

**WALTERS STATE COMMUNITY COLLEGE
COURSE SYLLABUS**

COURSE NAME AND NUMBER: Problem Solving, Geometry, and Statistics MATH 1420

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, Albert B. Bennett, Jr and L. Ted Nelson, 2007

REQUIRED TECHNOLOGY: TI-83 or TI-84 Graphing Calculator

CATALOG COURSE DESCRIPTION:

Students will use problem solving and logic to explore and develop concepts in geometry, measurement, probability, and statistics. These concepts will be explored using manipulative materials, collaborative activities, and technology. (Prerequisite: Two years of algebra 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. Classify, analyze, and measure 2- and 3-dimensional figures.
3. Analyze and solve quantitative geometric problems.
4. Solve problems using properties of congruent and similar figures.
5. Demonstrate estimation skills for metric and standard units.
6. Demonstrate an understanding of experimental and theoretical probability.
7. Collect, organize, display, and interpret data.
8. Construct and interpret graphs.
9. Analyze and interpret measures of central tendency and dispersion of data.
10. Use manipulatives, diagrams, and verbal explanations to demonstrate an understanding of concepts in geometry, measurement, and probability and statistics.

COURSE CONTENT:

Chapter 6: Decimals: Rational and Irrational Numbers

Section 6.3 Ratio, Percent, and Scientific Notation

Section 6.4 Irrational and Real Numbers

Chapter 7: Statistics

Section 7.1 Collecting and Graphing Data

Section 7.2 Describing and Analyzing Data

Section 7.3 Sampling, Predictions, and Simulations

Chapter 8: Probability

Section 8.1 Single-Stage Experiments

Section 8.2 Multistage Experiments

Chapter 9: Geometric Figures

Section 9.1 Plane Figures

Section 9.2 Polygons and Tessellations

Section 9.3 Space Figures

Section 9.4 Symmetric Figures

Chapter 10: Measurement

Section 10.1 Systems of Measurement

Section 10.2 Area and Perimeter

Section 10.3 Volume and Surface Area

Chapter 11: Motions in Geometry

Section 11.1 Congruence and Constructions

Section 11.2 Congruence Mappings (Optional)

Section 11.3 Similarity Mappings

INSTRUCTIONAL AND EVALUATION METHODS:

FINAL EXAM:

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 the Department of Services for Individuals with Disabilities in College Center (CCEN), Room 210 (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 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 nonaudible mode until after class, at which time calls can be received or checked. (See *the Walters State Catalog/Handbook*)

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:

In the event that classes cannot be taught in the regular classroom setting, students should go to eLearn (<https://elearn.ws.edu>) to access email, course content, and assignments.

DROP DEADLINE:

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

WEB RESOURCES:

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

<http://www.mhhe.com/bennett-nelson>, then click on Mathematics for Elementary Teachers: A Conceptual Approach 7/e and then Student Edition for Online Learning Center.