

Dixie State University of Utah
Mathematics Department

Fall 2015

Math for Elementary Teachers I
Math 2010

Course: MATH 2010.01 CRN # 40124

Meeting Days and Time: Monday & Wed. 1:00-2:15

Instructor: Greg Murray Ph.D. Assistant Professor

Class Location: Snow Room 147

Office Location: Snow Math & Science, Room 127

Office Hours: Monday 11:00 – 1:00 & Tues. 1:00 – 4:00

MyMathLab Course ID: murray85206

Credits: 3 credits

Semester Fall 2015

Email Address: gmurray@dixie.edu

Office Phone: 652 - 7985

Course Description 3.00 CR

This class is the first of a two-semester sequence in mathematics that is appropriate to the needs of elementary and intermediate school teachers. Topics include: problem solving, sets, numeration systems, whole numbers, number theory, rational numbers and decimals.

Both classes in the sequence are required for prospective elementary school teachers.

*** This class is not designed to teach you fundamental skills in elementary math**; it presumes prior competency in grade-school math. Rather, this class examines the theory behind elementary math. The content and processes of mathematics will be presented in a logically sound approach in order to help you:

1. Learn to view mathematics as fascinating and stimulating activity that provides skills, insights, and modes of thinking that are essential to modern life.
2. Become a more confident problem solver, who is able to think critically and creatively in a variety of quantitative, spatial and logical situations.
3. Become a more accomplished communicator with a capacity to construct well-reasoned explanations of mathematical algorithms.
4. See the connections between mathematics and other subjects in real-world applications.
5. Learn the foundations necessary to build adequate instructional opportunities for mathematical students across grades K-8.

Prerequisites

A grade of *C* or better in Math 1050. A grade of *C* or better is required in this course in order to take the second course in the sequence, Math 2020. In addition, ***you must pass*** the “Basic Skills Math Test” with a proficiency of 90 %, or higher, in order to pass this course.

Requirements

We will all use **MyMathLab access package** in junction with the textbook below. The MyMathLab access card grants access to course materials, including the textbook listed below. Available through the DSU bookstore.

Textbook: *A Problem Solving Approach to Mathematics for Elementary School Teachers*, 11/edition
By Billstein/Libeskind/Lott (© 2013). [Used for both Math 2010 and Math 2020]

You will need **internet access** through MyMathLab for daily assignments and tests.
MyMathLab Course ID: **murray85206**

Mathematics Department Learning Outcomes

1. Employ mathematical techniques in computational problems.
2. Students will interpret mathematical models.
3. Construct quantitative, logical arguments.
4. Students will apply mathematical knowledge to real world problems.
5. Communicate in the mathematical language through the use of proper notation and terminology.
6. Students will explore and analyze mathematical concepts, using technology as appropriate.

DISABILITY RESOURCE CENTER:

Students with medical, psychological, learning or other disabilities desiring reasonable academic adjustment, accommodations, or auxiliary aids to be successful in this class will need to contact the DISABILITY RESOURCE CENTER

Coordinator (Baako Wahabu) for eligibility determination. Proper documentation of impairment is required in order to receive services or accommodations. DRC

is located at the ground floor of the Financial Aid Office. Visit or call 652-7516 to schedule appointment to discuss the process. DRC Coordinator determines eligibility for and authorizes the provision of services

Final Exam: Monday Dec. 14th 1:00 – 3:00 p.m.

Academic integrity: In order to ensure that the highest standards of academic conduct are promoted and supported at the University, students must adhere to generally accepted standards of academic honesty, including but not limited to, refraining from cheating, plagiarizing, falsification, misrepresentation, and/or inappropriately colluding or collaborating. The University shall consistently hold students accountable for instances of academic dishonesty and apply appropriate consequences. For more information, see the Student Academic Misconduct section of DSU policy at <http://dixie.edu/humanres/polstu.html>

Disruptive Behavior- DSC disruptive behavior policy states, “Teachers at Dixie State University have the right to aggressively manage the classroom environment to ensure an effective learning climate. Toward this end, teachers may dismiss and remove disruptive students from individual class activities. If a student’s behavior continues to disrupt class activities, the teacher may dismiss and remove disruptive students from their courses.”

Title IX: The Dixie State University's Sexual Harassment and Sexual Misconduct policies are compliant with Federal laws prohibiting discrimination requires that faculty, student employees and staff members report any incidents of sex discrimination, including sexual harassment, sexual misconduct, stalking on the basis of sex, dating/intimate partner violence or sexual exploitation and/or related experiences or incidents.

Important links:Disability Resource Center – www.dixie.edu/drcenterIT Help Desk – www.dixie.edu/helpdeskLibrary – www.library.dixie.eduTesting Center – www.dixie.edu/testingTutoring Center – www.dixie.edu/tutoring

Cell Phones: Need to be turned off during class. If you have an emergency, please see me prior to class. Laptop computers & tablets may be used for e-textbook access and note-taking only

My Math Lab: www.pearsonmymathlabandmastering.com Course ID: **murray85206**

Assignments:

Daily attendance is required for this course.

Homework (1 point per question) will be completed, primarily, through MyMathLab. Due dates are in the syllabus calendar and in MyMathLab.

