Course: ACSK 0103 INTERMEDIATE ALGEBRA

Fall 2005    BH 1136     11208 MWF 8:00-9:10;  11209 MWF 9:30-10:40     MathPro5 code 10509

Dr. Marjorie Whitmore     619-4274   mwhitmor@nwacc.edu   http://faculty.nwacc.edu/mwhitmor

Burns 1449 Office Hours (no appointment needed)  Office hours listed here are on a "drop-in" basis. As I occasionally must attend meetings during any office hour, you should confirm ahead whenever possible. You may also make appointments outside the hours listed. However, if you make an appointment, please keep it. If you must miss an appointment, please email or call (479-619-4274). Repeatedly missing appointments may mean loss of that privilege.

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<th>Monday</th>
<th>Tuesday</th>
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<tr>
<td>11:00am -1:00pm</td>
<td>7:45am - 8:45am</td>
<td>10:30am - Noon</td>
<td>10:30am - 12:00pm</td>
<td>11:00 - Noon</td>
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Catalogue Description: This developmental algebra course covers exponents and radicals, systems of linear equations and inequalities, radical and quadratic, and rational equations and compound inequalities in one variable, line graphs and parabolas, function concepts including domain and range, and interwoven problem solving. Graphing calculator use. Upon successful completion, a student may take MATH 1204, College Algebra or MATH 2043, Survey of College Mathematics.

Prerequisite: Beginning Algebra (ACSK 0023) with a grade of C or better, or minimum placement score: COMPASS Algebra - 41 & Prealgebra–39, or ACT Math–17.

Credit/Contact/Load Hours: 3 credit hours, none counting toward any degree requirements.

Target Audience and Transfer: This course is intended for college students who have had considerable algebra instruction, and for those students needing a review of high school algebra concepts to strengthen skill in preparation for college algebra study. Intermediate Algebra is a non-transfer course.

Developmental Education Program:
Through placement and advisement, developmental education courses may be required prior to taking college-level courses at NWACC. The program goal is to enable learners to acquire competencies needed for success in mainstream college courses and to attain career and life goals. Developmental Education Performance Reports indicate that students who are successful at Intermediate Algebra succeed in College Algebra at a rate comparable to students placed directly into that course.

Goals for student thinking encourage intellectual risk-taking, mental math, organization of data, modeling and problem solving to help prepare the Intermediate Algebra student as a productive worker and citizen.

CORE COURSE OBJECTIVES - CONTENT:
A student successfully completing Intermediate Algebra, ACSK 0103, will demonstrate these five primary course competencies:
1) Write the equation of a line in slope-intercept form given the y-intercept as an ordered pair and another point on the line.
2) Graph any linear equation, including horizontal and vertical.
3) Solve a consistent system of two equations in two variables.
4) Solve a quadratic equation with irrational solutions and reducible radical.
5) Model linear, rational, Pythagorean, and quadratic problems using algebraic process.
6) And, meet all core objectives for Beginning Algebra:
   a) Find the solution of a linear equation
   b) Model a linear problem using algebraic process.
   c) Graph a linear equation in two variables.
   d) Simplify an exponential expression.
   e) Factor a second-degree polynomial.
   f) Meet all core objectives of Prealgebra (see Prealgebra course outline)

COURSE OBJECTIVES - ADDITIONAL CONTENT EMPHASIS-A student successfully completing Intermediate Algebra, ACSK 0103, will also be able to:
1) Solve a linear inequality in one variable (including compound) and graph the solution on a real number line.
2) Recognize functionality, and find a function’s domain (via its graph or formula) and range (via its graph).
3) Evaluate and graph functions.
4) Graph a system of linear inequalities in two variables.
5) Perform operations on radical expressions.
6) Solve any quadratic equation, including those with complex number solutions, via a variety of methods.

