

CORNING COMMUNITY COLLEGE

STEM Division, Fall 2017

Math 1230-003: Elements of Applied Mathematics I (CRN 39236)

Instructor Name: Richard Evans

Instructor Phone and Email: 962-9472 (office), 962-9518 (secretary), evansrs@corning-cc.edu

Instructor Office Location / Hours: S201; M W F 9:40 – 10:35; T 8:35 – 9:30; M 2:00 – 2:55. Please feel free to stop by my office any time!!

Course Description: Primarily for students enrolled in the technology programs. Problems in science and engineering are stressed. First semester includes algebraic operations review, functions and graphs, trigonometric functions and graphs, vectors and oblique triangles.

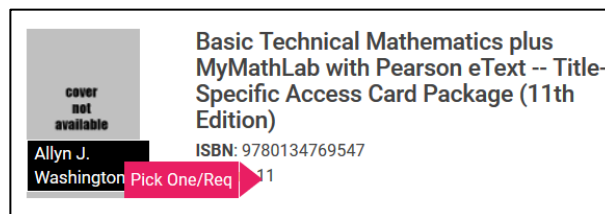
Course Learning Outcomes: Students will learn how to

1. Perform numerical operations
2. Evaluate, simplify and perform operations with algebraic expressions
3. Solve equations and literal equations
4. Solve problems involving geometry
5. Solve problems involving functions and graphs
6. Apply basic principles of trigonometry
7. Generate and evaluate graphs trigonometric functions – graph the sine and cosine functions of the form $f(x)=a\sin(bx+c)$ and $f(x)=a\cos(bx+c)$
8. Solve problems using vectors

Textbook and MyMathLab Student Access Code: There are two main options:

- Option 1: Package with hard-copy book and MyMathLab student access code

This may be purchased from the college store. This is the best option if you prefer to have a hard-copy version of the book. The MyMathLab access code comes with it. In MyMathLab, you will need to use the **Course ID evans71641** to register for this class. This option is listed on the college store website as:



- Option 2: MyMathLab student access code with ebook

This is the minimum requirement. When you purchase the MyMathLab student access code, you will automatically have access to an electronic version of the textbook. This may be purchased directly from the publisher at www.pearsonmylabandmastering.com by clicking on "Get Registered" in the student section. Use the **Course ID evans71641** to register for this class. You may also purchase the student access code from the college store.



Once inside MyMathLab, the eText can be accessed by clicking on the “Chapter Contents” tab.

Students waiting on financial aid can get temporary access to MyMathLab.

Other Required Materials: TI-84 graphing calculator, graph paper.

Tentative Outline / Timeline of Course Topics: See page 4

Homework

The homework assignment for each topic is listed in the course outline. All assignments are due by the beginning of the following class unless otherwise stated. Some homework is on MyMathLab and some will be on handouts given out in class. Some of the homework handouts will be collected and graded. Handouts not turned in by the due date will receive a grade of zero. MyMathLab homework that is not completed by the due date will receive a 20% deduction for each day it is late. If you get a homework question wrong on MyMathLab, you may click on “Similar Exercise” and try again. You have unlimited attempts, so you should strive to get 100%.

Quizzes

Quizzes will be given periodically. Quizzes may be take-home or in-class.

- Take-Home Quizzes: Students are allowed to use their class notes and textbook for take-home quizzes, **but should not receive any help from other people.** Any questions should be directed to the instructor. Take-home quizzes are due on the next class day after they are handed out (unless otherwise stated) and will not be accepted late for any reason unless the student has made previous arrangements with the instructor to do so. Otherwise, the quiz will receive a grade of zero.
- In-Class Quizzes: Quizzes missed due to absence will receive a grade of zero unless the student has made previous arrangements with the instructor.

Project Problems

Several project problems will be assigned. These problems go beyond what is required in the class but use fundamental concepts learned in the class.

Tests

There will be 3 in-class exams given throughout the semester. There will also be a cumulative final exam. There are no re-tests. Exams missed due to absence will receive a grade of zero unless the student has made arrangements with the instructor prior to the time of the test. Use the phone if necessary (phone numbers are listed on the previous page). If you cannot reach the instructor, leave a message and your call will be returned.

Evaluation/Grading Policy

Grades will be calculated using the following percentages

In-class exams:	40%
Final exam:	20%
Homework in MyMathLab:	15%
Quizzes, written homework, and project problems:	25%

Numerical averages are converted to letter grades using the chart below:

Letter Grade	Average	Letter Grade	Average
A	92 – 100	C+	77 – 80
A-	90 – 92	C	70 – 77
B+	88 – 90	D	60 – 70
B	82 – 88	F	Under 60
B-	80 - 82		

Attendance Policy

Attendance is required. The instructor reserves the right to drop a student from the course if the student has more than 3 absences. Students are responsible for everything that is presented in class whether they are there or not. Being absent is not an acceptable excuse for turning assignments in late.

