

WALTERS STATE COMMUNITY COLLEGE

COURSE SYLLABUS

COURSE NAME AND NUMBER: Number Concepts and Algebraic Structures – MATH 1410

SEMESTER AND YEAR:

INSTRUCTOR:

Mathematics Division Fax: 423-585-6873

Division Secretary: 423-585-6864

Tutoring: Mrs. Beth Dixon at Beth.Dixon@ws.edu or 423-585-6872 or MBSS 222

Ms. Mary Breedlove at Mary.Breedlove@ws.edu or 423-585-6920 or CCEN 261.

Office Hours: Office hours are posted on the office door. Office hours are times the professor is on campus. It is recommended that students make an appointment.

REQUIRED TEXTBOOK: Mathematics For Elementary Teachers A Conceptual Approach with Manipulative Kit, 7th Edition by Albert B. Bennett, Jr. and L.Ted Nelson

REQUIRED TECHNOLOGY: TI-83 or TI-84 graphing calculator required for course – discuss with instructor if you own a different graphing calculator

CATALOG DESCRIPTION:

Students will use problem solving and logic to develop number sense and a conceptual understanding of number systems, number operations, number theory, and functions. These concepts will be explored using manipulative materials, collaborative activities, and technology. (Prerequisite: Two years of algebra and one year of geometry in high school or completion of developmental mathematics.)

3 Semester Credits

COURSE OUTCOMES:

The student should be able to:

1. Identify and use various problem solving strategies.
2. Demonstrate an understanding of different numeration systems.
3. Use manipulatives, diagrams, and verbal explanations to demonstrate an understanding of number systems and operations.
4. Demonstrate an understanding of the concepts of variables and mathematical functions using verbal, numerical, graphical, and algebraic representations.
5. Perform mathematical computations using estimation skills, algorithmic procedures, and mental strategies.
6. Demonstrate properties of and the relationships between whole, rational, integer, and real numbers.
7. Describe, extend, and generalize patterns of shapes and numbers.

COURSE CONTENT:

Chapter 1 – Problem Solving

- 1-1 Introduction to Problem Solving
- 1-2 Patterns and Problem Solving
- 1-3 Problem Solving with Algebra

Chapter 2 – Sets, Functions, and Reasoning

- 2-1 Sets and Venn Diagrams
- 2-2 Functions, Coordinates, and Graphs

Chapter 3 – Whole Numbers

- 3-1 Numeration Systems
- 3-2 Addition and Subtraction
- 3-3 Multiplication
- 3-4 Division and Exponents

Chapter 4 – Number Theory

- 4-1 Factors and Multiples
- 4-2 Greatest Common factor and Least Common Multiple

Chapter 5 – Integers and Fractions

- 5-1 Integers
- 5-2 Introduction to Fractions
- 5-3 Operations with Fractions

Chapter 6 – Decimals: Rational and Irrational Numbers

- 6-1 Decimals and Rational Numbers
- 6-2 Operations with Decimals

INSTRUCTIONAL AND EVALUATION METHODS:

FINAL EXAM: The final exam for the class will be:

COURSE GROUND RULES:

All students attending Walters State Community College, regardless of the time and location of the class, must abide by the rules and regulations outlined in the current *Walters State Catalog/Student Handbook* and the current *Walters State Timetable of Classes*. A copy of the Catalog/Handbook and the Timetable of Classes may be obtained from the admissions office on the main campus or at any of our off-campus sites. You may also access the Catalog/Handbook on-line at the following web address: <http://www.ws.edu/catalog>

Students should attend the first day of class or contact the instructor prior to the first class. Failure to do this may result in being dropped from the class.

Plagiarism, cheating, and other forms of academic dishonesty are prohibited.

Students with disabilities must register with Student Support Services (CCEN), Room 262 (phone 423-585-6892) if they need any special facilities, services, or consideration.

Students in need of tutoring assistance are encouraged to contact the Office of Student Tutoring located in the College Center (CCEN), Room 261. The phone number is 423-585-6920.

Students receiving any type of financial aid or scholarship should contact the Financial Aid Office before making any changes to their schedule. Schedule changes without prior approval may result in loss of award for the current term and future terms.

Students who have not paid fees on time and/or are not correctly registered for this class and whose names do not appear on official class rolls generated by the Admissions and Records Office will not be allowed to remain in class or receive credit for this course.

Cellular phone use during classroom interaction is prohibited. Cellular phones must be turned to the non-audible mode until after class, at which time calls can be received or checked. (See *the Walters State Catalog/Handbook*)

For information related to the cancellation of classes due to inclement weather, please check the college's Web site at www.ws.edu or call the college's student information line, 1-800-225-4770, option 1; InfoConnect, (423) 581-1233, option 1045; the Sevier County Campus, (865) 774-5800, option 9; or the Greeneville/Greene County Center for Higher Education, (423) 798-7940, option 4. Also, please monitor local TV and radio stations for weather-related announcements. For additional information on this policy see the college catalog.

In the event of a pandemic or other college declared critical event that impacts the college's ability to proceed with academic course activities as planned, the college reserves the right to alter this course plan. In the event of a pandemic or other event, please refer to the college's home web page, www.ws.edu or call InfoConnect, (423) 581-1233 for further information.

Regular class attendance is a student's obligation. (See *the Walters State Catalog/Student Handbook*) If for some reason a student misses class, it is his or her responsibility to see the instructor regarding missed assignments and/or activities and to be prepared for the next class. Excessive absences may substantially lower the semester grade. The college requires the instructor to keep accurate records and to report when students are not attending class.

ALTERNATE TEACHING PLAN: Go to <https://elearn.ws.edu/> for links to class content.

DROP DEADLINE:

WEB RESOURCES: <http://www.ws.edu>, then click online icon for eLearn and STARNET.

ACCESS FULL SYLLABUS: <https://elearn.ws.edu>