Math 1118 (1110, 111): Mathematics for Elementary and Middle School Teachers I

University of New Mexico, Spring 2021 - Remote

Instructor: **Email:**

Drop in help times (a.k.a. Office Hours):

Textbook and Materials:

- *Mathematics for Elementary School Teachers* (7th edition) by Bassarear and Moss.
  - Available on day one as an ebook through RedShelf on UNMLearn. You can opt out until February 5, otherwise you will be automatically charged $58.25.
  - You might be able to find a cheap used print copy of the book online.
- *Explorations Mathematics for Elementary School Teachers* (7th edition) by Bassarear and Moss
  - Available at no cost. It is uploaded as a pdf to UNM Learn.
- Common Core State Standards (CCSS) http://www.corestandards.org/Math/
  - These standards have been adopted by the State of New Mexico, in addition to many other states, and will be referred to throughout the semester.
- Additional Materials
  - Additions materials will be available through UNM Learn (links to websites, articles, handouts, etc.) and will be free.

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. **Sections selected from chapters 1,2, 3, 4 and 8**

Prerequisites: 1130 or 1215 or 1220 or 1230 or 1240 or 1350 or 1430 or 1512 or FYEX 1010 or ACT Math ≥19 or SAT Math Section ≥480 or ACCUPLACER Next-Generation Arithmetic ≥276. This course builds on concepts generally covered in K-8 math. If you are uncertain about whether you have mastered those concepts, there is an Essential Skills Inventory with links to review materials found in UNM Learn. If a review of these concepts is insufficient, you might consider taking FYEX 1010 or MATH 1215X to get a more solid grounding, then return to the course next term.

Remote/Hybrid Schedule: Instructors please add how/when/where etc. students will attend your class. As well as any details you feel they need.

Grades: Your grade will be based on your performance on the following:

Exams	300 points
Final Exam	200 points
Project	50 points
Assignments	150 points
Total	700 points

Grading Scale: 90-100 A, 80-89 B, 70-79 C, 60-69 D, below 60 F. (+/- grades given at instructor's discretion)

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Exams: There will be 5 remote unit exams administered through UNM Learn, 60 points each. These are timed exams – 60 minutes for the exam and 15 minutes for download/upload. Weekend exams will be available from 2pm on Friday until 11:59pm on Sunday. The exam during immediately before Spring Break will be open from 1pm on Thursday until 11:59pm on Saturday. If you need an exception, contact your instructor before the exam or within 24 hours of the START of the exam. Make-up exams will be given solely at your instructor's discretion. Failure to take an exam may result in getting dropped from the course. Students will be required to upload images of their written responses. As future educators, you might be the lone expert in a room full of students. In this scenario you can use notes but also need to have a solid understanding that you can draw upon for real-time questions. Consequently, individual students are expected to complete each open-book exam on their own (without consulting other people) to demonstrate their own understanding/skills.

Final Exam: The final exam is worth 200 points. The final exam schedule can be found on the registrar's website.

Project: Instructors upload project details here.

Assignments: "Instructor Discretion" - [INSTRUCTORS – please rename accordingly, add details for your section as needed, optional language follows] Students are expected to be actively engaging with their peers and with the course content. "Instructor Discretion" might include discussions (synchronous or on discussion boards), white board work, activities, group assignments, and/or individual assignments.

Assignments: "Homework"- Completing homework assignments is critical to your success in this class. In a normal face-to-face course we suggest scheduling 2-3 hours of homework/review/reading time for every hour spent in class. This is 6-9 hours in addition to class time. The same expectation is true in the remote environment. Note that instructors might grade a subset of collected problems for accuracy.

In previous semesters, no late work was accepted. However, given the unusual nature of these times the following options exist if needed. One homework assignment will be dropped. One "stuff happens" extension can be requested. (In lieu of submitting the assignment you can submit the "stuff happens" assignment to get a three day, no questions asked, extension. We suggest you save this for unexpected internet problems, family emergencies, etc.). Late work will be accepted up to 24 hours after the original due time for 50% credit.

Common Statements on All Lower Division Math Syllabi:

Required Assignments: If a student has excessive missing assignments he/she may be dropped from the course. (In 1118, students who miss 2 consecutive weeks' worth of assignments may dropped from the course.) After the withdrawal deadline the instructor may or may not drop any student. Please note that it is the student's responsibility to drop the course if he/she stops submitting assignments. A failing grade of F may be issued is the student stops submitting the required assignments and does not drop before the posted deadline. No early final exams will be permitted except in documented emergencies: flight reservations, weddings, vacations, birthdays, non-NCAA sporting events etc. are not considered emergencies.

