



MAT120 Intermediate Algebra
Fall 2009
Section 56989, 12:30-2:35PM, Tue/Thur CM462

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Office Hours: 9:30-10:30 MW, 9:15-10:15 TR, 10:30-11:30 F (Tutor Center)

Textbook: *Mathematics in Action: Algebraic, and Graphic Problem Solving – A Custom Edition for Scottsdale Community College* (2008). Consortium for Foundation Mathematics. Pearson. ISBN: 978-0-558-32402-5

Course Description: Quadratic, rational, radical, exponential, and logarithmic functions and equations; graphs of quadratic, exponential, and logarithmic functions; equations quadratic in form; operations on rational expressions, radical expressions, and complex numbers; rational exponents; applications. Prerequisites: Grade of "C" or better in MAT090, MAT091, MAT092, MAT093, or equivalent, or a satisfactory score on the District placement exam.

Course Competencies:

1. Use function notation
2. Solve quadratic equations by factoring, completing the square, and the quadratic formula.
3. Solve equations quadratic in form.
4. Solve rational and radical equations.
5. Perform operations on complex numbers.
6. Perform operations on radical and rational expressions.
7. Simplify radical and rational expressions.
8. Simplify expressions involving rational exponents.
9. Graph quadratic, exponential, and logarithmic functions.
10. Identify the domain of quadratic, rational, radical, exponential, and logarithmic functions.
11. Rewrite logarithmic expressions using the properties of logarithms.
12. Evaluate formulas involving exponential or logarithmic expressions
13. Model and solve real-world problems using quadratic, rational, radical, exponential, and logarithmic equations.

Attendance is expected. You are to be in class every day it is scheduled. You may be withdrawn after 2 absences. I expect you to be in class on time and to stay the full length of class. If you have a legitimate need to leave class early, please notify me before class begins.

Grading: The semester grade is based on the number of points earned on chapter tests (100 points each), quizzes (varying points), hand-in assignments (2 points per section), and the final exam (150 points). Each student's final average is simply the total number of points divided by the total points possible. Final semester grades are assigned as follows:

<u>Percentage of Total Points</u>	<u>Semester Grade</u>
$90 \leq x < 100$	A
$80 \leq x < 90$	B
$70 \leq x < 80$	C
$60 \leq x < 70$	D
$0 \leq x < 60$	F

Final Exam: The final exam is required. Any student who does not take the final exam will automatically receive an "F" grade in the course. The final exam date and time is shown on the attached calendar.

Tests: I will accept no late exams (or quizzes). If you must be absent on an exam date you need to make arrangements with me prior to the absence.

Homework: I will not collect homework on a daily basis, but you will be required to maintain a notebook of the homework assignments. I will collect these notebooks on exam days.

Hand-In Assignments: I may periodically assign problems or projects which will count towards your overall grade. It is important that you attend class so that you don't miss handouts or announcements about these hand-in assignments.

Graphing Calculator: A graphing calculator is required for the course. The suggested calculators are the TI-83 or TI-84 models. Calculators with QWERTY keyboards, or those which have symbolic algebra capability, such as the TI-89 or TI-92, cannot be used during a quiz or test.

Tutoring: Drop-in tutoring is available for you in the Math/Science Center (480-423-6145) located in CM 441A. Tutoring is free and no appointment is necessary.

General Conduct: I expect that you will conduct yourself in a responsible, mature, and academically honest manner. Students who exhibit improper conduct are subject to disciplinary action as explained in the Scottsdale Community College General Catalog and Student Handbook. A student who is caught cheating on a test will receive a grade of zero for that test and disciplinary action will be taken in accordance with SCC policies.

Special Considerations: Please let me know right away if you have any kind of documented disability so that I can be aware of and accommodate special needs you may have. Students who have special needs should also contact the Disability Resources and Services Office at 480-423-6517.

Disclaimer: The instructor reserves the right to modify this syllabus to better meet the needs of the students.

To establish a positive learning environment for this class:

As an instructor, I am expected to be professional, courteous, respectful, and empathetic to students – and to

- Begin and end class on time,
- Be prepared for each class session,
- Provide academic feedback and grade assignments in a timely manner,
- Be available for individual consultation, and
- Clarify assignments and inform students of any adjustments to the class schedule.

