

**THE UNIVERSITY OF TEXAS AT EL PASO**  
**COLLEGE OF SCIENCE**  
**DEPARTMENT OF MATHEMATICAL SCIENCES**

Course Number: MATH 2303- 11792

Course Title: Number Concepts

Credit Hrs: 3

Term: Fall 2015

Course Meetings & Location: TR 10:30AM – 11:50AM in Liberal Arts 303

Prerequisite Courses: MATH 0311 or an adequate score on a placement exam

Course Fee: (if applicable) None

Instructor: Thomas Taylor

Office Location: Library 523

Contact Info: E-mail Address: ttaylor2@utep.edu  
Office Phone: (915) 747-8814  
Fax Number: (915) 747-6502  
Emergency Contact: (915) 747-5761

Office Hours: MW 11:00-12:00, TR 10:00-10:20, F 10:30-11:50

Textbook(s), Materials: Required: Mathematics for Elementary Teachers with Activities (4<sup>th</sup> Ed)  
By Sybilla Beckmann (purchase online with a discount code)

Course Description: This course focuses on numbers and operations for prospective elementary and middle school teachers. Topics include place value, whole numbers, rational numbers, signed numbers, arithmetic operations and algorithms, divisibility tests, multiples and factors. The focus is on conceptual understanding, quantitative reasoning, number sense, multiple representations and ways of thinking, mathematical justification and communication, problem solving, connection making and addressing students' common misconceptions and errors.

Course Objectives: Students will

- (a) deepen their conceptual understanding of numbers and operations by explaining why and making connections;
- (b) conceive mathematics as a problem solving endeavor that involves sense-making and thinking; and
- (c) develop the habits of attending to meaning, of analyzing problem situations, and of making conjectures and providing justifications; and
- (d) develop the skills of active reading and understanding mathematical texts.

Course Activities/Assignments: Number sense and mental computation will be emphasized throughout the course. Lectures will be very interactive; therefore, you are required to participate in class. Such participation may include presenting solutions on the board or working cooperatively with others.

**Assessment of Course Objectives:** Class work and homework will be assessed for completeness; exams and any projects will be scored for correctness.

| <b>Course Schedule:</b> | <b>Weeks</b> | <b>Sections</b> | <b>Topic</b>                               |
|-------------------------|--------------|-----------------|--|
|                         | 1 – 2        | 1.1 – 1.4       | Numbers & Base-Ten System                  |
|                         | 3 – 5        | 2.1 – 2.5       | Fractions & Problem Solving                |
|                         | 6 – 8        | 3.1 – 3.5       | Addition & Subtraction                     |
|                         | 9 – 10       | 4.1 – 4.6       | Multiplication (Whole numbers)             |
|                         | 11 – 12      | 5.1 – 5.4       | Multiplication (Rational & Signed Numbers) |
|                         | 13 – 15      | 6.1 – 6.3       | Division (Whole numbers)                   |

**TExES Competencies:** Competencies 14 & 18 (Generalist EC-6)  
Competencies 18 & 22 (Bilingual Generalist EC-6)  
Competencies 10, 11, 12, & 24 (Generalist 4-8)  
Competencies 14, 15, 16, & 28 (Bilingual Generalist 4-8)  
Competencies 1, 2, 3, 15 & 16 (Mathematics 4-8)

**Important Dates:** The Drop Date for this semester is Friday October 30, 2015

**Grading Policy:** Letter grades will be assigned by the following (standard) scale:

90-100 A

80-89 B

70-79 C

60-69 D

<60 F

Your final grade will be calculated as follows:

Class work: 5%

Assignments: 5%

Exams: 60% (3 exams, 20% each)

Final Exam 30%

**Make-up Policy:** Except for very special circumstances, which are documented and justified; there will be no make-up exams (for missed exams).

**Attendance Policy:** Attendance is very important in order to succeed in this course. You must attend every class meeting.

**Academic Integrity Policy:** Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts. Refer to the UTEP's Policy at <http://admin.utep.edu/Default.aspx?PageContentID=2083&tabid=30292>.

**Civility Statement:** Students are expected to conduct themselves in a manner conducive of a healthy learning environment.

**Disability Statement:** If you have a disability and need classroom accommodations, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, or by email to [cass@utep.edu](mailto:cass@utep.edu), or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at [www.sa.utep.edu/cass](http://www.sa.utep.edu/cass).

**Military Statement:** If you are a military student with the potential of being called to military service and/or training during the course of the semester, please inform your instructor as soon as possible.