

BUS 210, Business Analytics and Data Visualization*3 credits, 4 hours per week***Instructor**

Instructor Name: Khushboo Sherwani

Office location: Online

Phone number: you may contact me through Teams or email.

Email: Khushboo.Sherwani@Keyano.ca

Office Hours**Delivery Method(s):**

Online via MS Teams.

Hours of Instruction & Location

Day	Time	Location (e.g., Room#/Moodle)
Tuesday	15:30 - 17:20	ONLINE
Friday	15:30 - 17:20	ONLINE

Required Resources

Suggested Books:

Data Visualization

Published in: *Employee Surveys and Sensing : Challenges and Opportunities*, 20200525

Database: Oxford Scholarship Online

By: Sinar, Evan F.

HBR guide to data analytics basics for managers.

Publication Information

- Boston, Massachusetts : Harvard Business Review Press, [2018]
ISBNs: 9781633694286;

By: Evan F.

The books are excellent to begin with and are available in college Library.

Software:

1. Tableau Desktop

Use the following link to sign up for a Tableau account and download the application software.

<https://www.tableau.com/academic/students>

Note: Be sure to use your Keyano student email when signing up for Tableau.

2. Microsoft Excel

Hardware:

A Laptop (Windows or Mac) – See hardware requirements in the section Computer System Requirements

Assessment Details and Dates

Assessment	Weighting	Course Learning Outcome
Quiz 1	5%	CLO 1
Quiz 2 (In Class)	5%	CLOs 2 & 3
Quiz 3 (In Class)	5%	CLOs 2 & 4
Quiz 4	5%	CLOs 2 & 4
Test 1 (In Class)	5%	CLOs 2& 4

Assignment (In Class)	15%	CLOs 2,3, & 4
Mid-term Exam	20%	
Term Project	15%	TBD
Final Exam	25%	

Proposed Course Schedule

Week and Class Dates	Topic(s), Activities, Readings	Graded Assessments (%)	Tentative Due Dates
Week 1	Introduction to Course <ul style="list-style-type: none"> Review of course outline, Grading Rubric Moodle Tableau account setup and software installation (<i>Use your Keyano student email when signing up for Tableau.</i>)		
Week 2	Introduction to Business Analytics <ul style="list-style-type: none"> Define data analytics. Describe the importance of business analytics, data privacy, and data ethics. Describe the steps in the data analytics process. Differentiate between the various types of data analytics (descriptive, diagnostics, predictive, prescriptive analytics) and explain their application in the business environment. Tableau Overview 		
Week 3	Data Analytics <ul style="list-style-type: none"> Steps in the Analytics Process Nature of Data – Attributes to consider when selecting data for analysis Data Management 	Quiz 1:(5%)	TBD

	<ul style="list-style-type: none"> Working on Tableau 		
Week 4	<ul style="list-style-type: none"> Discuss the principles of data warehousing. Explain the important attributes/characteristics of data that must be contemplated when selecting data for analysis. Differentiate between leading business intelligence and data visualization tools. Working on Tableau 	Quiz 2: (5%)	TBD
Week 5	<p>Use business intelligence software and basic data analytics principles to extract, transform, and prepare data for analysis.</p> <ul style="list-style-type: none"> Connect to various types of data sources, such as spreadsheets, databases, and text files. Identify and work with different data types associated with varying data sources. <p>Transform data prior to analysis using tools such as pivots, splits, relationships, joins, and unions</p> <ul style="list-style-type: none"> Working on Tableau 	ASSIGNMENT 15%	TBD
Week 6	<ul style="list-style-type: none"> Perform descriptive and predictive analytics functions using business intelligence software and statistical techniques to analyze and derive insight from data. 	QUIZ 3 (5%)	TBD

