

**Math 110 (MW-10652 and W-10653)  
Number System in Elementary Mathematics – Fall 2013**

**Instructor:** Barbara Nilson

**Office:** 2762

**Phone:** 760-355-6477

**E-mail:** [bnilson@imperial.edu](mailto:bnilson@imperial.edu)

**Text:** Reconceptualizing Mathematics for Elementary School Teachers, Sowder, Sowder, Nickerson. 2<sup>nd</sup> ed.

**Last Day to Withdraw with a W** – Saturday, November 9, 2013

**Final Exam:** Wednesday, December 4, 2013

**Prerequisite: Math 91 (grade of C or better) or appropriate Placement Score.**

**COURSE DESCRIPTION**

This is a transfer level course recommended for students who are working towards a teaching credential in elementary education. Topics discussed are sets and relations, development of the number system from the natural numbers including whole, rational and real numbers, number theory, ratio and proportion.

**COURSE OBJECTIVES**

Upon satisfactory completion of the course, students will be able to:

1. Analyze mathematical patterns and will solve problems with the calculator as a supporting tool.
2. Demonstrate an understanding and comprehension of topics dealing with sets, functions and numeration.
3. Demonstrate an understanding and a working knowledge of whole numbers with emphasis placed on various bases.
4. Demonstrate an understanding and comprehension of elementary concepts of integer arithmetic.
5. Analyze basic number theory.
6. Demonstrate an understanding and comprehension of: elementary concepts of fractional numbers, the use of decimals and exponents.
7. Demonstrate knowledge of ratios and proportions.

**STUDENT LEARNING OUTCOMES**

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Demonstrate knowledge of operations and properties by creating story problems and modeling the solutions (ISLO1, ISLO2, ISLO3)
2. Demonstrate written mathematical communication skills (ISLO1, ISLO4)
3. Demonstrate analysis of children's multiplication and division errors (ISLO2, ISLO5)

**COURSE COMPONENTS**

***ASSIGNMENTS AND LATE WORK POLICY***

The problems listed are to help you understand concepts and mathematical communication. Each homework assignment will have a fixed due date corresponding to the quiz that covers the material from that assignment. For example, homework for Chapter 1 would be due Week 2. Absolutely no late work will be accepted. The HW will receive a maximum of 20 points regardless of the length of the assignment. The HW points are awarded on the basis of completeness and quality. Minimal quality will result in minimal points.

***EXAMS/TESTS***

Exams will be comprehensive and may include any or all types of assessment – true/false, multiple-choice, short answer, models, and essay. There is no makeup for exams; if you miss an exam, it will be recorded as a zero.

## GRADING POLICY

Your grade will be comprised of the following items:

11 chapters of homework @ 20 points/chapter	220 points	~32%
8 quizzes@10 points each	80 points	~12%
2 Exams @ 100	200 points	~28%
1 final exam @ 200 points	200 points	~28%
Total	700 points	100.00%

Your final grade will be based on the following points and percentages:

90% to 100%	630-700 points	A
80% to 89%	560-629 points	B
70% to 79%	490-559 points	C
60% to 69%	420-489 points	D
Below 60%	Below 420 points	F

## IVC POLICIES

- Under IVC policy, students are expected to attend every session of class in which they are enrolled. If a student is unable to attend the course or must drop the course for any reason, it will be the responsibility of the student to withdraw from the course. I will not drop you from the course. If the student does not withdraw from the course and fails to complete the requirements of the course, the student will receive a failing grade. **The last day to withdraw from this course with a "W" is Saturday, November 9, 2013.**
- Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as possible. The DSP&S office is located in Room 2117, in the Health Sciences Building. Their phone number is (760) 355-6312.
- Disruption of other students will result in a reprimand or expulsions from the class for that day. A second offense can result in administrative discipline.
- Cheating is not tolerated and will result in discipline from the administration.
- Bottled water is the only food or drink allowed in the room.

## MY POLICIES

- Cell phones or other electronic communication devices can only be used for appropriate math purposes. They may not be used during an exam. Texting or using your cell phone for calls during class can be grounds for dismissal from class.
- Disruption in my class is defined as behavior that interferes with another student's ability to learn or is distracting to myself or others. Some examples are: talking with other students during lecture, ringing phones, texting, reading non-math materials such as magazines, watching and/or playing videos or games on an electronic device, cleaning out your backpack...
- Use only non-transmitting calculators during exams (i.e. no cell phones or other transmittal devices).
- Quality work is expected. If a student meets the stated requirements for an assignment, but does it in a minimal fashion, the maximum grade for the product will be points valued at "C". To earn points valued at "B" or "A" there must be reasonable quality in the work.
- Multiple infractions of my policies can result in a lowering of your grade by 1 letter.

Math 110 Fall 2013 – B Nilson  
(May be subject to change.)

Week	Week Begin	Lecture/ Readings	Quizzes/ Exams	Homework Due	Homework Assigned	Holidays
1	8/19/2013	Ch1			HW Ch1 1.2.4, supp1.2.2, 1.3.5, 1.4.3, 1.4.9	
2	8/26/2013	Ch2	Quiz Ch1	HW Ch1 due	HW Ch2 supp2.2.1, 2.3.2, 2.3.3, 2.3.9, 2.3.18	
3	9/2/2013	Ch2-Ch3	Quiz Ch2		HW Ch3	<i>Labor Day, M 9/2</i>
4	9/9/2013	Ch3-Ch4	Quiz Ch3	HW Ch2 due	HW Ch4	
5	9/16/2013	Ch4	Quiz Ch4	HW Ch3 due		
6	9/23/2013	Ch5,	<b>Exam Ch1-4</b>	HW Ch4 due	HW Ch5	
7	9/30/2013	Ch 5-Ch6	Quiz Ch5		HW Ch6	
8	10/7/2013	Ch7	Quiz Ch6	HW Ch5 due	HW Ch7	<i>Veteran's Day, M 10/11</i>
9	10/14/2013	Ch7 - Ch8	Quiz Ch7	HW Ch6 due	HW Ch8	
10	10/21/2013	Ch8 - Ch9		HW Ch7 due	HW Ch9	
11	10/28/2013	Ch9	Quiz Ch8	HW Ch8 due		
12	11/4/2013	Ch9-Ch10	<b>Exam Ch5-8</b>		HW Ch10	
13	11/11/2013	Ch10-Ch11	Quiz Ch9	HW Ch9 due	HW Ch11	
14	11/18/2013	Ch11	Quiz Ch10	HW Ch10 due		
15	11/25/2013	Review Final		HW Ch11 due		<i>Thanksgiving, R 11/28</i>
16	12/2/2013	<b>Final Exam – Comprehensive Ch1-Ch11</b>				