

# MATH 60-14

## INTERMEDIATE ALGEBRA

**Meets:** Monday and Wednesday      **Time:** 12:00-2:00 **Room:** 397

### COURSE DESCRIPTION

Emphasizes intermediate concepts of algebra such as Rational Numbers, systems of equations in two and three variables, absolute value equations and inequalities, radical expressions, rational exponents, Complex Numbers, quadratic equations, graphing linear and quadratic functions, and graphing parabolas and circles.

### STUDENT LEARNING OUTCOMES

Upon successful completion of Math 60, the student should be able to:

- $\pi$  Recognize algebraic and functional vocabulary and symbols.
- $\pi$  Evaluate and perform algebraic operations on polynomial, rational, radical, and exponential expressions.
- $\pi$  Apply algebraic definitions, properties, and concepts to the solutions of linear, absolute value, and quadratic equations.
- $\pi$  Graph linear and quadratic functions, parabolas, and circles.
- $\pi$  Model and solve real world situations with appropriate mathematical notation.

### INSTRUCTOR CONTACT INFORMATION AND OFFICE HOURS

**Instructor:** Shannon Gracey **Phone:** 619-421-6700 ext. 5517

**e-mail:** [sgracey@swccd.edu](mailto:sgracey@swccd.edu) **website:** [www.swccd.edu/~sgracey](http://www.swccd.edu/~sgracey)

**Office Hours:** Room 320D, MW 10:15-11:55, F 10:15-11:05 or you may make an appointment by calling or e-mailing me, using the contact info written above.

### COURSE MATERIALS

**Required Text:** Elementary & Intermediate Algebra, Sullivan/Struve/Mazzarella, Pearson Prentice Hall, 2007

**Optional:** Student Solutions Manual, CD Lecture Series, Tutor access (phone and e-mail), and Chapter Test

**Materials:** Prep Videos. See textbook for additional support materials.

**Material Covered:** Chapters 7- 10, 12, Appendix E

**Calculator:** A scientific calculator is required. Graphing calculators are optional. Cell phone calculators are NEVER allowed.

### PREREQUISITES AND RECOMMENDED PREPARATION

**Prerequisite:** Credit for Math 45 or equivalent skill level as determined by the SWC Mathematics Assessment or equivalent

**Recommended Preparation:** RDG 56 or the equivalent skill level as determined by the Southwestern College Reading Assessment or equivalent

## ATTENDANCE & TARDIES

Each student is responsible for his/her registration in classes. Each student must attend the first class meeting or make arrangements with the instructor if he/she is going to be absent. Failure to attend the first class meeting or excessive unexcused absences, that is, more than 8 hours of missed class time, may result in a student being dropped from this class. Each class you will be given 2 points if you arrive on time and stay for the entire class, 1 point if you arrive late or leave early, and 0 points if you are absent. At the end of the semester this percentage  $\{(\text{earned points})/(\text{points possible})\} \times 100$  will replace your lowest quiz percentage.

## HOMEWORK

Homework will be collected on exam and quiz days at the beginning of the class. Homework is graded on completeness. Each new assignment must be started on a new paper, be clearly labeled with the chapter, section, and assignment, and stapled. **Graphs must be on GRAPH PAPER!** In order to be successful in this course, **YOU MUST PRACTICE MATH PROBLEMS EVERY DAY!!! No late homework will be accepted.**

## QUIZZES & EXAMS

Quizzes will typically be given after covering 3-4 sections, between exams. There will be at least 6 quizzes. No quizzes will be dropped, however your lowest quiz score may be replaced by your attendance percentage. **Exams will all be cumulative.** No exams are dropped, however your lowest exam score may be replaced by your earned homework percentage.

## QUESTIONS

Questions are an important part of the learning process. If you have a question, please feel free to ask me at any time! If you have a question, there are probably at least 5 other students with the same question. If I cannot answer your question immediately, I will come back to it ASAP.

## DISABILITY SUPPORT SERVICES (DSS)

DSS provides programs and services for students with disabilities. Southwestern College recommends that students with disabilities discuss academic accommodations with their professors during the first two weeks of class. This syllabus and course handouts are available in alternate media upon request.

## TUTORING AND ACADEMIC SUCCESS CENTER REFERRAL

To further your success, reinforce concepts, and achieve the stated learning objectives for this course, I refer you to Academic Success Center learning assistance services. You will be automatically enrolled in NC 3: Supervised Tutoring, a free noncredit course that does not appear on your transcripts. Services are located in the ASC (420), the Writing Center (420D), the Reading Center (420), Math Center (426), the Library/LRC Interdisciplinary Tutoring Lab, MESA (396), specialized on-campus School tutoring labs, the Higher Education Center, and the San Ysidro Education Center. Online learning materials and Online Writing Lab (OWL) are available at [www.swccd.edu/~asc](http://www.swccd.edu/~asc).

