Division of Applied Science & Management
School of Management, Tourism & Hospitality
Semester 2015-02, Winter 2016

Course Outline

Business 111

Introduction to Probability & Statistics (Statistics I)

59.0 Hours
3.0 Credits

Prepared by _____ Date: January 6, 2016

Brian Paul, Instructor

Approved by _____ Date: _____

Margaret Dumkee, Dean of Applied Science & Management

YUKON COLLEGE

This course outline was prepared by Brian Paul on January 6, 2016.

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Division of Applied Science & Management
School of Management, Tourism & Hospitality
Business 111
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Introduction to Probability & Statistics (Statistics I)

Instructor:	Brian Paul, M.Sc., MBA
Office Location:	Room #A 2412 - Ayamdigut Campus
Office Hours:	09:00 - 12:00: Monday, Wednesday and Friday 13:00 - 15:00: Tuesday and Thursday (or by appointment)
Contact Information:	Telephone Numbers: 668-8756 (Ayamdigut) 667-6763 (Home) 668-8890 (FAX - Ayamdigut) E-Mail: bpaul@yukoncollege.yk.ca (Ayamdigut) bpaul@northwestel.net (Home)

Course Length:	59.0 hours (2.0 hrs/day; 2 days/week; 15 weeks)		
Course Days:	Tue / Thur	**Course Time:**	10:00 - 12:00
Class Room #:	A 2206	**Lab Room #:**	A 2408 / A 2702

Course Description:

This course will deal with the fundamentals of probability and statistics and will emphasize the application of statistical models to “real world” problems of uncertainty and variability. The instructor will concentrate on building a sound knowledge of the use - and potential misuse - of statistical methods to provide students with a base for future administrative problem solving and analysis. A certain amount of mathematical development will be involved, but we will look mainly at how the basic concepts are applied, rather than spending time on theorems and mathematical derivations.

In the instructor’s experience, people who utilize statistical techniques make errors due mainly to a misunderstanding - or misapplication - of basic concepts. This course will begin, therefore, with a review of data summarization and will continue with a review of the basic laws of probability and the application of these laws to elementary statistical inference.

Course Goals:

1) One of the objectives of this course is to introduce students to the quantitative aspects of decision-making.

2) A second objective is to familiarize students with the statistical techniques applicable to business problem-solving.

3) A final objective is to provide students with a set of basic skills, with which they can begin conceptualizing problems in a quantitative manner.

In this course, we will be utilizing a textbook written by Canadian Gerald Keller. Comments on the author's approach to teaching statistics - and the rationale for this approach - can be found on pages xi to xiii of your statistics text.

Course Prerequisites:

None - the assumption is that students will be competent in basic algebra, as outlined in the program entrance requirements.

Course Format:

As mentioned previously, the course will be structured around selected chapters in **Statistics for Management and Economics (10th Edition)**, by Gerald Keller. The instructor will proceed on the assumption that students have kept abreast of the assigned materials - some students may wish to read ahead in the text. A partial assignment list will be provided by the instructor on January 7, 2016 - this list will be updated as the course progresses.

As the instructor cannot possibly cover all of the material in the assigned readings, the emphasis for examination purposes will be on material covered during class sessions. The course will be delivered using a combined format of lectures and sample problems worked out in class. The lectures will follow the textbook for the most part, but will be augmented with a small number of handouts.

You will be asked to apply the probability and statistics theory covered in classroom to related problem exercises and assignments.

Course Requirements:

How To Perform Well In This Course (!)

A good understanding of the basic concepts of probability and statistics is the key success factor in this course. It is absolutely essential that you keep abreast of the assignments and general course work (some of the ideas we will be discussing are more subtle than they might first appear). The concepts covered in this course are cumulative and missing classes will leave you "out of sync" in ways that may not be apparent until term test or examination time.

If you must miss a class, it's a good idea to let the instructor know ahead of time so that arrangements can be made to go over the material outside of class.

