

**COLLEGE OF SOUTHERN NEVADA**  
**Math 96– Intermediate Algebra--3 credits**  
**Syllabus Fall 2009--page 1**

**INSTRUCTOR:** Michelle Wyatt

**OFFICE:** Cheyenne campus, Room 1029, Office D (across from the planetarium)

**PHONE:** 651-4218. Math Office: 651-4029

**E-MAIL:** michelle.wyatt@csn.edu

**OFFICE HOURS:** Monday through Thursday 11 a.m. to 12:15 p.m.; appointments as arranged.

**WEBSITE:** www.nevada.edu/~wyatt

Dear Student:

I love teaching this class, and I am very excited about this semester. I hope you are very successful! I would love to work with each person one-on-one, but we won't have time during class. So I would love to see you during my office hours. Please feel free to stop in to get extra help.

This class will be intense! It requires you to be competent with the material from Math 95. If you don't know how to factor polynomials, you should drop this class and take Math 95. For many people, the material in this class will be totally new. That makes the class "feel tough". You have to learn thoroughly so spend a lot of time on this material. I will present ideas one day, you'll do your homework, and then you'll ask questions the following class. THEN you should continue to work on the old problems (at the same time, you need to work on the new ideas so you won't get behind) so you can also ask questions the NEXT class. You will find that we frequently "spiral" back to old ideas! Keep working until you understand. You may find you need extra help outside of class to thoroughly understand the concepts. Get help from me and go to tutoring as necessary! The amount of material covered is mandated by the math department; **no material can be eliminated**. We will adhere to the schedule of sections covered.

I am serious about you learning this material, and I have high standards on the tests I give. I want you to do well enough to be prepared for the next math class, so you need to make a C or better in this class to make progress to the next class! The only way to do well is to PRACTICE LIKE CRAZY--and to make sure you understand everything as you go along. If you have questions, you need to ask during class or get help outside of class. This syllabus and course outline are designed to help you progress through the course. After you read the syllabus, let me know if you have any questions. I'm looking forward to the semester, and I hope you are too.

Michelle Wyatt

**MY SCHEDULE:**

MW: 8 to 9:20 a.m.--Math 96

9:30 to 10:50 a.m.--Math 93

11 a.m. to 12:15 p.m.--Office Hours

12:30 to 1:50 p.m.--Math 96

2 to 3 p.m.--Asst Chair Duties

TR: 8 to 9:20 a.m.--Math 95

9:30 to 10:50 a.m.--Math 95

11 a.m. to 12:15 p.m.--Office Hours

12:15 to 1:15 p.m.--Asst Chair Duties

**TEXTBOOK:** *Beginning and Intermediate Algebra*, 4th Edition, by Lial, Hornsby and McGinnis.

**COURSE DESCRIPTION:** Topics include rational expressions and equations, linear equations and inequalities, radicals, quadratic equations, graphs, and applications.

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**COURSE OBJECTIVES:** Upon completion of the course, the student should be able to:

1. Work with functions and function notation
2. Graph functions
3. Solve systems of linear equations
4. Work with rational expressions and solve rational expression equations
5. Perform arithmetic on irrational numbers
6. Solve non-linear equations
7. Apply and extend all concepts

**PREREQUISITES & TRANSFERABILITY:** Math 095 with a grade of C or better; or a satisfactory ACT/SAT/Placement Test Score. Math 96 is NOT a review of Math 95, and a solid knowledge of linear equations, polynomials, factoring, and quadratic equations is assumed. Course is not transferable. Course cannot be used to satisfy degree requirements. Course is prerequisite for Math 120, 122, 124, 126, 128.

**REQUIRED: Access to a computer.** You will need to download and/or print certain files as indicated on the outline. **Scientific calculator required.** I will be using the Texas Instruments TI 30Xa because it is powerful but not too expensive. A graphing calculator is okay if you already know how to use it. NO symbolic algebra calculators (no TI 89 or TI 92 or anything else with a keyboard) are allowed because they give you a false sense of security. It is better for you to learn the algebraic manipulations on your own and use your calculator for arithmetic. You also cannot use a calculator that is part of a cell phone, PDA, computer, etc. Any calculator used must be a stand-alone calculator!

**HANDOUTS AND WORKSHEETS:** When I give you a handout or a worksheet, I expect you to go through all the examples and make sure you understand them. You may need to work my examples on your own notebook paper in order to fully understand the concepts (you may even need to work the same example several times in order to understand!). The more time and effort you spend in working examples, the better you should understand the concepts.

