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Instructor Information

Instructor Information will be available on the first day of class.

Name: TBA
DCCCD Email: TBA
Office Phone: TBA
Office Location: TBA
Office Hours: TBA
Division Office and Phone: STEM Division, M217, 972-860-5211

Course Information

Course Title: Fundamentals of Mathematics I
Course Number: MATH 1351
Section Number: TBA
Semester/Year: Summer 2020
Credit Hours: 4
Class Meeting Time/Location: This course can be completed entirely online; no campus visits are required.

Certification Date: Thursday, July 9, 2020

Last Day to Withdraw: Wednesday, July 29, 2020

**Course Prerequisites**

MATH 1350 or equivalent

**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 elementary and/or middle grade teacher certification.

**Required Course Materials**

**MyMathLab Access Code**

All work for the course is completed in [MyMathLab](https://my.mathlab.com) (MML). The MyMathLab Access Code will provide access to MyMathLab, which includes an electronic copy of the text, video instruction, and many other helpful features.

ISBN: 9780134856926

**Temporary Access to MyMathLab**

MyMathLab provides a Temporary Access Code. This code gives students temporary access to MyMathLab for a two-week period. Once the code expires, students will be locked out of their MyMathLab account until a regular Student Access Code is purchased. It is highly recommended that students purchase the regular Student Access Code BEFORE the two weeks expire to prevent interruptions in their MyMathLab account. Pearson developed the Temporary Access Code to help students receiving financial aid. The availability of this service will depend on its ethical use by instructors and students and may be discontinued at the discretion of Pearson at any time. Students completing the entire course using the Temporary Access Code will receive a grade of F regardless of course performance. A regular MyMathLab Student Access Code must be purchased in order for students to receive a grade based on course performance.

Note: A student of this institution is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.
Technology Requirements

Students must have an active e-mail account and regular access to a computer with a reliable internet connection and an integrated or USB connected webcam. Students with a Chromebook must have access to a tablet or different computer with a reliable internet connection and a webcam in order to take assessments. The dates of these assessments can be found in the Course Calendar. Students should perform the Browser Check on the MML Home Screen upon logging in and download any needed items. Failure to download the necessary items may result in errors viewing problems as well as the eText.

Optional Course Materials

Calculator

Graphing calculators (TI-83/84) are recommended in MATH 1351.

Textbook

An eText is included with the MyMathLab Access Code. Students also have the option of purchasing a loose-leaf copy of the text through the Menu in MyMathLab. Students wishing to purchase a hard copy of the text should refer to the following information:

Author: Billstein, Libeskind, Lott
Title: A Problem-Solving Approach to Mathematics for Elementary School Teachers
Edition: 12th Ed.
Publication Year: 2019
Publisher: Pearson
ISBN: 9780135183885

Course Outline

There are 31 Homework assignments in the course. Each homework assignment corresponds with a section of the text.

Chapter 8 – Real Numbers and Algebraic Thinking

8.1 Real Numbers
8.2 Variables
8.3 Equations
8.4 Functions
8.5 Equations in a Cartesian Coordinate System

Chapter 9 – Probability

9.1 Determining Probabilities
9.2 Multistage Experiments and Modeling Games
9.3 Simulations and Applications in Probability
9.4 Counting Techniques in Probability

Chapter 10 – Data Analysis/Statistics: An Introduction
10.1 Designing Experiments/Collecting Data
10.2 Displaying Data: Part I
10.3 Displaying Data: Part II
10.4 Measures of Central Tendency and Variation
10.5 Abuses of Statistics

Chapter 11 – Introductory Geometry
11.1 Basic Notions
11.2 Curves, Polygons, and Symmetry
11.3 More about Angles
11.4 Geometry in Three Dimensions

Chapter 12 – Congruence and Similarity with Constructions
12.1 Congruence through Constructions
12.2 Additional Congruence Theorems
12.3 Additional Constructions
12.4 Similar Triangles and Other Similar Figures

Chapter 13 – Congruence and Similarity with Transformations
13.1 Translations and Rotations
13.2 Reflections and Glide Reflections
13.3 Dilations
13.4 Tessellations of the Plane

Chapter 14 – Area, Pythagorean Theorem, and Volume
14.1 Linear Measure
14.2 Areas of Polygons and Circles
14.3 The Pythagorean Theorem, Distance Formula, and Equation of a Circle
14.4 Surface Area
14.5 Volume, Mass, and Temperature

Graded Work
The tables below provide a summary of the graded work in this course and an explanation of how your final course grade will be calculated. The student enrolled in the course must be the person completing course work.

Students should expect to spend a minimum of 4 hours each day, five days a week, working in the course.

Summary of Graded Work
### Course Requirement | Percentage of Final Grade
--- | ---
Homework | 30%
Chapter Quizzes | 20%
Midterm Exam | 25%
Final Exam | 25%

**TOTAL: 100%**

Throughout the course, your current grade can be found in your MML Gradebook.