Academic and Student Conduct

Information on academic standing and student rights and responsibilities can be found in the Academic Regulations:

http://www.yukoncollege.yk.ca//downloads/Yukon_College_Academic_Regulations_and_Procedures_-_August_2013_final_v1.pdf

Plagiarism

Plagiarism is a serious academic offence. Students who plagiarize material for assignments will receive a mark of zero (F) on the assignment and may fail the course. Plagiarism may result in dismissal from a program of study or the college.

Plagiarism involves presenting the words of someone else as you own. Plagiarism can be the deliberate use of a whole piece of another person's writing, but more frequently it occurs when students fail to acknowledge and to document sources from which they have taken material. Whenever the words, research, or ideas of others are directly quoted or paraphrased they must be documented according to standard procedures (APA or MLA). Re-submitting a paper for which you have previously received credit is also an academic offence.

Yukon First Nations Core Competency

Yukon College recognizes that a greater understanding and awareness of Yukon First Nations history, culture and journey towards self-determination will help to build positive relationships among all Yukon citizens. As a result, to graduate from any Yukon College program, you will be required to achieve core competency in knowledge of Yukon First Nations. For details, please see

www.yukoncollege.yk.ca/yfnccr.

Academic Accommodation

Reasonable accommodations are available for students requiring an academic accommodation to fully participate in this class. These accommodations are available for students with a documented disability, chronic condition or any other grounds specified in section 8.0 of the Yukon College Academic Regulations (available on the Yukon College website). It is the student's responsibility to seek these accommodations. If a student requires an academic accommodation, he/she should contact the Learning Assistance Centre (LAC) at (867) 668-8785 or lassist@yukoncollege.yk.ca.

Evaluation:

A final grade for this course will be assigned on the following basis:

Assignments / Mini-Tests 15%

There will be five mini-tests, each worth 3.0%. Don't panic at the sudden sight of so many tests ! These tests will occupy 20 to 30 minutes at the beginning of selected classes. They are meant to keep you up-to-date with the assignment questions (the alternative would be hand-in assignments on the same dates). The questions on the mini-tests will be identical, or nearly identical, to the assignment questions for that particular section of the course. Students who complete the assigned questions prior to the date of the test should have no problem scoring well on these tests.

Term Tests 39%

There will be three term tests in this course, each worth 13%. These term tests will be held during regular class sessions, as indicated in the accompanying syllabus.

Assignments / Cases 21%

There will be three assignments (or cases) that will require the use of a statistical software package (MINITAB or EXCEL).

Final Examination 25%

Rewrites of the final examination may be allowed under certain conditions. If a student does poorly on the final examination, such that he or she fails the course, the instructor may allow the student to rewrite the final examination. Under no circumstances will a student be allowed to rewrite a final examination if that student has failed the term work component of the course.

Total 100%

Required Textbook:

Keller, G. (2014): **Statistics for Management and Economics - 10th Edition**: Cengage Learning, 909 pp.

The preceding textbook is available from the Yukon College bookstore ($228.00); the book is priced at $196.42 on Amazon.ca. It also serves as the textbook for Business 307 (Statistics II), a second-year Business Administration elective course that may be offered during the fall semester.

An electronic version of the textbook can be downloaded for approximately $136 from the following internet address:

https://www.vitalsource.com/products/statistics-for-management-and-economics-10e-gerald-keller-v9781305142756

Earlier editions of the statistics text should be fine for this course, but the instructor will be assigning homework questions out of the tenth edition.

Single copies of the ninth and tenth editions of the statistics text have been placed on two-hour reserve in the Yukon College library.

Supplementary Textbooks / Internet Resources:

The instructor's list of supplementary textbooks available in the Yukon College Library is out-of-date, and will not be reproduced for students. The instructor does not have a student solutions manual for the ninth or tenth editions of the Keller text, but the instructor's solutions to the assigned homework questions will be available on the BUS 111 Moodle/SoftChalk page.

As noted, a course web page has been set up in Moodle (using the web authoring software SoftChalk). The instructor anticipates that the course web page will serve mainly as a repository for the course materials handed out in class (and any data files you'll need to complete the three assignments). Content will be added to the web page as course progresses.