Student Behavior: All students have to abide by the Student Code of Conduct: pathfinder.unm.edu. According to the Code of Conduct, student activities that interfere with the rights of others to pursue their education or to conduct their University duties and responsibilities will lead to disciplinary action. Students should strive to

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minimize distractions during ZOOM sessions: please mute your microphone (unless directed by the instructor) and position your camera to avoid distracting content in the background. Students are expected to behave in a courteous and respectful manner toward the instructor and their fellow students.

Academic Dishonesty: Academic Dishonesty (commonly known as "cheating") of any kind will not be tolerated. The score on an exam may be reduced, the score may be set to zero, the student may get dropped from the class, the student may get a grade of F for the class, and in most cases the incident will be reported to the Dean of Students. Refer to pathfinder.unm.edu to access the Student Handbook.

As a student you are taking this course because you want to learn the material well. It may be tempting to look up solutions on the many venues available online. Our goal is to support you so you come out of this class with a clear understanding and vison of the tools mathematics gives you. You learn mathematics by practice. If instead you simply go online and copy answers you will not learn the material. So, please know that struggling is OK, and it is perfectly OK to try, think about something for a bit, and then get more insight by asking questions.

Grading: To get full credit on graded work students must address all mathematical components presented by the problem, showing all steps and calculations. The use of proper notation, well-structured procedures, and legibility will be taken into account when assigning points.

Deadlines: The Department of Mathematics and Statistics will adhere to all of the registration deadlines published by the Office of the Registrar in the schedule of classes: registrar.unm.edu . We may not give permission to override any deadline (that is, we may not sign any form) except in documented emergencies; failing a class is not considered an emergency.

Grade mode and Withdrawals: You must select your grade mode (Letter Grade, CR/NC, or Audit) within the first 2 weeks of the semester. We may not give permission to change the grade mode after the deadline. Students in the regular grade mode who withdraw after the end of week 3 or are dropped by the instructor will receive a grade of W. If you do not withdraw or have not been dropped by the instructor you will receive a letter grade of A, B, C, D, or F (not a W). Students in the CR/NC grade mode who withdraw after the end of week 3 or are dropped by the instructor will receive a grade of W. If you do not withdraw or have not been dropped by the instructor you will receive a letter grade of NC (not a W). See the list of all deadlines: registrar.unm.edu . An Incomplete Grade is given only when circumstances beyond the student's control have prevented completion of the coursework within the official dates of a semester/session. (Not as an alternative to grades of D, F, NC, or W).

See the list of <u>all</u> deadlines: registrar.unm.edu .

Jan 29, 2021: Last day the CHANGE grade mode on LoboWEB

Feb 5, 2021: Last day to DROP without "W" grade and 100% tuition refund on LoboWEB

April 16, 2021: Last day to DROP without Dean's permission on LoboWEB

Accessibility Statement: We will accommodate students with documented disabilities (through ARC). During the first two weeks of the semester, those students should inform the instructor of their particular needs.

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Title IX: In an effort to meet obligations under Title IX, UNM faculty, Teaching Assistants, and Graduate Assistants are considered "responsible employees" by the Department of Education. This designation requires that any report of gender discrimination which includes sexual harassment, sexual misconduct and sexual violence made to a faculty member, TA, or GA must be reported to the Title IX Coordinator at the Office of Equal Opportunity, oeo.unm.edu . For more information on the campus policy regarding sexual misconduct, see: https://policy.unm.edu/university-policies/2000/2740.html

Course Outline: The course outline may be modified as the semester progresses. Supplemental activities and exercises may be included where appropriate. Check your e-mail frequently for updates**.**

Unit 1: What is Math, Whole Numbers, Place Value (1.1, 2.1)

Unit 2: Fractions and Decimals (2.2, 2.3)

Unit 3: Addition and Subtraction of Whole Numbers (3.1, 3.2)

Unit 4: Multiplication and Division of Whole Numbers (4.1, 4.2)

Unit 5: Geometry Basics and Shapes (8.1, 8.2)