Required Section Coverage: Appendix D, Appendix E, 7.1, 7.2, 7.3, 7.4, 7.5, 12.3, 8.1, 8.2, 8.3, Ch 8 Focus (p 598), 8.4, 8.7, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 10.1, 10.2, 10.3, 10.5, 10.6 + at least three Graphing Calculator Explorations from these: Appendix C, p 494, p 527, p 565, p 704, p 744, 790

Optional Sections: 1.1, Appendix A, Appendix B, Chapter 6, 2.8, 3.4, 3.5, 10.4, 11.1, 12.1
Required Text and materials

- **Sharpened pencils, 3-ring binder** (approximately 1.5”) with loose-leaf paper, **Graph paper** with 4-5 squares to the inch.
- **Scientific Calculator** If you already have a calculator that can compute square roots, it should be adequate. We will be using TI-82 or TI-83 calculators for the book’s “Graphing Calculator Explorations”. These are available for student checkout during class time. If you plan to buy a calculator, consider TI-82, 83, or 84. Appropriate calculators can be rented through the math department.
- **Blue Book/Examination Book** (bookstore) Bring to 2nd class meeting. DON’T write in it yet!

### STUDENT RESOURCES: ACSK 0103 INTERMEDIATE ALGEBRA

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<thead>
<tr>
<th>What........</th>
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<th>Where.......</th>
<th>Product info</th>
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<tbody>
<tr>
<td>Student Solutions Manual</td>
<td>Step by step solutions to odd-numbered exercises.</td>
<td>NWACC Bookstore</td>
<td>Prentice Hall</td>
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<tr>
<td>Videotape Series</td>
<td>Coverage by text sections. Text publisher.</td>
<td>NWACC Library BH</td>
<td>Free check-out</td>
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<tr>
<td>Digitized Lecture Videos on CD-ROM</td>
<td>All the Videos above in digital form</td>
<td>NWACC Library BH, NWACC Bookstore</td>
<td>Free check-out or purchase</td>
</tr>
<tr>
<td>MathPro 5</td>
<td>Online tutorial software</td>
<td>NWACC Bookstore</td>
<td>Prentice Hall</td>
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<tr>
<td>More publisher supports listed pg xv of Preface</td>
<td>Computer tutorials, multimedia and web supports.</td>
<td>Access available in NWACC Learning Lab BH 1109 or Math Café MAT 10</td>
<td>Prentice Hall</td>
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<tr>
<td>Peer and Faculty tutors</td>
<td>Discuss specific homework questions, help prepare for exams.</td>
<td>NWACC Learning Lab BH 1109, Math Café MAT 10, and ON-LINE</td>
<td>See Learning Lab Web Site for Schedule and Details</td>
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<tr>
<td>Texas-Instruments 82 or 83 Graphing Calculator</td>
<td>Permits home practice with the graphing calculator.</td>
<td>Go to Cashier’s window in BH, then take receipt to Math Secretary, MAT 02</td>
<td>Semester rental cost: TI-82 $15</td>
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### Assignments/Requirements

Course outlines and schedules are distributed the first week of class and are closely followed. You should **read each section and work corresponding Practice Problems/Concept Checks BEFORE** the section is covered in class. **During class**, you should ask questions if you don’t understand something. **After class**, start your homework as soon as possible, while the math is fresh in your mind. Please keep a list of unresolved homework questions on a separate sheet of paper in the front of your binder. This will save you a great deal of time later.

**5-point homework checks** are generally given on the last class day of each week, unless a test is scheduled for that day. Additional homework checks are given on other days as needed to have at least 16 altogether. I will give the section and problem number(s), but not the problem itself. You will copy the **problem(s)**, all necessary **work and explanations**, and your **solution** directly from your homework into your homework check blue book. You are allowed to use only your homework during homework checks. Homework checks begin promptly at the start of class and time is called within 5 minutes. It is ESSENTIAL that you complete all homework assignments and keep your work well organized for quick reference. If you are late and miss a homework check, you can’t make it up. Assignments are announced well in advance, you are allowed and encouraged to work together on homework, free tutoring is available in the Learning Lab/Math Café, and I will gladly work with you outside class. Your lowest 2 homework checks will be dropped for a total of 70 points.

You will have at least 11 5-point grades from **quizzes** [which might not be announced in advance], **participation**, **group work**, and other **assignments**. Of these, only the best 10 will count.

There will be a major **group project** worth 20 points, and a **quiz on Appendix D and Appendix E** worth 25 points. Neither of these grades can be dropped. Neither of these grades can be made up, except in advance.