## BEHAVIOR

- **CHEATING ON ANY TEST OR QUIZ WILL EARN A GRADE OF F!!! PLAGIARISM (COPYING) OF OTHER PEOPLE'S WORK IS NOT ACCEPTABLE.** Any person caught doing this will get an F on the assignment or test in question and can also potentially be given a grade of F for the course and/or be referred to the college discipline process.
- You may not use your cell phone or PDA as a calculator on exams.
- During class your cell phone/pager should be off.
- If you know you need to leave class early, take a seat near the door.
- **RESPECT YOUR FELLOW STUDENTS AT ALL TIMES!!!**

## GRADING

<b>Exams (4—MAKE-UPS ARE GRANTED ONLY IF I AM NOTIFIED <u>BEFORE THE EXAM</u>)</b> .....	<b>55%</b>
<b>Quizzes (MAKE-UPS ARE GRANTED ONLY IF I AM NOTIFIED <u>BEFORE THE EXAM</u>)</b> .....	<b>20%</b>
<b>HOMEWORK (NO LATE ASSIGNMENTS ACCEPTED)</b> .....	<b>5%</b>
<b>Final (CUMULATIVE)</b> .....	<b>20%</b>

A: 90%—100% B: 80%— 89% C: 70%— 79% D: 60%— 69% F: 59% and below  
*Final grades are left to the discretion of the instructor.*

**As a final note: To be successful in this course, it is recommended that you spend 2 hours outside of class for every hour in class.**

## STUDENT LEARNING OBJECTIVES

1. Student will simplify rational expressions.
2. Student will perform the operations of addition, subtraction, multiplication and division on rational expressions.
3. Student will evaluate and graph linear functions.
4. Student will solve inequalities and represent their solutions using interval notation and on a number line.
5. Student will graph linear inequalities in one and two variables.
6. Student will solve and graph solutions of compound linear inequalities.
7. Student will solve absolute value equations and inequalities.
8. Student will solve systems of equations with two unknown, including consistent and inconsistent systems, using graphing, substitution and elimination.
9. Student will solve application problems with systems of equations.
10. Student will solve systems of three equations with three unknowns by elimination and substitution.
11. Student will simplify radical expressions using prime factorization.
12. Student will use absolute value to simplify algebraic radical expressions
13. Student will add, subtract, multiply, and divide radicals.
14. Student will rationalize denominators.
15. Student will simplify and solve expressions with rational exponents.
16. Student will solve radical equations and applications resulting in radical equations.
17. Student will simplify and perform basic operations with Complex Numbers.
18. Student will evaluate radical functions.
19. Student will solve quadratic equations by factoring, substitution, square root property, completing the square, and by the Quadratic Formula.
20. Student will solve applications resulting in quadratic equations.
21. Student will identify the number and nature of the roots of a quadratic equation using the discriminant.
22. Student will solve quadratic inequalities in one variable.
23. Student will graph circles and parabolas.
24. Student will simplify rational expressions using the operations of addition, subtraction, multiplication and division.

Please return this page to Ms. Gracey on the second day of class. Be sure to print your name clearly so that I can give you credit.

I, \_\_\_\_\_, have read the course syllabus. I understand that I am required to follow the policies outlined in the syllabus. I also understand that this course will require approximately 8-10 hours of productive study time outside of class in order for me to have a chance of successfully completing this course. I understand that I must complete the homework in order for me to have a chance of successfully completing this course.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**TENTATIVE SCHEDULE**  
**FALL 2009**  
**MATH 60-14**

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
<b>AUGUST</b>	17 Intro, review, 7.1	18	19 7.2, 7.3	20	21
<b>AUGUST</b>	24 7.4, 7.5	25	26 7.6 <b>QUIZ 1/ CH. 7.1-7.5</b>	27	28 SAT. 8/29 IS THE LAST DAY TO ADD OR WITHDRAW W/REFUND
<b>AUGUST/ SEPTEMBER</b>	31 7.7, 7.8	1	2 REVIEW CH. 7 <b>EXAM 1/CH. 7</b>	3	4
<b>SEPTEMBER</b>	7 <b>HOLIDAY</b>	8	9 8.1, 8.2	10	11 LAST DAY TO DROP W/O RECEIVING A W OR APPLY FOR C/NC—3PM
<b>SEPTEMBER</b>	14 8.3, 8.4	15	16 8.4 <b>QUIZ 2/ CH. 8.1-8.3</b>	17	18
<b>SEPTEMBER</b>	21 8.5, 8.6	22	23 8.7 <b>QUIZ 3/ CH. 8.4-8.6</b>	24	25
<b>SEPTEMBER/ OCTOBER</b>	28 8.7, E. 1	29	30 E. 2, REVIEW CH. 8	1	2
<b>OCTOBER</b>	5 <b>EXAM 2/ CH. 7, 8, E. 1, E. 2</b>	6	7 9.1, 9.2	8	9
<b>OCTOBER</b>	12 9.3, 9.4	13	14 9.4 <b>QUIZ 4/ CH. 9.1-9.3</b>	15	16
<b>OCTOBER</b>	19 9.5	20	21 9.6	22	23
<b>OCTOBER</b>	26 9.7, 9.8	27	28 REVIEW <b>EXAM 3/ CH. 7-9</b>	29	30 DEADLINE TO PETITION FOR FALL GRADUATION
<b>NOVEMBER</b>	2 10.1	3	4 10.2	5	6 LAST DAY TO DROP AND RECEIVE A W— 3PM
<b>NOVEMBER</b>	9 10.3	10	11 <b>HOLIDAY</b>	12	13
<b>NOVEMBER</b>	16 10.4	17	18 REVIEW <b>QUIZ 5/ CH. 10.1-10.4</b>	19	20
<b>NOVEMBER</b>	23 10.5	24	25 10.6	26 <b>HOLIDAY</b>	27 <b>HOLIDAY</b>
<b>DECEMBER</b>	30 12.1 <b>QUIZ 6/ CH. 10.5- 10.6</b>	1	2 12.2	3	4
<b>DECEMBER</b>	7 <b>EXAM 4/ CH. 7-10, 12.1, 12.2</b>	8	9 <b>REVIEW FOR FINAL</b>	10 <b>NO CLASSES</b>	11 <b>NO CLASSES</b>
<b>DECEMBER</b>	14 <b>FINAL 1PM-3PM</b>	15	16	19	20

