

**NEW RIVER COMMUNITY COLLEGE**

**DUBLIN, VIRGINIA**

**COURSE PLAN**

Course Number and Title: MTH 101 - Basic of Technical Mathematics I

Prepared by: MTH Dept. Fall, 2007  
(Instructor) (Date)

Approved by: \_\_\_\_\_ Fall, 2007  
(Interim Dean) (Date)

**I. Course Description**

Provides a foundation in mathematics with emphasis in arithmetic, basic algebra, geometry and trigonometry. Presents applications directed to specialty options. Lecture 4 hours per week.

**II. Introduction**

This is a basic mathematics course that is required for selected certificates and diplomas. It is also intended to prepare students to enter a basic algebra course (MTH 03). Emphasis will be placed on practical applications.

**III. Specific Objectives**

The student will be able to:

- A. Add, subtract, multiply and divide whole numbers and signed numbers.
- B. Find all factors of a number.
- C. Apply order of operation of numbers.
- D. Evaluate formulas.
- E. Change improper fractions to whole or mixed numerals and change whole or mixed numerals to improper fractions.
- F. Reduce fractions to lowest terms and raise fractions to higher terms.
- G. Add, subtract, multiply and divide fractions.
- H. Understand the applications of fractions.
- I. Understand decimal notation and place values.
- J. Round off decimals.
- K. Add, subtract, multiply and divide decimals.
- L. Write a number as a fraction, decimal or percent.
- M. Understand applications of decimals.
- N. Understand applications of percent.
- O. Measure angles and identify polygons.

- P. Solve for measures of angles in applications.
- Q. Find the area and perimeter of quadrilateral.
- R. Use the pythagorean theorem to solve right triangles.
- S. Find the circumference and area of circles.
- T. Understand applications of circles, angles, quadrilaterals and triangles.
- U. Evaluate expressions.
- V. Simplify expressions by adding like terms.
- W. Solve equations.
- X. Solve formulas.
- Y. Understand trigonometric ratios.
- Z. Use trigonometric ratios to solve right triangles.

#### **IV. Instructional Procedures**

The instructional procedures will include lectures, discussions, problem sessions, clinical experiences, reviews and test.

#### **V. Instructional Materials**

- A. Textbook:
  - Title: Elementary Technical Mathematics
  - Author: Dale Ewen, C. Robert Nelson
  - Publisher: Brooks/Cole
  - Date: 1997/98
  - Edition: Seventh

Additional resource materials for some New River Community College classes can be found on the NRCC Web-based learning site at [nr.edu/learninglinks](http://nr.edu/learninglinks).

#### **VI. Course Content**

- A. Basic Concepts
- B. Fractions
- C. Decimals
- D. The Metric System (part)
- E. Geometry (part)
- F. Polynomials (part)
- G. Equations and Formulas
- H. Trigonometry (part)
- I. Ratio and Proportion (part)

#### **VII. Evaluation and Attendance**

- A. There will be six tests during the semester and there will be a comprehensive final exam at the end of the semester. The final exam will be given in two parts and will count two test grades.
- B. Attendance will also be a factor in the final grade. If the student misses no classes he will receive 3 points added to his final grade. If he misses 1 class, 2 points will be added; if he misses 2 classes, 1 point will be added.

C. Grading Scale:

A = 91 - 100

B = 81 - 90

C = 71 - 80

D = 61 - 70

F = 0 - 60

W = Withdrawal

## **VIII. 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" or "U" 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 Director of Student Services.

### **Instructor Initiated Withdrawal Policy**

A student who adds a class or registers after the first day of class is counted absent from all class meetings missed. Each instructor is responsible for keeping a record of student attendance in each class.

Students who have not attended class or picked up/accessed distance learning materials by the last day to drop class and receive a refund must be withdrawn by the instructor during the following week. No refund will be applicable.

Since attendance is not a valid measurement for Distance Education (DE) courses, students may be withdrawn due to non-performance. Students should refer to his/her DE course plan for the instructor's policy.

When a student's absences equal twice the number of weekly meetings of a class (equivalent amount of time for summer session), the student may be dropped for unsatisfactory attendance in the class by the instructor.

When an instructor determines that absences constitute unsatisfactory attendance, an Instructor Withdrawal Form should be completed and submitted to the Admissions and Records Office within five days of when the student met the withdrawal criteria. The last date of attendance must be documented. A grade of "W" will be recorded during the first sixty percent (60%) period of a course. Students withdrawn after the sixty percent (60%) period will receive a grade of "F" or "U" except under documented mitigating circumstances when a letter of appeal has been submitted by the student. A copy of this documentation must be placed in the student's academic file.

The student will be notified of the withdrawal by the Admissions and Records Office. An appeal for reinstatement into the class may be approved only by the instructor.

#### **IX. Cheating Policy**

Cheating will not be tolerated. Any student found cheating on a test or exam will receive a zero and be subject to additional disciplinary action.

#### **X. Disability Statement**

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

#### **XI. 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.

**MTH 101-103**  
**TENTATIVE ASSIGNMENT SCHEDULE**

**Elementary Technical Mathematics**  
**Ewen/Nelson**

<u>Day</u>	<u>Section</u>	<u>Day</u>	<u>Section</u>
1	1.2	24	7.1, 7.2
2	1.3	25	7.3, 7.4
3	1.6	26	Review
4	1.7	27	Test 5
5	1.8	28	12.1, 12.3
6	TEST 1	29	12.5, 12.8
7	2.1, 2.2	30	Review
8	2.2, 2.3	31	Test 6
9	2.4, 2.5	32	13.1, 13.2
10	Review	33	13.3, 13.4
11	TEST 2	34	13.5 & Review
12	3.1, 3.2	35	TEST 7
13	3.3	36	Exam Review
14	3.4	37	EXAM (part 1)
15	3.5	38	7.3, 7.4
16	3.6, 3.7	39	14.3
17	Review	40	14.5
18	TEST 3	41	12.5
19	4.1, 4.2	42	Review
20	4.4	43	TEST 8
21	4.7	44	Exam Review
22	Review	45	EXAM (part 2)
23	TEST 4		