### Tests/Exams

We will have 4 **100-point tests** and a **COMPREHENSIVE 200-point final exam**. One low test score will be replaced by your score on the corresponding section of the final exam if that helps your grade. Your final exam is required, and will be comprehensive. The final exam cannot be dropped. Students who do not take the final exam will earn a semester grade of F. See the course schedule for test and exam dates.

- 25 points quiz on Appendix D and Appendix E
- 70 points homework checks
- 50 points quizzes, take-home assignments, participation, etc.
- 20 points group project
- 400 points tests
- 200 points final exam
- **765 points total possible**

To find your current grade percentage, add your points earned, divide by points possible, then multiply by 100.

<table>
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<th>Points</th>
<th>Grade</th>
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<tr>
<td>0-59</td>
<td>F</td>
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<tr>
<td>60-69</td>
<td>D</td>
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<tr>
<td>70-79</td>
<td>C</td>
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<td>80-89</td>
<td>B</td>
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<tr>
<td>90-100</td>
<td>A</td>
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**Attendance: Absences aren’t excused; makeup work isn’t allowed**  Instead, all students are allowed to drop several grades.

- There will be at least 16 5-point grades from homework checks. Only your best 14 grades will count toward this total.
- There will be at least 11 5-point grades from quizzes, participation, etc. Only the best 10 will count.
- There will be 4 100-point tests. One of these can be replaced by the corresponding section of the final exam if that helps your grade. If you miss a test, the test you miss will be the one replaced by the corresponding section of the final exam. The final exam cannot be dropped or made up.

Pre-assigned work with a specific due date must be turned in before class starts. Work turned in after class begins is late. Late work received up to one class period late is worth half of the possible points. Beyond that, late work gets no credit.

**Makeup Policy**  If possible, let me know BEFORE you miss class, and I will try to work with you. You are responsible for the material covered even if you miss, so this is very important. Makeup work is not allowed. If you miss a class, you will not get any points for graded work done in class that day. **Absences are not excused for any reason.**  Instead, all students are allowed to drop several grades [as explained above], and replace one test grade.

**What You Are Responsible For**

You are expected to bring required class materials to every class meeting, to attend every class meeting for the entire scheduled time, and to complete ALL homework problems on the assignment sheet, whether or not they are collected for a grade. Expect to spend a minimum of 6 hours per week on reading, practice problems/concept checks, homework, and reviewing for tests. Try to schedule some of your study time on campus during my office hours, or when Math Café/Learning Lab tutors are on duty. Try to schedule all study time to coincide with times you are alert. If you are absent for any reason including class cancellation due to weather, it is your responsibility to read the missed sections and do the associated problems from the assignment sheet before the next class meeting.

**Basic Reminders**  The NWACC Catalog sections on Student Rights and Responsibilities, Academic Dishonesty, and the Student Conduct Code apply to this and all other classes at NWACC. Please read these sections if you haven’t already done so. Out of respect for your classmates, **TURN OFF THE VOLUME on pagers and phones, and do not sharpen pencils while the instructor is teaching.**  If you arrive late please enter quietly. Please stay after class to make sure I count you late instead of absent. Instructors’ attendance records are collected by NWACC.

**Exit Criteria**  Any student needs a final grade of A, B or C to proceed to MATH 1204, College Algebra or MATH 2043, Survey of College Mathematics.

**Withdrawal Deadline**  The deadline to drop this class with a "W" is Friday, November 4. Consulting with an academic advisor, your instructor, or Financial Aid can inform your decision. An official Drop Form from Admissions must be completed and turned into the Registrar’s Office by 4:00 pm on the last day to withdraw.

**Additional Dates**

- **Mon, Aug 29**  Last day to drop and receive 100% refund
- **Mon, Sept 05**  Labor Day – No Classes – School is Closed
- **Fri, Nov 04**  Last day to drop with a “W” (Please contact me before doing this.)
- **Wed-Sat, Nov 23-26**  Thanksgiving Break –No Classes
- **Monday, Dec 12** Final Exam 8:00-10:00  (for 11208 MWF 8:00-9:10 class)
- **Wednesday, Dec 14** Final Exam 9:30-11:30  (for 11209 MWF 9:30-10:40 class)

**Bad Weather Policy**  Cancellation of classes will be posted on the NWACC website (http://www.nwacc.edu) and released to local T.V. and radio. Day classes are announced by 6:00 am, and evening classes by 3:00 pm. You may also call the Student Information Line: 619-4377. In your instructor’s opinion, if Bentonville and Rogers public schools close, it is hazardous for NWACC students to attempt to attend an 8:00 am class, although your instructor will not cancel class if NWACC is open.

