# MATH 1 3 4 2 INET 5-Week Syllabus

Cedar Valley College

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<td>Chapter 7 – Estimates and Sample Sizes</td>
<td>5</td>
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<tr>
<td>Unit 4</td>
<td>5</td>
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</tbody>
</table>
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: Elementary Statistics
Course Number: MATH 1 3 4 2
Section Number: TBA
Semester/Year: Summer 2 20 20
Credit Hours: 3
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

This is an entry-level course and is open to any student meeting TSI standards of college readiness (student must have appropriate assessment test score or have successfully completed DMAT 0 3 1 0).

Course Description

Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Use of appropriate technology is recommended.

Required Course Materials

MyStatLab Access Code

All work for the course is completed in MyStatLab (MSL). The MyStatLab Access Code will provide access to MyStatLab, which includes an electronic copy of the text, video instruction, and many other helpful features.
ISBN: 9780134869735

Temporary Access to MyStatLab

MyStatLab provides a Temporary Access Code. This code gives students temporary access to MyStatLab for a two-week period. Once the code expires, students will be locked out of their MyStatLab 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 MyStatLab account. Pearson developed the Temporary
Access Code to assist 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 MyStatLab 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.

Email
Since email is the primary form of communication for online courses, it is imperative the email address in eConnect is checked daily. If this email is not checked daily, students may miss important course information.

When contacting your instructor, please include your name, course, and section number. Emails without this information may not be answered.

Optional Course Materials

Textbook
An eText is included with the MyStatLab Access Code. Students also have the option of purchasing a loose-leaf copy of the text through the Menu in MyStatLab. Students wishing to purchase a hard copy of the text should refer to the following information:
Author: Triola, Mario F.
Title: Elementary Statistics Using the TI-83/84 Graphing Calculator
Edition: 4th
Publication Year: 2015
Publisher: Pearson
ISBN: 9780134686943

Course Outline
This course is divided into four units. There are a total of 27 assignments in the course and four exams (one for each unit). Each assignment corresponds with a section in the text.
Unit 1
Chapter 1 – Introduction to Statistics
  1.2 Statistical and Critical Thinking
  1.3 Types of Data
  1.4 Collecting Sample Data

Chapter 2 – Summarizing and Graphing Data
  2.2 Frequency Distributions
  2.3 Histograms
  2.4 Graphs That Enlighten and Graphs That Deceive

Chapter 3 – Statistics for Describing, Exploring, and Comparing Data
  3.2 Measures of Center
  3.3 Measures of Variation
  3.4 Measures of Relative Standing and Boxplots

Unit 2
Chapter 4 – Probability
  4.2 Basic Concepts of Probability
  4.3 Addition Rule
  4.4 Multiplication Rule

Chapter 5 – Discrete Probability Distributions
  5.2 Probability Distributions
  5.3 Binomial Probability Distributions
  5.4 Parameters for Binomial Distributions

Unit 3
Chapter 6 – Normal Probability Distributions
  6.2 The Standard Normal Distribution
  6.3 Applications of Normal Distributions
  6.5 The Central Limit Theorem

Chapter 7 – Estimates and Sample Sizes
  7.2 Estimating a Population Proportion
  7.3 Estimating a Population Mean
  7.4 Estimating a Population Standard Deviation or Variance

Unit 4
Chapter 8 – Hypothesis Testing
  8.2 Basics of Hypothesis Testing
  8.3 Testing a Claim About a Proportion
8.4 Testing a Claim About a Mean
8.5 Testing a Claim About a Standard Deviation or Variance

Chapter 10 – Correlation and Regression

10.2 Correlation
10.3 Regression

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.

Summary of Graded Work

<table>
<thead>
<tr>
<th>Course Requirement</th>
<th>Percentage of Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments</td>
<td>20%</td>
</tr>
<tr>
<td>Four Exams @ 20% each</td>
<td>80%</td>
</tr>
</tbody>
</table>

TOTAL: 100%

Throughout the course, your current grade can be found in your MSL 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>

Your Final Grade is submitted to eConnect for your official transcript. Therefore, your name in eConnect must match your name in MyStatLab. If your name in eConnect is not the same as your name in MyStatLab, you may not receive the correct grade in the course.

Description of Graded Work

Assignments

There are 27 homework assignments in this course. For each assignment, students are expected to read the section in the E-text, watch the lesson video(s), and watch any assigned StatCrunch video(s). The assignments typically include 10 – 20 questions.

The Course Calendar details when assignments should be completed. There is a final due date for all assignments at the conclusion of each Unit.
Exams
There are four exams in this course, each corresponding with a Unit of work. The exam questions will be very similar to those encountered in the assignments. Exams typically have 20-40 questions. Students are allowed to use notes and should open StatCrunch in another window prior to beginning an exam.

Students are allowed two attempts on each exam and only the best attempt will count. The second attempt is optional.

Due Dates for exams can be found in the Course Calendar.

