will be online interactive homework assignments for each section covered in each chapter. Late penalty will be applied for late work.

   **Exam:** There will not be a final exam for this course.

   **Quizzes:** There will be two quizzes for each chapter assessed in MyMathLab. The lowest of all the quizzes will be dropped.

   **Orientation:** Orientation will consist of registering with MyMathLab and completing the orientation homework assignment. In addition, you must email me when this work is completed by the due date.

   **Course Grade:** Your Course Average will be determined by your performance on the graded components of the course:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>Orientation (MyMathLab)</td>
<td>5%</td>
</tr>
<tr>
<td>Homework (MyMathLab)</td>
<td>20%</td>
</tr>
<tr>
<td>Quizzes (MyMathLab)</td>
<td>15%</td>
</tr>
<tr>
<td>Proctored Tests</td>
<td>60%</td>
</tr>
</tbody>
</table>

2. **Grading Scale:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90 - 100%</td>
</tr>
<tr>
<td>B</td>
<td>80 - 89%</td>
</tr>
<tr>
<td>C</td>
<td>70 - 79%</td>
</tr>
<tr>
<td>D</td>
<td>60 - 69%</td>
</tr>
<tr>
<td>F</td>
<td>Below 60%</td>
</tr>
</tbody>
</table>
D. WITHDRAWAL POLICY

Student Initiated Withdrawal Policy
A student may drop or withdraw from a class without academic penalty during the first sixty percent (60%) of a session. For purposes of enrollment reporting, the following procedures apply:

a. If a student withdraws from a class prior to the termination of the add/drop period for the session, the student will be removed from the class roll and no grade will be awarded.

b. After the add/drop period, but prior to completion of sixty percent (60%) of a session, a student who withdraws or is withdrawn from a course will be assigned a grade of "W." A grade of "W" implies that the student was making satisfactory progress in the class at the time of withdrawal, that the withdrawal was officially made before the deadline published in the college calendar, or that the student was administratively transferred to a different program.

c. After that time, if a student withdraws from a class, a grade of "F" will be assigned. Exceptions to this policy may be made under documented mitigating circumstances if the student was passing the course at the last date of attendance.

A retroactive grade of "W" may be awarded only if the student would have been eligible under the previously stated policy to receive a "W" on the last date of class attendance. The last date of attendance for a distance education course will be the last date that work was submitted.

Late withdrawal appeals will be revised and a decision made by the Coordinator of Admissions and Records.

No-Show Policy
A student must either attend face-to-face courses or demonstrate participation in distance learning courses by the last date to drop for a refund. A student who does not meet this deadline will be reported to the Admissions and Records Office and will be withdrawn as a no-show student. No refund will be applicable, and the student will not be allowed to attend/participate in the class or submit assignments. Failure to attend or participate in a course will adversely impact a student’s financial aid award.

Instructor Initiated Withdrawal
Since attendance is not a valid measurement for Distance Education (DE) courses, a student may be withdrawn due to non-performance. A student should refer to his/her DE course plan for the instructor’s policy.

In accordance with the No-Show Policy, a student who has not attended class or requested/accessed distance learning materials by the last day to drop the class and receive a refund must be withdrawn by the instructor during the following week. No refund will be applicable.

The student will be notified of the withdrawal by the Admissions and Records Office. An appeal of reinstatement into the class may be approved only by the instructor.
E. CHEATING/PLAGIARISM POLICY

A grade of zero will be awarded to any writing assignments or tests that show cheating or plagiarism. To plagiarize is “To use and pass off as one’s own the ideas or writings of another.” (Definition adapted from the American Heritage Dictionary.) Remember that plagiarism includes lifting words or ideas from Internet sites, as well as copying from print sources.

F. DIVERSITY STATEMENT

The NRCC community values the pluralistic nature of our society. We recognize diversity including, but not limited to, race, ethnicity, religion, culture, social class, age, gender, sexual orientation and physical or mental capability. We respect the variety of ideas, experiences and practices that such diversity entails. It is our commitment to ensure equal opportunity and to sustain a climate of civility for all who work or study at NRCC or who otherwise participate in the life of the college.

New River Community College does not discriminate on the basis of race, color, national origin, sex, disability, or age in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Dr. Mark C. Rowh, Vice President for Workforce Development and External Relations, 217 Edwards Hall, 540-674-3600, ext. 4241.

G. DISABILITY STATEMENT

If you are a student with a documented disability who will require accommodations in this course, please register with the Center for Disabilities Services located in the Advising Center in Rooker Hall for assistance in developing a plan to address your academic needs.