ASSESSMENT OF STUDENT LEARNING FOR MATHEMATICS TEACHERS

MATH 250 | SPRING QUARTER 2014 | HERTZ 120 1-1:50 PM MONDAY –THURSDAY

INSTRUCTOR:

Dr. Mark Oursland
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COURSE DESCRIPTION:

Prerequisite MATH 164. This course in an intuitive approach to the geometry and measurement topics relative to the curriculum for elementary and middle schoolteacher candidates. The course standards are aligned with the Washington State Endorsement standards for elementary and middle school endorsement standards.

COURSE RATIONALE:

According to the *Principles and Standards for School Mathematics* (2000), "Through the study of geometry, students will learn about geometric shapes and structures and how to analyze their characteristics and relationships. Spatial visualization – building and manipulating mental representations of two– and three–dimensional objects and perceiving an object from different perspectives – is an important aspect of geometric thinking. Geometry is a natural place for the development of students' reasoning and justification skills, culminating in work with proof in the secondary grades. Geometric modeling and spatial reasoning offer ways to interpret and describe physical environments and can be important tools in problem solving. … The notion of building understanding in geometry across the grades, from informal to more formal thinking, is consistent with the thinking of theorists and researchers." (p. 41). It is aligned with State Endorsement, CTL, and state WAC 18A-270 standards.

COURSE STANDARDS:

Mathematical practices, knowledge, and skills: Demonstrate a deep conceptual understanding of the following CCSS-M by performing, explaining, and applying skills related to the following course standards. Objective lists aligned with these standards will be used for self-assessment and performance evaluation.

Standards for Mathematical Practices	Standards for Geometry and Measurement
• Make sense of problems and persevere in solving them. • Reason abstractly and quantitatively. • Construct viable arguments and critique the reasoning of others. • Model with mathematics. • Use appropriate tools strategically. • Attend to precision. • Look for and make use of structure. • Look for and express regularity in repeated reasoning.	• Understand congruence in terms of rigid motion. • Prove theorems involving triangle congruency and similarity. • Apply transformations and use similarity and congruence in mathematical situations. • Understand and perform geometric constructions physically and/or with technology. • Understand the Pythagorean Theorem and apply it to problem solving situations. • Solve real life and mathematical problems involving lines, angle measure, area, surface area, and volume. • Classify, visualize, and describe two-dimensional figures and three-dimensional objects as well as the relationship among them. • Apply geometric concepts to model real world situations.

COURSE RESOURCES:

Text: Modules to be supplied in class

Supplies: calculator, several paper folders, graph paper, a GOOD compass, protractor, ruler, 3-ring binder with 6 dividers/tabs, several plastic sleeves/pockets that fit in a binder, and colored pencils.

Canvas: Canvas is a Learning Management System, which we will use for our course gradebook and resources.

ASSIGNMENTS AND EVALUATION GUIDELINES:

Please remember that organization, neatness, and legibility count! Points will be deducted for late work at the discretion of the instructor, except take-home quizzes (must be completed same day as due).

Geometry Experience Paper (**10** points): See description and due date on handout.

Homework (**0** points): Homework aligned with the course objectives will never be due. It is for your benefit and questions from the homework in the modules will very likely appear on tests. If you need help with homework, arrange for help from classmates, the Math Center, or me.

Activities (**115** points): We will be doing a number of activities in class. If we do not complete them in class, you will be responsible for **finishing them outside of class**. These will be due by unit on the day of the test for that unit. Activities must be clearly labeled for full credit.

Portfolio (**50** points for compilation and explanation): I recommend a 3-ring binder with 6 sections labeled Introduction, Information, Modules, Activities, Quizzes/Tests, and Resources. You will organize and use the portfolio for self-assessment and reflection of your performance in meeting the course objectives.

Quizzes/Daily Grades (**125** points): Each item in this category will be worth 25 points. There will be at least 6 of these scores, which could include: quizzes and special in–class activities or presentations in class (announced or unannounced). At least 1(one) of the scores in this category will be dropped for a total of 125 points. **Make–up grades are not possible**.