**disAbility Services**  If you are a student with a disability who will be requesting accommodations, you must contact the Office of disAbility Services in Burns Hall 619-4384. The director of disAbility Services will meet with you and recommend appropriate accommodations and services after you have submitted the required documentation.

**Family Educational Rights and Privacy Act**  NWACC is committed to your right to privacy as outlined in the Family Educational Rights and Privacy Act (FERPA).

**Plagarism**  Directly copying someone else’s work or allowing someone to copy yours will result in the loss of that score and will be dealt with according to the policy on Academic Dishonesty (see p. 150-151 in the 2005-2006 College Catalog).  DO NOT ask to copy and say NO if someone asks to copy your paper.
List of Textbook Assignments  CC-Concept Check PP-Practice Problem MM-Mental Math  EX-Exercise Set
GCE-Graphing Calculator Explorations

Little class time will be spent on these Appendix A and Appendix B, so be SURE to get extra help outside of class if you need it.

Appendix A - p967-972; Ex Set: 1, 3, 5, 9, 12, 13, 17, 18, 21, 24, 25, 29, 30, 33, 36, 37, 41, 42, 45, 48, 49, 51, 53, 54, 55, 57, 59, 61, 63
Appendix B - p973-978; MM: 1, 3, 5, 7; Ex Set: 3, 5, 6, 9, 11, 12, 15, 17, 18, 21, 24, 25, 29, 30, 31, 33, 36, 37, 41, 45, 49, 53

Optional Extra Review of Beginning Algebra (as needed): 6.1: PP 2, 5; 6.2: CC p424, PP 4, 7; 6.3: PP 3; 6.4: PP 4, 5, 7; 6.5: PP 3, 6, 7;
6.6: EX 9, 21, 29; 6.7: PP 3, 5; 3.3: PP 1, 6, 7; 3.4: PP 1, CC (p227), PP 3, 4, 5, 6

7.1: GCE (p 494): 1, 3, 4, 6; MM: All; EX: 1, 3, 5, 6, 7, 9, 12, 15, 18, 19, 20, 21, 22, 24, 25, 27, 29, 31, 33, 36, 39, 41
7.2: MM: All, EX: 3, 6, 9, 12, 13, 15, 18, 21, 24, 25, 26, 27, 28, 29, 31, 33, 36, 39, 41, 42, 45, 47, 49, 51, 53, 57, 60, 61, 62, 63, 66, 67

Appendix C (pp 982-984): EX: 1, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42
2.8: PP 3, CC (p156), CC (p 159), PP 9

Integrated Review 7--all

7.3: EX: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 23, 24, 26, 27, 28, 29, 30, 31, 32, 33, 36, 37, 39, 42, 44, 45, 50, 51, 53, 56, 57, 59, 61, 63, 65, 69, 72, 75, 78, 81, 84, 85, 86
7.4: GCE (p 527) 1-4; EX: 3, 6, 9, 12, 13, 15, 18, 21, 24, 25, 27, 30, 33, 36, 39, 42, 43, 45, 47, 49, 51, 54, 55, 57, 58
7.5: EX: 3, 6, 9, 11, 15, 18, 21, 23, 25, 27, 30, 33, 36, 37, 39, 41, 43, 45, 48, 50, 51

Ch 7 Test (p553-555): 1-24

Cumulative Review (p557 – 558): 1-25

Optional Review (only do problems directed at needed topics):
Ch 7 Rev (p549-552): 1 – 51
Appendix A (p967): 1-64
Appendix B (p973): 1-56

12.3: (p 935): EX: 3, 6, 9, 12, 15, 21, 24, 27, 30
8.1: MM: All; EX: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 37, 38, 39, 40, 41, 42, 43, 46, 48, 51, 52, 53
8.2: EX: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 31, 33, 35, 36, 39, 42, 45, 48, 49, 51
8.3: EX: 3, 6, 9, 12, 13, 14, 15, 18, 21, 24, 25, 27, 28, 30, 33, 36, 39, 41, 43, 45, 48, 49, 51, 52, 53

