Welcome to Math 1118:
Math for Elementary and Middle School Teachers

Instructor
Cindi Goodman
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Class Details
Monday/Wednesday
Class Time: 4:30-5:45pm
VAAS 141

Instructor led Study Sessions
M/W 3:00 pm -4:00 pm
T/Th 11:00 am—12:00 pm

Online: Th 1:30 pm-2:30 pm

https://unm.zoom.us/j/94360342143
Password: mathhelp
Or by appointment

Course Description

This course offers an in-depth look rational numbers, arithmetic operations (addition, subtraction, multiplication, and division), and basic geometric concepts. Problem solving is emphasized throughout. (3 Credit Hours).

Prerequisite: Math 1130 or 1215 or 1220 or 1230 or 1240 or 1350 or 1430 or 1512 or FYEX 1010 or ACT Math =>20 or SAT Math Section =>520 or ACCUPLACER Next-Generation QRAS =>255.

Get to Know Your Professor

I am Cindi Goodman and I am an Assistant Professor of Mathematics at UNM-Valencia. I have taught developmental mathematics and critical thinking for mathematics since 2014. I was a tutor for 9 years before I began teaching specializing in math. I have a Bachelor's degree in Pure Mathematics from The University of New Mexico, a Master's degree in Mathematics and Education from Western New Mexico University in Silver City, NM.
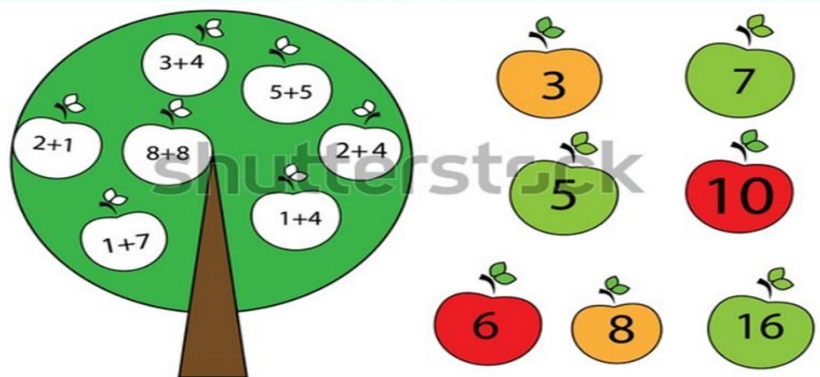
Course Materials

Textbook: e-text

"Mathematics for Elementary Teachers with Activities," 5th edition, by Sybilla Beckman

The e-text will be available through Canvas.

Math Matching Game
Sorting apples

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Course Outcomes

Goal 1: Represent numbers and operations with models.

> **SLO 1:** Use visual models, including physical objects, drawings of counts, lengths, and area, number lines, and symbols to represent numbers and operations, and flexibly move between representations.
>
> **SLO 2:** Explain the relationship between contexts and the appropriate mathematical operations.

Goal 2: Identify and use the deeper structures of arithmetic.

> **SLO 1:** Analyze and perform multiple methods for doing addition, subtraction, multiplication, and division.
>
> **SLO 2:** Analyze student work, assess the validity of arguments, and identify mathematical misconceptions in mistakes.
>
> **SLO 3:** Describe and use the relationships between operations to represent and solve problems.
>
> **SLO4:** Describe and use strategies for mental computation and estimation using fact families, the structure of base-ten numbers, and the arithmetic properties.

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Goal 3: Explain concepts in arithmetic.

> **SLO 1:** Explain procedures for doing addition, subtraction, multiplication, and division with base-10 numbers using correct mathematical terminology and notation.
>
> **SLO 3:** Explain why the commutative and associative properties of addition and multiplication and the distributive property of multiplication over addition make sense.
>
> **SLO 4:** Explain how estimation and rounding work using models and correct mathematical terminology and notation.
>
> **SLO 4:** By the end of the course, students will be able to communicate how various mathematical concepts are interconnected, and describe the application of mathematics in a diverse range of fields.

Goal 4: Explain concepts in geometry.

> **SLO 1:** Describe, using appropriate vocabulary and representations, how points, lines, and angles relate to each other and to applications in the real world.
>
> **SLO 2:** Explain different ways to classify two-dimensional shapes based on their properties.

Classroom Policies

Attendance / Participation (10%)

You are expected to be <u>on time</u> for each class, stay the <u>entire</u> class, have the necessary course materials on hand, and participate in the lecture or group activities to receive full credit for attendance each day.
Absences: If you know ahead of time you will miss a class, send me an email indicating the date of the absence to receive an excused absence.
Arrange before the next class meeting to get notes from a classmate. The student bears full responsibility for the material and information covered in class.
Each student starts with 100 attendance points. Attendance is taken at the **beginning** of class. Seven attendance points are deducted for each unexcused absence: Four attendance points for tardiness.

