Note:

Course content may be changed, term to term, without notice. The information below is provided as a guide for course selection and is not binding in any form, and should not be used to purchase course materials.
COURSE SYLLABUS

MATH 217
ELEMENTARY GEOMETRY

COURSE DESCRIPTION
A development of basic concepts of elementary geometry including area, volume, compass and straight-edge constructions, polyhedra, tessellations, motions in the physical world, transformations, congruence and similarity.

RATIONALE
Geometry, probability, and statistics along with arithmetic skills have long been recognized as important ingredients in determining how well an individual functions in society. In today’s highly complex world, mathematical understanding is more important than ever and is a prerequisite to successful study in many fields. A primary purpose of this course is to provide students with grounding in the rudiments of mathematics that will enable them to successfully cope with the content of modern elementary mathematics.

I. PREREQUISITE
For information regarding prerequisites for this course, please refer to the Academic Course Catalog.

II. REQUIRED RESOURCE PURCHASE
Click on the following link to view the required resource(s) for the term in which you are registered: http://bookstore.mbsdirect.net/liberty.htm

III. ADDITIONAL MATERIALS FOR LEARNING
A. Computer with basic audio/video output equipment
B. Internet access (broadband recommended)
C. Microsoft Office

IV. MEASURABLE LEARNING OUTCOMES
Upon successful completion of this course, the student will be able to:
A. State and apply definitions and theorems related to the various concepts of geometry, probability, and statistics.
B. Identify two- and three-dimensional geometric figures as well as their properties and relationships.
C. Demonstrate understanding of the Pythagorean Theorem and its applications.
D. Construct geometric figures and translations using a straight-edge, compass, and protractor.

E. Show congruence and similarity of geometric figures using definitions, theorems, and constructions.

F. Compute length, area, surface area, and volume of geometric figures using English and metric units.

G. Construct graphical representations of statistical data, e.g., box and-whisker, histogram, and stem-and-leaf.

H. Compute basic probability, measures of central tendency, and measures of dispersion and variation.

V. **CORE COMPETENCY LEARNING OUTCOMES**

A. Solve problems (including word problems) utilizing arithmetic concepts and algebraic equations. (Math)

B. Interpret information presented in various graphs and diagrams. (Math)

C. Solve problems using insight or logical reasoning. (Math)

VI. **COURSE REQUIREMENTS AND ASSIGNMENTS**

A. Textbook readings and lecture presentations

B. Course Requirements Checklist

   After reading the Course Syllabus and [Student Expectations](#), the student will complete the related checklist found in Module/Week 1.

C. Discussion Board Forums (2)

   Discussion boards are collaborative learning experiences. Therefore, the student is required to provide a thread in response to the provided prompt for each forum. Each thread must be at least 200 words and demonstrate course-related knowledge. In addition to the thread, the student is required to reply to 2 other classmates’ threads. Each reply must be at least 100 words.

D. Homework (12)

   The student will complete 12 MyMathLab homework assignments with varying amounts of questions. The student will have 3 attempts to answer each question.

E. Projects (2)

   In Project 1, the student will have an opportunity to gather educational data and display the results using an appropriate graph form. The student will then prepare an analysis of his or her results in at least 150 words.

   In Project 2, the student will develop a learning game or activity that teaches a geometry concept from chapters 11–13. The activity must be appropriate to a certain grade level and identify learning outcomes and related VA SOLs as well
as a time schedule. The student will also prepare and provide any manipulatives or worksheets that may be required for the learning activity.

F. Exam Reviews (4)

Each Exam Review will cover the Reading & Study material for the assigned modules/weeks. Each Exam Review will contain multiple-choice and short answer questions and will be completed using MyMathLab.

G. Quizzes (6)

Each quiz will cover the Reading & Study material for the assigned modules/weeks. Each quiz will be open-book/open-notes and have a 1-hour time limit.

