

Math 1115 - 001: Technical Mathematics I

Spring 2017

Monday, Wednesday 3:00 PM - 4:15 PM

BIC 1536

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Office Hours: Monday: 1:00 PM - 3:00 PM, 7:00 PM - 7:30 PM;

Tuesday: 2:00 PM - 4:00 PM, 6:00 PM - 6:30 PM;

Wednesday: 1:00 PM - 3:00 PM, 7:00 PM - 7:30 PM;

Thursday: 2:00 PM - 4:00 PM, 6:00 PM - 6:30 PM

Text and Materials:

Basic Technical Mathematics, 10th ed. by Allyn J. Washington

Calculator: TI-86 or anything with less sophistication

Course Content: For technical/occupational programs. Emphasizes problem solving skills using elementary algebra, right angle trigonometry, and ratio and proportion.

Course Goals:

1. Demonstrate the ability to simplify algebraic expressions
2. Demonstrate the ability to add, subtract, multiply, divide, and factor polynomials
3. Solve linear equations
4. Solve quadratic equations
5. Demonstrate the ability to manipulate formulas
6. Use ratio, proportion, variation, and percents in problem solving
7. Use English and metric systems in problem solving
8. Calculate area and volume of geometric forms
9. Use the measurement concepts of precision, accuracy, absolute error, and relative error in problem solving
10. Use right angle trigonometry in problem solving
11. Demonstrate the ability to graph linear relations

Classes: Students are expected to attend class and PARTICIPATE. Students are responsible for all material covered in each class. Quizzes and exams will be held during class time.

Homework: Homework will be assigned for every lecture. Students need to spend time and at least attempt every assigned homework problem to master the material and be prepared for quizzes and exams. Homework problems often appear on quizzes and exams.

Homework and Quizzes: QUIZZES will only consist of two problems. They should take no more than 20 minutes and are intended as a “spot check” for students to know how well they understand the material without outside references. They may be administered at the beginning, middle or end of class and might be on any class day, though if not told otherwise, they will be given on the last lecture day of the week. Calculators might be allowed on quizzes depending on the material, so bring your calculator to every class.

Some weeks, instead of a quiz the instructor will collect the **homework** assigned in the previous week. Two (2) problems on the homework will be graded using the same rubric as quizzes. The two problems that are chosen to be graded on the homework will not be announced before the homework is collected, so students are encouraged to complete every homework problem and seek help on difficulties they may have. Sufficient work **MUST** be shown on the homework to receive full credit. Just writing down the answers to a homework problem is not enough.

From the combined homework and quiz grades, the lowest two (2) will be dropped when computing the final grade.

Exams: There will be three (3) midterms and a final exam given in the course. All exams will be comprehensive and students should expect to be asked about all material leading up to that exam. The midterms will be taken in-class. No new material will be covered on exam days. No cell phones will be allowed at all at a student's desk during the exam. Calculators will be allowed (except possibly on the first exam), but only the calculators stated above or inferior models. Further instruction will be given on exam days.

Any conflicts of exam dates must be discussed with the instructor at least one full day prior to the exam date with follow-up emails documenting what we discussed. Any exam missed without consulting the instructor beforehand will receive 0 points.

Grading:

Quizzes	100 Points
Exams	100 Points Each
Final Exam	200 Points
Total	600 Points

In general,

A	B	C	D	F
540 and up	480 – 540	420 – 480	360 – 420	Below 360

Written Style: Student should practice and use good style when answering problems. That means that any answer which requires an explanation should be written in complete sentences, all mathematical notation should be consistent and make sense, and anybody reading the solutions for the first time (namely, the grader) should have no confusion as to both the final answer and the work involved to get there. For example, “ $1 + 1 = 2$ ” is a complete sentence. It has a subject ($1 + 1$), a verb ($=$) and an object (2).

Academic Integrity: Students should be aware of the Code of Academic Conduct and know the consequences should the code be violated. The document can be found at www.cod.edu/dept/boardpolicy/5050pr.doc. Violations of academic integrity will result in a score of 0 for that assignment with further punishments possible.

Attendance Policy: Students are expected to attend every class and to understand material for classes they miss. Quizzes **CANNOT** be made up. **NO** exam will be given after the exam day. If the student has a valid excuse with a valid written note explaining the emergency (at the instructor's discretion) for missing an exam, then a grade on a future exam may count towards the missed exam as well or a different make-up exam will be administered. This is not an ideal situation and should be avoided. If a student has a valid excuse but does not maintain adequate communication (email/in-person conversations) to make a plan to recoup the missed points, then they will forfeit the missed points. Do not miss class!

While in class, students should be respectful of other students as well as the instructor. Students should not distract others with their computers or cell phones. Any distractible cell phone use should be done outside the classroom. All communication between instructor and students will be conducted either through Blackboard or via a COD email account. Make sure you check your COD email regularly.

Center for Access and Accommodations: Students who require any type of special accommodations for access and participation in this course must be registered with the Center for Access and Accommodations, SSC 3249.

Tentative Course Calendar

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Jan 23rd 1 Introduction, Numbers and Fundamental Algebra: §1.1-1.2	24th	25th 2 Calculators and Exponents: §1.3-1.4	26th	27th
30th 3 Scientific Notation, Roots & Radical: §1.5-1.6	31st	Feb 1st 4 Addition, Subtraction, Multiplication of Expressions: §1.7-1.8	2nd	3rd
6th 5 Division of Expressions, Solving Equations: §1.9-1.10	7th	8th 6 Formulas and Literal Equations: §1.11	9th	10th
13th 7 Applied Word Problems: §1.12	14th	15th 8 Lines, Angles, Triangles: §2.1-2.2	16th	17th
20th 9 Quadrilaterals, Circles: §2.3-2.4	21st	22nd 10 Exam 1	23rd	24th
27th 11 Rectangular Coordinates: §3.3	28th	Mar 1st 12 Angles, Defining Trigonometric Functions: §4.1-4.2	2nd	3rd
6th 13 Values of Trigonometric Functions: §4.3	7th	8th 14 The Right Triangle & Applications: §4.4-4.5	9th	10th
13th 15 Linear Equations: §5.1	14th	15th 16 Graphs of Linear Functions: §5.2	16th	17th
20th 17 Ratio and Proportion, Variation: §18.1-18.2	21st	22nd 18 Exam 2	23rd	24th
27th Spring Break No Classes	28th Spring Break No Classes	29th Spring Break No Classes	30th Spring Break No Classes	31st Spring Break No Classes

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Apr 3rd 19 Special Products, Common Factor, Difference of Squares: §6.1-6.2	4th	5th 20 Factoring Trinomials, Sum & Difference of Cubes: §6.3-6.4	6th	7th
10th 21 Equivalent Fractions, Fraction Multiplication & Division : §6.5-6.6	11th	12th 22 Addition & Subtraction of Fractions: §6.7	13th	14th <i>Last Day to Withdraw: Saturday, April 15!!</i>
17th 23 Equations Involving Fractions: §6.8	18th	19th 24 Solving Quadratic Equations by Factoring: §7.1	20th	21st
24th 25 Completing the Square: §7.2	25th	26th 26 The Quadratic Formula: §7.3	27th	28th
May 1st 27 Graphs of Quadratic Functions: §7.4	2nd	3rd 28 Units of Measurement: Appendix B	4th	5th
8th 29 Exam 3	9th	10th 30 Conclusion, Final Exam Review	11th	12th
15th 31	16th	17th 32 Final Exam 3PM - 4:50PM BIC 1536	18th	19th
22nd 33	23rd	24th 34	25th	26th