### Final Grade

<table>
<thead>
<tr>
<th>Percentages</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100%</td>
<td>A</td>
</tr>
<tr>
<td>80-89.9%</td>
<td>B</td>
</tr>
<tr>
<td>70-79.9%</td>
<td>C</td>
</tr>
<tr>
<td>60-69.9%</td>
<td>D</td>
</tr>
<tr>
<td>0-59.9%</td>
<td>F</td>
</tr>
</tbody>
</table>

### Description of Graded Work

#### Homework Assignments

There are 31 homework assignments in this course. Students must correctly complete at least half of the problems in a homework section to move on to the next assignment.

Homework has both a Due Date and a Final Submission Date. Students may work on homework after the Due Date. Homework completed after the Due Date is subject to a 5% per day per question late penalty. The late penalty for homework does not affect a student’s ability to move on to the next assignment. After the Final Submission Date, Homework will no longer be available. Homework not completed by the Final Submission Date will receive a score of zero.

Due Dates and Final Submission Dates for homework can be found in the [Course Calendar](#).

#### Quizzes

There are seven quizzes in this course, each covering a Chapter of work. Students must correctly complete at least half of the problems in each section of work in a Chapter in order to take the Quiz over the Chapter.
Students are allowed two attempts on quizzes. If a student correctly completes 70% or more on each homework assignment in a chapter, they will be allowed to take both the 1st and 2nd attempts on that Chapter Quiz without working needing to complete additional work. If a student is unable to get all homework assignments in a chapter above 70%, they will need to work on the “What did I miss on Chapter # Quiz”, and get that assignment up to at least 70% to open your 2nd attempt on that quiz.

If a student uses both attempts on a quiz, the higher attempt is used in grade calculations. The second attempt is optional, and the “What did I miss on Chapter # Quiz” assignment will not be used in grade calculations.

Quizzes have both a Due Date and a Final Submission Date. Students may work on Quizzes after the Due Date. Quizzes completed after the Due Date are subject to a 5% per day per question late penalty. After the Final Submission Date, quizzes will no longer be available. Quizzes not completed by the Final Submission Date will receive a score of zero.

Due Dates and Final Submission Dates for quizzes can be found in the Course Calendar.

**Midterm and Final Exam**

There are two Exams in this course. The Midterm Exam covers Chapters 8-11. Students must have completed all work in Chapters 8-11 including quizzes, in order to take the Midterm. The Final Exam covers Chapter 12-14. Students must have completed all work in Chapters 12-14, including quizzes, in order to take the Final. Students are allowed only one attempt on the Midterm and Final Exam.

Practice Problems for both the Midterm and Final are available in MML and are optional. Performance on the Practice Problems will not be used in grade calculations.

The Midterm and Final Exams must be taken by the due date. Any Exam not taken by its due date will receive a score of zero. Students will not be allowed to take Exams late.

Chapter Quizzes and Exams use the Pearson Lockdown Browser. Students will be prompted to download the Pearson Lockdown Browser before taking a Quiz or Exam is it is not already installed.

Chapter Quizzes and Exams can only be taken with the necessary Technology Requirements.

All Chapter Quizzes and Exams should be completed without outside assistance – this includes apps, websites, or other people. Students committing/guilty of academic dishonesty – having others complete course work or using apps, online sites, or help from others – will receive a failing grade in the course.

The instructor reserves the right to require on-site testing at any time during the course.
Pearson Lockdown Browser Information

Please download the Pearson Lockdown Browser (LDB) prior to beginning a Quiz or Exam.

For technical issues, contact Pearson Customer Support.

Course Calendar

All students are expected to adhere to course deadlines and due dates; extensions will not be granted.

<table>
<thead>
<tr>
<th>Graded Work</th>
<th>Description of Graded Work</th>
<th>Due Date</th>
<th>Final Submission Date</th>
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</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>8.1 Real Numbers</td>
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<td></td>
<td>8.2 Variables</td>
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<td>8.3 Equations</td>
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<td>8.4 Functions</td>
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<td></td>
<td>8.5 Equations in a Cartesian Coordinate System</td>
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<tr>
<td></td>
<td>Chapter 8 Quiz</td>
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<td></td>
<td>9.1 Determining Probabilities</td>
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<td></td>
<td>9.2 Multistage Experiments and Modeling Games</td>
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<td></td>
<td>9.3 Simulations and Applications in Probability</td>
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<td></td>
<td>9.4 Permutations and Combinations in Probability</td>
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<tr>
<td></td>
<td>Chapter 9 Quiz</td>
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<td></td>
<td>Sunday July 12th</td>
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<td>Sunday July 19th</td>
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<tr>
<td>Week 2</td>
<td>10.1 Designing Experiments/Collecting Data</td>
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<td>10.2 Displaying Data: Part I</td>
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<td>10.3 Displaying Data: Part II</td>
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<td>10.4 Measures of Central Tendency and Variation</td>
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<td>10.5 Abuses of Statistics</td>
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<td>Chapter 10 Quiz</td>
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<td></td>
<td>11.1 Basic Notions</td>
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<td>11.2 Curves, Polygons, and Symmetry</td>
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<td>11.3 More about Angles</td>
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<td>11.4 Geometry in Three Dimensions</td>
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<td></td>
<td>Chapter 11 Quiz</td>
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<tr>
<td></td>
<td>Practice Problems for the Midterm (optional)</td>
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<tr>
<td></td>
<td>MIDTERM EXAM</td>
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<td></td>
<td>Sunday July 19th</td>
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<td>Sunday July 19th</td>
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<tr>
<td>Week 3</td>
<td>12.1 Congruence through Constructions</td>
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<td>12.2 Additional Congruence Theorems</td>
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<td>12.3 Additional Constructions</td>
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<td>12.4 Similar Triangles and Other</td>
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<td></td>
<td>Chapter 12 Quiz</td>
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<td>13.1 Translations and Rotations</td>
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<td>13.2 Reflections and Glide Reflections</td>
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<td>13.3 Dilations</td>
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<td></td>
<td>Sunday July 26th</td>
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<td>Wednesday August 6th</td>
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</tbody>
</table>
Note: Working ahead is encouraged.

