

Columbia College
Statistics and Data Analysis I (STAT 180)

Lecture 1

Course Outline

Semester Dates: May 12, 2014 – June 13, 2014

Please note that when a holiday falls during the week, your class will be rescheduled for the Friday of that week. Students are required to make arrangements to be present at the rescheduled class.

Facilitator: Roy George, B.Sc., MBA, Ph.D. (candidate) Email: royvgeorge@gmail.com

Class Time: 1:00 pm – 5:00 pm (Tue/Thu) Room: 805-111

Credit: 3 Prerequisite: None

Note: It is the student's responsibility to be familiar with the information contained in the Course Outline and to clarify any areas of concern with the facilitator.

Course Description:

The student develops both the knowledge of certain key concepts fundamental to the field of statistics and the ability to apply the related formulas to a range of typical business problems. The concepts explored include elementary probability, expectation, drawing conclusions from both large and small samples, discrete and continuous random variables and measures of central tendency and dispersion.
Prerequisite: None

Learning Outcomes:

As a result of active participation in these sessions, a student can expect to:

- Describe and explain the key basic terms, concepts, theories, models, tools and techniques in statistics and data analysis.
- Discuss the quantitative approach to problem-solving and decision-making and how it can be applied in the real world.
- Identify the various quantitative methods used and explain how each can assist managers make better decisions.
- Discuss the various probability concepts and explain how probability analysis can help in better decision-making.
- Critically analyze cases and be able to apply statistical concepts and tools to resolve problems and issues presented in each case.

Course Format:

This course uses a variety of teaching/learning methods including discussion, personal reflection, experiential exercises, student presentations, role-plays, group activities and especially case studies. Our faculty aims to create a learning environment where the learner is actively engaged in inquiry, critical thinking and problem solving. The classroom provides you with a place where you can learn with and from others in a cooperative and collaborative manner.

You are expected to take a very active part in class discussions and take responsibility for your own learning. Be a positive and co-operative team member. Columbia College uses a facilitation model of instruction where the facilitator's role is to facilitate your learning. The expectation is that you will come to class prepared with pre-class homework completed. Your facilitator will engage you in activities that are based on your completed homework and readings. Your enthusiastic and positive approach in the classroom will create an atmosphere that will help every student develop the knowledge, skills and attitudes that are needed for success.

How you conduct yourself in our classes will, to a large extent, mirror your conduct in society and your future work site. For example, if you have a tendency to ask questions, challenge the ideas of others in a respectful manner, draw out the best from your colleagues, and encourage both group development and task accomplishment in this class, it is likely you will do the same at work. A high level of student involvement and developing professionalism is expected in the classroom as you work towards your goal.

Required Textbooks and Equipment:

Skuce, J. (2013). *Analyzing Data and Making Decisions: Statistics for Business*. Toronto, ON: Pearson Education Inc.

Recommended Readings and Resources:

Students may access these sources from the College and from home.

ProQuest Nursing and Allied Health, Canadian Business and Current Affairs, and Canadian Newsstand

- <http://proquest.umi.com/login>
Username: cc-library
Password: welcome

GALE InfoTrac Custom Journals

- <http://infotrac.galegroup.com/itweb/calg145?db=SP00>
Password: cclibrary09

Homework Assignment Due for the First Class:

1. Read chapters one and two of your text, *Analyzing Data and Making Decisions: Statistics for Business* (2nd ed.).
2. As a result of your reading assignment, write down at least three questions that you would like to be clarified or discussed in class.
3. Prepare for a test based on the assigned readings.
4. Read this syllabus and be prepared to discuss this in class.

Evaluation - Assessment of Student Performance:

The final grade in the course will be based on the following elements. Wherever possible facilitators will use rubrics to assess your performance and offer feedback.

Title of Assignment/Examination	Due Date	Weight
Assignments	Classes 3, 5, 7, 9	40%
Tests	Daily	20%
Final exam	Class 10	40%
N/A	N/A	N/A
N/A	N/A	N/A

Please note that all homework and assignments are due at the beginning of each class.

