

MATH 3703
Geometry For P-8 Teachers

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Office hours: 10:50-12:30; and 1-2 (T, Th) (Carrollton)
11:30-2:00 (F) (Newnan)

Textbook:

Billstein, R., Libeskind, S., & Lott, J. (2012). *A Problem solving approach to mathematics for elementary school teachers*, 11th Edition. Pearson Addison-Wesley: Boston, MA.

Overview of the Course: This course is designed to help prospective P-8 teachers develop mathematical understanding of elementary and mid-grade level mathematics through collaboration and problem solving. In this course, students will have opportunities to reconstruct geometry concepts through problem solving and use those concepts to solve realistic problems. Although there will be some lecturing at times, there will be ample opportunities for students to reconstruct mathematical ideas by communicating and sharing your mathematical ideas with classmates.

Goals and Objectives of the Course include, but not limited to,

- 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.

Attendance:

- Students must be **punctual** and **always** attend class. There could be unforeseen emergencies that do come up. However, anyone missing classes **FIVE times or more** during the semester **might not** receive a credit for the course. Medical excuses are only accepted when provided with documentation.
- Students cannot enter the classroom once the class starts and should wait **SILENTLY** outside of the classroom until the door is reopened. In such cases, students will be recorded as tardy. The first two tardiness combined will be considered as one absence. After two tardiness, each tardiness will be considered as an absence.
- Students who disrupt the class for any reason will be escorted to outside of the classroom, disallowed to return for the day, and marked absent.
- Students who have 0 or 1 absence (with **NO** exception even for medical issues) will be given an extra credit of 5 points toward the final grade.

Use of Calculator and Other Electronics: Calculator is the only electronic device students can use in the classroom. **Calculator as a phone accessory is NOT allowed.** In fact, in no circumstance are students allowed to use any types of electronics other than calculators. Students who do not abide by this rule will be escorted to outside of the classroom, disallowed to return for the day, and marked absent.

Grading: Grading: Your final grade in the course will be based on your performance on quizzes, a mid-term exam, a final exam, and the extra credit of 5 points.

Quiz	30 pts
Midterm	30 pts
Final Exam	40 pts
(Extra Credit)	5 pts
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	105 pts

- A quiz will be given on Thursdays, in particular in the weeks 2, 3, 4, 5, 6, 9, 10, 11, 12, and 13. Students will be allowed to drop two lowest scores (**No makeup quiz in any case**).
- The midterm exam will be on Thursday of Week 7. The final exam will be on the final exam week. (Check the date and time on the UWG academic calendar.) No make-up exam is permitted except for medical emergencies that can be documented.
- Students are expected to do homework in a timely manner. However, homework will be neither collected nor graded.
- Final Course Grade:

A	90-105
B	80-89.99
C	70-79.99
D	60-69.99
F	Below 60

Common Language Link

As a student at UWG, you need to understand school policies and codes. Please read the information on <http://tinyurl.com/UWGSyllabusPolicies>

Tentative Schedule

Week	Materials
1 & 2	Exploration 1: Textbook-Ch. 11.1 & 11.4
3 & 4	Exploration 2: Textbook-Ch. 11.2, 11.3, & 14.1
5, 6, & 7	Exploration 3: Textbook-Ch. 12.1, 12.2, 12.3 & 12.4 Midterm in Week 7
8, 9, & 10	Exploration 4: Ch. 13.1, 13.2,, 13.3, & 13.4
11, 12, & 13	Exploration 5: Textbook-Ch. 14.2, 14.3, 14.4 & 14.5
14 & 15	Review