Math 2118 (215): Mathematics for Elementary and Middle School Teachers III

University of New Mexico, Spring 2021

Instructor: **Email:**

Drop In Help Hours (a.k.a Office Hours):

Textbook and Materials:

- *Mathematics for Elementary Teachers with Activities* (5th edition) with by Sybilla Beckmann
  - Available on day one as an ebook through Inclusive Access on UNMLearn. You can opt out until February 5, otherwise you will automatically be charged $66.
  - You might be able to find a cheap used print copy of the book online.
- 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
  - Additional materials will be available through UNM Learn (links to websites, articles, handouts, etc.) and will be free.

Course Description: The course covers algebra from the viewpoint of elementary school curriculum with emphasis on proportional and linear relationships. Also included: data analysis and other topics with connections to the elementary curriculum. Problem solving is emphasized throughout. **Sections from chapters: 3, 5, 6, 7, 9, 11, 12, 15**

Prerequisites: MATH 1118 and (1215X or 1220 or 1230 or 1240 or 1350 or 1430 or 1512 or ACT Math =>19 or SAT Math Section =>480 or ACCUPLACER Next-Generation Quantitative Reasoning, Algebra, and Statistics =>262). This course builds on concepts generally covered in K-8 math + algebra. Some students find they are rusty on these foundational math skills either because it has been a long time since they last practiced or because their initial learning experiences did not result in lasting understanding. To be successful in this course, you may find you need to review the basics before you can start developing a teacher level of understanding. Our ebook comes with a basic skills practice program in MyMathLab. We encourage you to try these problems and, if needed, use the MyMathLab program to practice basic skills. If a review of these concepts is insufficient, you might consider taking 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:

Unit Tests	350	points
Final Exam	150	points
Project	50	points
Initial Practice Assignments	50	points
Homework/In-Class Assignments	100	points
Total	700	points

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Grading Scale: 90-100 A, 80-89 B, 70-79 C, 60-69 D, Below 60 F (Your instructor reserves the right to assign +/- grades.)

Unit Tests: There will be 7 remote unit tests administered through UNM Learn, 50 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 after Spring Break will be available from 12am on Monday until 11:59pm on Tuesday. If you need an exception, contact your instructor before the test or within 24 hours of the START of the exam. Make-up tests will be given solely at your instructor's discretion. Students may be dropped if they miss a test. 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 test on their own (without consulting other people) to demonstrate their own understanding/skills.

Final Exam: The final exam is cumulative and worth 150 points. The final exam will be administered during the time scheduled by UNM registrar in a remote fashion and is an individual exam.

Project: Students will prepare a detailed video explanation of one homework problem during the semester (50 points). Videos will be uploaded to UNM Learn for peer and instructor feedback. These will serve as a review resource for the cumulative final exam.

Initial Practice Assignments: After reading the text and watching the instructional videos, students will be given the opportunity to practice new concepts in a "low stakes" format. The instructor will provide practice problems/activities to get you thinking about the content, to develop your skills, and to help you understand where you need more practice. [INSTRUCTORS – add details for your section as needed or change to reflect how you are handling those 50 points]

Homework Assignments: 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 may grade a subset of collected problems for accuracy. [INSTRUCTORS – add details for your section as needed]

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 2118, 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 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

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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.

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

Help: If you are struggling, seek help immediately. In addition to your instructor's office hours, there is extra help available at:
- CAPS: Center for Academic Program Support, 3rd floor Zimmerman Library, 277-4560 and online(tutors are students)
- CATS: Counseling and Therapy Services, Student Health Center, 277-4537 (for test anxiety, etc.)

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: Ratios and Proportional Reasoning (7.1, 7.2, comparison)
Unit 2: Elementary Algebra (9.3, 9.4, 9.5)
Unit 3: Measurement and Area (11.1, 11.4, 12.1 – 12.4, 12.6, 12.8)
Unit 4: Fraction and Decimal Addition and Subtraction (3.4 and decimal addition/subtraction)
Unit 5: Fraction and Decimal Multiplication (5.1, 5.2)
Unit 6: Fraction and Decimal Division (6.4 – 6.6)
Unit 7: Elementary Data Analysis (15.2-15.3)

TENTATIVE MWF Schedule

Week - Dates	Monday	Wednesday	Friday	Weekend
1 – 1/18-1/24	No School – MLK Day	Intro, syllabus, technical trouble shooting	Unit 1: 7.1	
2 – 1/25-1/31	Unit 1:7.2	Unit 1: comparisons	Unit 1: more practice	
3 – 2/1-2/7	Unit 2: 9.3	Unit 2: 9.4	Unit 2: 9.4	**UNIT 1 Exam** Fri. 2pm -Sun. midnight
4 – 2/8-2/14	Unit 2: 9.5	Unit 2: 9.5	Unit 3: 11.1	
5 – 2/15-2/21	Unit 3: 11.4	Unit 3: 12.1/12.2	Unit 3: 12.8	**Unit 2 Exam** Fri. 2pm -Sun. midnight
6 – 2/22-2/28	Unit 3: 12.3	Unit 3: 12.4	Unit 3: 12.6	
7 – 3/1-3/7	Unit 4: 3.4	Unit 4: 3.4	Unit 4: 3.4	**Unit 3 Exam** Fri. 2pm -Sun. midnight

