

University of West Georgia

MATH 3703: Geometry for P-8 Teachers I

Summer 2020

Course Syllabus

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Class Location: 307 Boyd Building

Class Meeting: Online

Catalog Description:

This course has a special emphasis for teachers of grades P-8. It broadens understanding of the fundamental concepts of **algebra** with particular **attention to specific methods** and materials of instruction.

Required Books:

Bilstein, R., Libeskind, S., & LoU, J. (2020). *A problem solving approach to mathematics for elementary school teachers*, (13th). Boston, MA: Pearson Addison-Wesley.

Student Learning Outcomes:

The teacher candidates should be able to do the following:

- Define point, line, and angle (such as interior angle, exterior angle, parallel lines, perpendicular lines, collinear points) and their associated properties and use them correctly in problem solving.
- Find area, perimeter, surface area, and volume of two- and three-dimensional figures (such as triangle, rectangle, parallelogram, circle, rectangular prism, cone, and pyramid).
- Describe similar and congruent figures and be able to solve problems using the property of similarity.
- Be able to determine interior and exterior angles and line measures of polygons using properties.
- State Pythagorean Theorem and use the theorem in various problems.
- Know rotation, translation, and size transformation of geometric figures and use them in problem solving.
- Define important mathematical ideas such as slope and intercepts and solve problems regarding rotation and translation.

Evaluations and Grading Procedures:

Homework and quizzes (30%): There will be 2-3 homework assignments for each chapter. Homework assignments should be done after completing all assigned readings and finishing the worked examples. **NO LATE HOMEWORK WILL BE ACCEPTED.**

Exams (45%): There will be 3 one-hour exams, and each exam will contribute 15% towards the final grade. Unexcused absences from an exam will result in a grade of zero (0) for that exam.

Final Exam (25% of the grade): A **comprehensive** final exam will be given during Finals Week.

Letter grades will be assigned by the following scale:

90-100%	A
80-89%	B
70-79%	C
60-69%	D

Below 60% E

Make-up and extra credit policy: There will be NO make-ups for HW assignments, quizzes, or exams will be allowed. **Please note that NO extra credit will be given!** Points can be earned only as stated above.

University policies: Please refer to university's policy at [http:// tinyurl.com/UWGSyllabusPolicies](http://tinyurl.com/UWGSyllabusPolicies)

This is a tentative schedule of assignments and topics to be covered. Changes will be made as needed.

Week 1: Sections 11.1, 11.2, 11.3 (Introductory Geometry)

Week 2: Exam 1 review; Exam 1

Week 3: Sections 12.1, 12.2, 12.3, 12.4 (Congruence and Similarity with Constructions)

Week 4: Exam 2 review; Exam 2

Week 5: Sections 13.1, 13.2, 13.3 (Area, Pythagorean Theorem, and Volume)

Week 6: Exam 3 review; Exam 3

Week 7: Final exam review

Week 8: Final exam