

Midland College Syllabus

2021-2022

MATH 1351

Mathematics for Teachers II

3 Semester Credit Hours

(3 Lecture/0 Lab)

Instructor Information:

Instructor: [Click here to enter text.](#)

Phone: [Click here to enter text.](#)

Office Hours: [Click here to enter text.](#)

Office: [Click here to enter text.](#)

Email: [Click here to enter text.](#)

Notice: Students MUST actively participate by completing an academic assignment required by the instructor by the official census date. Students who do not actively participate in an academically-related activity may be reported as never attended and dropped from the course.

Course Description:

This course is intended to build or reinforce a foundation in fundamental mathematics concepts and skills. It includes the concepts of geometry, measurement, probability, and statistics with an emphasis on problem solving and critical thinking. Prerequisite: A C or better in MATH 1314 or 1414.

A teaching demonstration/project is required for this course. Participation in the evening math night is required to earn credit.

Text, References and Supplies:

- Mathematical Reasoning for Elementary School Teachers, 7th ed., Pearson/Addison/Wesley. (MyMathLab with Pearson eText.)
- 978-0-134-76675-1
- Computer access
- Scientific calculator

Student Learning Outcomes

After successfully completing this course the students should be able to:

1. Apply fundamental terms of geometry such as points, lines, and planes to describe two and three dimensional figures.
2. Make and test conjectures about figures and geometric relationships.
3. Use a variety of methods to identify and justify congruency and similarity of geometric objects.
4. Perform geometric transformation.
5. Demonstrate fundamental probability techniques and apply those techniques to solve problems.
6. Explain the use of data collection and statistics as tools to reach reasonable conclusions.

7. Recognize, examine, and utilize the basic principles of describing and presenting data.
8. Perform measurement processes and explain the concept of a unit of measurement.
9. Develop and use formulas for the perimeter, area, and volume for a variety of figures.

Student Contributions, Responsibilities and Class Policies:

Students will be expected to comply with the policies outlined in the [Midland College Catalog](#). Instructor policies concerning attendance and academic behavior are consistent with the policies in the catalog. Regular attendance is required to do well in this class.

Students will be evaluated based on the results of assessments outlined in the syllabus and Instructor Handout.

Attendance Policy:

It is the responsibility of the students to know the policies and procedures associated with absences. These policies are set by instructors. Excused absences may include, but are not limited to, illness, severe weather, and death in the family. Instructors will determine whether or not an absence is excused. Please visit the [Midland College Catalog](#)

Withdrawal Policy:

Students who have enrolled in a Texas public institution of higher education as a first-time freshman in fall 2007 or later are permitted to drop no more than six courses during the entire undergraduate career. This limit includes all transfer work taken at a Texas institution of higher education and to second baccalaureate degrees. This statute was enacted by the State of Texas in spring 2007 (Texas Education Code 51.907). Any course that a student drops after Census Day is counted toward the six-course limit if "(1) the student was able to drop the course without receiving a grade or incurring an academic penalty; (2) the student's transcript indicates or will indicate that the student was enrolled in the course; and (3) the student is not dropping the course in order to withdraw from the institution." Please visit the [Midland College Catalog](#)

Scholastic Dishonesty:

Midland College does not tolerate scholastic dishonesty or academic misconduct in any form. Please read the Student Rights & Responsibilities section in the [Midland College Catalog](#) for more information.

Evaluation of Students:

Students will be evaluated based on grades which may including the following but are not limited to:

Assessments	Percentage of Grade	Grade Range
Exams	35-45%	90-100 A
Quizzes/Activities/Assignments	0-20%	89-80 B
Teaching Demo/Project	15-30%	79-70 C
Final Exam	20-25%	69-60 D 59-0 F

Students will be evaluated based on the results of examinations given throughout the semester. Your lecture instructor will inform you on the first day of class as to the tentative dates and content for each exam. Students are expected to complete each exam. Your instructor will inform you on the first day of class as to make-up procedures for missed exams and any exemption procedures if they apply (See Instructor Handout).

Course Schedule:

This class meets for 3 contact hours per week. For a tentative schedule of the class meetings and material to be covered during those meetings, please refer to the schedule distributed to each student on the first class meeting (See Instructor Handout).

Course Outline:

From the text, select topics from chapters 9-14 will be covered. Appropriate assignments from the text and companion website will be used to enhance concepts. In addition to the text material, students will participate in activities designed to reinforce concepts and demonstrate methods for classroom use, explore extensions in critical thinking, and use individual and collaborative learning to broaden mathematical foundation.

Geometric Figures

- 9.1 Figures in the Plane
- 9.2 Curves and Polygons in the Plane
- 9.3 Figures in Space

Measurement: Length, Area, Volume

- 10.1 The Measurement Process
- 10.2 Area and Perimeter
- 10.3 The Pythagorean Theorem
- 10.4 Volume
- 10.5 Surface Area

Transformations, Symmetries, and Tilings

- 11.1 Rigid Motions and Similarity Transformations
- 11.2 Patterns and Symmetries
- 11.3 Tilings and Escher-like Designs

Congruence, Constructions, and Similarity

- 12.1 Congruent Triangles
- 12.2 Constructing Geometric Figures
- 12.3 Similar Triangles

Statistics

- 13.1 Organizing and Representing Data
- 13.2 Measuring the Center and Variation of Data

Probability

- 14.1 Experimental Probability
- 14.2 Applications of Counting Principles to Probability
- 14.3 Permutations and Combinations
- 14.4 Odds, Expected Values, Geometric Probability, and Simulations

Non-Discrimination Statement

Midland College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following individual has been designated to handle inquiries regarding the non-discrimination policies:

Tana Baker

Title IX Coordinator/Compliance Officer
3600 N. Garfield, SSC 131
Midland, Texas 79705
(432) 685-4781
tbaker@midland.edu

For further information on notice of non-discrimination, visit the ED.gov Office of Civil Rights website, or call 1 (800) 421-3481.

Americans with Disabilities Act (ADA) Statement:

Midland College provides services for students with disabilities through Student Services. In order to receive accommodations, students must visit www.midland.edu/accommodation and complete the Application for Accommodation Services located under the Apply for Accommodations tab. Services or accommodations are not automatic, each student must apply and be approved to receive them. All documentation submitted will be reviewed and a "Notice of Accommodations" letter will be sent to instructors outlining any reasonable accommodations.

Math & Science Division Information:

Division Office: AHSF 124
Division E-Mail: mns@midland.edu

(432) 685-4561

Department Chair: Dr. Krista Cohlma
Dean: Dr. Miranda Poage
Secretary: Sarah Anderson
Clerk: Liliana Orcutt

(432) 685-4541

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