

VICTOR VALLEY COLLEGE SYLLABUS

FALL 2007

Course No.: **Math 120** Course Title: **Statistics** Units: **4 units**
Section No.: **16565** Class Hours: **2:45 – 4:50 PM** Days: **M** Room: **30 - 10**

Instructor Name: **Michael Butros** Office No: **LA – A1**

Office Hours: **Monday 1:30 – 2:30, Tuesday 1:30 – 2:30, Wednesday 3:00 – 5:00,**
Friday 10:00 – 11:00, other times available by appointment

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Instructor URL: <http://www.butros.info/Michael.html>

FALL CALENDAR

Fall Semester Begins	August 27
Labor Day Holiday (no classes)	September 3
End of 1 st 8-week term	October 20
Beginning of 2 nd 8-week term	October 22
Veteran's Day Holiday (no classes)	November 12
Thanksgiving Holidays (no classes)	November 22-25
Fall Semester Ends	December 15

WITHDRAWAL POLICY

Last day to withdraw from a 16-week class and receive a "W" is November 5, 2007.

Prerequisite: Successful completion of Math 90 (Intermediate Algebra)

Textbook: Introductory Statistics, by Neil Weiss, Addison – Wesley.

Course Description: This class covers basic statistical techniques, including design and analysis for parametric and non-parametric data, descriptive statistics, graphical techniques of illustrating the data probability and inferential statistics. Inferential statistics included are estimation and hypothesis testing, chi-square, analysis of variance and regression. Applications are drawn from a variety of fields.

Course Objectives:

The student will be able to:

- Recognize different types of graphs, charts, and diagrams
- Recognize the shape of the distribution of a data set
- Compute the measures of central tendency and measures of dispersion for a data set
- Represent data sets using frequency tables, histograms, bar graphs, and pie charts
- Compute the probability of an event
- Compute the mean and standard deviation of random variables
- Compute and interpret confidence intervals

- Perform parametric and non-parametric hypothesis tests on one population mean
- Perform parametric and non-parametric hypothesis tests on two population means
- Perform Chi-square procedures
- Compute and interpret the regression equation
- Compute a one-way ANOVA table

Course Content

❖ Descriptive Statistics

- Variables
- Data
- Graphs and Charts
- Frequency Tables
- Stem-and-Leaf Diagrams
- Distribution Shapes
- Measures of Central Tendency
- Measures of Dispersion
- Z-scores

❖ Probability

- Classical Probability
- Events
- Contingency Tables
- Conditional Probability
- Tree Diagrams
- Independence
- Bayes' Rule
- Counting Rules
- Discrete Random Variables: Mean and Standard Deviation
- Bernoulli Trials
- Binomial Distribution: Mean and Standard Deviation
- Poisson Distribution: Mean and Standard Deviations

❖ The Normal Distribution

- The Standard Normal Curve
- Normal Curves
- Normally Distributed Random Variables

❖ The Sampling Distribution of the Mean

- Sampling Error
- The Mean and Standard Deviation of the mean
- The Sampling Distribution of the mean

❖ Inferential Statistics

- Confidence Intervals
- Hypothesis Tests for One Population Mean
- Hypothesis Tests for Two Population Means
- Inferences for Population Proportions
- Chi-squared Procedures
- The Mann-Whitney Test
- The Wilcoxon Signed-Rank Test

❖ Regression and Correlation

- The Regression equation
- The Coefficient of determination
- Linear Correlation
- Slope of the Population Regression Line
- Estimation and Prediction
- Inferences in Correlation

❖ Analysis of Variance

- The F-Distribution
- One-Way ANOVA

Attendance Policy: **Regular attendance is strongly recommended.** *(Class attendance is not a measure of performance or proficiency. Whether a student is just physically present in the class is not a valid basis for grading. Reference Title 5 Section 55002 of the California Code of Regulations: (A) Grading Policy. The course provides for measurement of student performance in terms of stated course objectives and culminates in a formal, permanently recorded grade based upon uniform standards in accordance with section 55758 of this Division. The grade is based on demonstrated proficiency in the subject matter and the ability to demonstrate that proficiency, at least in part, by means of written expression that may include essays, or, in courses where the curriculum committee deems them to be appropriate, by problem solving exercises or skills demonstrations by students.)*

Grading Policy: The grading for this class will consist of the following components:

- | | |
|---------------------------|--------|
| • Homework (online) | 12.5 % |
| • Chapter Exams (online) | 12.5 % |
| • Midterm One (on campus) | 25 % |
| • Midterm Two (on campus) | 25 % |
| • Final (on campus) | 25 % |

The final grade will be given according to the following scale

Total Percentage	Final Grade
90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

IMPORTANT NOTE: Students with disabilities, whether physical, learning, or psychological, who believe that they may need accommodations in this class, are encouraged to contact Disabled Student Program & Services as soon as possible to ensure that such accommodations are implemented in a timely fashion. Authorization from DSPS is required before any accommodation can be made.

Class Conduct Policies:

- Anyone caught cheating will receive an “F” for the course and I will also pursue **THE STRONGEST DISCIPLINARY ACTION AVAILABLE AT THE COLLEGE**
- **ONLY** those registered in the class are allowed in the classroom
- **TURN OFF** the sound feature on your cell phone or pager before class begins
- When you turn in your homework assignments **MAKE SURE THE ITEMS BELOW ARE SATISFIED:**
 1. Include your name and class
 2. Include the assignment number and due date
 3. The problems are done in order
 4. The pages are stapled (if it requires more than one page)

The first time these conditions are not satisfied will be a warning. Thereafter any time an assignment is missing the above information will result in points lost

- You are encouraged to work with each other on the homework assignments but each student should turn in their own assignment
- All assignments and exams are to be completed on the assigned date. **THERE WILL BE NO MAKE UP HOMEWORK ASSIGNMENTS OR EXAMS.** Inform the instructor if you are going to miss a class on a day when an exam or an assignment is due
- You are **ENCOURAGED** to ask questions in class
- Make sure you contact the instructor if you have any questions regarding the class

Tentative Schedule for Math 120
Fall 2007
Butros

- ❖ August 27, 2007 – September 3, 2007 – Chapter Two
- ❖ September 4, 2007 – September 11, 2007 – Chapter Three
- ❖ September 12, 2007 – September 19, 2007 – Chapter Four
- ❖ September 20, 2007 – September 27, 2007 – Chapter Five
- ❖ September 28, 2007 – October 4, 2007 – Chapter Six
- ❖ **October 8, 2007 - Midterm One (Chapters 2 – 5)**
- ❖ October 5, 2007 – October 12, 2007 – Chapter Seven and Chapter Eight
- ❖ October 13, 2007 – October 20, 2007 – Chapter Nine
- ❖ October 21, 2007 – October 28, 2007 – Chapter Ten
- ❖ October 29, 2007 – November 6, 2007 – Chapter Twelve
- ❖ **November 19, 2007 – Midterm Two (Chapters 6 – 10)**
- ❖ November 7, 2007 – November 14, 2007 – Chapter Thirteen
- ❖ November 15, 2007 – November 22, 2007 – Chapter Fourteen
- ❖ November 23, 2007 – November 30, 2007 – Chapter Fifteen
- ❖ December 1, 2007 – December 8, 2007 – Chapter Sixteen
- ❖ **December 12, 2007 – Final Exam (Chapters 12 – 16)**