**ATTENDANCE:** You are strongly encouraged to attend each class meeting, and attendance will be taken. If you do not attend class, you are **STILL** expected to do the homework and be prepared for the tests. You **CANNOT** be absent on a test day because **there are no make-up tests!**

**HOMEWORK:** Homework is designed to help you understand the concepts and should help you prepare for your tests. It is **VERY** important that you ask questions on any material from the homework that you don't understand! Don't wait until you feel overwhelmed; ask immediately. I do not pick up daily homework. However, if you would like to keep a homework notebook, you could earn up to 100 points for your homework. This is how that would work:

During the last 2 weeks of the semester, show me your homework notebook. Points will be assigned depending on the number of assignments completed. For example, 92% of assignments completed = 92 points.

At the end of the semester, those who kept homework notebooks would have 100 more total points in their overall semester point totals.

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**CLASS BEHAVIOR:** I expect you to pay attention during class-time, to not hold private conversations with other students, and to not disrupt the classroom in any way. **I am serious about your learning; I don't want any disruptions or distractions!** If you are disruptive, you can be removed from the classroom. Repetition of the offense can result in expulsion from the course.

All cell phones, beepers, pagers, etc. should be turned off during class time. This is especially important on test days!

During class, you will be given notes over new material. You will also be given some time to ask questions about previous homework assignments; however, that time may be limited so new material can be covered.

**HONESTY:** I assume honesty on the part of all students. However, cheating, plagiarism and other acts of academic dishonesty are held as serious offenses. Instructors have the responsibility to report any such incident in writing to the administration. The student involved may flunk the course and could be expelled from the College.

**TESTS:** You will have take-home tests and in-class tests which will be comprehensive. The in-class tests will be worth MANY more points than take-home tests and will have more of an effect on your overall semester grade, so study well for those. On take-home tests, I encourage you to work with a classmate (if you go to tutoring with your test, ask the tutors to make up problems similar to what is on the test so you can truly understand concepts). I don't want you to copy each other's work, but I do want you to compare so you can make corrections before turning the take-home tests in for grading. I think you will learn more by talking to each other about the material. **Be sure to stay caught up with your homework even when you are also working on a take-home test.**

On in-class tests, give me a one-week turn around time for grading.

**GRADING & GRADING SCALE:** At the end of the semester, grades will be computed based on a point system. The number of points you earn will be divided by the total possible points to give a percentage grade. Then that percentage grade will be converted to a letter grade, using the following scale:

93-100%	A	78- 79%	C+	Below 60%	F
90- 92%	A –	70- 77%	C		
88- 89%	B+	68- 69%	D+		
83- 87%	B	63- 67%	D		
80- 82%	B –	60- 62%	D –		

Since Mathematics courses require strong foundations, all examinations in this course will be cumulative in nature. You must know all background material for this course, whether covered in the course material or not. **IF YOU JUST QUIT ATTENDING AND DO NOT OFFICIALLY WITHDRAW, YOUR GRADE WILL BE AN F.** If you prefer a W, either officially withdraw or ask me to withdraw you. At the end of the semester if you are not earning the grade you would like to be earning, you can ask me to give you a W (withdrawal) grade.

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**IMPORTANT DATES:**

September 7 – Labor Day – no classes  
September 21 – last day to change audit to credit with instructor approval  
October 30 – Nevada Day – no classes  
November 8 – last day to officially withdraw from a class with grade of W  
November 9 – last day to change from credit to audit grade in person only  
November 11 – Veteran’s Day – no classes  
November 26 through 29 – Thanksgiving Break – no classes  
December 13 through 19 – Finals

**SAFETY:** Please note emergency exits. Please inform instructor of any environmental hazards. A copy of the Mathematics departmental safety plan is on file at the Mathematics department office.

**COLLEGE ANNOUNCEMENTS:**

From the DRC: “If you have a documented disability that may require assistance, you will need to contact the Disability Resource Center (DRC) for coordination of your academic accommodations. The DRC is located in Student Services on each campus. The phone numbers are Cheyenne 651-4045, Henderson 651-3795, and West Charleston 651- 5644.

For those students that would like to perform community service or earn extra money, stop by the DRC to fill out a job interest card. This office hires students as note takers, proctors, scribes, and lab assistants as needed."