Grading:

Grades for each component will be added together at the end of the semester. The final total will be translated to the Columbia College's 4.0 grading scale as follows:

Marking and Grading Conversion:

Description	Letter Grade	Grade Points	Percentage Scale	
Excellent	A+	4.0	100	95
	A	4.0	94	90
	A-	3.7	89	85
Good	B+	3.3	84	80
	B	3.0	79	75
	B-	2.7	74	70
Satisfactory	C+	2.3	69	65
	C	2.0	64	60
	C-	1.7	59	55
Poor	D	1.0	54	50
Failure	F	0.0	49	0

Please note that to pass this course you must earn at least a "D" (a minimal pass).

Submission and Completion of Assignments:

You are expected to submit assignments by the due date. Any late assignments may be assessed a marking penalty of 5%. If you are unable to submit an assignment on the due date, you must request an extension **before** the due date by filling out an *Application for Assignment Extension form (SSPP-F012)* that is to be submitted to the Department Chair for approval. This form is available on Columbia's website, Bldg. 802 – Main Office and from Department Chairs.

Requesting an Examination Deferral:

If you are requesting an exam to be deferred, you must submit an Application for *Deferred Examinations form (SSPP-F012)* to the Department Chair **within 48 hours of the missed examination date and time**. Applications for deferred examinations will only be considered due to medical or personal emergency. A medical certificate or other appropriate documentation may be required. This form is available on Columbia's website, Bldg. 802-Main Office and from Department Chairs.

Attendance Requirements:

Columbia College believes that students are committed to their program and learning experiences. However, it is understood that there are times when students may be absent. Any absences can be viewed as a potentially serious disruption of the learning process and necessary achievement of the learning objectives. Being late is also considered unacceptable as it interferes with the learning opportunities of others. Unavoidable absences or lateness must be reported to the course facilitator in advance. Please refer to Columbia College's *Attendance Policy and Regulations (ADM-P151)* for detailed information on Attendance Requirements.

Academic Integrity:

Academic dishonesty is a serious offence and can result in suspension or expulsion from Columbia College.

There is no tolerance for academic dishonesty and any student caught plagiarizing is subject to serious sanctions as outlined in the *Student Code of Conduct Policy (ADM-P229)*. Students are encouraged to familiarize themselves with this policy and avoid any behavior that could possibly be seen as cheating, plagiarizing, misrepresenting, or putting into question the integrity of one's academic work.

Student Conduct:

It is the responsibility of each student to uphold the expectations and responsibilities outlined in the *Student Code of Conduct Policy (ADM-P229)* and any additional requirements established by your program.

Generally, each student will:

- be respectful and courteous toward others;
- demonstrate appropriate and supportive communication skills, and coach, assist, advise and otherwise support other students in their studies;
- manage any personal stress and conflict in a positive and resourceful manner, and assist others to do the same;
- be dressed in a manner appropriate for their workplace or learning environment, as established by the program;
- conduct themselves in a professional manner with regard to their communication with others and their behavior in class;
- conduct themselves with academic integrity in all of their learning activities, tests, exams, and assignments
- keep up with day-to-day classroom and course expectations.

Important Dates:

Description	Date
Last to add/drop courses	5 school operating days from the start of the semester OR before the third scheduled class, whichever is greater
Last day to withdraw without academic penalty	50% or less of the semester has been completed
Final Examination	A final exam may take many formats. If a final exam is scheduled, it will be taken in an assigned room under the supervision of a Test Proctor. <u>Students must be on time as they will not be permitted to enter once the exam has started.</u> Exam dates, times, and location are posted by the main office Bldg. 802 and in the hallway in Bldg. 805. <u>It is the student's responsibility to check this exam posting.</u>

Appeals:

Please refer to the *Student Appeal Policy (ADM-P177)*.

Students with Temporary or Permanent Disabilities:

Students with temporary or permanent disabilities may apply for accommodations. To be considered for an accommodation, a student must register with Columbia College's Disability Services by making an appointment with a Disability Services Advisor – Main Office – Bldg. 802 or emailing disabilityservices@columbia.ab.ca. The Department Chair or facilitator is not able to provide you with any accommodations without you taking this step. Please refer to Columbia College's website to review *the Accommodation Policy and Handbook (ADM-P188)*.