**Attendance and Your Final Grade**
This course can be completed entirely online; no campus visits are required.
Your grade in the course can be found in your MyMathLab Gradebook.

**Late Work Policy**
All students are expected to adhere to course deadlines and due dates.

Homework and Quizzes have both a Due Date, and a Final Submission Date. Students may work on both Homework and Quizzes after the Due Date. Homework and Quizzes are subject to a 5% per day per question late penalty. After the Final Submission Date, Homework and Quizzes will no longer be available. Homework and Quizzes not completed by their Final Submission Date will receive a score of zero.

**Certification Policy**
Students must attend and participate in their on-campus or online course(s) in order to receive federal financial aid. Instructors are required by law to validate attendance in order for students to receive financial aid.
To be certified as attending an online mathematics courses, students must correctly complete at least 70% of the first homework assignment in MyMathLab prior to the Certification Date.

Failure to show proof of attendance in the course prior to the Certification Date can affect Financial Aid.

**Withdrawal Policy**

Please consult your instructor before withdrawing from this course, visit the [Dropping or Withdrawing From Classes](#) webpage.

**Instructor Policies**

If a student experiences a situation during the course which prevents the student from working or negatively affects the student's performance, it is the responsibility of the student to contact the instructor immediately for guidance. Notifying the instructor of such a situation at the end of the semester is not sufficient and will not result in an extension.

**Institutional Policies**

Institutional Policies relating to this course can be accessed using the link below. These policies include information about tutoring, Disabilities Services, class drop and repeat options, Title IX, and more.

[Cedar Valley Institutional Policies](#)

**Student Rights and Responsibilities**

The Commitment to Cedar Valley College Community charges students to maintain high standards of academic and personal integrity. All students should read and be familiar with the [Student Rights and Responsibilities Office (SRRO)](#).

It is your responsibility as a Cedar Valley College Student to know and understand the academic standards for our community.

The following are the guidelines for Academic Concerns:

Important: It is your responsibility to provide your full name, student id #, course name, and section number EXAMPLE: MATH 1314-31001
- Meet with the instructor
- If not resolved with the instructor, contact the department coordinator (the instructor will provide this information)
- If not resolved with the department coordinator, request a meeting with the Executive Dean
- If the outcome does not meet resolution, contact the SRRO.

Non-Academic concerns such as: Title IX or a CARE issue, contact the SRRO directly.

As a student, you are expected to comply with the general law, campus policies and regulations. The College’s Student Code of Conduct expects students "to be good citizens and to engage in responsible behaviors that reflect well upon the college, to be civil to one another and to others in the campus community, and contribute positively to student and college life." See the Code of Student Conduct and select Purpose for more information. Contact the Student Rights and Responsibilities Office by email or call 972-860-5295 for questions and concerns.

**Student Learning Outcomes**

**Texas Higher Education Coordinating Board (THECB) Student Learning Outcomes**

Upon successful completion of this course, students will:

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 transformations.
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.

**Cedar Valley Student Learning Outcomes**
1. Solve applications using percent, ratios, and proportions.
2. Use probabilities, simulations, and counting techniques to solve problems and analyze games.
3. Select and use appropriate statistical methods to analyze data and reason statistically.
4. Recognize, name, compare, and measure two- and three-dimensional shapes.
5. Determine congruent and similar objects through geometric constructions.
6. Use transformations of the plane to illustrate symmetries, size transformations, and tessellations.

**Texas Core Objectives**

The College defines essential knowledge and skills that students need to develop during their college experience. These general education competencies parallel the Texas Core Objectives for Student Learning. In this course, the activities you engage in will give you the opportunity to practice two or more of the following core competencies:

1. **Critical Thinking Skills** - to include creative thinking, innovation, inquiry, and analysis, evaluation, and synthesis of information
2. **Communication Skills** - to include effective development, interpretation, and expression of ideas through written, oral, and visual communication
3. **Empirical and Quantitative Skills** - to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
4. **Teamwork** - to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal
5. **Personal Responsibility** - to include the ability to connect choices, actions, and consequences to ethical decision-making
6. **Social Responsibility** - to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities

MATH 1 3 5 1 develops Critical Thinking, Communication, and Empirical and Quantitative Skills by requiring students to solve and analyze applications to at least one of the following: sets, functions, numeration systems, number theory, and the real number system.