



DEPARTMENT SCIENCE

COURSE OUTLINE – FALL 2016

ST1510 (A3, B3): Introduction to Applied Statistics I – 3 (3-0-2) 75 Hours over 15 Weeks

INSTRUCTOR: Tom McLeister **PHONE:** 780-539-2961
OFFICE: J212 **E-MAIL:** tmcleister@gprc.ab.ca
OFFICE HOURS: MTRF 10:00—11:00

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 by Prem S. Mann, Wiley

DELIVERY MODE(S): Lectures: C2 D2 WF 13:00-14:20 J228
Lab: C2 M 14:30-16:20 A305
Lab: D2 T 14:30-16:20 A305

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: UA, UC*, UL, AU*, AF, CU, GMU, KUC* (From the GPRC catalog)

***Warning:** Although we strive to make the transferability information in this document up-to-date and accurate, **the student has the final responsibility for ensuring the transferability of this course to Alberta Colleges and Universities.** Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at Alberta Transfer Guide main page <http://www.transferalberta.ca> or, if you do not want to navigate through few links, at <http://alis.alberta.ca/ps/tsp/ta/tbi/onlineSearch.html?SearchMode=S&step=2>

**** 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: Assignments 10%
 Lab Reports 10%
 Midterm 26% Fri. Oct. 21
 Lab Exam 15% C2 Mon. Nov. 28; D2 Tue. Nov. 29
 Final Exam 39% Dec. 6-16 inclusive (including Saturdays and evenings)

GRADING CRITERIA:

Alpha Grade	4-point Equivalent	Percentage Guidelines	Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	95-100	C+	2.3	66-69
A	4.0	90-94	C	2.0	62-65
A-	3.7	85-89	C-	1.7	58-61
B+	3.3	80-84	D+	1.3	55-57
B	3.0	75-79	D	1.0	50-54
B-	2.7	70-74	F	0.0	00-49

COURSE SCHEDULE/TENTATIVE TIMELINE:

Chapters 1-3 Sampling, Experiments, Graphs, Measures of Central Tendency and Spread
 Chapters 4-7 Probability, Probability Distributions, Binominal, Normal, Sampling Distributions of \bar{x} and \hat{p}
 Chapter 8 Confidence Intervals
 Chapter 9-12 Hypothesis Tests about the Mean, Proportion, Two Populations, Chi-square, ANOVA
 Chapter 13 Linear Regression, Correlation, Inference about B

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, seminar or during consultation with the instructor.

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.