

Course Syllabus
MATH 2311: Foundations of Elementary Mathematics II
Spring 2015

Instructor: Dr. Angela Brown

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Office Hours: MW 10-12, TR 2-3:30, others by appointment.

Time and Place of Class Meetings: TTh 3:30-4:45 ACR 205

Prerequisites: Satisfactory completion of Math 2310 with a grade of C or better.

Required Textbooks: *Mathematics for Elementary Teachers with Activities*, 4th Edition, Sybilla Beckman. ISBN13 978-0-321-82572-8. We will cover most of chapters 7 through 16.

Other Equipment Needed: paper and pencils.

Course Description: Second course in the mathematics content sequence for preservice elementary and middle school teachers. Topics include: fraction operations, decimals, real numbers, ratio and proportion, percent, basic notions of geometry, measurement, and basic probability and statistics.

Course Objectives By the end of the course, the successful student will be able to:

- Understand and discuss mathematics content for pre-service elementary and middle school teachers
- Be able to relate the topics below to teaching at those levels
- Grasp and understand the reasons for addressing mathematical concepts rather than solving problems
- Demonstrate their understanding of the material with course exams

Mathematics Program Learning Objectives:

The graduating student should be able to:

- Apply knowledge of basic mathematics principles.
- Identify and provide valid proofs or solutions for theorems or problems.
- Recognize and dispute invalid mathematical statements by using counter-examples.

EC TO 6 Teacher Competencies

- Competency 013 (Mathematics Instruction) The teacher understands how students learn mathematical skills and uses that knowledge to plan, organize and implement instruction and assess learning.

- Competency 014 (Number Concepts and Operation) The teacher understands concepts related to numbers, operations and algorithms and the properties of numbers. 2
- Competency 015 (Patterns and Algebra) The teacher understands concepts related to patterns, relations, functions and algebraic reasoning.
- Competency 016 (Geometry and Measurement) The teacher understands concepts and principles of geometry and measurement.
- Competency 017 (Probability and Statistics) The teacher understands concepts related to probability and statistics and their applications.
- Competency 018 (Mathematical Processes) The teacher understands mathematical processes and knows how to reason mathematically, solve mathematical problems and make mathematical connections within and outside of mathematics.

Grading Scale: 90-100 A, 80-89 B, 70-79 C, 60-69 D, 59-Below F

Grading Policy: The grade weighting will be as follows:

Homework/In Class Work/Quizzes: 30%

Exams : 40%

Presentations: 30%

For each class period, you will be expected to read your textbook before the material we will be covering that day. For this purpose, you will have online quizzes that will be due the evening before the material to be covered. These will be graded on your completion of the assignment and on the accuracy of what you have read. For this purpose, you will also want to point out what you have not understood in this material so Dr. Brown can form the lecture and class activities around this material.

Homework will be assigned periodically throughout the semester. Homework assignments must be complete and will be turned in on Tuesdays during class. Not all problems will be graded for content, but the assignment grade is contingent on completeness. If you use outside references, make sure to properly source the material. Copying answers from the back of the book will be considered plagiarism and will be prosecuted thusly.

You will have two presentations this semester to be chosen from the sections to be covered. The presentation requirements will be given to you at a later date.

There will be three exams. All exams will be closed notes, closed book, and no calculators allowed. No make-up exams will be given unless due to a school function.

The final exam is on Tuesday May 12 at 8:00 am.

General Policies: Class will start at the designated time and run for 1hour and 15 minutes with no breaks. You are expected to be on time, attend every class meeting, stay for the duration of class time and come to learn. Do not schedule any appointments that will conflict with class time; if you have done so then I need documentation of the appointments.

You are expected to bring all necessary materials and take notes and participate. You are expected to turn-off and

not to access any electronic, non-task oriented device such as cell/smart phones/pads and i-pods. A cell phone cannot be used as a calculator. Devices for recording the lecture are permitted; either audio or video.

If you come to class without your materials then you will be released from class to go get the appropriate materials. If you try to sleep during class or put your head on your desk you will have to leave class and go home and sleep. Working on another class is not allowed. If you sit with your arms crossed, you will be asked to take notes and participate. If you are causing others around you to miss lecture material then you will be asked to leave.

Any personal business must be conducted during office hours or by appointment. I will only discuss grades and attendance issues in my office. Classroom time is for the entire class.

Attendance Policy: Students are expected to attend every class. If class must be missed, the student is expected to get the notes from a classmate, and to check with me or on Blackboard for announcements and updated assignments. You are expected to check your Sul Ross e-mail account. Absences due to school functions should be discussed with me ahead of time.

Students are expected to arrive to class on time. If a student is perpetually late, they will be asked to not attend class unless they arrive on time. If tardiness becomes a problem for the class as a whole, people who arrive late will not be permitted to enter the class. If this stricter policy becomes necessary, there will be an announcement made in class.

It is policy of the university to drop a student with a grade of “F” if 9 hours or more of class are missed. For this course that would be 6 or more class sessions missed.

Americans With Disabilities Act: As an instructor, I am required by law to provide “reasonable accommodations” to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing the instructor for MATH 4330 of their need for accommodation and in providing authorized documentation through designated administrative channels. If you need to request such accommodations, please contact the ADA Coordinator in Counseling and Accessibility Services, Ferguson Hall 112, 432-837-8203.

Important Dates:

January 20	First Day of Classes
January 23	Last Day for Late Registration and Schedule Changes
March 16-20	Spring Break
April 10	Last Day to Withdrawal from University or Drop Classes with a Grade of “W” (by 4 pm)
May 6	Last Day of Classes
May 11-14	Final Exams
May 16	Commencement

Tentative Schedule-Subject to Change

	Tuesday		Thursday
Jan 20	Intro/Proportions	Jan 22	Proportions
Jan 27	Number Theory	Jan 29	Number Theory
Feb 3	Algebra	Feb 5	Algebra
Feb 10	Algebra	Feb 12	Review/Catch up
Feb 17	Exam 1	Feb 19	Geometry
Feb 24	Geometry	Feb 26	Geometry
Mar 3	Measurement	Mar 5	Measurement
March 10	Area	Mar 12	Area
Mar 24	Volume and Surface Area	Mar 26	Volume and Surface Area
Mar 31	Geometry of Motion	Apr 2	Geometry of Motion
Apr 7	Catch Up/Review	Apr 9	Exam 2
Apr 14	Statistics	Apr 16	Statistics
Apr 21	Statistics	Apr 23	Probability
Apr 28	Probability	Apr 30	Probability
May 5	Review/Catch Up Day		