

**BUS 111 A, Statistics I**

3 Credits, 3 hours Lecture, 2 hours Lab

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

*Prerequisites: BUS 110 Business Mathematics*

**Instructor**

Name: Amani Edwards  
 Office: S 111E  
 Phone: 780-791-8956  
 Email: [amani.edwards@keyano.ca](mailto:amani.edwards@keyano.ca)

**Office Hours**

MON 11:00 AM - 12:00 PM  
 TUE/THU 1:00 PM - 2:00 PM

**Hours of Instruction**

<b>Lectures:</b>		<b>Labs:</b>	
TUE/THU	10:30 -11:50 (Room 273)	MON:	9:00 – 10:50 (Lab Y - S105)
		WED:	8:00 – 9:50 (Lab Z - S107)
		WED:	10:00 – 11:50 (Lab X - S107)

**Required Resources**

Donnelly, R. (2020). Business Statistics -- MyLab Statistics with Pearson eText, Third edition. ISBN-10: 0134782925 • ISBN-13: 9780134782928

**Please register for MyLab Statistics in order to access quiz, assignments, and exams related to the course.** Instructions are provided on MOODLE under course orientation.

The access code for MyLab Statistics and the e-text is available at the Keyano bookstore.

**Course Outcomes**

Upon successful completion of the course, the student shall be able to:

- Arrange data sets and represent them using a number of organizational methods.
- Determine descriptive statistics of data including the mean, mode, median, variance and standard deviation.
- Calculate the probability that any given event may occur.
- Determine and apply the discrete and continuous probability distributions including the binomial distribution, the normal distribution, sampling distributions and the central limit theory.
- Utilize inferential statistics including hypothesis testing about the mean and proportion, ANOVA, chi-square test, correlation and linear regression analysis.
- Perform statistical analysis of data with Microsoft EXCEL.

**Evaluation**

<b>Assessment</b>	<b>Percentage</b>
Assignments (Pearson)	15%
Labs and Tutorials	15%
Class Participation and Attendance	5%
Quizzes (MOODLE)	20%
Midterm Examination	20%
Final Examination	25%
<b>Total</b>	<b>100%</b>

**Assignments**

Assignments must be completed via the MyLab Statistics web site as such access to MyLab Statistics is mandatory. Your instructor will go over the instructions during the first lecture. The assignments cover chapters learned in class.

**Labs and Tutorials**

In the real business world, most statistical analyses are conducted using computer software. This is one of the industry standards for analyzing statistics and as such we will be employing EXCEL in this course. Please download and install Microsoft EXCEL prior to the start of the course on your personal computer if possible (see MOODLE). There are five labs that are designed to introduce students to the main features of data organization and analyses (both descriptive and inferential). The labs serve to demonstrate how data analyses covered in the course can be conducted with the statistical software. Labs are conducted in class and are due at the end of the class. The first session of the lab will be a technology workshop in which the students are introduced to the technology required to complete labs and relevant analyses and given the opportunity to ask the instructor questions. As well tutorials will be done during lab sessions. Tutorials will provide practice into technology and course material covered. Unlike labs, tutorials are instructor-assisted. All labs and tutorials are due at the end of the class.

**Quizzes**

Quizzes will be via MOODLE during lab sessions. They will be close-book assessments covering chapters completed prior to the week of the quiz. The structure of the quiz will be a hybrid of multiple choice and direct answer questions.

**Examinations**

The examinations (mid-term and final) will be close-book assessments administered via Moodle. Study guides for the scope of the exams will be provided by the instructor.

### Preparing for Class and Notes

For learning to happen in any course, you must take an active role in the process. For this class, you are expected to come to class prepared and ready to learn, which requires you to review each chapter before class. Being prepared for class enables you to construct a knowledge base on which subsequent learning rests. For collaborative exercises, one grade will be provided to every group member based on the exercise deliverables. All exercises and assignments must be completed during the allotted period. There will be no exceptions. I emphasize group learning in my classes, as I believe group activities help students develop varied skills that are increasingly important in the work environment. Working in groups will provide each student the opportunity to develop team skills, improve communication skills, and leverage personal experiences to contribute to group tasks.