Student Withdrawal Policy / Last Day to Drop

If for any reason a student must withdraw from this course, it is the student's responsibility to do so by submitting an online drop form through MyCCC. A grade of "W" will be assigned if the withdrawal occurs before **10/29/17**, the official drop date for this course, and a grade of "F" thereafter. If a student simply stops attending rather than officially withdrawing, he or she will receive a grade of "F" for the course. The instructor may drop a student for non-attendance.

Classroom Conduct

Coming late to class, chatting during class, sleeping during class, using cell phones in class, or any other disruptive behavior will not be tolerated. A student who creates a disturbance in a class may be directed to leave the class by the instructor. Failure to comply with such a directive could result in suspension or dismissal from the College after an appropriate hearing.

Academic Honesty Policy

It is expected that while participating in this course, all students will adhere to the Code of Student Conduct and the Academic Honesty policy as detailed in the Student Handbook. Plagiarism and other forms of cheating will not be tolerated in any form and will be punished by the instructor and the college as appropriate. Penalties for violating Academic Honesty may include a reduction in grade, an "F" for the course or expulsion from the college.

Students with Disability Information

Students with learning, physical, or psychological disabilities who wish to receive accommodations for this course must contact the Office of Student Disability Services in the Administration Building on the Spencer Hill Campus (at 607-962-9262) or at sds@corning-cc.edu. Students are required to self-identify by making a formal request for services, and to provide current documentation that reflects the nature of the disability. Reasonable accommodations in the classroom will be provided for students with appropriately documented disabilities. Confidentiality will be maintained at all times.

Class Cancellation / Inclement Weather

Class cancellations by the instructor will be posted via an announcement sent directly to your student email account. Cancellations due to inclement weather will be posted on the CCC website and the main page of MyCCC. It is the student's responsibility to check these sources on a regular basis.

Course Outline and HW taken from Basic Technical Mathematics, Washington/Evans 11th edition

Week	Topic	Homework (due by next class)
1	Introduction 1.3: Calculators and Approximate Numbers	
1	1.3: Calculators and Approximate Numbers (continued)	MML Section 1.3 Homework
2	2.1: Lines and angles 2.2: Triangles	MML Section 2.1-2.2 Homework
2	2.3: Quadrilaterals 2.4: Circles	MML Section 2.3-2.4 Homework TH Quiz (Geometry & Rounding Rules)
2	Right Triangle Def of the Trig Functions	MML Trig HW 1
3	Finding Sides or Angles of Right Triangles	TH Quiz (Right Triangle Trig)
3	Applications of Right Triangles	MML Trig HW 2
3	Angles and the General Def of the Trig Functions	MML Trig HW 3
4	Signs of the Trig Functions; Four Quadrant Trig	MML Trig HW 4
4	Four Quadrant Trig Continued	TH Quiz (4 Quadrant Trig)
4	9.1: Introduction to vectors and vector addition	MML Section 9.1 Homework
5	9.2: Components of vectors	MML Section 9.2 Homework
5	Exam 1	
5	9.3: Vector addition by components	Handout: Into to Adding Vectors
6	9.3: Vector addition by components (continued)	Handout: Adding Vectors Using Components
6	9.4: Applications of vectors, Static equilibrium problems	TH Quiz (Vector addition, Equilibrium)
6	9.5: The Law of Sines	MML Section 9.5 Homework
7	9.6: The Law of Cosines	MML Section 9.6 Homework
7	Unit conversions (Section 1.4)	MML Unit Conversions Homework
7	8.3: Radians	MML Section 8.3 Homework
8	8.4: Applications of radian measure	MML Section 8.4 Homework
8	10.1: Graphs of $y = a\sin x$ and $y = a\cos x$	MML Section 10.1 Homework
8	10.2: Graphs of $y = a\sin bx$ and $y = a\cos bx$	MML Section 10.2 Homework
9	10.3: Graphs of $y = a\sin(bx + c)$ and $y = a\cos(bx + c)$	TH Quiz (Graphing Trig Functions)
9	Continued	
9	1.4: Exponents 1.5: Scientific notation	MML Section 1.4-1.5 Homework
10	Exam 2	

10	1.7: Addition and subtraction of algebraic expressions 1.8: Multiplication of algebraic expressions 1.9: Division of algebraic expressions (skip long division)	MML Section 1.7-1.9 Homework
10	1.10: Solving equations 1.11: Formulas and literal equations	
11	Continued	TH Quiz (Algebra & Equations)
11	Introduction to functions, functional notation, domain and range	Handout: Functions, problems 1-3
11	Continued	
12	Graphing a Function and the Graphing Calculator	Handout: Functions, problems 4-6
12	Continued	
12	Exam 3	
13	Project Problems	Project Problem 1
13	Project Problems	Project Problem 2
13	Project Problems	Project Problem 3
14	Review for Final Exam	
14	Review for Final Exam	
Final Exam		