

**DEPARTMENT OF MATHEMATICS
COLLEGE OF SCIENCES
CENTRAL WASHINGTON UNIVERSITY
COURSE SYLLABUS SPRING 2011**

1. **MATH 250**

<u>Course Number</u>	<u>TIME/DAY</u>	<u>BLDG/ ROOM</u>	<u>INSTRUCTOR</u>
33299	10:00-10:50 MTWH	Hertz 120	Dr. Janet Shiver

2. **Textbook and Materials:**

- The text for this course is *a Problem Solving Approach to Mathematics*, tenth edition by Billstein, Liebeskind and Lott.
- Supplies necessary for the successful completion of this course include: colored pencils, calculator, 3 ring binder, compass, protractor, and ruler.

3. **Office Hours and Phone Numbers:**

Office: Bouillon 117

Phone: 963-2834

Email: shiverj@cwu.edu

Office hours: 11:00 – 11:50 or by appointment

4. **Course Description:** This course is designed for students who plan to teach at the elementary or middle grades level and who have declared education as their major course of study. This course focuses on an intuitive development of geometric ideas including point set Euclidean geometry, measurement, area, perimeter, volume, and transformational geometry. Students completing the course should develop precise mathematical language, improve their understanding of geometric concepts, and develop methods to teach geometry for understanding.

5. **Course Outcomes:** After completing this course you will be able to

- Express mathematical ideas orally and in writing
- Make and test conjectures, write simple proofs
- Formulate counterexamples
- Create and explain constructions
- Find the perimeter, area, and volume of geometric figures
- Use standard and non standard units of measure to solve problems
- Convert from one unit to another in standard and metric measurement systems
- Name two and three dimensional figures
- Demonstrate a knowledge of the relationship between parallel lines and angle measure
- Demonstrate a knowledge of the properties of triangles and special cases of triangles
- Demonstrate understanding of the sum of interior and exterior angles of polygons

- Explain and use the properties of quadrilaterals
- Explain and use the concept of similarity in geometry and real world problems
- Identify and create basic geometric transformations
- Identify and explain different types of symmetries

5. **Course Expectations:** Students will be expected to read the text **prior** to class, to complete all assigned problems and projects on time, keep a well organized notebook, and to seek outside assistance when difficulties are encountered. Homework should be NEATLY written **in pencil** and all supporting work must be shown.

6. **Absence Policy:** Regular attendance is essential for successful completion of this course. A student absent from a test or other graded assignment will be given a zero unless excused in advance by the instructor. Extenuating circumstances will be evaluated on a case- by- case basis. Please have supporting documentation available for review upon returning to class. *More than 4 absences from this class may result in a grade of F for the semester.* Students entering late or leaving prior to the end of the class period may be counted absent for that day.

7. **Grading Policy:** The course grade will be determined as follows:

Average of Unit Tests = 50%

Average of Homework/ notebook/labs/quizzes = 15%

Average of Projects = 15%

Final Exam = 20%

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
93- 100%	90- 92%	87- 89%	83- 86%	80- 82%	77- 79%	72- 76%	70- 72%	67- 69%	63- 66%	60- 62%	<60%

8. **Academic Honesty:** The integrity of students and their written and oral work is a critical component of the academic process. There are times when it is proper to get help from other and times when it is not. Feel free to ask others for help on homework, activities and take-home assignments and quizzes. During in-class quizzes and tests all work will be done individually. All written work submitted in this course must properly document all outside sources used. The submission of another's work as one's own is plagiarism, and will be dealt with using the procedures outlined in the Undergraduate Catalog.

9. **Disability Accommodations:** Any student requiring instructional modifications due to a documented disability should make an appointment to meet with me as soon as possible. An official copy of your "Confirmation of Eligibility for Academic Adjustments" from the Disability Support Services Office documenting the disability will be expected to receive such accommodations.

10. **Course Outline:** This schedule is a **rough** estimation of the time that will be spent on the following topics. This schedule may be modified by the instructor at any time during the course.

Week of	Topic
March 29	Geometry Basics (11-1, 11-3)
April 4	Quiz 1 , Two and Three Dimensional Figures (11-2 and 11-4)
April 11	Test 1 , Lines (12-5) Pythagorean Theorem (13-3),
April 18	Project 1 due April 21st , Constructions and Congruence (12-1, 12-2)
April 25	More Constructions (12-3) Similarity (12-4)
May 2	Project 2 due May 5th , Similarity (12-4) Test 2 , Systems of Measurement (13.1),
May 9	Quiz 3 , Perimeter, Circumference (13.1), area (13-2) Surface Area (13-4), Volume (13-5)
May 16	Volume (13-5) Test 3 Catch up!
May 23	Project 3 due May 26 , Transformations (14-1,14-2),
May 30	Quiz 4 , Size Transformations (14-3) Symmetry (14-4)
June 9th	Final Exam 8:00 – 10:00

11. **Projects:** Brief descriptions of the 3 possible projects (these may change or options may be given) for this course are listed below. A detailed description and rubric will be given out at a later time for each of the projects.

Project 1: Students will use their knowledge of two and three dimensional figures to create an age appropriate learning center for their classroom.

Project 2: Students will use their knowledge of basic constructions to construct the centers of a triangle.

Project 3: Students will use their knowledge of centers of triangles, area, surface area and volume to determine the measurements of a mystery polyhedral.

12. **FIRE!!** In the event of a fire alarm signal, students will exit the building in a quick and orderly manner through the nearest hallway exit and gather in an assigned area outside the building. Learn the floor plan and exits of this building. Do not use elevators. Crawl on the floor if you encounter heavy smoke. Assist disabled persons and others if possible without endangering your own life.