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

Course Calendar

All students are expected to adhere to course 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>
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<td></td>
<td></td>
</tr>
<tr>
<td>Monday, July 6</td>
<td>Begin Unit 1</td>
<td></td>
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<tr>
<td>Tuesday, July 7</td>
<td>1.4 Collecting Sample Data</td>
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<tr>
<td>Wednesday, July 8</td>
<td>2.3 Histograms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thursday, July 9</td>
<td>3.2 Measures of Center</td>
<td></td>
<td>Unit 1 Due Sunday, July 12</td>
</tr>
<tr>
<td>Friday, July 10</td>
<td>3.4 Measures of Relative Standing and Boxplots</td>
<td></td>
<td>Unit 1 Due Sunday, July 12</td>
</tr>
<tr>
<td>Saturday, July 11</td>
<td>Review Unit 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sunday, July 12</td>
<td>Exam 1 Due by 11:59 pm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graded Work</td>
<td>Description of Graded Work</td>
<td>Due Date</td>
<td>Final Submission Date</td>
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<tr>
<td><strong>Week 2</strong></td>
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<tr>
<td>Monday, July 13</td>
<td><strong>Begin Unit 2</strong></td>
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<tr>
<td></td>
<td>4.2 Basic Concepts of Probability</td>
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<tr>
<td></td>
<td>4.3 Addition Rule</td>
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<tr>
<td>Tuesday, July 14</td>
<td><strong>4.4 Multiplication Rule</strong></td>
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<tr>
<td>Wednesday, July 15</td>
<td><strong>5.2 Probability Distributions</strong></td>
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<tr>
<td>Thursday, July 16</td>
<td><strong>5.3 Binomial Probability Distributions</strong></td>
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<tr>
<td>Friday, July 17</td>
<td><strong>5.4 Parameters for Binomial Distributions</strong></td>
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<tr>
<td>Saturday, July 18</td>
<td><strong>End of Unit 2</strong></td>
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<tr>
<td><strong>Sunday, July 19</strong></td>
<td><strong>Review Unit 2</strong></td>
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<tr>
<td><strong>Sunday, July 19</strong></td>
<td><strong>Unit 2 Exam due by 11:59 pm</strong></td>
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<tr>
<td><strong>Week 3</strong></td>
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<tr>
<td>Monday, July 20</td>
<td><strong>Begin Unit 3</strong></td>
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<td></td>
<td>6.2 The Standard Normal Distribution</td>
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<td></td>
<td>6.3 Applications of Normal Distributions</td>
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<tr>
<td>Tuesday, July 21</td>
<td><strong>6.5 The Central Limit Theorem</strong></td>
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<tr>
<td>Wednesday, Jul 22</td>
<td><strong>7.2 Estimating a Population Proportion</strong></td>
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<tr>
<td>Thursday, July 23</td>
<td><strong>7.3 Estimating a Population Mean</strong></td>
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<tr>
<td>Friday, July 24</td>
<td><strong>7.4 Estimating a Pop Standard Deviation or Variance</strong></td>
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<tr>
<td>Saturday, July 25</td>
<td><strong>End of Unit 3</strong></td>
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<tr>
<td><strong>Review Unit 3</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Graded Work</td>
<td>Description of Graded Work</td>
<td>Due Date</td>
<td>Final Submission Date</td>
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</table>
| **Sunday, July 26**  
Unit 3 Exam | | | |
| **Monday, July 27**  
Begin Unit 4  
8.2 Basics of Hypothesis Testing | | | |
| **Tuesday, July 28**  
8.2 Basics of Hypothesis Testing | | | |
| **Wednesday, July 29**  
8.3 Testing a Claim About a Proportion | | | |
| **Thursday, July 30**  
8.4 Testing a Claim About a Mean | | | |
| **Friday, July 31**  
8.5 Testing a Claim - Standard Deviation or Variance | | | |
| **Saturday, August 1**  
10.2 Correlation | | | |
| **Sunday, August 2**  
Off | | | |
| **Monday, August 3**  
10.3 Regression  
End of Unit 4 | | | |
| **Tuesday, August 4**  
Review Unit 4 | | | |
| **Wednesday, August 5**  
Review Unit 4 | | | |
| **Thursday, August 6**  
Unit 4 Exam | | | |

**Week 5**

| **Monday, August 3**  
10.3 Regression  
End of Unit 4 | | | |
| **Tuesday, August 4**  
Review Unit 4 | | | |
| **Wednesday, August 5**  
Review Unit 4 | | | |
| **Thursday, August 6**  
Unit 4 Exam | | | |

Unit 4 Due Thursday, August 6  
Unit 4 Due Thursday, August 6

Note: Students are allowed to work ahead of schedule and complete the course early. Please contact your instructor if you plan to complete the course early.
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 MyStatLab Gradebook.

Late Work Policy

All students are expected to adhere to course deadlines and due dates.

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 50% of the first homework assignment in MyStatLab 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.

Instructors may add additional policies here. Please leave a line between policies and delete this line.

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

1. Explain the use of data collection and statistics as tools to reach reasonable conclusions.
2. Recognize, examine and interpret the basic principles of describing and presenting data.
3. Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics.
4. Explain the role of probability in statistics.
5. Examine, analyze and compare various sampling distributions for both discrete and continuous random variables.
6. Describe and compute confidence intervals.
7. Solve linear regression and correlation problems. 8. Perform hypothesis testing using statistical methods.

**Cedar Valley Student Learning Outcomes**
1. Create and interpret statistical graphs. (THECB #2)
2. Apply the measures of central tendency, variation, and position as well as distribution and outliers to analyze data. (THECB #1)
3. Determine probabilities using rules of probability and the Binomial probability distribution. (THECB #s 3,4, &5)
4. Construct and interpret confidence intervals for means, proportions, and standard deviations. (THECB #6)
5. Perform hypothesis testing for means, proportions, and standard deviations and interpret the results. (THECB #8)

**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 4 2 develops Critical Thinking, Communication, and Empirical and Quantitative Skills by requiring students to collect, analyze, and define characteristics of velocity functions from their graphs.