### Grading System

Descriptor	Alpha Grade	4.0 Scale	Percent
Excellent	A+	4.0	> 93.9
	A	4.0	87 – 93.9
	A-	3.7	80 – 86.9
Good	B+	3.3	77 – 79.9
	B	3.0	74 – 76.9
	B-	2.7	70 – 73.9
Satisfactory	C+	2.3	67 – 69.9
	C	2.0	64 – 66.9
	C-	1.7	60 – 63.9
Poor	D+	1.3	57 – 59.9
<b>Minimum Pass</b>	D	1.0	50 – 56.9
Failure	F	0.0	< 50

### Proposed Topics

1. An Introduction to Business Statistics
2. Displaying Descriptive Statistics
3. Calculating Descriptive Statistics
4. Introduction to Probabilities
5. Discrete Probability Distributions
6. Continuous Probability Distributions
7. Sampling and Sampling Distributions
8. Confidence Intervals
9. Hypothesis Testing for a Single Population
10. Hypothesis Tests Comparing Two Populations
11. Analysis of Variance (ANOVA) Procedures
12. Chi-Square Tests
13. Hypothesis Tests for the Population Variance
14. Correlation and Simple Linear Regression

**See the course schedule for details of readings, assessments, and due dates.**

**Please Note:**

Date and time allotted to each topic is subject to change.

## Performance Requirements and Student Services

### Student Responsibilities

As a student, it is your responsibility to contact the Office of the Registrar to complete the required forms, including the Withdraw Course or Program or a Change of Registration form. Please refer to the important dates listed in the Academic Schedule in the [Keyano College credit calendar](#). The Keyano College credit calendar also has information about Student Rights and the Code of Conduct. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and the Code of Conduct Policies.

### Student Attendance

Class attendance is helpful for two reasons: First, class attendance maximizes a student's learning experience. Second, attending class is an excellent way to keep informed of matters relating to the course administration (e.g., the timing of assignments and exams). Ultimately, you are responsible for your learning and performance in this course. It is the responsibility of each student to be prepared for all classes. Absent students are responsible for the material covered in those classes, and students must ensure they are ready for their next class, including completing any missed assignments and notes.

### Academic Misconduct

Students are considered responsible adults and should adhere to the principles of intellectual integrity. Intellectual dishonesty takes many forms:

- Plagiarism or the submission of another person's work as their own,
- The use of unauthorized aids in assignments or examinations (cheating),
- Collusion or the unauthorized collaboration with others in preparing work,
- The deliberate misrepresentation of qualifications,
- The willful distortion of results or data,
- Substitution in an examination by another person,
- Submitting unchanged work for another assignment, and
- Breach of confidentiality.

The consequences for academic misconduct range from a verbal reprimand to expulsion from the College. More specific descriptions and details are found in the Student Rights and Code of Conduct section of the Keyano College credit calendar. It is the responsibility of each student to be aware of the guidelines outlined in the Student Rights and Code of Conduct Policies. To ensure your understanding of plagiarism, you may be required to complete the online [Understanding Plagiarism tutorial](#) and submit the certificate of completion.

### Online Learning

Technology and internet connectivity will impact your online learning experience. You may be required to watch online videos, take online quizzes, or participate in live online classes. Live/virtual courses will be hosted in Microsoft Teams or Zoom. For all course delivery types, you will access your course resources on Keyano's learning management system: Moodle (iLearn). Login in using your [Keyano username and password](#). Keyano College operates in a Windows-based environment and having access to the correct tools for online learning is essential.

### Internet Speed

Minimum download and upload speeds of 10 Mbps. Recommended download speeds of 25 Mbps and upload speeds of 10 Mbps (if you are sharing your internet at home). You can check your internet speed with [Speedtest by Ookla](#).

## Computer System Requirements

Keyano College software are Windows based.

### Minimum Requirements and Recommended Upgrades for Windows (preferred system) and Apple devices

These minimum standards are required for a Windows computer/laptop (OS 10 or 11) and a Macintosh (OS 10.14 or above).

1. Windows 10 Operating System or above
2. 4GB of RAM. Recommended upgrade to 8GB of RAM.
3. 10GB+ available hard drive storage space. Note installing Microsoft Office 365 requires 3GB of available hard drive space.
  - a. Install the Microsoft Office 365 suite (~3GB) \*
4. Microphone, webcam, and speakers (All modern laptops have these three accessories built-in. However, a headset or earbuds with a microphone is also recommended.
5. Windows has built-in anti-virus/malware software. It is essential to install system updates to keep your device secured regularly.

\*[Microsoft Office 365](#) is free to Keyano students.

Tablets, iPads, and Chromebooks are **not** recommended: they may not be compatible with the testing lockdown browsers and Microsoft Office 365.