Written Homework (40%)

Each section will have a small separate written homework and must be completed as indicated on the outline. The purpose of the written homework is to determine if you understand the concepts correctly. I will not grade illegible homework. **Each homework assignment is worth 25 points**.
Late homework has a week's grace period and will receive a 20% penalty. No work will be accepted after two weeks.

Group Assignments (10%)

There will be two small assignments to be completed in a group. Groups will be between two and three students.
These assignments will further develop your conceptual understanding of the topics presented in the course.
You must be present to participate and receive any credit.

Exams/Final Exam (20%/20%)

Two exams will be given during the semester. Students are expected to show their work clearly.
All of the tests (including the final exam) will be in class and will follow a specific procedure. Information on this will be disseminated later in the course. All students are expected to show all work to get full credit.
If you are unable to take a test, you must notify me in advance of the scheduled test. We will determine when a make-up test is to be administered.

The final exam in this class is worth 20%. The sections covered will be communicated as we near the end of the semester. Permission to take the final exam other than scheduled occurs only under extenuating circumstances as approved by me. Emergency situations will be considered on an individual basis.

Credit-hour Statement: This is a three credit-hour course. Class meets for two 75-minute sessions of direct instruction for sixteen weeks during the Fall 2022 semester. Please plan for a minimum of six hours of out-of-class work (or homework, study, assignment completion, and class preparation) each week.

Grading Distribution & Scale

Attendance	10%
Homework (Written)	40%
Group Assignments	10%
Exams	20%
Final Exam	20%
Total	100%

GRADING SCALE: Students in this course will receive the following grades:

A	[90 – 100%]
B	[80 – 90%)
C	[70 – 79%)
D	[60 – 70%)
F	[0 – 60%)

Student Resources

If you are struggling in this course, do not be afraid to ask for help!

- o Tutoring Hours: See my tutoring hours listed at the beginning of this syllabus.
- o Form study groups: You may work together with other members of our class.
- o Free Tutoring: http://valencia.unm.edu/campus-resources/the-learning-center/learning-center.html
- o Tutoring available in the tutoring center, Learning Resource Center.

Semester Deadlines

- Fall 2022– 16-week classes (deadlines will be different for first and second 8-week classes)
- Monday, August 22: First day of class, classes available in Canvas
- Monday, September 5: Labor Day, no class
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- Friday, September 2, by 5:00 pm: Last day to add a class or to change credit hours or grade mode in LoboWEB.
- Friday, September 9: Last day to drop without "W" grade and with 100% refund on LoboWEB
- Friday, November 11 : Last day to drop *without* Dean's permission on LoboWEB. Will receive "W" grade and will be responsible for tuition for the course.
- Friday, December 9: Last day to drop with the permission form.
- Finals Week: Monday, December 12 – Saturday, December 17

COVID-19 Requirements:

COVID-19 Health and Awareness. UNM is a mask friendly, but not a mask required, community. To be registered or employed at UNM, Students, faculty, and staff must all meet UNM's Administrative Mandate on Required COVID-19 vaccination. If you are experiencing COVID-19 symptoms, please do not come to class. If you have a positive COVID-19 test, please stay home for five days and isolate yourself from others, per the Centers for Disease Control (CDC) guidelines. If you do need to stay home, please communicate with me at [ ]; I can work with you to provide alternatives for course participation and completion. UNM faculty and staff know that these are challenging times. Please let us know that you need support so that we can connect you to the right resources and please be aware that UNM will publish information on websites and email about any changes to our public health status and community response.

UNM COVID-19 requirements are subject to change relative to guidance from the New Mexico Department of Health. Thank you for keeping the Lobo community safe.

University Policies

Accommodations

In accordance with University Policy 2310 and the Americans with Disabilities Act (ADA), academic accommodations may be made for any student who notifies the instructor of the need for an accommodation. It is imperative that you take the initiative to bring such needs to the instructor's attention, as I am not legally permitted to inquire. Students who may require assistance in emergency evacuations should contact the instructor as to the most appropriate procedures to follow. Contact Accessibility Resource Center at 277-3506 or arcsrvs@unm.edu for additional information.

UNM is committed to providing courses that are inclusive and accessible for all participants. As your instructor, it is my objective to facilitate an accessible classroom setting, in which students have full access and opportunity.

If you are experiencing physical or academic barriers, or concerns related to mental health, physical health and/or COVID-19, please consult with me after class, via email/phone or during office hours. You are also encouraged to contact Accessibility Resource Center at arcsrvs@unm.edu or by phone 277-3506.

If you are a Valencia campus student, contact Equal Access Services at Valencia Campus at (505)925-8560 or Valencia Student Services. If you are a main campus student you can receive documentation from the main campus Accessibility Resource Center. I will not guarantee accommodation without the appropriate documentation.

Academic Integrity

Having academic integrity is paramount to your success in any class. Plagiarism or cheating is not tolerated. Any instance of this will result in a grade of zero for that assignment. Here is the link to the UNM Academic Dishonesty Policy: https://pathfinder.unm.edu/campus-policies/academic-dishonesty.html and student code of conduct: https://pathfinder.unm.edu/code-of-conduct.html

Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question or for the course.

