

### **BUS111E, Statistics I**

*3 Credits, 16 weeks, 3 hours*

Students are introduced to basic statistical concepts and procedures used to solve business problems. Topics covered include: data graphics and charts; measures of central tendency and dispersion; elementary probability; probability and sampling distributions; interval estimation; hypothesis-testing; and regression & correlation. Students will also develop competence in the use of data analysis software.

*Prerequisites and/or co-requisites: BUS 103*

### **Instructor**

Jason Schulz  
S113F  
780-791-4829  
jason.schulz@keyano.ca

### **Hours of Instruction**

*Wednesday, 6:30 – 9:30 PM, Syncrude Technology Centre, Room S110*

### **Office hours**

Monday 9:30 – 10:00 AM  
Tuesday 2:30 – 2:50 PM, 5:00 – 6:30 PM  
Wednesday 2:00 – 2:50 PM, 5:00 – 6:30 PM

### **Required Resources**

Basic Statistics for Business & Economics, Lind et al., Fourth Canadian Edition, ISBN 978-0-07-132051-1

Texas Instruments BA II Plus or Texas Instruments BA II Plus Professional Calculator and Internet Access (for Lyryx Labs)

### **Course Outcomes**

Upon completion of the course the student should be able to:

1. Arrange data sets and represent them using a number of organizational methods
2. Calculate the mean, median, mode, variance and standard deviation of a data set.
3. Calculate the probability that any given event may occur.
4. Calculate z-values in Normal Probability Distributions.
5. Differentiate between z- and t-values.
6. Conduct Hypothesis testing, using the five-step method, for single and two sample tests.
7. Describe some of the common errors that occur in samples.
8. Perform ANOVA calculations and generate the corresponding table.

## Evaluation

Lyryx Online Labs: 30%

Midterm Exam: 30%

Final Exam: 40%

Total: 100%

*The minimum progression grade for this course is 60%. The minimum standard for passing this course is a grade of 50%. Failure to maintain a minimum weighted average of 50% on examinations will result in a failing grade (F).*

**Examinations and Quizzes:** *Students are required to attend exams and quizzes as scheduled. If, for some **important** reason they are unable to do so, they are required to do the following: 1) Call or email your instructor **prior** to the date of the exam or quiz outlining the problem and 2) provide documentation (Medical note) verifying the reason for your absence.*

**Lyryx On-Line Labs:** *Lyryx assignments are to be submitted online at the Lyryx site (<http://login.lyryx.com/>). An assignment can be attempted as many times as desired and the highest mark will be recorded. Each assignment is worth 3% of the final mark (10 x 3% = 30%). Note that it is essential assignments be completed on time otherwise the Lyryx program will not accept them. Each Lyryx assignment must be completed on **Wednesday of the week indicated**.*

**Labs:** *Students are expected to use their lab sessions to work on the Lyryx on-line labs. If students are having difficulty with questions, fellow classmates (or the instructor) may be consulted for assistance.*

## Performance Requirements

### Student Attendance

Class attendance maximizes a students' learning experience. In addition, attending class is a good way to keep informed of matters relating the administration of the course (e.g., the timing of assignments and exams). Ultimately, you are responsible for your own learning and performance in this course. **Students are expected to arrive on time and to stay for the duration of the class.** Please refer to page 32 of the Credit Calendar.

It is the responsibility of each student to be prepared for all classes. Students who miss classes are responsible for the material covered in those classes and for ensuring that they are prepared for the next class, including the completion of any assignments and/or notes that may be due.

### Accommodation for Students with Disabilities

The College will provide reasonable accommodation to students with disabilities in order to promote academic success. If you require accommodation, contact the Learner Assistance Program Office at 780-792-5608 to initiate the process for documenting, assessing and implementing your individual accommodation needs. In addition, tutoring services are available at the SKILL Centre (Room 119).

**Students will refrain from using mobile devices in class. Students who choose to do so during class will be asked to leave.**

**Proposed Schedule**

WEEK	WEEK OF	TOPIC	CHAPTERS / SECTIONS
1	Jan. 7	Introduction to Statistics Describing Data: Frequency Distributions and Graphic Presentation	1 & 2
2	Jan. 14	Describing Data: Numerical Measures	3
3	Jan. 21	A Survey of Probability Concepts Lyryx #1 Deadline	4
4	Jan. 28	Discrete Probability Distributions	5
5	Feb. 4	The Normal Probability Distribution Lyryx #2 Deadline	6
6	Feb. 11	<b>Midterm Exam (30%)</b> Lyryx #3 Deadline	
7	Feb. 18	Sampling Methods and Central Limit Theorem Lyryx #4 Deadline	7
8	Feb. 25	<b>Reading Week - No Classes</b>	
9	March 4	Estimation and Confidence Intervals Lyryx #5 Deadline	8
10	March 11	One-Sample Tests of a Hypothesis Lyryx #6 Deadline	9
11	March 18	Two-Sample Tests of a Hypothesis Lyryx #7 Deadline	10
12	March 25	Analysis of Variance Lyryx #8 Deadline	11
13	April 1	Linear Regression and Correlation Lyryx #9 Deadline	12
14	April 8	Multiple Regression and Correlation Analysis Lyryx #10 Deadline	13
15	April 15	<b>Review for Final Exam</b>	
16	April 22	<b>FINAL EXAM (40%) - TBA</b>	

**Authorization**

This course outline has been reviewed and approved by the Program Chair.

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Jason Schulz, Instructor

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Gina Langager, Chair

Date Authorized

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Guy Harmer, Dean

Date Authorized

**Signed copies to be delivered to:**

Instructor  
Registrar's Office