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8 – 3/8-3/13	Unit 4: 3.4	Unit 4: Decimal Add/Sub	Project Assignments	
Week 9 – Spring Break Sunday March 14 to Sunday March 21				
10 – 3/22-3/28	**Unit 4 Exam Mon. 12am to Tues. midnight**	Unit 5: 5.1	Unit 5: 5.1	
11 – 3/29-4/4	Unit 5: 5.1	Unit 5: 5.2	Unit 5: 5.2	
12 – 4/5-4/11	Unit 6: 6.4	Unit 6: 6.4	Unit 6: 6.5	**Unit 5 Exam** Fri. 2pm -Sun. midnight
13 – 4/12-4/18	Unit 6: 6.5	Unit 6: 6.6	Unit 6: 6.6	
14 – 4/19-4/25	Unit 7: 15.2	Unit 7: 15.2	Unit 7: 15.2	**Unit 6 Exam** Fri. 2pm -Sun. midnight
15 – 4/26-5/2	Unit 7: 15.2	Unit 7: 15.3	Unit 7: 15.3	**Unit 7 Exam** Fri. 2pm -Sun. midnight
16- 5/3-5/9	REVIEW	REVIEW	REVIEW	
17 – 5/10-5/15	FINALS			

Tentative Tue/Thurs Schedule

Week - Dates	Tuesday	Thursday	Weekend
1 – 1/18-1/24	Intro, syllabus, technical trouble shooting, etc.	Unit 1:7.1	
2 – 1/25-1/31	Unit 1: 7.2	Unit 1: Comparisons	
3 – 2/1-2/7	Unit 2: 9.3/9.4	Unit 2: 9.4	**Unit 1 Exam** Open Friday 2pm to Sunday midnight
4 – 2/8-2/14	Unit 2: 9.4/9.5	Unit 2: 9.5	
5 – 2/15-2/21	Unit 3: 11.1,11.4	Unit 3: 12.1, 12.2	**Unit 2 Exam** Open Friday 2pm to Sunday midnight
6 – 2/22-2/28	Unit 3: 12.8, 12.3	Unit 3: 12.3, 12.4	
7 – 3/1-3/7	Unit 3: 12.6 Unit 4: 3.4	Unit 4: 3.4	**Unit 3 Exam** Open Friday 2pm to Sunday midnight
8 – 3/8-3/14	Unit 4: 3.4	Unit 4: Decimal Add/Sub	
Week 9 - Spring Break Sunday, March 14 to Sunday, March 21			
10 – 3/22-3/28	**Unit 4 Exam** Open Monday 12:01am to Tuesday midnight	Unit 5: 5.1	
11 – 3/29-4/4	Unit 5: 5.1	Unit 5: 5.2	
12 – 4/5-4/11	Unit 6: 6.4	Unit 6: 6.4/6.5	**Unit 5 Exam** Open Fri. 2pm to Sun. midnight
13 – 4/12-4/18	Unit 6: 6.5	Unit 6: 6.6	

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14 – 4/19-4/25	Unit 7: 15.2	Unit 7: 15.2	**Unit 6 Exam** Open Fri 2pm to Sun midnight
15 – 4/26-5/2	Unit 7: 15.3	Unit 7: 15.3	**Unit 7 Exam** Open Fri 2pm to Sun midnight
16- 5/3-5/9	REVIEW	REVIEW	
17 – 5/10-5/15	FINAL during time scheduled by registrar		

Course Goals and Student Learning Outcomes for Math 2118

Goal 1: Understand data analysis from the viewpoint of elementary school curriculum, such as making and interpreting dot plots, pictographs, and bar graphs.

- **SLO 1:** By the end of the course, students will be able to display, analyze, and interpret data.

Goal 2: Know how to use appropriate vocabulary, notation, and reasoning in valid mathematical explanations.

- **SLO 2**: By the end of the course, students will be able to construct valid mathematical explanations.

Goal 3: Understand problem solving in the context of mathematical applications.

- **SLO 3:** By the end of the course, students will be able to model and solve a variety of mathematical applications using various approaches relevant to the K-8 curriculum.

Goal 4: Understand the interconnectedness of elementary mathematical concepts and relate these concepts to application problems.

- **SLO 4:** By the end of the course, students will be able to describe real-world situations that model expressions and equations.

Goal 5: Understand algebraic concepts from the viewpoint of elementary school curriculum.

- **SLO 5:** By the end of the course, students will be able to demonstrate understanding of algebraic concepts of the K-8 curriculum