

# NMSU Grants Campus

## Pre-Algebra, CCDM 103N

Fall 2011

**Instructor:** Crystal Rust

**Contact Information:**

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**Office Hours:** 12:05 – 1:05 & 5:05 – 6:15 Mon, Wed; 10 – 1:15 Tues; 6:00 – 6:35 pm Thur. or by appointment.

**Class Meeting:** MW 9:55 – 12:05

**Course Catalog Description:** Fundamental mathematics operations and arithmetic computations. Introduction to algebra and applied geometry. Provides laboratory and individualized instruction.

**Credit Hours:** CCDM 103N is a 4 credit hour course.

**Required Textbook and Materials to bring to each class meeting:**

1. Textbook: Basic College Mathematics, 11th Edition by Marvin L. Bittinger. Published by Addison Wesley, ISBN: 978-0-321-59919-3.
2. Notes Binder: A three ring binder to neatly keep class notes, returned work, frequency logs, and frequency questions. You will **not** be permitted to use this notebook on exams.
3. Zipper Pencil Bag: It is a great idea to put a zipper pencil bag in the front of your Notes Binder to keep your Bonus Bucks in.
4. Homework Notebook: Can be a three ring notebook or a spiral notebook. This should be separate from your notes binder as the homework notebook will be collected for grading. Keep an organized homework notebook as you **may** use it on exams.
5. Pencils, erasers, and loose leaf notebook paper.
6. Calculators are permitted **only** during the second part of the course (I will let you know).

**Course Overview/Content:** CCDM 103N is designed for students who need a review of arithmetic and measurement, with an introduction to integers and equation solving, before taking a basic algebra course. Students who score below 60 on the Arithmetic portion of the Computer Placement Test are generally advised to take CCDM 103N. Students who score below 30 on the Arithmetic portion of the Computer Placement Test, or students who feel particularly anxious about taking any mathematics course, may wish to take CCDM 100N before enrolling in CCDM 103 N. Although the course does not apply toward graduation, the skills learned in CCDM 103N are essential for most degree programs. Students who earn a C or better in CCDM 103N should be prepared to successfully complete CCDM112N. Students who earn an A in CCDM 103N may be prepared to successfully complete CCDM 114N.

This course will cover the following topics:

1. Whole Numbers
2. Fraction Notation: Addition, Subtraction, Multiplication, Division & Mixed Numbers
3. Decimal Notation
4. Real Numbers
5. Ratio & Proportion
6. Percent Notation
7. Data, Graphs & Statistics
8. Measurement
9. Geometry

**Student Learning Outcomes:**

Upon successful completion of this course, each student should be able to do the following:

1. Memorize and recall facts, procedures, and vocabulary pertaining to whole numbers, fractions, decimals, percents, integers and geometric shapes.
2. Solve application problems using the appropriate arithmetic as a tool.
3. Integrate various strategies and techniques from different areas in mathematics to solve application problems.
4. Extract relevant data to solve real-life problems that involve computations with integers, fractions, decimals and percents.
5. Analyze and interpret graphical data.
6. Express numerical quantities in meaningful units.
7. Evaluate formulas from a variety of disciplines, using calculators when appropriate.
8. Use proportional reasoning to solve problems.
9. Recognize basic geometric properties of two- and three-dimensional figures and compute their area and volume.
10. Estimate the magnitude of quantities before formal computation; compare estimated and computed values for consistency.

