

Revised: Fall 2016

# **MTH 241 STATISTICS I**

## **COURSE OUTLINE**

### **Prerequisites:**

**MTH 163 or MTH 166 or equivalent, or a placement recommendation of MTH 241 or equivalent.**

### **Course Description:**

**Covers descriptive statistics, elementary probability, probability distributions, estimation, and hypothesis testing. Uses the computer package, MINITAB, to solve case studies.**

**VIRGINIA WESTERN COMMUNITY COLLEGE  
PO Box 14007  
Roanoke, VA 24038  
(540)-857-7273**



**Semester Credits: 3 Lecture Hours: 3 Lab/Recitation Hours: 0**

# **MTH 241 Statistics I**

## **Course Outcomes**

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

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

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Required Materials:

Software, Textbook, Calculator

Textbook:

Discovering Business Statistics, Keller, 9<sup>th</sup> ed., Hawkes Publishing  
ISBN #: 9781941552582

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# MTH 241 Statistics I

Topical Description: (Outline chapters and sections to be covered in the book – may include timeline)

## Topical Description

<u>Topics</u>	<u>Chapter</u>
I. Descriptive Statistics	2, 3 & 4
A. Tables and Charts	
B. Measures of Central Tendency	
C. Measures of Variability	
II. Probability	6, 7 & 8
A. Basic Concepts and Rules	
B. Discrete Distributions	
1. Binomial	
2. Hypergeometric	
3. Poisson	
C. Normal Distribution	
III. Sampling Distributions	9
A. Central Limit Theorem	
B. Random Sampling	
IV. Statistical Inference--Estimation and Testing	10-14
A. One Sample Methods	
B. Two Sample Methods	
V. 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 finds the mean and standard dev

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# MTH 241 Statistics I

Notes to Instructors

(List information about optional topics, departmental exams, etc)

- 1.
- 2.
- 3.
- 4.

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