

**DEPARTMENT OF MATHEMATICS
COLLEGE OF SCIENCES
CENTRAL WASHINGTON UNIVERSITY
COURSE SYLLABUS WINTER 2014**

1. **MATH 250**

| <u>Course Number</u> | <u>TIME/DAY</u> | <u>BLDG/ ROOM</u> | <u>INSTRUCTOR</u> |
|----------------------|------------------|-------------------|-------------------|
| 12971 | 1:00 – 1:50 MTWH | Hertz 120 | Dr. Janet Shiver |

2. **Textbook and Materials:**

- There is no required textbook for this course. However, if you would like to have a book for reference purposes some choices are:
 - *A Problem Solving Approach to Mathematics*, eleventh edition by Billstein, Liebeskind and Lott.
 - *Mathematics for Elementary Teachers, A Contemporary Approach*, tenth edition by Musser, Peterson and Burger.
 - *Mathematics for Elementary Teachers*, third edition by Beckmann
- 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: 10:00 – 11:00 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 complete all assigned problems and projects on time (at the beginning of class), keep a well organized notebook, and to seek outside assistance when difficulties are encountered. Take home assignments will be accepted up to one day late but 20 points will be deducted from the grade received on the assignment for any late work. Late work is defined as anything handed in after the start of class. All Assignments should be NEATLY written **in pencil** and all supporting work must be shown to receive credit. Sloppy or incomplete work will not be graded and may receive a grade of zero.

6. **Absence Policy:** Regular attendance is essential for successful completion of this course. A student absent from a test or other class assignment will be given a **zero** unless excused in advance by the instructor. Extenuating circumstances such as illness or injury will be evaluated on a case-by-case basis but must be **accompanied by a doctor's note**. Please have supporting documentation available for review upon returning to class or you will not be allowed to make up the missed work. *More than 4 absences from this class may result in a grade of F for the semester.*

7. **Grading Policy:** The course grade will be determined as follows:
 Average of Unit Tests = 50%
 Average of Homework/ notebook/labs/quizzes/projects = 25%
 Attendance = 5% (0 absences – 100, 1 absence – 90, 2 absences – 80, etc.)
 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% | 73-76% | 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. Test dates are flexible and

| Week of | Topic | Notes |
|----------------|--|---|
| Jan 6 | Geometry Basics (11-1, 11-3), | |
| Jan 13 | Geometry Basics (11-1, 11-3) | |
| Jan 20 | Geometry Basics (11-1, 11-3) Two Dimensional figures Symmetry (14-4) | Martin Luther King Day- Jan 20 Test 1 |
| Jan 27 | Transformations (14-1,14-2), Size Transformations (14-3) | No Class – Jan 29 |
| Feb 3 | Constructions (12-1, 12-2, and 12 -3) | Quilting project Due – Feb 3rd |
| Feb 10 | Three Dimensional Figures (11-2 and 11-4)Systems of Measurement (13.1) | Construction project due Feb 12th Test 2 |
| Feb 17 | Pythagorean Theorem (13-3)Perimeter, Circumference (13.1) | Presidents day – Feb 17th Construction project due |
| Feb 24 | Area (13-2) Surface Area (13-4) and Volume (13-5) | Platonic Solids project due Feb 24 |
| March 3 | Volume (13-5) Congruence (12-1, 12-2) | Test 3 |
| March 10 | Congruence (12-1, 12-2) Similarity (12-4) | |
| March 17 | 12:00 – 2:00 | FINAL EXAM!!! |

11. **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.