Academic Dishonesty is defined as:

"Academic dishonesty" includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.

Title IX Reporting Obligations

Our classroom and our university should always be spaces of mutual respect, kindness, and support, without fear of discrimination, harassment, or violence. Should you ever need assistance or have concerns about incidents that violate this principle, please access the resources available to you on campus, especially the LoboRESPECT Advocacy Center and the support services listed on its website (http://loborespect.unm.edu/). Please note that, because UNM faculty, TAs, and GAs are considered "responsible employees" by the Department of Education, any disclosure of gender discrimination (including sexual harassment, sexual misconduct, and sexual violence) made to a faculty member, TA, or GA must be reported by that faculty member, TA, or GA to the university's Title IX coordinator at the Office of Compliance, Ethics, and Equal Opportunity. For more information on the campus policy regarding sexual misconduct, please see: https://policy.unm.edu/university-policies/2000/2740.html.

Course Outline (Math 1118: (Fall 2022) *Course outline is subject to change)*

Week	Dates	Sections / Topics	Assignments
1	8/22 - 8/24	Introduction Sections 1.1, 1.2	
2	8/29 – /31	Sections 1.3, 1.4	
3	9/7	Section 2.2	Written homework 1 due
4	9/12 – 9/14	Sections 2.3, 2.4	Written homework 2 due
5	9/19 – 9/21	Section 2.5 **Review**	Written homework 3 due
6	9/26 – 9/28	**Test # 1** Section 3.1	Written homework 4 due
7	10/3 – 10/5	Sections 3.2, 3.3	Written homework 5 due
8	10/10 – 10/12	Sections 3.3, 4.1	Written homework 6 due Group Project 1
	10/13 – 10/14	**Fall Break**	
9	10/17 – 10/19	Sections 4.2, 4.3, 4.4	
10	10/24 – 10/26	Sections 4.5, 4.6	Written homework 7 due
11	10/30 – 11/3	**Review** **Test #2**	Written homework 8 due
12	11/7 – 11/9	Section 6.1, 6.2	Written homework 9 due
13	11/14 – 11/16	Section 6.3	Written homework 10 due Group Project 2
14	11/21 – 11/23	Sections 10.1, 10.2	Written homework 11 due
	11/25 – 11/26	**Thanksgiving Holiday**	
15	11/28 – 11/30	Sections 10.3, 10.4	Written homework 12 due
16	12/5 – 12/7	Section 10.4 **Review**	Written homework 13 due
17	12/12	**Final Exam (4:30—6:30 pm)**	

Math 1118: FA22

Due dates in this outline may change as needed.

Unit	Written Homework Problems	Due Date
1	Sect. 1.1: page 23 #5a,b,c, 8, 11a,b,c Sect. 1.2: page 37 #1a,b,c,d,e,f,g,h, 7a,b,c,d, 14, 17	9/7
2	Sec. 1.3: page 46 #3, 7a,b,c,d, 8a,b, 13a,b,c Sec. 1.4: page 51 #2, 4, 5	9/14
3	Sect. 2.1: page 64 #5, 10a,b,c, 12a,b,c, 16, 19, 23	9/21
4	Sect. 2.2: page 75 #1, 3, 7, 10, 14, 18, 20 Sect. 2.3: page 85 #2, 3, 4, 6, 12, 15, 17	9/28
5	Sect. 2.4: page 96 #3, 4, 9a,b,c,d, 10, 12, 16, 19	10/5
6	Sect. 3.1: page 110 #1a,b,c, 3a,b,c, 10	10/12
7	Sect. 3.2: page 122 #3a,b, 5, 6, 7, 10a Sect. 3.3: page 130 #2, 3, 6, 7 Sect. 4.1: page 160 #1a,b,c,f, 2, 6	10/26
8	Sect. 4.2: page 164 #1, 3 Sect. 4.3: page 175 #3, 7, 10, 13, 22a,b,c Sect. 4.4: page 186 #6a,b,c, 9a,b, 11a,b	11/2
9	Sect. 4.5: page 195 #7, 8, 10, 16 Sect. 4.6: page 204 #4, 7a,b,c,d, 12a,b,c,d	11/9
10	Sect. 6.1: page 246 #1a,b,c,d,e,f, 2, 6a,b Sect. 6.2: page 253 #3, 5a,b,c, 9a,b,c,d,e, 15	11/16
11	Sect. 6.3: page 266 #2a,b, 5a,b, 7a, 21a,b	11/23
12	Sect. 10.1: page 486 #3a, 4a,b,c, 6, 10a,b,c Sect. 10.2: page 493 #2, #4a,b,c,d	11/30
13	Sect. 10.3: page 499 #1, 2, 3a,b,c,d,e Sect. 10.4: page 512 #3, 5a,b, 9, 11a,b, 16a,b	12/7