Tests (**500** points): There are **three** tests covering 1–2 modules each and a comprehensive final, including both new and old material. The first three tests are 150 points each. The final is worth 200 points. Dates will be announced well in advance. Make-up tests will be allowed only for extraordinary circumstances that I **must know about in advance.** You must do your own work on in–class tests. Notes, cell phones, headphones, or similar items will not be allowed during testing situations. Calculators are allowed.

Assignment	Points
Geometry Experience Paper	10
Activities	115
Portfolio	50
Quizzes	125
Tests	500
Total Points	**800**

Grading Scale
93-100% = A, 90-93% = A-, 87-90% = B+, 83-87% = B, 80-83% = B- , 77-80% = C+, 73-77% = C, 70-73% = C-, 67-70% = D+, 63-67% = D, 60-63%, 0-60% = F   Please see the CWU Catalog for the eligibility for an incomplete (I).

Performance Expectations
Daily attendance is expected and considered a necessity for passing this course. It is also expected that your presence will <u>contribute to and never distract from the learning of others in the class</u>. As you prepare to become a teacher, you need to become accustomed to setting a good example for students. Attendance demonstrates professionalism and dedication. High quality work and organization demonstrate professionalism, as well. The use of cell phones and other like devices definitely distracts from your learning during class.

COURSE POLICIES:
Instructor Feedback/Communication
I will be reading the Discussion Boards and replying to messages occasionally. You will receive specific feedback on your Syllabus Draft and your Course Syllabus in the form of electronic comments appended to your electronic submission. I will use the Announcements tool in Blackboard to communicate changes to the course and other course information.

Suggestions for Success

To be successful, you must work hard and **be organized**. I encourage you to form study groups. You must also **attend** class, study regularly, take notes, and do the homework and activities. You must seek help before you are in trouble and/or too far behind. Never hesitate to ask for help from me, your classmates, or anyone else who can help. I am here to serve you and help you be successful. If you need help, decide what you need help with and write it down. If you are working on a problem unsuccessfully, write down the approaches you have tried. Then seek help with your paper in hand. Write down the helpful hints you receive. Finally, after you successfully complete this course, do not let this be your last course in mathematics. After you join the ranks as a teacher take more courses, attend workshops, read professional journals, attend conferences, and network with other teachers. Successful teachers continually renew themselves.

Feedback/Communication/Academic Honesty

There are times when it is proper to get help from others and times when it is not. Feel free to ask others for help on homework, activities, and take-home quizzes. You can only learn how to do something new by doing it correctly. During in–class tests, you must do your own work. Academic dishonesty will not be tolerated during testing situations.

Schedule

I will keep you informed of the schedule and assignments and you can record them on the calendar I will hand out and be on Canvas. Keep the calendar in your notebook and review Canvas frequently.

UNIVERSITY POLICIES:
Academic Integrity

Academic Integrity is a standard set for this course. Students are expected to complete all of their coursework and assignments using their original words and ideas and will properly cite the words and ideas of others. Students are also expected to be honest in their interactions with the instructor. A student found to have not upheld these expectations is subject to failing this course and shall be subject to disciplinary action or sanction. The University catalog defines the term "academic dishonesty" in all its forms including, but not limited to:

- cheating on tests;
- copying from another student's test paper;
- using materials during a test not authorized by the person giving the test;
- collaboration with any other person during a test without authority;
- knowingly obtaining, using, buying, selling, transporting, or soliciting in whole or in part the contents of an unadministered test or information about an unadministered test;
- bribing any other person to obtain an unadministered test or information about an unadministered test; substitution for another student or permitting any other person to substitute for oneself to take a test; plagiarism" which shall mean the appropriation of any other person's work and the unacknowledged incorporation of that work in one's own work offered for credit;
- "collusion" which shall mean the unauthorized collaboration with any other person in preparing work for credit.

Documented incidences of Academic Dishonesty will be referred to Office of the Vice President of Student Affairs.

Special Needs

Students with disabilities who wish to set up academic adjustments in this class should give me a copy of their "Confirmation of Eligibility for Academic Adjustments" from the Disability Support Services Office as soon as possible so we can discuss how the approved adjustments will be implemented in this class. Students without this form should contact the Disability Support Services Office, Bouillon 205, or dssrecept@cwu.edu or 963–2171.

Good Luck in this course! I hope you find it enjoyable and never hesitate to talk to me if you have any problems.