DEPARTMENT OF SCIENCE

COURSE OUTLINE – WINTER 2020

ST1510 (C3, D3): Introduction to Applied Statistics I – 3 (3-0-2) 75 Hours for 15 weeks

INSTRUCTOR:	Dr. Mustafa Avci	**PHONE:**	780-539-2008
OFFICE:	J206	**E-MAIL:**	mavci@gprc.ab.ca
OFFICE HOURS:	Tue. & Thurs. 11:15-12:15		

CALENDAR DESCRIPTION: The course includes data collection and presentation, descriptive statistics. Probability distributions, sampling distributions, and the central limit theorem; point estimation and hypothesis testing; correlation and regression analysis; goodness of fit and contingency table.

PREREQUISITE(S)/COREQUISITE: Mathematics 30-1 or Mathematics 30-2 or equivalent

REQUIRED TEXT/RESOURCE MATERIALS: Introductory Statistics at www.lyryx.com under products and then Open Stax. Free, open resource.

DELIVERY MODE(S):

Mode	Group	Time	Day	Classroom
Lecture	C3 & D3	13:00-14:20	Wednesday & Friday	J202
Lab	D3	14:30-16:20	Wednesday	A312
	C3	14:30-16:20	Thursday	A312

COURSE OBJECTIVES: This course provides an introduction to statistical methods and their applications. The main topics are: obtaining and summarizing data with graphs and numeric measures; probability theory; and statistical inference (drawing conclusions from sample data by carrying out a hypothesis test). This course also comes with a lab component; students will use EXCEL as a tool to further help their understanding in statistical analysis.

LEARNING OUTCOMES: To demonstrate the basic knowledge of descriptive statistics and its use. To perform elementary analysis of research data and to interpret the results of statistical tests. To demonstrate a conceptual knowledge of the concepts and principles involved. To select the appropriate statistical test. To be able to enter and analyze data using the computer program EXCEL.

TRANSFERABILITY: Please consult the Alberta Transfer Guide for more information (www.albertatransfer.com)

** Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. **Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability**

EVALUATIONS:

The final grade for this course is composed of the marks received for each of the following components:

Component	Percent /Weight	Notes
Assignments	**10%**	Collaborative Group work
Lab Reports	**10%**	Works delivered in the Labs
Midterm	**27%**	Wednesday, February 12
Lab Exam	**15%**	**D3** Wednesday, April 1 & **C3** Thursday, April 2
Final Exam	**38%**	April 15-April 25 (including Saturdays and evenings)
Total	**100%**	

GRADING CRITERIA: Please note that most universities will not accept your course for transfer credit **IF** your grade is **less than C-**. This means **DO NOT GET LESS THAN "C-" IF YOU ARE PLANNING TO TRANSFER TO A UNIVERSITY.** And less than a C- may not be accepted as a prerequisite at the college and elsewhere.

GRADE CONVERSION GUIDELINES

Alpha Grade	4-point Equivalent	Percentage Guidelines		Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	90-100		C+	2.3	67-69
A	4.0	85-89		C	2.0	63-66
A-	3.7	80-84		C-	1.7	60-62
B+	3.3	77-79		D+	1.3	55-59
B	3.0	73-76		D	1.0	50-54
B-	2.7	70-72		F	0.0	00-49

COURSE SCHEDULE/TENTATIVE TIMELINE:

Week	Topics / Text Book Sections	Notes
1st Jan. 6 - 10	Sampling and Data 1.1-1.4	
2nd Jan. 13 - 17	Descriptive Statistics	
3rd Jan. 20 - 24	2.1-2.8	

4th Jan. 27 - 31	Probability 3.1-3.6	
5th Feb. 3 - 7	Discrete Random Variables 4.1-4.3 Continuous Random Variables 5.1, 5.2, 5.4	Wed. Feb. 12: Midterm
6th Feb. 10 - 14	The Normal Distribution 6.1, 6.2	Feb 17: Family Day/**College closed**
7th Feb. 24-28	The Central Limit Theorem 7.1, 7.3 Confidence Intervals 8.1-8.3	Feb 18-21: Winter Break/**No classes**
8th Mar. 2 - 6	Hypothesis Testing with One Sample 9.1-9.6	
9th Mar. 9 - 13	Hypothesis Testing with Two Samples 10.1-10.5	
10th Mar 16 - 20		
11th March 23 - 27	The Chi-Square Distribution 11.1-11.6	Lab Exams: **D3** Wednesday, April 1 & **C3** Thursday, April 2
12th Mar 30 – Apr 3	Linear Regression and Correlation 12.1-12.6	
13th Apr 6 – 10	F Distribution and One-way ANOVA 13.1-13.3	April 10: Good Friday/**College closed**
14th Apr 13		April 13, the last day of classes
April 15-April 25	**Final Exam**	Scheduled by the Office of the Registrar

STUDENT RESPONSIBILITIES: Students are responsible for all lecture material, labs and readings. Students are expected to practice the material by doing problems from the textbook. **Assignments are not accepted if handed in late**. **If the midterm is missed** due to illness the weight will be put on the final (i.e. the final will be worth 65%). **If the final is missed** due to illness it will be deferred (see calendar for information). A doctor's note and a phone message or email will be required in both cases.
Cellphone use is not permitted in the classroom. This includes texting. Please turn off and put away your cellphone during class. You may be asked to leave the classroom if using a cellphone.
No recording of any kind is allowed in the class, lab or during consultation with the instructor.

Final Exam: The final exam will be written during the exam period, **between April 15 and April 25 inclusive** (including Saturdays and evenings). <u>It is the student's responsibility to be available to write the exam at the scheduled time. Writing early is not permitted</u>.

STATEMENT ON PLAGIARISM AND CHEATING:

Cheating and plagiarism will not be tolerated and there will be penalties. For a more precise definition of plagiarism and its consequences, refer to the Student Conduct section of the College Admission Guide at http://www.gprc.ab.ca/programs/calendar/ or the College Policy on Student Misconduct: Plagiarism and Cheating at www.gprc.ab.ca/about/administration/policies /
Note: All Academic and Administrative policies are available on the same page.