# MATH 1 3 4 2 INET 16-Week Syllabus

Cedar Valley College

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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: Elementary Statistics
Course Number: MATH 1 3 4 2
Section Number: TBA
Semester/Year: Spring 2020
Credit Hours: 3
Class Meeting Time/Location: This course can be completed entirely online; no campus visits are required.
Certification Date: Monday, February 3, 2020
Last Day to Withdraw: Thursday, April 16, 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.

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>
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<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>
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</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**

**Assignments**
There are 27 homework assignments in this course. For each assignment, students are expected to read the section in the Etext, 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>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td><strong>Begin Unit 1</strong>&lt;br&gt;1.2 Statistical and Critical Thinking&lt;br&gt;1.3 Types of Data&lt;br&gt;1.4 Collecting Sample Data</td>
<td>Jan. 26th</td>
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<tr>
<td>Week 2</td>
<td>2.2 Frequency Distributions&lt;br&gt;2.3 Histograms</td>
<td>Feb. 2nd</td>
</tr>
<tr>
<td>Week 3</td>
<td>2.4 Graphs That Enlighten and Graphs That Deceive&lt;br&gt;3.2 Measures of Center</td>
<td>Feb. 9th</td>
</tr>
<tr>
<td>Week 4</td>
<td>3.3 Measures of Variation&lt;br&gt;3.4 Measures of Relative Standing and Boxplots&lt;br&gt;<strong>Unit 1 Exam</strong></td>
<td>Feb. 16th</td>
</tr>
<tr>
<td>Week 5</td>
<td><strong>Begin Unit 2</strong>&lt;br&gt;4.2 Basic Concepts of Probability&lt;br&gt;4.3 Addition Rule</td>
<td>Feb 23rd</td>
</tr>
<tr>
<td>Week 6</td>
<td>4.4 Multiplication Rule&lt;br&gt;5.2 Probability Distributions</td>
<td>Mar. 1st</td>
</tr>
<tr>
<td>Week 7</td>
<td>5.3 Binomial Probability Distributions&lt;br&gt;5.4 Parameters for Binomial Distributions&lt;br&gt;<strong>Unit 2 Exam</strong></td>
<td>Mar. 8th</td>
</tr>
<tr>
<td>Week 8</td>
<td><strong>Begin Unit 3</strong>&lt;br&gt;6.2 The Standard Normal Distribution&lt;br&gt;6.3 Applications of Normal Distributions</td>
<td>Mar. 22nd</td>
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<tr>
<td>Week 9</td>
<td>6.5 The Central Limit Theorem</td>
<td>Mar. 29th</td>
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<td>Week 10</td>
<td>7.2 Estimating a Population Proportion</td>
<td>Apr. 5th</td>
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<tr>
<td>Graded Work</td>
<td>Description of Graded Work</td>
<td>Due Date</td>
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| Week 11    | 7.3 Estimating a Population Mean  
7.4 Estimating a Pop Standard Deviation or Variance  
Unit 3 Exam              | Apr. 12th  |
| Week 12    | Begin Unit 4  
8.2 Basics of Hypothesis Testing                                                                 | Apr. 19th  |
| Week 13    | 8.3 Testing a Claim About a Proportion                                                                 | Apr. 26th  |
| Week 14    | 8.4 Testing a Claim About a Mean  
8.5 Testing a Claim - Standard Deviation or Variance                                                                 | May 3rd    |
| Week 15    | 10.2 Correlation  
10.3 Regression                                                                 | May 10th   |
| Week 16    | Unit 4 Exam                                                                 | May 12th   |

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.

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.

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.