



Grading: Your final grade will be based on the percentage of total points you earned, using the standard scale: A = 90% and above, B = 80-89.9%, C = 70-79.9%, D = 60-69.9%, F = below 60%. Plus/Minus grading will not be used.

Exams: There will be four exams (each worth 100 points) during the semester. Exam questions will be based on the homework, and I will review the material covered on the exam during class on the last class day before the exam. No makeup exams will be given, but if you contact me **before** the day of an exam, I may be able to make arrangements for an alternate time for you to take the exam. The final (worth 150 points) will be cumulative. You must take the final to pass the course.

Homework: Homework assignments will be collected on exam days (worth 2 points per section). Each section should start on a new sheet of paper and be clearly labeled. To receive credit, you must show your work. A list of answers is not acceptable. Your homework grade will be based on the number of problems you attempted.

Individual and Group Projects: Throughout the semester, there will be projects due (worth 10-20 points each). The projects will consist of problems that are more interesting and involved than the typical homework and exam problems. Most projects will start as in class assignments, but will require time outside the classroom to finish. For individual projects, students are encouraged to work together, but each student is responsible for completing and submitting his/her own project. For group projects, only one finished assignment will be turned in for each group.

Quizzes: Throughout the semester, there will be quizzes assigned using MathXL. These will consist of a few problems and should take approximately 15 minutes. Each quiz can only be attempted once, and they will be completed during the lab hour. Quizzes will be closed notes and closed book. Missed quizzes cannot be made up.

Computer Labs: Each week, a computer lab will be assigned using MathXL and done online. You will have time to work on them during the scheduled lab times, but you should expect to spend time outside of class to finish the assignments. Computer lab assignments will be due 1 week from when they are assigned, at the start of class. Attendance is mandatory for the computer lab portion of the course.

STEM Achievement Center: To support your efforts to succeed in this class, I refer you to the STEM Achievement Center (H-Building). The STEM Achievement Center is a resource center that provides individual assistance in mathematics and science. Instructors and student tutors are available to answer homework questions, give confidence, and support math students. Students also have access to graphing calculators, textbooks, instructional videos, and computer tutorial programs. Computers are also available for student use. The STEM Achievement Center is open Monday through Thursday from 9:00 am to 5:00 pm and Friday from 9:00 am to noon.

## Course Objectives (Expected Student Learning Outcomes)

To successfully complete this course, students must show the ability to:

- Analyze and solve linear, quadratic, rational, radical, exponential and logarithmic functions from a graphic, numeric and analytic perspective
- Analyze and solve linear and non-linear systems of equations and inequalities
- Use matrices and determinants to solve systems of two or three equations
- Analyze and solve applied problems using linear, quadratic, rational, radical, absolute value, exponential and logarithmic equations
- Apply principles of rational exponents in order to simplify algebraic expressions and solve equations involving radical expressions.
- Apply critical thinking and mathematical reasoning skills necessary in algebraic problem solving and related disciplines
- Observe, interpret and analyze the behavior of graphs and statistical plots
- Articulate and analyze the connection between numerical, graphical and verbal approaches to solving problems
- Recognize and describe trends in a table of data
- Analyze functional relationships in order to better understand, graph, and/or interpret the nature of the function.
- Extract and interpret information from the graph of a function
- Recognize and graph elementary conics
- Use a graphing utility to solve problems graphically
- Select and apply the appropriate computer program to model, analyze and interpret a collection of data or to solve real-world application problems

Attendance: Good attendance is a must for success in this class. College policy states that a student may be dropped from the course for excessive absences or tardies.

**My Policy**: Four absences during the first four weeks or six absences during the entire semester and you may be dropped – arriving significantly late or leaving significantly early counts as half an absence.

