

	<p>School of Arts & Science MATHEMATICS AND STATISTICS DEPARTMENT STAT 219 Probability and Statistics 2 Winter 2017</p>
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COURSE OUTLINE

The course description is online @ <http://camosun.ca/learn/calendar/current/web/stat.html>

1. Instructor Information

(a)	Instructor:	Susan Chen
(b)	Office	E260, Lansdowne Campus
(c)	Office Hours	MWThF 1:30 – 2:20 PM, Tu 12:30 – 1:20 PM, or by appointments.
(d)	Phone	250-370-3497
(e)	Email	chen@camosun.bc.ca
(f)	D2L Website	http://online.camosun.ca/

2. Intended Learning Outcomes

Upon completion of this course the student will be able to:

1. Perform analysis of paired data.
2. Make inferences concerning a difference between population proportions.
3. Make inferences concerning a population variance, or two population variances.
4. Make inferences concerning more than two population means (analysis of variance) with a single factor or with two factors.
5. Compute Type I error, Type II error, and the power of a hypothesis test.
6. Perform correlation and regression analyses, and make inferences about parameters and predictions.
7. Perform basic categorical data analysis.
8. Perform basic non-parametric data analysis.

3. Required Materials

(a)	Texts	Text: Devore, Jay L., <i>“Probability and Statistics for Engineering and the Sciences”</i> , 9e, 8e, or 7e. Lab Manual: <i>“Stat 219 Lab Manual”</i> on D2L.
(b)	Other	A Sharp EL-531 Scientific Calculator. <i>No other calculators are allowed for tests and the final examination.</i>

4. Course Content and Schedule

<u>Topic</u>	<u>Sections</u>
Unit 1. Review: Confidence Intervals and Tests of Hypotheses	7.1-7.3, 8.1-8.5, 9.1-9.2
Unit 2. Confidence Intervals for the Variance	7.4 plus supplementary notes
Unit 3. Inference Based on Two Samples	9.3 – 9.5
Unit 4. The Analysis of Variance	10.1 - 10.3
Unit 5. Multifactor Analysis of Variance	11.1 - 11.2
Unit 6. Simple Linear Regression and Correlation	12.1 - 12.5
Unit 7. Analysis of Categorical Data	14.1 - 14.3
Unit 8. Distribution-Free Procedures	15.1 - 15.2, 15.4

R Labs: This course includes R lab sessions designed to familiarize students with the use of a computer as a tool for statistical analysis. *You must have the Stat 219 Lab Manual for each lab.* A lab assignment will be assigned for each lab session. Understanding each lab is essential for succeeding the Lab Final Examination.

iClickers

We will be using the i>Clickers in lectures, and you will be graded on your participation and performance. Clickers will be provided in class. You will be assigned with a specific clicker and you will be responsible for returning the clicker to the instructor in each class.

Homework: *“I hear and I forget. I see and I remember. I do and I understand.”* There are two sets of assignments for this course. Set #1 consists of Assignment Worksheets and is to be submitted for credit. These assignment worksheets **must be submitted to me by 3:30pm** on the due date. Set #2 consists of a list of problems from the textbook with answers given in the book. You can find these on the last page of this outline. In order to get a full understanding of the course materials **you need to do both sets of homework.**

5. Basis of Student Assessment (Weighting)

Labs and Assignments	12%
Daily Clicker Questions	5%
Tests	33%
Lab Final	10%
Cumulative Final Exam (3 hrs)	40%

Please refer to the Stat 219 Tentative Calendar for *tests dates, and lab and assignment due dates.*

All tests must be written during the scheduled times. In the event that you missed a test due to family emergency or illness, the weight of the test will be put on the final exam *if* the instructor is notified *before* the test and proper documentation is provided. NO late assignments or lab assignments will be accepted for credit. Final examinations will be scheduled by the college and they will take place during April 18-26. You must be available to write the final examination at the scheduled time. Holidays or scheduled flights are not considered as emergencies.

