# Virginia Western Community College MTH 245 Statistics I 

## Prerequisites

Successful completion of MTH 154, MTH 161, or MTH 167 with a C or better.

## Course Description

Presents an overview of statistics, including descriptive statistics, elementary probability, probability distributions, estimation, hypothesis testing, correlation, and linear regression.

## Semester Credits: 3 <br> Lecture Hours: 3

## Required Materials

## Textbook:

Discovering Business Statistics. Nottingham. 1st edition. Hawkes. ISBN: 9781941552582.

## Other Required Materials:

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## Course Outcomes

At the completion of this course, the student should be able to:

- Prepare reports using descriptive statistics both graphical and numeric presentations.
- Carry out basic probability calculations.
- Use the binomial and normal distributions to solve appropriate applied problems.
- Make appropriate statistical inferences using one and two sample methods.
- Use ANOVA for statistical inferences involving more than two populations.
- Use a computer to obtain appropriate statistics for use in applied problems.


## Topical Description

| Topics | $\frac{\text { Chapter }}{2,3, \& 4}$ |
| :--- | ---: |
| Descriptive Statistics | 2,4 |
| Tables and Charts |  |
| Measures of Central Tendency |  |
| Measures of Variability | $6,7, \& 8$ |
| Probability |  |
| Basic Concepts and Rules |  |

Discrete Distributions
BinomialHypergeometric
Poisson
Normal Distribution
Sampling Distributions9Central Limit TheoremRandom Sampling
Statistical Inference - Estimation and Testing ..... 10-14
One Sample MethodsTwo Sample Methods
Analysis of Variance15.1

Computer usage is stressed throughout the course. Students will use Minitab for exercises throughout the course. Students will also use a calculator that expediently find the mean and standard dev.

## Notes to Instructors

None.