Disability Support Services: Academic accommodations are available for students with disabilities. Please identify yourself to your instructor and to DSPP staff so that the appropriate accommodations can be ensured. DSPP is at A-300, LRC (660-4239)

Academic Honesty: Academic dishonesty of any type by a student provides grounds for disciplinary action by the instructor or college. If you cheat, there will be consequences: I may give you a zero on the assignment or a zero in the course, or other additional consequences, regardless of whether you were the giver or receiver of the cheating.

Misconduct: Disruptive or threatening behavior or any conduct that interferes with my ability to teach or another student's ability to learn will not be tolerated. Such actions could result in a warning, removal from the class, or referral to the Dean for disciplinary action. Please turn off your cell phones during class.

<b>Day</b>	<b>Section</b>	<b>Topic</b>	<b>Homework</b>
M 8/22	1.1 1.2 1.3 1.4	Basics of Algebra Operations and Properties of Real Numbers Solving Equations Intro to Problem Solving	<b>P 10:</b> 11,15,23,29,37,41,45,51,57,61,69 <b>pp. 20:</b> 15,39,51,57,63,73,87,99,107,115,123,135,139,143,151 <b>pp. 27:</b> 5,13,21,23,31,39,45,53,57,63,75,81 <b>pp. 38:</b> 1,5,7,9,11,17,21,29,37
W 8/24	1.5 1.6 1.7	Formulas, Models, and Geometry Properties of Exponents Scientific Notation	<b>pp. 46:</b> 11,17,23,27,35,41,47,49,53,59,63,81 <b>pp. 57:</b> 3,7,11,17,19,25,29,35,37,39,49,53,59,61,69,73,79,85,91,99,107,111 <b>pp. 64:</b> 3,7,11,17,19,21,25,33,37,39,43,49,55,57,61,65,67,71
M 8/29	2.1 2.2 2.3	Graphs Functions Linear Functions: Slope, Graphs, and Models	<b>pp. 80:</b> 7,11,15,19,21,25,27,35,39,43,47,53 <b>pp. 91:</b> 9,15,17,21,25,29,35,39,43,47,49,51,55,59,61,63,65,67,69 <b>pp. 104:</b> 7,11,15,19,23,25,27,31,35,41,47,51,55,57,59,63,67,71,73
W 8/31	2.4 2.5 2.6	Another Look at Linear Graphs Other Equations of Lines The Algebra of Functions	<b>pp. 116:</b> 11,15,19,25,29,35,39,45,51,55,61,63,67,71,75,81,87 <b>pp. 124:</b> 5,11,15,19,23,27,31,35,37,43,45,47,51,55,57,63,69,73,75,79,85 <b>pp. 134:</b> 7,11,17,19,25,29,31,33,35,41,45,49,51,59,63,67
M 9/5	<b>Labor Day No Class</b>		
W 9/7	3.1 3.2 3.3	Systems of Equations in Two Variables Solving by Substitution or Elimination Solving Applications: Systems of Two Equations	<b>pp. 155:</b> 9,11,15,17,23,29,33,41,45,49,51,53 <b>pp. 163:</b> 7,13,19,21,25,31,37,41,47,53,59,61 <b>pp. 174:</b> 15,17,19,21,23,25,29,33,35,39,45,47
M 9/12	1.1-1.7 2.1-2.6	<b>Test Chapters 1 &amp; 2</b>	
W 9/14	3.4 3.5	Systems of Equations in Three Variables Solving Applications: Systems of Three Equations	<b>pp. 185:</b> 7,9,13,19,23,27,31,37 <b>pp. 190:</b> 3,5,7,9,13,15,17,19,23
M 9/19	3.7 3.8	Determinants and Cramer's Rule Business and Economic Applications	<b>pp. 202:</b> 7,11,15,17,21,25,31,33 <b>pp. 207:</b> 9,13,15,17,19,23,27,29
W 9/21	4.1 4.2	Inequalities and Applications Intersections, Unions, and Compound Inequalities	<b>pp. 228:</b> 3,9,11,15,19,23,29,35,41,47,51,55,59,61,65,69,73,79 <b>pp. 238:</b> 11,15,19,23,25,31,35,43,45,47,51,57,63,69,73,79,95,99
M 9/26	4.3 4.4	Absolute-Value Equations and Inequalities Inequalities in Two Variables	<b>pp. 248:</b> 9,17,23,29,31,37,41,45,47,51,53,55,61,69,79,85,89 <b>pp. 259:</b> 7,11,15,21,27,31,35,39,45,49,55,59,61

