

Mathematics 172: Mathematics for Electronics 1
Q2, 2002-2003

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Office Hours: 11:30 – 12:20 Tuesday, Wednesday, Friday
12:30 – 13:20 Wednesday, Thursday
The Tuesday office hour is a drop-in hour held in CBA 101. Please feel free to work on homework while eating your lunch.

Course Description: This is a course in intermediate algebra. Topics: real numbers, linear equations and inequalities, polynomials, rational expressions, rational exponents, radicals, quadratic equations, linear equations and inequalities in two variables, and systems of linear equations.

Prerequisites: Math 10 or by assessment.

Textbook: M. Dugopolski, *Intermediate Algebra*, Third Edition, McGraw-Hill, Boston, 2000.

Calculator Policy: On the first few quizzes, no calculators are permitted. On the last few quizzes, and the final exam, calculators will be permitted. Programmable calculators are fine, but no personal computers are allowed.

Grade Calculation: The final grade will be calculated according to the following breakdown:

Quizzes (5-6):	35%
Assignments (6-7):	15%
Final Exam:	50%

The lowest quiz grade will be dropped when calculating the average of your quizzes. This allows a student to be absent on any one quiz day for any reason, including illness, without penalty. There is no provision for “making up” a missed quiz.

Note: If your final exam grade is higher than your term work grade and your term work is judged satisfactory, then your final exam grade will count as 100% of your final grade.

Late Policy: Late assignments will be given a penalty of 25% per week.

Math Room: Technologies Centre (TEC) 142 (phone: 370-4492): This drop-in centre is freely available for your use to work on math homework and to seek help from the tutor on staff (see hours posted on door).

Study Time: It is recommended that between 5 and 10 hours per week (or more for students with a weak background) be spent studying for this course outside of class time.

Grade Scale: Final letter grades are normally assigned as follows (subject to the conditions above):

A+	95-100
A	90-94
A-	85-89
B+	80-84
B	75-79
B-	70-74
C+	65-69
C	60-64
D	50-59
F	0-49

Course Content:

Chapter 1 – The Real Numbers	
Section 1.1: Sets	2 hours
Section 1.2: The Real Numbers	1 hour
Section 1.3: Operations on the Set of Real Numbers	1 hour
Section 1.4: Evaluating Expressions	1 hour
Section 1.5: Properties of the Real Numbers	1 hour
Section 1.6: Using the Properties	1 hour
Chapter 2 – Linear Equations and Inequalities in One Variable	
Section 2.1: Linear Equations in One Variable	2 hours
Section 2.2: Formulas	1 hour
Section 2.3: Applications	3 hours
Section 2.4: Inequalities	2 hours
Section 2.5: Compound Inequalities (optional)	1 hour
Chapter 3 – Graphs and Functions in the Cartesian Coordinate System	
Section 3.1: Graphing Lines in the Coordinate Plane	1 hour
Section 3.2: Slope of a Line	1 hour
Section 3.3: Three forms for the Equation of a Line	1 hour
Section 3.4: Linear Inequalities and Their Graphs	1 hour
– omit graphing compound inequalities	
Chapter 4 – Systems of Linear Equations: 4.1-4.2	
Section 4.1: Solving Systems by Graphing and Substitution	1 hour
Section 4.2: The Addition Method	1 hour
Chapter 5 – Exponents and Polynomials:	
Section 5.1: Integral Exponents and Scientific Notation	2 hours
Section 5.2: The Power Rules	1 hour
Section 5.3: Addition, Subtraction, and Multiplication of Polynomials	1 hour
Section 5.4: Multiplying Binomials	1 hour
Section 5.5: Division of Polynomials - omit synthetic division	2 hours
Section 5.6: Factoring Polynomials	1 hour
Section 5.7: Factoring $ax^2 + bx + c$	1 hour
Section 5.8: Factoring Strategy	1 hour
Section 5.9: Solving Equations by Factoring	1 hour
Chapter 6 – Rational Expressions:	
Section 6.1: Properties of Rational Expressions	2 hours
Section 6.2: Multiplication and Division	1 hour
Section 6.3: Addition and Subtraction	1 hour
Section 6.4: Complex Fractions	1 hour
Section 6.5: Solving Equations Involving Rational Expressions	1 hour
Section 6.6: Applications	2 hours
Chapter 7 – Rational Exponents and Radicals:	
Section 7.1: Rational Exponents	1 hour
Section 7.2: Radicals	2 hours
Section 7.3: Operations with Radicals	1 hour
Section 7.4: More Operations with Radicals	1 hour
Section 7.5: Solving Equations with Radicals and Exponents	2 hours
Section 7.6: Complex Numbers	1 hour
Chapter 8 – Quadratic Equations and Inequalities:	
Section 8.1: Factoring and Completing the Square	1 hour
Section 8.2: The Quadratic Formula	1 hour
Section 8.3: More on Quadratic Equations	1 hour