Course Outline: Tentative Schedule (Instructors – keep the schedule appropriate for course TR/MWF)

Week - Dates	Monday	Wednesday	Friday	Weekend
1 – 1/18-1/24	X No School MLK	Orientation	Unit 1: 1.1	
2 – 1/25-1/31	Unit 1: 1.1	Unit 1: 2.1	Unit 1: 2.1	
3 – 2/1-2/7	Unit 2: 2.2	Unit 2: 2.2	Unit 2: 2.2	**UNIT 1 EXAM** Fri. 1pm – Sun midnight
4 – 2/8-2/14	Unit 2: 2.2	Unit 2: 2.2	Unit 2: 2.2	
5 – 2/15-2/21	Unit 2: 2.2	Unit 2: 2.3	Unit 2: 2.3	
6 – 2/22-2/28	Unit 2: 2.3	Unit 3: 3.1	Unit 3: 3.1	**Unit 2 EXAM** Fri 1pm – Sun midnight
7 – 3/1-3/7	Unit 3: 3.1	Unit 3: 3.1/3.2	Unit 3: 3.2	
8 – 3/8-3/14	Unit 3: 3.2	Unit 3: 3.2	**UNIT 3 EXAM is open**	**Unit 3 Exam** Thurs 1pm – Sat midnight
Week 9 – Spring Break Sunday, March 14 – Sunday March 21				
10 – 3/22-3/28	Unit 4: 4.1	Unit 4: 4.1	Unit 4: 4.1	
11 – 3/29-4/4	Unit 4: 4.1	Unit 4: 4.1	Unit 4: 4.2	
12 – 4/5-4/11	Unit 4: 4.2	Unit 4: 4.2	Unit 4: 4.2	
13 – 4/12-4/18	Unit 4: 4.2	Unit 5: 8.1	Unit 5: 8.1	**Unit 4 EXAM** Fri 1pm – Sun midnight
14 – 4/19-4/25	Unit 5: 8.2	Unit 5: 8.2	Unit 5: 8.2	

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15 – 4/26-5/2	Unit 5: 8.2	Unit 5: 8.2	Flex Day	**Unit 5 Exam** Fri 1pm – Sun midnight **Videos due Sunday by midnight**
16- 5/3-5/9	REVIEW	REVIEW	REVIEW	
17 – 5/10-5/15	FINALS			

Week - Dates	**Tuesday**	**Thursday**	**Weekend**
1 – 1/18-1/24	Orientation/ Unit 1: 1.1	Unit 1: 1.1	
2 – 1/25-1/31	Unit 1: 2.1	Unit 1: 2.1	
3 – 2/1-2/7	Unit 2: 2.2	Unit 2: 2.2	**UNIT 1 EXAM Fri 1pm – Sun midnight**
4 – 2/8-2/14	Unit 2: 2.2	Unit 2: 2.2	
5 – 2/15-2/21	Unit 2: 2.3 (make this 2.2)	Unit 2: 2.3	
6 – 2/22-2/28	Unit 2: 2.3	Unit 3: 3.1	**UNIT 2 EXAM Fri 1pm – Sun midnight**
7 – 3/1-3/7	Unit 3: 3.1	Unit 3: 3.1/3.2	
8 – 3/8-3/14	Unit 3: 3.2	Unit 3: 3.2	Unit 3 Exam Thurs 1pm – Sat midnight
Week 9 – Spring Break Sunday, March 14 – Sunday March 21			
10 – 3/22-3/28	Unit 4: 4.1	Unit 4: 4.1	
11 – 3/29-4/4	Unit 4: 4.1	Unit 4: 4.1/4.2	
12 – 4/5-4/11	Unit 4.2	Unit 4: 4.2	
13 – 4/12-4/18	Unit 4: 4.2	Unit 5: 8.1	**UNIT 4 EXAM Fri 1pm – Sun midnight**
14 – 4/19-4/25	Unit 5: 8.1/8.2	Unit 5: 8.2	
15 – 4/26-5/2	Unit 5: 8.2	Flex day	**Videos Due By Sunday midnight** **Unit 5 EXAM Fri 1pm-Sun midnight**
16- 5/3-5/9	REVIEW	REVIEW	
17 – 5/10-5/15	FINALS		

Student Learning Outcomes for Math (1110) 1118:

Course 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.

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

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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 properties of arithmetic.

Course 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.

Course 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.