<b>Day</b>	<b>Section</b>	<b>Topic</b>	<b>Homework</b>
W 9/28	5.1	Intro to Polynomials and Polynomial Functions	<b>pp. 284:</b> 11,15,17,19,21,23,25,29,31,33,35,39,41,45,47,51,53,55,57,61,65,69,71,75,79,89,95
	5.2	Multiplication of Polynomials Common	<b>pp. 296:</b> 9,13,17,21,25,29,31,35,37,39,41,43,47,51,53,57,61,65,69,73,77,79
	5.3	Factors and Factoring by Grouping	<b>pp. 302:</b> 9,13,19,23,25,31,39,43,47,51,55,57,59,63,67
M 10/3	3.1 – 3.8 4.1-4.4	<b>Test Chapters 3 &amp; 4</b>	
W 10/5	5.4	Factoring Trinomials	<b>pp. 314:</b> 9,15,21,27,35,41,51,57,63,69, 77,85,98,105
	5.5	Factoring Perfect Square Trinomials and Difference of Squares	<b>pp. 319:</b> 11,17,23,,27,31,37,45,51, 57,65,69,85
	5.6	Factoring Sums or Differences of Cubes	<b>pp. 324:</b> 11,15,19,25,29,35,41,45,61,67
M 10/10	5.7	Factoring: A General Strategy Applications of	<b>p. 328:</b> 7,11,17,21,27,31,37,41,49,53,59,69
	5.8	Polynomial Equations	<b>pp. 339:</b> 7,13,17,23,27,35,41,47,51,57,61,63,73,77,81,85,89,91,95
	6.1	Rational Expressions and Functions: Multiplying and Dividing	<b>pp. 360:</b> 13,17,21,25,29,31,35,41,49,53,57,61,67,71,73,77
W 10/12	6.2	Rational Expressions and Functions: Adding and Subtracting	<b>pp. 369:</b> 9,15,19,21,23,27,31,37,43,47,53, 61
	6.3	Complex Rational Expressions	<b>pp. 378:</b> 7,11,19,23,29,31,39,49
	6.4	Rational Equations	<b>pp. 385:</b> 5,13,19,27,37,45,49,53
M 10/17	6.5	Applications	<b>p. 395:</b> 7, 15, 21, 29, 33
	6.6	Division of Polynomials	<b>pp. 402:</b> 9,13,19,23,27,31,37,39,43,45
	6.7	Synthetic Division	<b>pp. 407:</b> 9,13,15,19,23,27
	6.8	Formulas, Applications	<b>pp. 415:</b> 15, 17, 21, 27, 33, 39
W 10/19	5.1-5.8 6.1-6.4	<b>Test Chapters 5 &amp; 6</b>	
M 10/24	7.1	Radical Expressions and Functions Rational	<b>pp. 437:</b> 9,13,19,25,27,31,35,37,39,47,53,59,67,73,79,85,89,93
	7.2	Numbers as Exponents	<b>pp. 443:</b> 9,15,21,27,31,37,45,49,55,61,65,71,79,87,97
W 10/26	7.4	Dividing Radical Exp.	<b>pp. 456:</b> 9,15,21,27,33,39,41,47,53,59,65
	7.5	Expressions Containing Several Radical Terms	<b>pp. 462:</b> 7,11,15,19,23,27,31,37,43,47,5155,59,61,67,71,87,97,103,107
	7.6	Solving Radical Equations	<b>pp. 469:</b> 5,7,11,17,23,29,35,41,45,49,53
M 10/31	7.8	The Complex Numbers	<b>pp. 489:</b> 9,15,21,27,33,41,47,57,59,65,6975,77,81,89,95
	8.1	Quadratic Equations	<b>pp. 508:</b> 7,11,17,25,27,29,33,37,41,47,49,53,55,61,65,71
	8.2	The Quadratic Formula	<b>pp. 515:</b> 7,11,17,23,27,31,35,39,43,47
	8.3	Solutions of Quadratics	<b>pp. 519:</b> 1-6,7,11,15,19,33,42,45,47

