	School of Arts & Science – Mathematics Department
	MATH 216 – 001 and 002 (Applied Statistics)
	WINTER 2012

The Approved Course Description is available on the web at http://camosun.ca/learn/calendar/current/web/math.html

1.   Instructor Information

(a)	Instructor:	Bree Wilton
(b)	Location:	E266
(c)	Phone:	250-370-3504
(d)	Email:	wiltonb@camosun.bc.ca
(e)	Webpage:	https://sites.google.com/site/breewilton/
(g)	Office Hours:	9:30 – 10:30 AM Monday – Friday

2.   Intended Learning Outcomes

The prerequisite is Math 12 or assessment. Upon completion of this course you should be able to:
1. Compute and interpret descriptive statistics.
2. Perform calculations that apply the basic properties and concepts of probability.
3. Make statistical inferences for one population and two populations.
4. Make statistical inferences for more than two populations (ANOVA).
5. Apply the technique of linear regression in circumstances where appropriate and assess the usefulness of a linear model in these situations using the concept of correlation.
6. Apply basic methods to analyze categorical data.
7. Use the statistical software MINITAB to perform basic data analysis.

3.   Required Materials

(a)	Texts	**Textbook:** Introduction to the Practice of Statistics (7th edition), Moore, McCabe and Craig. Freeman, 2012. **Lab Manual:** Math 216 Lab Manual, Calver, Chen and Salloum.
(b)	Other	A Sharp EL-531 Scientific Calculator. *No other calculators are allowed for tests and the final examination.*

4.   Course Content

Looking at Data - Distributions	1.1 – 1.3
Looking at Data – Relationships	2.1 – 2.5
Producing Data	3.1 – 3.4
Probability – The Study of Randomness	4.1 – 4.5
Sampling Distributions	5.1 – 5.2 and Poisson handout
Introduction to Inference	6.1 – 6.3
Inference for Distributions	7.1 – 7.2
Inference for Proportions	8.1 – 8.2
Analysis of Two-Way Tables	9.1 – 9.3
Inference for Regression	10.1
Analysis of Variance	12.1

Minitab Labs: This course includes 7 lab sessions. You will need the lab manual for each lab, except for the Lab Intro. The lab manual is available at the Bookstore. The labs will be held in the computer lab E115 on the following Tuesdays: **January 10**, **January 17**, **January 31, February 14**, **March 13**, **March 27**, and **April 3**. The labs are designed to familiarize you with the use of a computer as a tool for statistical analysis. The computer software we use is Minitab 16. Each lab session includes a lab assignment to be submitted 6 days after your lab day. There will be a lab final exam due in the last week of classes. *Please note that Minitab can be accessed in all GP labs and the Learning Commons.*

Homework Assignments: There will be **6** homework assignments. Approximately one third of the assignment will be selected for marking. Your homework should be neat and complete. **Late assignments will not be accepted** however, the lowest assignment mark will be dropped when calculating the assignment average. This allows you to miss one assignment without penalty**.** There will also be a set of **suggested problems** from the textbook. In order to get a full understanding of the course materials you need to do both sets of homework.

Attendance: Showing up to class is the easiest and most important thing you can do to help succeed the course. Keeping up is an essential part of any statistics course as much of the material builds on itself**.** If you feel yourself falling behind at any point during the term, then please do not hesitate to come speak to me.

Math Lab: Math lab **E224** is staffed with math tutors available for **free** help. It is a great idea to do your homework there and get help whenever needed.

Practice Tests: There will be a practice test session on the day before each test. Students are encouraged to ask questions and to work together with peers during these sessions. Solutions for these practice tests will be posted on my website. *You would benefit most from these practice tests if you come to the practice tests with the notes reviewed, all homework problems completed, and a formula sheet made.*

5. Basis of Student Assessment (Weighting)

Score 1

Assignments* (5)	10%
Labs (5)	5%
Tests (50 min each) (3)	35%
Lab Final	10%
Cumulative Final Exam (3 hrs)	40%

Score 2

Lab Final	10%
Cumulative Final Exam (3 hrs)	90%

To earn an A+ in the course, you must obtain at least 90% on both Score 1 and Score 2.

For all other grades, your course grade will be the higher of Score 1 and Score 2 if all homework and lab assignments have been completed in a satisfactory manner; otherwise, your course grade will be Score 1. *Note that in order to pass this course (D or higher), you must obtain a final examination score of 40% or higher.*

*The lowest assignment mark will be dropped when calculating the assignment average. This allows you to miss one assignment without penalty.

Tentative Test Dates: **February 6**, **March 7**, **April 5**.

Lab Final: Due **April 11**.

Final examinations will be scheduled by the college and they will take place during April 16-21 & 23, 24. You must be available to write the final examination at the scheduled time.

6. Awards

Among other Mathematics awards, we now have a Statistics Award ($500). You can find out more information about the awards on this page: http://camosun.ca/learn/programs/math/scholarships.html.

7. Grading System

Percentage grades will be converted to letter grades as follows:

A+	[90, 100]	B+	[77, 80)	C+	[65, 70)	F	[0, 50)
A	[85, 90)	B	[73, 77)	C	[60, 65)		
A-	[80, 85)	B-	[70, 73)	D	[50, 60)		

8. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School administration Office, at Student Services and on the College web site in the Policy Section.
There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services or the College web site at camosun.bc.ca.