# 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**

## **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	<u>Chapter</u>
Descriptive Statistics	2, 3, & 4
Tables and Charts	
Measures of Central Tendency	
Measures of Variability	
Probability	6, 7, & 8
Basic Concepts and Rules	
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Discrete Distributions	
Binomial	
Hypergeometric	
Poisson	
Normal Distribution	
Sampling Distributions	9
Central Limit Theorem	
Random Sampling	
Statistical Inference – Estimation and Testing	10-14
One Sample Methods	
Two Sample Methods	
Analysis of Variance	15.1

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.