Integrated Review 8--all

8.4: MM: All; EX: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 48, 51, 53, 55
8.7: EX: 3, 6, 9, 12, 15, 16, 17, 18, 19, 21, 24, 26, 28, 29, 30, 33, 34, +Ch 8 Review (p 644): 77
8.4: GCE (p565)1-4; 1, 2, 3, 4

Ch 8 Test (pp 645-648): 1-12, 19-28; Cumulative Review (pp 649-650): 1-17; Ch 8 Review (p 639-644): 1-44, 71-78

9.1: EX 1, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 37, 39, 42, 45, 48, 50, 51, 53, 54, 55, 56, 57, 58, 59, 60, 61, 64, 66, 67, 68, 69, 72, 75, 76, 78, 79, 81, 83, 84, 85

9.2: EX 3, 6, 9, 12, 15, 16, 18, 19, 21, 23, 24, 25, 27, 30, 31, 33, 36, 38, 39, 42, 43, 45, 48, 51, 54, 57, 58, 60, 61, 63, 65, 66, 67, 69, 72, 75, 78, 81, 84, 85, 87, 90, 92, 93, 95, 97, 99, 102, 103, 104, 105, 106

9.3: EX 2, 3, 6, 9, 12, 13, 15, 18, 21, 24, 27, 30, 32, 33, 36, 39, 42, 44, 48, 51, 54, 57, 60, 63, 66, 69, 72, 75, 78, 81, 83, 84, 85

9.4: MM: All; EX: 1, 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69, 72, 73, 75, 78, 79, 81, 84, 85, 86, 87, 88

9.5: MM: All; EX: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 31, 33, 35, 36, 39, 41, 42, 43, 45, 48, 51, 54, 57, 60, 63, 66, 69, 72, 73, 75, 77, 78, 79, 81

9.6: GCE (p 704): 1 3, 6; EX: 3, 6, 9, 12, 13, 15, 18, 19, 20, 21, 22, 24, 27, 30, 33, 36, 39, 42, 45, 48, 49, 50, 51, 54, 57, 59, 61, 63, 64, 65, 67, 69, 71, 75, *78, 79, 81, 84, 85, 86, 87, 88

Integrated Review 9--all

9.7: MM: All; EX: 1, 3, 6, 7, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69, 72, 75, 78, 81, 84, 85, 87, 90, 93, 96, 98, 99, 101, 102, 103

Ch 9 Test (pp 731-732): 1–34; 12.3 (p 935): 5, 13, 23, 28, 29; Cumulative Review (pp 733-734): 1-23, 26, 27

10.1: GCE (p744) 1, 3, 5, 6; EX: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 67, 69, 72, 75, 77, 78, 81, 83, 85, 87, 89, 91, 93, 94

10.2: MM: All; EX: 3, 6, 9, 12, 15, 18, 21, 24, 27, 29, 30, 33, 36, 39, 42, 45, 48, 49, 51, 53, 55, 57, 59, 61, 63, 65, 66, 68, 69, 72, 73, 75, 77, 78, 80, 81, 83, 85, 87

10.3: EX: 3, 6, 9, 12, 15, 18, 21, 30, 33, 36, 39, 45, 48, 51, 54, 57, 59, 61, 63, 65, 67, 69, 72, 75, 76, 77, 78

Integrated Review 10--all

10.5: GCE (p 790): 1, 3, 4; MM: All; EX: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 49, 51, 54, 55, 56

10.6: EX: 3, 6, 9, 12, 15, 18, 21, 24, 27, 21, 31, 33, 35, 37, 39, 43, 45, 48, 49, 51, 53

Ch 10 Test (pp 815-816): 1-12, 17-23

Cumulative Review: (pp 817-818): 1-3, 6-21, 23


Appendix D (pp 989-990): EX: 1, 3, 5, 7, 9, 12, 15, 18, 20, 21, 24, 27, 30, 33, 36, 38, 39, 41, 43, 46, 48, 49, 50, 54, 55

Appendix E (pp 997-1000): EX: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 32, 36, 39, 42, 45, 48, 51, 54, 57, 60, 63, 66, 69, 72, 75, 78, 81, 84, 87, 90, 93, 96, 97, 98, 99, 102