**Assessment of Student Performance—Grading and Evaluation:**

1. Exams: Three monthly major exams will be given. Each exam is worth 100 points and will count 20% of your total grade. The exams will contain multiple choice questions, open ended questions, fill in the blank questions, and matching questions. **You are allowed only ONE make-up exam. If you miss two exams, the final exam will count double for a missed exam.**
2. Final Exam: A comprehensive final exam will be given. It will be worth 100 points and constitutes 20% of your total grade. **You must take the final exam.**
3. Quizzes: There will be quizzes. They will be over homework problems or topics covered in previous class meetings. Each quiz will count 20 points. I will take the 5 highest quiz scores. The quiz score will constitute 10% of your total grade. **There are no make-ups on missed quizzes.**
4. Homework: Homework notebooks will be collected periodically. I will collect them on the last day of class for that week. I will return them to you the next class meeting. I may also collect homework notebooks on exam days. Each time I collect the homework notebooks you can receive up to 20 points. **You will be penalized 5 points off the grade for each day you turn in your homework notebook late.** I will take the 5 highest homework scores. The sum of the homework scores will constitute 10% of your total grade.
5. Grade Calculation Formula:  

$$(\text{Monthly exam 1 score})(.20) + (\text{Monthly exam 2 score})(.20) + (\text{Monthly exam 3 score})(.20) + (\text{Final exam score})(.20) + (\text{Sum of homework scores})(.10) + (\text{Sum of quiz scores})(.10) = \text{Numerical grade}$$

Grade Scale: 90 – 100 = A; 80 – 89 = B; 70 – 79 = C; 60 - 69 = D; 0 - 59 = F

\*Note: In order to proceed to CCDM 112/114N you must pass CCDM 103N with a C or better.

**Classroom supports that are not part of your grade, but help you to succeed:**

1. Classroom Website: You may get copies of the class notes and student notes at [www.mathdoctor1999.com](http://www.mathdoctor1999.com).
2. Student Notes: will be posted on the classroom website before each class. **AT THE MINIMUM**, you should read over and work through examples in the student notes **BEFORE** each class.
3. Frequency Questions: These are questions that I will ask you during class. If you have studied the student notes before class, you should know the answers when I ask you the frequency questions during class discussion. These questions may also be possible questions on monthly exams. In other words, you should keep frequency questions together to study for exams. **IF I HAVE TIME**, I will type up the frequency questions for you and give them to you in class. If not, you will be able to find them in the class notes that will be uploaded to the classroom web site [www.mathdoctor1999.com](http://www.mathdoctor1999.com).

4. Frequency Logs: I will give these to you. Each time I ask a frequency question in class, you are to mark on your frequency log if you knew the answer or not on each class day. These logs are for your benefit. You will find that the more you prepare outside of class, the higher the frequency of knowing the answer to the frequency questions will become and the better prepared for the exams you will be. You should keep your frequency logs in the front of your notes binder. I will look at them occasionally, and if you have been keeping up with them, you will get a Bonus Buck that day!
5. Bonus Bucks: **These are your extra credit!!** You can earn bonus bucks during class by answering frequency questions, working homework problems out that your classmates may ask, participating in other classroom problem solving activities, and keeping a frequency log each day of class. You can use these bonus bucks to buy:
  - extra points on low quiz/exam scores (you cannot however, buy a score for a missed quiz/exam)
  - one day pass on turning in an assignment late without penalty
  - other things as long as I approve it

The only way to get bonus bucks is by coming to class prepared and ready to discuss the material for that class day. **THUS, attendance is important.** You cannot get Bonus Bucks if you do not attend class!!!

6. Exam Reviews: **At least one week before an exam, I will give you an exam review and announce the exact exam date.** These reviews will also be posted on the class website. The exam reviews will be multiple choice questions and I will give you the answers. You should use the exam reviews as a practice exam. We will go over the exam review in class before the exam. (This is another way to earn bonus bucks!) The exams will be just like the reviews, except all the questions on the exam will **not** be multiple choice. The exams will also contain frequency questions

**College Provided Tutoring Services**: If you cannot come to my office for help, you can get additional help on campus in the Student Success Center (room 125) and the Math Lab (room 111). Tutors are available and can assist you when you find yourself needing help.