6. Grading System

Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D	Minimum level of achievement for which credit is granted; a course with a "D" grade cannot be used as a prerequisite.	1
0-49	F	Minimum level has not been achieved.	0

Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy E-1.5 at camosun.ca for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	<i>In progress:</i> A temporary grade assigned for courses that, due to design may require a further enrollment in the same course. No more than two IP grades will be assigned for the same course. <i>(For these courses a final grade will be assigned to either the 3rd course attempt or at the point of course completion.)</i>
CW	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.

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

LEARNING SUPPORT AND SERVICES FOR STUDENTS

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.ca.

8. Academic Integrity

The Department of Mathematics and Statistics has prepared a handout called [Student Guidelines for Academic Integrity](#) to help you interpret college policies involving student conduct, academic dishonesty, plagiarism, etc. It is your responsibility to become familiar with the contents of the document and the college policies it references.

STAT 219 Suggested Homework Problems from the textbook Probability and Statistics by Devore

Section	7th edition	8th Edition	9th Edition
5.4	47, 49, 53	47, 49, 53	47, 49, 53
Chapter 7 Review	1, 3, 5, 11, 13, 15, 17, 19, 21, 23, 29, 33, 39, 41, 47, 51, 55	1, 3, 5, 11, 13, 15, 17, 19, 21, 23, 29, 33, 39, 41, 47, 51, 55	1, 3, 5, 11, 13, 15, 17, 19, 21, 23, 29, 33, 39, 41, 47, 55
Chapter 8 Review	1, 3, 7, 19, 21, 23, 25(a), 35, 37, 40, 47, 50, 53, 55, 57, 63, 65, 67, 69, 73, 75	1, 3, 7, 19, 21, 23, 25(a), 31, 37(a), 39, 41, 47, 49, 51, 53, 55, 57, 65, 67, 69, 71, 73	1, 5, 9, 19, 21(a), 29, 43(a), 45, 47, 57, 59, 61, 63, 65, 73
7.4	43, 45	43, 45	43, 45
Chapter 9 Review	1(a,b), 3, 5, 9, 11, 17(a,b), 21, 25, 33	1(a,b), 3, 5, 9, 11, 17(a,b), 21, 25, 33	1(a,b), 5, 9, 11, 17(a,b), 21, 25, 33
9.3	39, 41, 43	39, 41, 43	39, 41, 43
9.4	47, 49, 51(a), 53, 55	47, 49, 51(a), 53, 55	47, 51(a), 53, 55
9.5	57, 59, 61, 63	57, 59, 61, 63	57, 59, 61, 63
Chapter 9 Supp	65, 67, 69, 71, 73, 75, 77, 83	65, 67, 69, 71, 73, 75, 77, 83	65, 67, 69, 71, 73, 75, 77, 83
10.1	1, 3, 5, 7, 9	1, 3, 5, 7, 9	1, 3, 5, 7, 9
10.2	11, 17, 19, 21	11, 17, 19, 21	11, 17, 19, 21
10.3	25, 27	25, 27	25, 27
Chapter 10 Supp	35, 39	35, 37	35, 37
11.1	1, 3, 5, 7	1, 3, 5, 7	1, 3, 5, 7
11.2	17, 19	17, 19	17, 19
Chapter 11 Supp	51	51	51
12.1	7, 9	7, 9	7, 9
12.2	13, 15(c, d), 17, 19, 21(b, c, d)	13, 15(c, d), 17, 19, 21	13, 15(c, d), 17, 19, 21
12.3	33, 35	33, 35	33, 35
12.4	47, 49, 51, 53	47, 49, 51, 53	47, 49, 51, 53
12.5	59, 61, 63, 67	59, 61, 63, 67	59, 61, 63, 67
Chapter 12 Supp	71, 73, 83, 85	71, 73, 83, 85	71, 73, 83, 85
14.1	1, 3, 5, 11	1, 3, 5, 11	1, 2, 5, 11
14.2	13, 15, 17, 23	13, 15, 17, 23	13, 15, 17,
14.3	25, 29, 31	25, 29, 31	23, 29, 31
Chapter 14 Supp	37, 39, 41, 43	37, 39, 41, 43	37, 39, 41, 43
15.1	3, 5	3, 5	3, 5
15.2	11, 13, 15	11, 13, 15	11, 13, 15
15.4	23, 25, 27	23, 25, 27	23, 25, 27
Chapter 15 Supp	29, 33	29, 33	29, 33