Midland College
Syllabus
2008-09
MATH 1351
Fundamentals of Mathematics II
3 Semester Credit Hours
(3 Lecture/0 Lab)

Course Description: Concepts of geometry, probability, and statistics, as well as applications of the algebraic properties of real numbers to concepts of measurement with an emphasis on problem solving and critical thinking. This course is designed specifically for students who seek middle grade (4-8) teacher certification. Prerequisite: Requires a “C” or greater in Math 1350, or “C” or greater in Math 1314 (College Algebra) or its equivalent. Course Fee. (27.0101.6019)


Course Goals/Objectives: After successfully completing this course the students should be able to:

1. Use the language of mathematics.
2. Understand basic number theory, including properties of natural numbers, integers, rational, and real numbers.
3. Understand figures in a plane and in space.
4. Identify two-and three dimensional shapes.
5. Connect two-and three-dimensional shapes to mathematical formulas.
6. Work with and understand measurement including process, systems, length, area, and volume.
7. Understand standard and non-standard units.
8. Use counting techniques, and determine probability of simple and complex events.
9. Organize, represent and interpret data.
10. Understand measures of central tendency and variability.
11. Use coordinate system to find distance and slope, and to plot equations.
12. Understand congruence and similarity of triangles.
13. Create basic Euclidian constructions.
15. See and understand connections in learning mathematics.

Student Contributions and Class Policies: Students are expected to attend class regularly; they may be dropped if they have more than six absences in a MWF class, or more than four absences in a TT class. Students are expected to behave in a manner
that will not interfere with the learning process.

**Evaluation of Students:**

Students will be evaluated based, as follows:

- 10 - 20% class activities
- 40 - 60% exams
- 10 - 30% final exam
- 10 - 20% projects.

Grade ranges are:
- 90-100 for an A,
- 89 for a B,
- 79 for a C,
- 69 for a D,
- 0- 59 for an F.

The normal grading scale is in accordance with the Midland College Faculty Handbook. Any grade ranges that differ from these should be noted in the individual instructor’s grade book.

**Course Schedule:**

From the text, topics from chapters 6, 12 and 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.
Intellectual Competencies:

1. Reading - Understanding the material incorporated in the text used in this course will require the student to analyze and interpret various mathematical concepts.

2. Listening - The primary teaching methods used in this course are discussion and lecture. Understanding the oral presentation of material will require the student to analyze and interpret various mathematical concepts.

3. Critical Thinking - Critical thinking, as exemplified by problem solving, is inherent in the study of any scientific discipline. Mathematical problems will be considered, discussed, and analyzed in this course.

ADA Statement:

Any student who, because of a disabling condition, may require some special arrangements in order to meet course requirements should contact the instructor as soon as possible. These conditions may include documented physical or educational disabilities. Please be aware that services or accommodations are not automatic. Each student must request them and secure the proper authorizations.

Exemplary Objectives:
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<tr>
<th>Competency</th>
<th>Course Number</th>
<th>Course Title</th>
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<tbody>
<tr>
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<td>2. To represent and evaluate basic mathematical information verbally, numerically, graphically and symbolically.</td>
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<td>3. To expand mathematical reasoning skills and formal logic to develop convincing mathematical arguments.</td>
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<td>4. To use appropriate technology to enhance mathematical thinking and understanding and to solve mathematical problems and judge the reasonableness of the results.</td>
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<td>5. To interpret mathematical models such as formulas, graphs, tables and schematics and draw inferences from them.</td>
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<td>7. To develop the view that mathematics is an evolving discipline, interrelated with human culture, and understanding its connections to the other disciplines.</td>
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<tr>
<th>Instructor Information:</th>
<th>Name:</th>
<th>Dr. Kay Hodge</th>
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<tr>
<td></td>
<td>Office:</td>
<td>103 AHSF</td>
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<tr>
<td></td>
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<td>Hours:</td>
<td>Posted on Office Door and on BlackBoard</td>
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<tr>
<td></td>
<td>Division Dean:</td>
<td>Dr. Margaret Wade, 125 SF, 685-4615</td>
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</tbody>
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|                        | Division Secretary: | Norma Duran, 124 SF, 685-4612  
Brenda Smith, 108 SF, 685-6413 |