As a student, you are expected to be reflective, courteous, respectful, and empathetic to classmates, instructor, and other College staff assisting you in your learning – and to

- Be in class and be on time,
- Be prepared for class sessions,
- Participate in class activities,
- Follow instructions and complete assignments,
- Keep up with and turn in assignments by the due dates,
- Put forth your best effort,
- Ask questions when you don't understand,
- Maintain knowledge of your grade status,
- Contact instructor right away about concerns or situations that interfere with your success in the class, and
- Comply with policies found in College catalog and student handbook.

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Week of	Tuesday	Thursday
Aug 24	1.1	1.2, 1.3
Aug 31	1.4, Calculator Activity (1-4), Cluster Review	1.5, 1.6
Sept 7	1.7, 1.9, Calculator (5-6) (summarize. 1.8)	Cluster review, Gateway review
Sept 14	Chapter 1 Exam, 2.1	2.4, 2.5, (summarize 2.3)
Sept 21	2.7, 2.8	2.8, Gateway
Sept 28	Chapter 2 Exam, 3.1	3.2, 3.3
Oct 5	3.8, Cluster Review	3.8, 3.9
Oct 12	3.10, 3.11	3.12, 3.13
Oct 19	Cluster Review, Gateway Review	Chapter 3 Exam, 4.1
Oct 26	4.2, Complete the Square	4.3, 4.4
Nov 2	4.5, 4.6	4.7, Cluster Review
Nov 9	Chapter 4 Exam, 5.1	5.3, 5.4
Nov 16	5.5, 5.6	5.7, 5.8
Nov 23	5.9, Cluster 1 Review	Holiday
Nov 30	Cluster 2 Review, Gateway Review	Chapter 5 Exam, Final Exam Rev.
Dec 7	Final Exam Review	Final Exam Review
Dec 14		Final Exam: Thursday, Dec 17 11:30-1:20 PM

1.1) 1-8,9abc,10
1.2) 1-4, 6, 8, 9, 10, 11a
1.3) 1-3, 5, 7
Cluster practice, p.38) 2-10, 12, 14, 15
1.5) 1-6, 9
1.6) 1, 3-8
1.7) 1, 2, 3, 4bc, 5, 6b, 9
1.9) 1, 2
Cluster practice p.91) 1, 2, 6, 7, 9, 12, 15, 17
2.1) 2, 3, 5, 6
2.4) 2, 5-20
2.5) 1-4
2.7) 1-3, 4abc, 5aceg, 6, 7
2.8) 1-3, 5
Gateway, p.277) 1-7, 9, 10, 11, 13
3.1) 3, 4
3.2) 1, 2, 5, 7, 8
3.3) 1, 2, 4, 5
Cluster practice, p.348) 1-8, 11, 12, 14
3.8) 1-5
3.9) 3, 4
3.10) 1
3.11) 1, 2, 7ac, 9, 10
3.12) 1, 3-7, 10
3.13) 1-5, 7
Gateway, p. 413) 1, 3, 4, 5, 8h, 9a, 10ad, 11, 12, 13a, 14a, 15a, 16
4.1) 3, 5, 7-11, 14
4.2) 1, 3, 5, 7, 9, 11, 17
4.3) 5, 7, 9, 11, 15
4.4) 5-13odd, 14, 16, 18, 20
4.5) 3-13odd
4.7) 1-19odd
Gateway, p.533) 1, 3, 5, 8, 9, 12, 14, 17, 21, 22def, 25, 28, 31, 34a, 35, 36, 37, 41, 48
5.1) 2, 3
5.3) 2, 3, 4
5.4) 2, 3, 4, 6
5.5) 2, 4
5.6) 1, 3
Cluster practice, 601) 3, 4, 6, 7, 8, 11, 13
5.7) 2, 7
5.8) 1a, 2, 3, 7
5.9) 1, 5, 6, 9
Gateway p. 645) 1, 3, 4, 5, 6a, 7, 8, 10a, 12a, 14abcd, 17a,