Student Support:

Students should be aware that Life Coaching, Career and Disability Services, and Student Support Services (i.e. tutoring, academic strategists, etc.) are provided by Columbia College. Inquire how to request these services at the Main Office in building 802. It is the student's responsibility to discuss their specific learning needs with the appropriate service provider.

Class Schedule/Overview:

Please note that this schedule is subject to change. Any changes or cancellations will be emailed to you. It is your responsibility to check the email address you have given to the school on a daily basis for any messages from the Department Chair/designate, facilitator or College Administration. It is the student's responsibility to be familiar with the information contained in the Course Outline and to clarify any areas of concern with the facilitator.

Class Session	Topics	Pre-Class Readings
1	<ul style="list-style-type: none">Using data to make better decisionsUsing graphs and tables to describe data	<ul style="list-style-type: none">Chapters 1, 2
2	<ul style="list-style-type: none">Using numbers to describe dataCalculating probabilities	<ul style="list-style-type: none">Chapters 3, 4
3	<ul style="list-style-type: none">Probability distributionsUsing sampling distributions to make decisions	<ul style="list-style-type: none">Chapters 5, 6Assignment 1 due (see Appendix 1)
4	<ul style="list-style-type: none">Making decisions with a single sampleEstimating population values	<ul style="list-style-type: none">Chapters 7, 8
5	<ul style="list-style-type: none">Making decisions with matched-pairs samples, quantitative or ranked dataMaking decisions with two independent samples, quantitative or ranked data	<ul style="list-style-type: none">Chapters 9, 10Assignment 2 due (see Appendix 1)
6	<ul style="list-style-type: none">Making decisions with three or more samples, quantitative data—analysis of variance (ANOVA)	<ul style="list-style-type: none">Chapter 11
7	<ul style="list-style-type: none">Making decision with two or more samples, qualitative dataReview	<ul style="list-style-type: none">Chapter 12Assignment 3 due (see Appendix 1)
8	<ul style="list-style-type: none">Analyzing linear relationships, two quantitative variablesReview	<ul style="list-style-type: none">Chapter 13
9	<ul style="list-style-type: none">Analyzing linear relationships, two or more variablesReview	<ul style="list-style-type: none">Chapter 14Assignment 4 due (see Appendix 1)
10	<i>Final Exam – 3 hrs.</i>	<ul style="list-style-type: none">N/A

Appendix 1 Assignment Outlines

Assessment Information Assignments #1, 2, 3, and 4

Due Date: Classes 3, 5, 7, and 9

Weight: 40% (10% each)

Students will submit answers to specific exercises at the end of text chapters (see below). Students will develop skills in applying statistical concepts and tools to resolve real-world problems and issues presented in these exercises.

Assignment 1

Chapter 1 – Exercise 20, Page 24

Chapter 3 – Exercise 6, Page 148

Assignment 2

Chapter 8 – Exercise 22, pages 323-324

Assignment 3

Chapter 9 – Exercise 22, Pages 368-369

Chapter 10 – Exercise 23, Page 398

Assignment 4

Chapter 13 Exercise 26, Pages 523-524

Quizzes

Due Date: Each class from classes 1 through 8.

Weight: 20%

Students will be expected to read the assigned chapters in the text and other assigned readings and be prepared to write a graded quiz based on these reading assignments.

Final Exam

Due Date: Class 10

Weight: 40%

Students will be required to write a final exam covering the content of classroom learning and assigned text and other readings. The exam will consist of 75 to 100 multiple-choice questions.

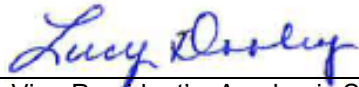
Approval:



Program Chair's Signature

May 5, 2014

Date



Vice-President's, Academic Signature

May 5, 2014

Date



Registrar's Signature

May 5, 2014

Date