**Classroom Conduct Policy**: Students must conform to the NMSU Grants Student Code of Conduct as published. It is the faculty's responsibility to shape and maintain a positive learning environment in the classroom and labs as well as on campus in general. Students are expected to contribute to a positive learning environment as determined by the faculty member responsible for the course. Student conduct that is determined to be detrimental to creating and maintaining a positive learning environment, for example rude, disruptive or uncooperative behavior, and/or distractive clothing, can lead to dismissal of the student from the class session or course. While complaints from other students in the class are one measure of disruption, the faculty member has the responsibility and authority to establish a positive learning environment. Please, no

texting or phone calls during class. If you must answer a text or call, quietly leave the room. Also, during exams, cell phones must be off. If you have an emergency situation, let me know.

**Statement Regarding Academic Misconduct:** Any student found guilty of academic misconduct shall be subject to disciplinary action. Academic misconduct includes, but is not limited to, the following actions: CHEATING; PLAGIARISM; UNAUTHORIZED POSSESSION OF EXAMINATIONS, RESERVE LIBRARY MATERIALS OR LABORATORY MATERIALS; UNAUTHORIZED CHANGING OF GRADES ON AN EXAMINATION, INSTRUCTOR'S GRADE BOOK OR GRADE REPORT; NONDISCLOSURE OR MISREPRESENTATION IN FILLING OUT APPLICATIONS OR OTHER COLLEGE RECORDS. The following disciplinary actions and sanctions may be imposed for any of the above infractions of regulations: Disciplinary Probation, Disciplinary Suspension, Dismissal, Expulsion.

**Attendance Policy:** Attendance is important for your academic progress. If you do not attend class, you cannot earn Bonus Bucks which are the only form of extra credit in the class. If a student misses three consecutive classes or five cumulative absences, the instructor may begin procedures for an Administrative Withdrawal. Please contact me if you are to be absent for an extended amount of time. If you are absent, it is your responsibility to find out what you have missed. You can find the notes on the classroom website. Quizzes cannot be made up and turning in your homework notebook if collected during your absence will be subject to the 5 point penalty policy.

**Americans with Disabilities Act (ADA):** If you have, or think you may have, a disability that interferes with your performance as a student in this class, you are encouraged for academic reasons to discuss this on a confidential basis with your instructor, and/or The Americans with Disabilities Act (ADA) Coordinator, in the Main Office, or at 287-7981. If you have a condition that may affect your ability to exit from the premises in case of an emergency, you are urged, for safety reasons, to notify the ADA coordinator.

**Statement of Syllabus Modification:** The instructor may modify this syllabus to meet the needs of a particular class. How fast we move will depend on several factors, so specific dates are not included. You should look at the class notes that will be posted on the class website if you are absent to see what sections we covered while you were gone.

## **Assignment and Testing Schedule**

<b>Text Section</b>	<b>Section Title</b>	<b>Homework Problems</b>
<b>Chapter 1</b>	<b>Whole Numbers</b>	
1.1	Standard Notation	1 – 46 odd
1.2	Addition	1 – 32 odd
1.3	Subtraction	1 – 52 odd
1.4	Multiplication	1 – 40 odd

