

**COURSE SYLLABUS**  
**MTH 184**  
**FOUNDATIONS OF MATHEMATICS**  
**3 SEMESTER HOURS CREDIT**  
**FALL 2007**

<b>Location of Class:</b>	LDB 431
<b>Class Meeting Time:</b>	TT 8:00 – 9:30 am
<b>Instructor:</b>	Dr. John Huber
<b>Office Location:</b>	Lee Drain Building – Room 421-D
<b>Instructor Contact Information:</b>	Phone: (936) 294-1589 Email: <a href="mailto:jhuber@shsu.edu">jhuber@shsu.edu</a>
<b>Office Hours:</b>	8:00 – 10:00 MW 9:30 – 11:00 TuTh Other by appointment

**TEXAS EXAMINATION OF EDUCATOR STANDARDS (EC-4 Generalist)**

**Competency 013**

**The teacher understands concepts related to numbers and number systems and demonstrates knowledge of patterns, relations, functions, and algebraic reasoning.**

The beginning teacher:

- Analyzes and describes number concepts (e.g. odd, even, prime), operations and algorithms, and the properties of numbers.
- Analyzes, explains, and models the four basic operations with whole numbers, integers, and rational numbers.
- Uses numbers to describe and quantify phenomena such as time, temperature, and money.
- Applies knowledge of place value and other number properties to perform mental mathematics and computational estimation.
- Illustrates relations and functions using concrete models, tables, graphs and symbolic expressions.
- Understands how to use algebraic concepts and reasoning to investigate patterns, make generalizations, formulate mathematical models, make predictions, and validate results.
- Knows how to identify, extend, and create patterns using concrete models, figures, numbers, and algebraic expressions.

- Uses properties, graphs, and applications of relations and functions to analyze, model, and solve problems in mathematical and real-world situations.

## Course Description

This course is designed to develop the background in functions sets, whole numbers, number theory, fractions and integers necessary for pre-service mathematics teachers at grades EC – 8 . Credit in this course may only be applied to elementary/middle school certification.

## Course Outline

### Set and Set Operations

#### Whole Numbers

- Concept
- Operations
- Properties
- Algorithms

### Elementary Number Theory

#### Integers

- Concept
- Operations
- Properties
- Algorithms

### Fractions and Rational Numbers

- Concept
- Operations

## Required Textbook:

*Mathematical Reasoning for Elementary Teachers* (Fourth Edition), 2006. Calvin T. Long and Duane W. Temple. Pearson Education.

## Attendance Policy

Attendance is *extremely* important. Regular and punctual attendance is expected. Course grades may be lowered up to one-half letter grade for each one hour absence in excess of three hours. Students should discuss each absence with the instructor.

## Assignments

Major Examinations (3)	75%
Final Examination	25%

## Major Examinations

There will be three major examinations in this course. You should notify the instructor in advance if you must miss a class during which time a major examination is scheduled.

The instructor, at his discretion, may allow you to take the exam early. In the event this is not possible, the final exam grade will replace the exam missed. Each major exam will be worth 100 points.

## Final Examination

The final examination is comprehensive. It will be multiple-choice and will be worth 100 points.

## Grading Plan

The course grade will be determined by the average of the three (3) major exam grades and the final exam grade. In the event your grade on the final exam is higher than your lowest major exam grade, the final exam grade will replace the score on the exam with the lowest grade. If the final exam grade is replacing a missed exam, the final exam grade will only be used in place of the missed exam. The letter grade will be determined as follows:

90 – 100	A	60 – 69	D
80 – 89	B	< 60	F
70 – 79	C		

## Academic Dishonesty

All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of any form of academic dishonesty including, but not limited to, cheating on an examination or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.

## Classroom Rules of Conduct

Students will refrain from behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. **Cellular**

***telephones and pagers must be turned off before class begins.*** Students are prohibited from eating in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a directive to leave class. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.

### **Visitors in the Classroom**

Unannounced visitors to class must present a current, official SHSU identification card to be permitted in the classroom. They must not present a disruption to the class by their attendance. If the visitor is not a registered student, it is at the instructor's discretion whether or not the visitor will be allowed to remain in the classroom.

### **Americans with Disabilities Act**

It is the policy of Sam Houston State University that no otherwise qualified disabled individual shall, solely by reason of his/her handicap, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any academic or Student Life program or activity. Disabled students may request assistance with academically related problem stemming from individual disabilities by contacting the Director of the Counseling Center in the Lee Drain Annex or by calling 936-294-1720.

### **Religious Holidays**

A student who is absent from class for the observance of a religious holy day will be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence. Students will be excused to travel for observance of a religious holy day. A student who wishes to be excused for a religious holy day must present the instructor with a written statement describing the holy day(s) and the travel involved. Upon receiving the statement the instructor will provide the student with a written description of the deadline for the completion of missed exams or assignments.

### **Instructor Evaluations**

You may be asked to complete a course/instructor evaluation form toward the end of the semester.

### **Syllabus Revision**

The instructor reserves the right to revise any part of this syllabus as deemed necessary throughout the semester. Revision, if necessary, will be announced during class.