H. Exams (3)

Each exam will cover the Reading & Study material for the assigned modules/weeks. Each exam will be open-book/open-notes and have a 1-hour time limit. Each Exam will contain multiple-choice and short answer questions and will be completed using MyMathLab.

I. Final Exam

The Final Exam will cover the Reading & Study material for the assigned modules/weeks. The exam will be open-book/open-notes and have a 1-hour time limit. The Final Exam will contain multiple-choice and short answer questions and will be completed using MyMathLab.

VII. COURSE GRADING AND POLICIES

A. Points

<table>
<thead>
<tr>
<th>Course Requirement</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion Board Forums (2 at 40 pts ea)</td>
<td>80</td>
</tr>
<tr>
<td>Homework (12 at 10 pts ea)</td>
<td>120</td>
</tr>
<tr>
<td>Projects (2 at 40 pts ea)</td>
<td>80</td>
</tr>
<tr>
<td>Quizzes (6 at 25 pts ea)</td>
<td>150</td>
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<tr>
<td>Exam Reviews (4 at 10 pts ea)</td>
<td>40</td>
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<tr>
<td>Exams (3 at 125 pts ea)</td>
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<tr>
<td>Final Exam</td>
<td>155</td>
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<tr>
<td><strong>Total</strong></td>
<td>1010</td>
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</table>

B. Scale

A = 900–1010  B = 800–899  C = 700–799  D = 600–699  F = 0–599

C. Late Assignment Policy

If the student is unable to complete an assignment on time, then he or she must contact the instructor immediately by email.

Assignments that are submitted after the due date without prior approval from the instructor will receive the following deductions:
1. Late assignments submitted within one week of the due date will receive a 10% deduction.

2. Assignments submitted more than one week late will receive a 20% deduction.

3. Assignments submitted two weeks late or after the final date of the course will not be accepted.

4. Late Discussion Board threads or replies will not be accepted.

   Special circumstances (e.g. death in the family, personal health issues) will be reviewed by the instructor on a case-by-case basis.

D. Disability Assistance

   Students with a documented disability may contact Liberty University Online’s Office of Disability Academic Support (ODAS) at LUOODAS@liberty.edu to make arrangements for academic accommodations. Further information can be found at www.liberty.edu/disabilitysupport.
## Course Schedule

**MATH 217**


<table>
<thead>
<tr>
<th>Module/Week</th>
<th>Reading &amp; Study</th>
<th>Assignments</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Billstein et al.: sections 9.1–9.2 2 presentations MyMathLab Videos</td>
<td>Course Requirements Checklist  Class Introductions  Homework 9.1–9.2 Quiz 1</td>
<td>10 0 10 25</td>
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<td>2</td>
<td>Billstein et al.: sections 9.3, 10.1 1 presentation MyMathLab Videos</td>
<td>Homework 9.3, 10.1 Quiz 2</td>
<td>10 25</td>
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<td>3</td>
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<td>Homework 10.2–10.3 Project 1</td>
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<td>4</td>
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<td>10 25</td>
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<td>5</td>
<td>Billstein et al.: sections 9.1–9.3, 10.1–10.4</td>
<td>Exam 1 Review Exam 1</td>
<td>10 125</td>
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<td>6</td>
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<td>40 10</td>
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<tr>
<td>MODULE/ WEEK</td>
<td>READING &amp; STUDY</td>
<td>ASSIGNMENTS</td>
<td>POINTS</td>
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<td>Exam 2 Review, Exam 2</td>
<td>10/125</td>
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<td>Homework 13.3–13.4, Project 2</td>
<td>10/40</td>
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<td>16</td>
<td>Billstein et al.: Cumulative Review</td>
<td>Final Exam Review, Final Exam</td>
<td>10/155</td>
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</tbody>
</table>

TOTAL 1010

DB = Discussion Board

**NOTE:** Each course module/week (except Module/Week 1) begins on Tuesday morning at 12:00 a.m. (ET) and ends on Monday night at 11:59 p.m. (ET). The final module/week ends at 11:59 p.m. (ET) on **Friday**.