1.5	Division	1 – 62 odd
1.6	Rounding and Estimation; Order	1 – 67 odd
1.7	Solving Equations	1 – 60 odd
1.8	Applications and Problem Solving	1 – 57 odd
1.9	Exponential Notation and Order of Operations	1 – 68 odd
<b>Chapter 2</b>	<b>Fraction Notation: Multiplication and Division</b>	
2.1	Factorizations	1 – 76 odd
2.2	Divisibility	1 – 24 odd
2.3	Fractions and Fraction Notation	1 – 66 odd
2.4	Multiplication and Applications	1 – 42 odd
2.5	Simplifying	1 – 60 odd
2.6	Multiplying, Simplifying, and Applications	1 – 55 odd
2.7	Division and Applications	1 – 51 odd
<b>Chapter 3</b>	<b>Fraction Notation and Mixed Numerals</b>	
3.1	Least Common Multiples	1 – 54 odd
3.2	Addition and Applications	1 – 57 odd
3.3	Subtraction, Order, and Applications	1 – 64 odd
3.4	Mixed Numerals	1 – 62 odd
3.5	Addition and Subtraction Using Mixed Numerals; Applications	1 – 50 odd
3.6	Multiplication and Division Using Mixed Numerals; Applications	1 – 51 odd
3.7	Order of Operations; Estimations	1 – 56 odd
<b>EXAM 1</b>		
<b>Chapter 4</b>	<b>Decimal Notation</b>	
4.1	Decimal Notation, Order, and Rounding	1 – 90 odd
4.2	Addition and Subtraction	1 – 56 odd
4.3	Multiplication	1 – 61 odd
4.4	Division	1 – 77 odd
4.5	Converting from Fraction Notation to Decimal Notation	1 – 86 odd
4.6	Applications and Problem Solving	1 – 27 odd
4.7	Applications and Problem Solving	1 – 41 odd
<b>Chapter 10</b>	<b>Real Numbers</b>	
10.1	The Real Numbers	1 – 56 odd
10.2	Addition of Real Numbers	1 – 70 odd
10.3	Subtraction of Real Numbers	1 – 85 odd
10.4	Multiplication of Real Numbers	1 – 60 odd
10.5	Division of Real Numbers and Order of Operations	1 – 88 odd
<b>Chapter 5</b>	<b>Ratio and Proportions (May use Calculators on the remaining sections)</b>	
5.1	Intro to Ratios	1 – 40 odd
5.2	Rates and Unit Prices	1 – 33 odd
5.3	Proportions	1 – 58 odd
5.4	Applications of Proportions	1 – 35 odd

5.5	Geometric Applications	1 – 27 odd
<b>Exam 2</b>	<b>May use calculator only on chapter 5 stuff</b>	
<b>Chapter 6</b>	<b>Percent Notation</b>	
6.1	Percent Notation	1 – 61 odd
6.2	Percent Notation and Fraction Notation	1 – 91 odd
6.3	Solving Percent Problems Using Percent Equations	1 – 36 odd
6.4	Solving Percent Problems Using Proportions	1 – 36 odd
6.5	Applications of Percent	1 – 47 odd
6.6	Sales Tax, Commission and Discount	1 – 56 odd
6.7	Simple and Compound Interest; Credit Cards	1 – 35 odd
<b>Chapter 7</b>	<b>Data, Graphs and Statistics</b>	
7.1	Averages, medians, and Modes	1 – 22 odd
7.2	Tables and Pictographs	1 – 37 odd
7.3	Bar Graphs and Line Graphs	1 – 45 odd
7.4	Circle Graphs	1 – 13 odd
<b>Chapter 8</b>	<b>Measurement</b>	
8.1	Linear Measures: American Units	1 – 38 odd
8.2	Linear Measures: The Metric System	1 – 50 odd
8.3	Converting Between American Units and Metric Units	1 – 32 odd
8.4	Weight and Mass; Medical Applications	1 – 73 odd
8.5	Capacity; Medical Applications	1 – 53 odd
8.6	Time and Temperature	1 – 53 odd
8.7	Converting Units of Area	1 – 34 odd
<b>Chapter 9</b>	<b>Geometry</b>	
9.1	Perimeter	1 – 22 odd
9.2	Area	1 – 49 odd
9.3	Circles	1 – 30 odd
9.4	Volume	1 – 33 odd
9.5	Angles and Triangles	1 – 50 odd
9.6	Square Roots and the Pythagorean Theorem	1 – 50 odd
<b>EXAM 3</b>		
<b>Final Exam</b>		

### Important Dates to Remember:

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|--|------------------------|
| ✓ Last Day to drop a class w/o a “W”       | September 2, 2011      |
| ✓ Labor Day Holiday – No Class             | September 5, 2011      |
| ✓ Last Day to drop a course with a “W”     | October 11, 2011       |
| ✓ Last Day to Withdraw from the University | November 12, 2011      |
| ✓ Fall Break and Thanksgiving Holiday      | November 21 - 26, 2011 |
| ✓ Thanksgiving Holiday-Offices Closed      | November 24-26, 2011   |

Last Day of Fall Classes