Required Supplies:

A handheld calculator will be required for this course, preferably one with a variety of statistical function keys. Students planning on taking Business 260 during the second year of the Business Administration program might want to purchase a Sharp EL-738 FC financial calculator, the calculator instructors have been recommending for this course over the past number of years. The Staples store downtown sells these calculators at a price of $45.93 (plus GST).

Students interested in renting **MINITAB Release 17** for use on their own computers for a period of twelve months may do so for approximately seventy dollars (Canadian). A six-month rental is available for approximately forty-two dollars (Canadian). **MINITAB Express** is also available for rental if you are using an Apple device. Details on the download procedure can be found at the following Internet address:

http://www.onthehub.com/minitab/

Proposed Syllabus:

Class	Date	Text: Chapters	Topic
1	01/07/16	1.1-1.4 & 2.1	Introduction to the Course
2	01/12/16	3.1	Graphical Techniques for Interval Data I
3	01/14/16	3.1	Graphical Techniques for Interval Data II
	01/15/16		**Last Day To Register In Winter Semester Courses**
4	01/19/16	2.2-2.3 & 3.1-3.4	Graphical Presentation

Class	Date	Text: Chapters	Topic
5	01/21/16	4.1	Measures of Central Location I
6	01/26/16	4.1	Measures of Central Location II
			Mini-Test #1 (Chapter 3 - pp. 44 to 61)
7	01/28/16	4.2-4.3 & 4.7-4.8	Measures of Variability I
8	02/02/16	4.2-4.3 & 4.7-4.8	Measures of Variability II
			Mini-Test #2 (Chapter 4 - pp. 95 to 103)
9	02/04/16	N/A	Introduction to MINITAB / Data Analysis Plus
			1st Assignment Handed Out
	TBA		**Review Session**
10	02/09/16	6.1-6.5	Probability I
11	02/11/16	N/A	**Term Test #1 (Chapters 3 and 4)**
12	02/16/16	6.1-6.5	Probability II
13	02/18/16	6.1-6.5	Probability III [1]
	02/20/16 to 02/28/16		**Reading Week Break**
14	03/01/16	7.1 & 7.4-7.5	Discrete Probability Distributions I
15	03/03/16	7.1 & 7.4-7.5	Discrete Probability Distributions II
			Mini-Test #3 (Chapter 6)
16	03/08/16	8.1-8.3	Continuous Probability Distributions I
			1st Assignment Due
17	03/10/16		**Term Test #2 (Chapter 6)**
	03/11/16		**Last Day To Withdraw From Winter Semester Courses Without Academic Penalty**

Class	Date	Text: Chapters	Topic
18	03/15/16	8.1-8.3	Continuous Probability Distributions II
			2nd Assignment Handed Out
19	03/17/16	9.1, 9.2 & 9.4	Sampling Distributions
20	03/22/16	10.1-10.3	Estimation
21	03/24/16	11.1-11.4	Introduction to Hypothesis Testing
			Mini-Test #4 (Chapters 7 & 8)
	03/25/16 to 03/28/16		**Easter Weekend**
22	03/29/16	12.1 & 12.3	Inference About A Population
23	03/31/16	12.1 & 12.3	Inference About A Population
			3rd Assignment Handed Out
	TBA		**Review Session**
24	04/05/16	N/A	**Term Test #3 (Chapters 7, 8, 9 and 10)**
			2nd Assignment Due
25	04/07/16	13.1-13.3 & 13.5	Inference About Comparing Two Populations
26	04/12/15	13.1-13.3 & 13.5	Inference About Comparing Two Populations
			Mini-Test #5 (Chapters 11 and 12)
27	04/14/16		**Review Session**
	04/18/16 to 04/22/16		**Examination Week**
	04/26/16		**3rd Assignment Due**

[1] **Please note the three-hour class on Thursday, February 18. This class will run from 10:00 am to 1:00 pm in A 2206.**