

MATH 3703

Foundations of Numbers and Operations

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Office hours: 12:15-2:15 (T & Th, Carrollton)
11:30-12:30 (F, Newnan)

Textbook:

Billstein, R., Libeskind, S., & Lott, J. (2015). *A Problem solving approach to mathematics for elementary school teachers*, 12th Edition. Pearson Addison-Wesley: Boston, MA.

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 and Classroom Rules:

- 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 reopen. 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 one absence. Students are responsible for reporting their attendance to the professor once the attendance roll is called.
- 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.

Use of Electronics: Students cannot use any electrical device other than scientific calculators in the classroom. 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: The final grade in the course will be based on the performance on homework assignments (10 Points), 3 mid-term exams (20 points each) and a final exam (30 points), totaling 100 points.

- Homework will be assigned regularly and collected one class day prior to each midterm exam. Homework grades will be based on the organization (numbers should be in order), completeness, and correctness. Homework must include all the necessary work leading to the answer. Late homework won't be accepted.

Homework Grading Rubric

3 Points: More than 75% correctness and completeness

2 Points: More than 50% correctness and completeness

1 Point: More than 25% correctness and completeness

0 Point: Less than 25% correctness and completeness

- There will be 4 midterm tests and the lowest midterm score will be dropped. **NO** make-up exam will be provided in any case, **including medical emergencies**.
- If students miss the final exam, the final exam score will be 0, with no exception.

<u>Grade Components and Dates</u>			<u>Final Course Grade</u>	
Homework:	10%		A	90-100
Midterm 1	20%*	Jan. 30 th	B	80-89.99
Midterm 2	20%*	Feb 20 th	C	70-79.99
Midterm 3	20%*	Mar 13 th	D	60-69.99
Midterm 4	20%*	April 19 th	F	Below 60
Final Exam	30%	TBA		

* The lowest midterm will be dropped.

Common Language Link

https://www.westga.edu/administration/vpaa/assets/docs/faculty-resources/common_language_for_course_syllabi_v2.pdf

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