Syllabus Quiz. This Quiz is on Canvas. 20 points

Article Reviews (40 points each) (rubric to be provided)

Chapter Reflections (10 points each) (rubric to be provided)

Chapter Tests (40 points each) Completed through MyMathLab. Each test of the **Chapter Tests may be taken up to 2 times.**

Attendance & Participation (5 daily points assigned)

Fraction Project (40 points) Rubric to be provided

Midterm Exam taken in class (**100 points**)

Final Exam taken in class (**200 points**)

Total Points: approximately 1080

Check your Grades on **MyMathLab**

Course Management System: <https://canvas.dixie.edu> help line (435) 652-7951

Grading Scale

The total points possible is divided by the total points earned to get a final percentage. The grade breakdown is as follows:

A = 100-94	B = 86-84	C = 75-70	D = 59-55
A- = 93-90	B- = 83-80	C- = 69-65	D- = 55-50
B+ = 89-87	C+ = 79-75	D+ = 64-60	F = Below 50

Remember, grade of **C or better** is required in order to take Math 2020.

Tentative Schedule

Dates	Topic and Activities	Assignments Due
Monday Aug 24	Welcome. Mathematical Introduction.	
Wed. Aug 26	Chapter 1 Problem Solving Skills	*Have Read Section 1.1 *Syllabus Quiz (on Canvas) due by Sept. 1
Mon Aug 31	Patterns~Patter~Patt~Pa~ Reasoning and Logic	* Have Read Section 1.2 & Section 1.3 (pgs 34-35 & 40-41)
Wed Sept 2	Chapter 2: Numeration Systems and Sets Counting	* Have Read Section 2.1 * Chapter 1 HW (Homework) due by Sept 6 *Chapter 1 Test (completed by Sept. 8)
Mon Sept 7	NO class Labor Day	
Wed. Sept. 9	Describing Sets	* Chapter 1 Reflection Due Today * Have Read Section 2.2
Mon. Sept. 14	Sets: Intersections and Unions <i>Basic Skills Test</i> in class	
Wed Sept. 16	Review Chapters 1 and Chapter 2	* Chapter 2 HW due by Sept 18 * Chapter 2 Test (by Sept. 20)
Mon. Sept. 21	Chapter 3: Whole Numbers And a whole lot more	* Have Read Section 3.1 *Chapter 2 Reflection Due Today
Wed Sept. 23	Addition/ Subtraction Algorithms	Have Read Section 3.2 * Article Review (<i>Never Say...</i>) Due Today
Mon. Sept. 28	Multiplication and Division of Whole Numbers	Have Read Section 3.3
Wed Sept. 30	Multiplication/ Division Algorithms	Have Read Section 3.4
Mon Oct. 5	Chapter 4: Number Theory Divisibility	* Have Read Section 4.1 * Chapter 3 HW due today *Chapter 3 Reflection Due Today * Chapter 3 Test (by Oct 6)
Wed. Oct 7	Prime and Composite Numbers	* Have Read Section 4.2
Mon. Oct 12	GCD and LCM Have what in common?	*Have Read Section 4.3
Wed. Oct. 14	Midterm Exam in class [Chapters 1- 4]	
Mon. Oct 19	Chapter 5: Integers Addition and Subtraction of Integers	*Have Read Section 5.1 * Chapter 4 Reflection Due Today * Chapter 4 HW due today * Chapter 4 Test by Oct 20
Wed. Oct. 21	Multiply and Divide Integers	* Have read section 5.2
Mon. Oct 26	Chapter 6: Rational Numbers	*Have Read Section 6.1 * Chapter 5 Reflection Due Today
Wed. Oct 28	Addition and Subtraction of Rational Numbers	*Have Read Section 6.2 * Chapter 5 HW due today * Chapter 5 Test (by Nov. 3)
Mon. Nov. 2	Multiplication and Division of Rational Numbers	* Have Read Section 6.3

Wed.. Nov 4	Ratio and Proportion	*Have Read Section 6.4
Mon. Nov 9	Using Ratios and Proportions	
Wed Nov 11	Chapter 7: Decimal, Rational Numbers and Percents Introduction to Decimals	* Chapter 6 HW by Nov. 10 * Have Read Section 7.1
Mon. Nov 16	Fitting Numbers Operations on Decimals	* Chapter 6 Reflection Due Today * Chapter 6 Test (by Nov 17) *Have Read Section 7.2
Wed. Nov 18	Nonterminating Decimals Percents and Interest	*Have Read Section 7.3 * Article Review #2 Due Today
Mon. Nov. 23	Fraction Projects (1)	
Wed. Nov 25	Thanksgiving Holiday	
Mon. Nov. 30	Our friends: fractions, decimals and percentages	*Chapter 7 Reflection Due Today * Chapter 7 Test (by Dec 6)
Wed. Dec 2	Fraction Projects (2)	Chapter 7 HW due today
Mon. Dec. 7	Fraction Projects (3)	
Wed. Dec. 9	Review for Final	
Monday Dec. 14	Final Exam 1:00p.m. - 3:00 p.m.	

This Syllabus is tentative; students are responsible for any changes announced in class.