Math 302 - Mathematics for Early Childhood  
Fall 2015 Syllabus

*Instructor:* Professor Tim Harms  
*Office:* MacLean 375F  
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*Office Phone:* 218-477-4016

*Office hrs:* M 12:00-12:50, T 8:30-10:30 & 1:00-2:50, W 8:30-11:00, R 8:30-10:30, F 12:00-12:50  
additional hours by appointment

*Class meets:* M, W, F 11:00-11:50 in MA 269

*Web page:* [http://web.mnstate.edu/harms](http://web.mnstate.edu/harms)

*Required Text:* Mathematical Reasoning for Elementary School Teachers by Long & DeTemple, 6th Edition

*Required Supplies:* three ring binder, colored pencils, *(no calculator)*

*Prerequisites*  
Students must have successfully completed Math 110 or its equivalent with a C - or better prior to taking this course.

*Course Description:*  
Development of numeration systems, whole number, integer, rational numbers, geometry, and measurement. The content focuses on appropriate representations and models specifically tied to early childhood education. Open only to majors in Early Childhood Education. Does not substitute for Math 303 or 304. This course does not apply to the mathematics major or minor requirements.

*Learner Outcomes:*  
Students will be able to (MN Board of Teaching Standards for Early Childhood Education #1-8):  
1) use and understanding of mathematics and of how primary-aged children learn mathematics to guide instruction that develops children's understanding of number sense and number systems, geometry, and measurement.  
2) planning activities that develop primary-aged children's understanding of mathematics and increases their ability to apply mathematics to everyday problems  
3) helping primary-aged children experience mathematics as a way to explore and solve problems in their environment at home and in school through open-ended work that includes child-invented strategies with different problems, games, and authentic situations  
4) selecting and creating a variety of resources, materials, and activities for counting and studying patterns and mathematical relationships  
5) building learning environments where children can construct their own knowledge for learning mathematics  
6) providing objects, counters, charts, graphs, and other materials to help primary-aged children express ideas, and represent and record problem solving through numbers and symbols  
7) using games to use mathematics to solve problems, to symbolize phenomena and relationships, and to communicate quantitative information  
8) asking questions to clarify how primary-aged children perceive a problem, develop a strategy, and understand different approaches to reasoning and thinking in mathematics  
9) Clearly express mathematical/logical ideas in writing.
Course Outline:
Unit 1 – Chap 2 & 3 - Sets and Whole Numbers, Numeration and Computation Test 1
Unit 2 – Chap 5 - Integers & Chap 6 - Fractions and Rational Numbers Test 2
Unit 3 – Chap 8 & 9 - Algebraic Reasoning & Geometric Figures Test 3
Unit 4 – Chap 10 - Measurement: Length, Area, Time Comprehensive Final Exam – Dec. 14 at 11:30

Class assignments with due dates are posted and regularly updated on the Web page listed above under the Math 302 link.

Student Expectations:
- Regular and active classroom participation.
- Professor Harms is to be contacted as soon as possible if an absence is unavoidable.
- Allocate time in your schedule to complete the homework by its due date. (For every hr. of class you will be expected to work outside of class at least 2 hrs.)
- Work cooperatively in small groups in the discussion of individual homework and the completion of study guide activities. (In class you will be working in small groups and outside of class you may want to consider forming a study group with a few classmates to review topics together)
- Solve problems in mathematics by formulating problems, use different strategies to verify and interpret results, & communicate results.
- Please do not use your cell phone while in class, after 2 notifications of cell phone use you will be asked to leave class.
- Students will act in a respectful, honest and trustworthy manner in class and on all assignments.

Attendance Policy:
- An absence will result in no credit for that day’s work unless prior arrangements have been made.
- Late work will lose 50% of its value for each day beyond its due date.
- No make-up on missed quizzes or tests if prior arrangements have not been made with Dr. Harms.

Evaluation:
1. Quizzes worth 10-15 pts. each total ≈ 90 pts
2. Select labs, handouts, and vocabulary notebook 5-10 pts. each total ≈ 80 pts
3. Activity Presentations, Reflections, and Evaluations ≈ 40 pts
4. Three unit tests worth 100 pts. each
5. Comprehensive Final worth 200 pts

Grades are posted under the course’s website link titled: Progress Report

Grading Scale:
100-98 A+; 97-93 A; 92-90 A- 
89-88 B+; 87-83 B; 82-80 B-
79-78 C+; 77-73 C; 72-70 C-
69-68 D+; 67-63 D; 62-60 D-
59%- F

(Grades will be rounded to the nearest whole percent. There is no extra credit offered in this course so do your best on each assignment and assessment.)
Assistance Available:
If you are having trouble please see Dr. Harms during office hours or make an appointment. The Math Department offers drop in tutoring M-F in MacLean 383 with Baily or Kaylee the best resources to help with Math 302 questions Mon. 9-10:30, Wed. 9-10:30 & 3-4, Thur. 1:30-3, & 3-4, Fri. 9:30-11.

Special Accommodations:
Minnesota State University Moorhead is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (DRC) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations.

- If you have, or think you may have, a disability (e.g. mental health, attentional, learning, chronic health, sensory or physical) please contact the DRC at (218) 477-4318 (V) or (800)627.3529 (MRS/TTY) to schedule an appointment for an intake.

- Additional information is available on the DRC website: [http://www.mnstate.edu/disability/](http://www.mnstate.edu/disability/)

- If you are registered with the DRC and have a current Accommodation Letter, please schedule an appointment to visit with me, during my office hours, to discuss implementation of your accommodations.