From the Mathematics Department: Students may also get extra help by going to the Science and Math Resource Lab. On the Cheyenne campus, the lab is in room 2050.

**NOTES:** Students are expected to take notes, complete homework, ask questions as needed, schedule appointments for extra help as needed, work with a tutor as needed. You are expected to "wrestle" with the material and not give up. Form study groups to help yourselves understand the material. You will get out of the class what you put into it!

I recommend one notebook for class notes and another notebook for homework. For each, you should write the date, put the section number at the top, and the page number. You should be organized and neat, and you should take pride in both. You need a folder for all class hand-outs, quizzes, and tests. You want to be able to quickly find and use the material you need, both now and in the future.

Class notes are given to help you. When you first learn a concept, re-work the examples given during class; then tackle the homework. While you practice, you should be asking yourself why what you are doing is logical. You have to teach yourself why processes and procedures make sense. To learn math well and retain it, you need to **PRACTICE LIKE CRAZY!!**

Above all, you are going to be asked to **THINK**. Learning algebra can be a very rewarding experience, but you do have to put in the time, effort, and thinking necessary.

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**Course Outline**

**Don't be absent on an in-class test day--there will be no make-up tests!** Instead, the grade you earn on the final exam will be the grade for the missed test. **The final exam MUST be taken; if you miss the final, you receive 0%.** As you can see, I don't recommend being absent on test days. If an emergency arises, you must call me at 651-4218. I must speak with you about your taking the test before the test is given back to the class. Once the test is given back to the class, the grade you earn on the final exam is the grade for the missed test.

If you miss a class, you need to read the book (or the worksheets) and get someone's notes. It is your responsibility to stay caught up!

**If you don't know how to factor, you should immediately drop Math 96 and enroll in Math 95.**

Whenever I assign an even number problem, the answer will be given on this outline. The answers to the odd numbered problems are in the back of your book.

<u>Class</u>	<u>MW</u>	<u>During Class</u>	<u>Assignment After Class</u>
1	8/31	Sect 5.3 Domain	p 348: 21-39 odd WS on Domain and Function Notation
2	9/2	Sect 6.1  Sect 6.2	p 401: 3; 5; 13-21 odd; 27; 33; 35; 37; 41; 43; 47; 49; 51; 53; 55; 60; 62; 65; 67; 69; 77; 79 Answers: 60. $x^2 + 3x + 9$ 62. $\frac{k^2 - 2k + 4}{k - 2}$ p 408: 29; 31; 43; 47; 53
3	9/9	Sect 6.3 Sect 6.4	Read on your own p 423: 9-21 odd; 25-45 odd; 51; 53; 63; 69
4	9/14	Sect 6.5 Sect 6.6	p 431: 7; 13; 15; 19; 29 p 441: 17; 19; 21; 25; 33; 37; 43; 45; 47; 53; 55; 57; 61; 63; 67; 73; 75; 77 <b>Test #1 (take-home) handed out</b>
5	9/16	Sect 6.7	p 451: 19-23 all; 25; 27; 28; 33; 34; 35; 37; try 41, 43 Answers: 20. $\frac{8}{4-x} = \frac{24}{4+x}$ 22. $x = 150$ mph 26. $x = 16$ km per hour 28. $x = 3$ mph 34. $\frac{1}{2}t + \frac{1}{3}t = 1$

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<u>Class</u>	<u>MW</u>	<u>During Class</u>	<u>Assignment After Class</u>
6	9/21	Radicals #1	WS on Radicals 1: Simplify; Combine (go to <a href="http://www.nevada.edu/~wyatt">www.nevada.edu/~wyatt</a> to download/print)
7	9/23	<b>Turn in Test #1</b> Radicals #2	WS on Radicals 2: Multiply/Divide; FOIL (go to <a href="http://www.nevada.edu/~wyatt">www.nevada.edu/~wyatt</a> to download/print) Review Sheet for Test #2 handed out
8	9/28	Radicals #3	WS on Radicals 3: Rationalize Denominators (go to <a href="http://www.nevada.edu/~wyatt">www.nevada.edu/~wyatt</a> to download/print)
9	9/30	Review	
<b>10</b>	<b>10/5</b>	<b>In-class Comprehensive Test #2 through Day 10</b>	
11	10/7	Sect 10.2	p 675: 1-10 all; 11-35 odd; 37-47 odd; 51-55 odd; 61-73 odd; 83; 89-92 all Answers      2.    E 4.    J 6.    G 8.    F 10.   I 90. $y^{\frac{3}{2}}$ 92. $\frac{1}{2}$ $k^3$
12	10/12	Sect 10.6	p 710: 7-27 odd; 28; 37; 43; try 49 by following example 5 Answer      28.    {1}
13	10/14	Sect 10.7	p 717: 7-15 odd; 19; 23; 27-37 odd; 41; 47; 49; 53; 59; 61 <b>Test #3 (take-home) handed out</b>
14	10/19	Finish Sect 10.7  Sect 11.1	p 718: 69; 71; 72; 75 Answer      72.    1 p 739: 5-35 odd; 55-59 odd; try 65

