



COURSE OUTLINE

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

1. Instructor Information

| | | |
|-----|---------------|---|
| (a) | Instructor: | Bree Wilton |
| (b) | Office Hours: | M, Th, F 9:30 – 10:20 , Tu W 12:30-1:20 |
| (c) | Location: | E268 |
| (d) | Phone: | 250-370-3502 |
| (e) | Email: | wiltonb@camosun.bc.ca |
| (f) | Website: | https://sites.google.com/site/breewilton/home |

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, or 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> , 8th edition, 2012 Lab Manual: <i>“Math 219 Lab Manual”</i> on my website. |
| (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 Math 219 Lab Manual for each lab.* A lab assignment will be assigned for each lab session. All lab assignments are due by **3pm** on the due date. **No late assignments will be accepted for credit.** Understanding each lab is essential for succeeding in the Lab Final Examination.

Homework: 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 3pm** 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 | 15% |
| Tests | 35% |
| Lab Final | 10% |
| Cumulative Final Exam (3 hrs) | 40% |

Please refer to **my website** for tentative *test dates* and lab/homework *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 13-18 and April 20-21. You must be available to write the final examination at the scheduled time. Holidays or scheduled flights are not considered to be 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.

STUDENT CONDUCT POLICY

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 the College web site in the Policy Section.

| MATH 219 – Suggested Homework Problems | | | |
|---|--|--|---|
| Section | 6th edition | 7th edition | 8th 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, 51, 55 |
| Chapter 8 Review | 1, 3, 7, 19, 21, 23, 25(a), 35, 37, 39, 47, 49, 51, 53, 55, 61, 63, 65, 67, 71, 73 | 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 |
| 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), 3, 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, 49, 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, 39 | 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(b, c, d) | 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 | 69, 71, 81, 83 | 71, 73, 83, 85 | 71, 73, 83, 85 |
| 14.1 | 1, 3, 5, 11 | 1, 3, 5, 11 | 1, 3, 5, 11 |
| 14.2 | 13, 15, 17, 23 | 13, 15, 17, 23 | 13, 15, 17, 23 |
| 14.3 | 25, 29, 31 | 25, 29, 31 | 25, 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 |