<b>Day</b>	<b>Section</b>	<b>Topic</b>	<b>Homework</b>
W 11/2	8.4	Studying Solutions of Quadratic Equations	<b>pp. 525:</b> 7,13,19,25,29,35,41,49,53
	8.5	Equations Reducible to Quadratic	<b>pp. 533:</b> 9,13,17,19,23,27,31,35,39,41
	8.6	Quadratic Functions and Their Graphs	<b>pp. 542:</b> 7,9,13,19,25,33,39,45,49,51,55,57
M 11/7	8.7	More About Graphing Quadratic Functions	<b>pp. 550:</b> 9,13,17,21,25,29,31,33,39
	8.8	Problem Solving and Quadratic Functions	<b>pp. 556:</b> 5,7,13,15,19,23,29,41
W 11/9	9.1	Composite and Inverse Functions	<b>pp. 588:</b> 9,13,17,21,25,27,33,39,43,47,53,59,65,71,73
	9.2	Exponential Functions	<b>pp. 596:</b> 1,7,13,19,25,31,35,39,41,45,49
M 11/14	6.5-6.8 7.1-7.8 8.1-8.9	<b>Test Chapters 7 &amp; 8</b>	
W 11/16	9.3	Logarithmic Functions	<b>pp. 604:</b> 9,13,15,21,27,35,37,41,45,47,53,59,63,69,75,79,85,89
	9.4	Properties of Logarithmic Functions	<b>pp. 611:</b> 7,11,13,17,21,23,27,31,33,39,43,47,51,53,57,61,65
M 11/21	9.5	Common and Natural Logarithms Solving Exponential and Logarithmic Functions	<b>pp. 619:</b> 9,15,21,33,39,45,51,57,63,65,69,75
	9.6	Common and Natural Logarithms Solving Exponential and Logarithmic Functions	<b>pp. 626:</b> 9,13,19,25,31,37,45,49,53,57,
W 11/23	10.1	Conic Sections: Parabolas and Circles	<b>pp. 656:</b> 3,9,15,21,27,29,33,37,41,43,47,49,53,55,59,63,67,71,75,77,83
	10.2	Conic Sections: Ellipses	<b>pp. 663:</b> 5,9,13,15,17,21,25,29,31
M 11/28	10.3	Conic Sections: Hyperbolas	<b>pp. 672:</b> 9,13,17,21,25,27,31,35,39,43
	10.4	Nonlinear Systems of Equations	<b>pp. 682:</b> 7,13,19,23,29,35,41,47,51,53,55
W 11/30	11.1	Sequences and Series	<b>pp. 696:</b> 7,11,17,19,23,27,29,33,37,41,45,49,53,59,61,65,67,69
	11.2	Arithmetic Sequences and Series	<b>pp. 704:</b> 9,13,17,21,25,29,33,35,39,43,45,47,51
M 12/5	11.3	Geometric Sequences and Series	<b>pp. 713:</b> 3,7,9,13,19,23,27,33,37,41,47,51,53,57,61,65,69
	11.4	The Binomial Theorem	<b>pp. 725:</b> 9,15,21,25,33,41,43,49
W 12/7		<b>Review for Final Exam</b>	
<b>5/26</b>	<b>Wed</b>	<b>Final Exam 8:00-10:00 am</b>	