## Specific Department Requirements

Business and OA programs require Windows 10 or higher.  
Other programs may utilize Windows-based tools as well.

## Computer Software

Students have access to Microsoft Office 365 and Read & Write for free using Keyano credentials.

See [Recommended Technology](#) for more information.

## Recording of Lectures and Intellectual Property

Students may only record a lecture if explicit permission is provided by the instructor or Accessibility Services. Even if students have permission to record a lecture or lecture materials, students may not share, distribute, or publish any of the lectures or course materials; this includes any recordings, slides, instructor notes, etc., on any platform. Thus, no student is allowed to share, distribute, publish or sell course-related content without permission. It is important to recognize that the Canadian Copyright Act contains provisions for intellectual property. The [Academic Integrity Policy](#) provides additional information on Keyano College's expectations from students as members of the intellectual community.

## ITS Helpdesk

If you have issues with your student account, you can contact the ITS Helpdesk by emailing [its.helpdesk@keyano.ca](mailto:its.helpdesk@keyano.ca) or calling 780-791-4965.

## Specialized Supports

The Student Services Department is committed to Keyano students and their academic success. There is a variety of student support available at Keyano. All student services are available during Keyano business hours: Monday to Friday, 8:30 a.m. to 4:30 p.m. The College is closed on statutory holidays. If you require support outside of regular business hours, please inform the support service team, and they will do their best to accommodate your needs.

**Accessibility Services** provides accommodations for students living with disabilities. Students with documented disabilities or who suspect a disability can meet with an Access Strategist to discuss their current learning barriers and possible accommodations. Students who have accessed accommodations in the past are encouraged to contact the department to request accommodations for the following semester. Please note that requesting accommodations is a process and requires time to arrange. Contact the department as soon as you know you may require accommodations. For accessibility supports and disability-based funding, please book an appointment by emailing us at: [accessibility.services@keyano.ca](mailto:accessibility.services@keyano.ca).

Accessibility Services also provides individual and group learning strategy instruction for all students and technology training and support to enhance learning. You can meet with an Access Strategist to learn studying and test-taking strategies. In addition, you can schedule an appointment with the Assistive Technology Specialist to explore technology tools for learning. Book an appointment today by emailing: [accessibility.services@keyano.ca](mailto:accessibility.services@keyano.ca)

**Wellness Services** offers a caring, inclusive, and respectful environment where students can access free group and individual support to meet academic and life challenges. Mental Health Coordinators provide a safe and confidential environment for you to seek help with personal concerns. Our Wellness Navigator offers support with basic needs such as housing, financial and nutritional support, and outside referrals when needed. Wellness Services welcomes students to participate in group sessions that address topics including mindfulness and test anxiety throughout the academic year. Individual appointments can be made by emailing [wellness.services@keyano.ca](mailto:wellness.services@keyano.ca).

**Library Services** provides students with research, information, and educational technology supports as they engage in their studies. Library staff are available to help you online and in person throughout the semester. Librarians offer individual and small group consultations booked using the online [Book A Librarian calendar](#). The library also provides virtual research and subject guides to help you with your studies. Find the guide that supports your course-related research by viewing the complete list of online [Subject Guides](#). To start your research and access citation guides (APA, MLA, Chicago, or IEEE), visit the [Research Help page](#). The library's collections (including print and online materials) are searchable using [OneSearch](#). The library offers a Loanable Technology collection to support students accessing and using technology. For an up-to-date list of technology available for borrowing, visit the library's [Loanable Technology webpage](#). For a detailed list of library resources and services, go to [www.keyano.ca/library](http://www.keyano.ca/library). For all inquiries, please email [askthelibrary@keyano.ca](mailto:askthelibrary@keyano.ca) or [chat with us online](#).

The **Academic Success Centre** at Keyano College (CC-119) provides **free** academic support services to registered students, such as tutoring, writing support, facilitated study groups, workshops, and study space. Academic Content Specialists are available in Mathematics, Science, Trades, Power Engineering, Upgrading/College Prep, Human Services, English, Humanities, and more. Students are encouraged to visit the Academic Success Centre to discuss study strategies and academic concerns. For additional information, please email [Academic.Success@keyano.ca](mailto:Academic.Success@keyano.ca).

The **Academic Success Coach** is located in the Academic Success Centre and works with students to develop academic success plans, time management skills, study strategies, and homework plans. For additional information, please email [Academic.Success@keyano.ca](mailto:Academic.Success@keyano.ca).