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<u>Class</u>	<u>MW</u>	<u>During Class</u>	<u>Assignment After Class</u>
15	10/21	Sect 11.2	p 747: 19-25 all; 33; 49; 50; 53; 31; 32; 35 Answers: 20. $\{-2, 4\}$ 22. $\{-2 \pm \sqrt{3}\}$ 24. $\{2 \pm 3\sqrt{2}\}$ 50. $\{-3 \pm i\}$ 32. $\left\{\frac{-1 \pm \sqrt{7}}{3}\right\}$
16	10/26	<b>Turn in Test #3</b> Sect 11.3	p 754: 5- 37 odd Review Sheet for Test #4 handed out
17	10/28	Sect 11.5	p 773: 7; 9; 11; 29; 31; 35; 36 Answer: 36. $x = 5$ ft WS on More on Quadratic Equations (go to <a href="http://www.nevada.edu/~wyatt">www.nevada.edu/~wyatt</a> to download/print)
18	11/2	Review	
<b>19</b>	<b>11/4</b>	<b>In-class Comprehensive Test #4 through Day 19</b>	
<b>You will need graph paper for Day 21!</b>			
20	11/9	Sect 3.3	p 226: 2-7 all; 9; 27-51 odd; 52; 53 Answers 2. $m = \frac{6}{4} = \frac{3}{2}$ 4. $m = -\frac{7}{4}$ 6. $m =$ undefined 52. parallel $m = 5$ perpendicular $m = -\frac{1}{5}$
21	11/16	Sect 3.4	p 239: 7; 9; 11; 17-23 odd; 36; 37; 39; 41; 42; 43; 47; 49 Answers: 36. $y = 2x - 7$ 42. $y = -\frac{4}{5}x + \frac{9}{5}$

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<u>Class</u>	<u>MW</u>	<u>During Class</u>	<u>Assignment After Class</u>
22	11/18	Sect 7.1 Sect 7.2	p 481: 7; 9; 11-19 odd; 29; 31; 33 p 496: 15-19 odd; 23-31 odd; 33; 35; 43-49 odd; 51; 53; 63; 65; 67; 69
23	11/23	Sect 9.3	p 645: 7-19 odd; 29 <b>Test #5 (take-home) handed out</b>
24	11/25	Sect 7.3	p 512: 5; 7; 11; 15; 17-22 all; 41-49 odd; 53; 59; on 75 and 77 only graph (using slope-intercept) Answers: 18. not a function D: [-2, 2] R: [-2, 2] 20. function D: [-2, 2] R: [0, 4] 22. not a function D: [3, ∞) R: (-∞, ∞) Handout on Review of Interval Notation Handout on Domain and Range
25	11/30	Sect 8.1 Sect 8.2	p 555: 1; 3; 15; 17; 25; 27 p 565: 3-19 odd; 27 Review Sheet for Test #6 handed out
26	12/2	<b>Turn in Test #5</b> Sect 8.3	p 572: 5-15 odd; 23-29 odd
27	12/7	Sect 8.5	WS on Mixture Word Problems Using 2 Equations (go to <a href="http://www.nevada.edu/~wyatt">www.nevada.edu/~wyatt</a> to download/print)
28	12/9	Finish Section 8.5	Finish WS on Mixture Word Problems Using 2 Equations
29	12/14	Review Homework Notebooks (optional) due	
<b>30</b>	<b>12/16</b>	<b>In-class Comprehensive Test #6 through Day 30</b>	

The instructor reserves the right to modify the above schedule as necessary. It is the student's responsibility to be aware of any changes made.