	<ul style="list-style-type: none"> • Compute and interpret measures of location such as mean, mode, median, and percentiles. • Working on Tableau 		
Week 7	<ul style="list-style-type: none"> • Compute and interpret measures of dispersion, such as variance and standard deviation. • Compute and interpret correlation coefficient. • Estimate and interpret a linear regression model. • Apply custom aggregations. • Use string, number, date, logical, and type conversion functions to manipulate data. • Working on Tableau 	QUIZ 4 (5%)	TBD
Week 8	<ul style="list-style-type: none"> • Define data visualization and explain its value as a tool for communicating information. • Identify design principles for producing effective visualizations. • Working on Tableau 	TEST 1 for 5%	TBD
Week 9	<ul style="list-style-type: none"> • Midterm Practice and Midterm Exam 	Midterm Exam (20%)	TBD
Week 10	<ul style="list-style-type: none"> • Apply appropriate design principles to create visualizations. • Develop stand-alone visuals such as graphs, charts, and maps. • 	Final Project Discussion Begins	
Week 11	<ul style="list-style-type: none"> • Combine various visuals into interactive dashboards to convey insights from 		TBD

	analysis or to facilitate dynamic KPI reporting. <ul style="list-style-type: none"> • Create and share data story. • Analyze, critique, and revise data visualizations 	Final Project progression Check	
Week 12	<ul style="list-style-type: none"> • Reading Days – No Class 		
Week 13	<ul style="list-style-type: none"> • Data Visualization • Compare and Contrast Real-World Examples • Infographics • The Storytelling Process • Visualization Critique and Redesign 	Final project Presentation guidelines discussed	TBD
Week 14	<ul style="list-style-type: none"> • Final Project Presentations 	Final Project (15%)	TBD
Week 15	<ul style="list-style-type: none"> • Final Project Presentations Final Exam Review 		

Please Note:

- The date and time allotted to each topic are subject to change.
- Students will have access to their Moodle course shells for 15 days following completion of their course.
- Every effort has been made to ensure that the information in this course syllabus is accurate at the time of publication. Keyano College reserves the right to change the course syllabus content if it becomes necessary so that course content remains relevant. Any changes to the course syllabus during the semester will be communicated to students in writing by the instructor in a timely manner. A revised course syllabus will be posted to the LMS.
- A minimum GPA of 1.7 or higher is required for students to remain in good academic standing and progress to the next semester, unless otherwise indicated for a specific program.

Specialized Information

Keyano 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 [Withdrawal/Drop Form](#). All forms are available on the [College website](#). Please refer to the important dates listed in the Academic Schedule in the [Keyano College credit calendar](#) and/or on the

[College website](#). It is the responsibility of each student to be aware of the guidelines outlined in the [Student and Academic 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.

Course Evaluation

Midterm exams and term work is to be completed at the time/date indicated in your course syllabus. It is the expectation of the College that students make every reasonable effort to complete all course evaluation, including, quizzes, midterms, and exams, as scheduled. In the event of an emergency, rescheduling of exams and/or extensions are only provided at the discretion of the course instructor. Students should contact the instructor as soon as they are able, to notify them of missing an evaluative component. Instructors will use discretion in deciding whether circumstances justify granting a reschedule and/or extension.

Regular term quizzes, midterms, and exams are not eligible for deferral and/or date extension accommodations. Students with accommodations, please refer to Accessibility Services.

Final Exams are subject to deferral processes, please refer to the current [Keyano College Credit Calendar](#).

Academic Integrity & Misconduct

Academic integrity requires commitment to the values of honesty, trust, fairness, respect, and responsibility. It is expected that students at Keyano College will adhere to these ethical values in all activities related to learning, teaching, research, and service. Any action that contravenes this standard, including misrepresentation, falsification, or deception, undermines the intention and worth of scholarly work and violates the fundamental academic rights of members of our community.

Academic 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),
- Using Artificial Intelligence (AI) to complete coursework (without instructor approval),
- 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.

In all academic work, the ideas and contributions of others must be appropriately acknowledged and work that is presented as original must be, in fact, original. Using an AI-content generator (such as ChatGPT) to complete coursework without proper attribution or authorization is a form of academic dishonesty. If you are unsure about whether something may be plagiarism or academic dishonesty, please contact your instructor to discuss the issue.

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 & Academic Policies* 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, Academic Integrity, and Non-Academic Misconduct Policies.

To ensure your understanding of plagiarism and academic integrity, you are required to complete the online [Understanding Academic Integrity tutorial \(https://keyano.libwizard.com/f/academic-integrity-tutorial\)](https://keyano.libwizard.com/f/academic-integrity-tutorial) and submit the certificate of completion to your instructor(s).

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 outline, course syllabus and 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.

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 your programs such as lockdown browsers used for assessments and/or Microsoft Office 365.

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 or calling 780-791-4965.

Specialized Supports

Keyano College 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 register to discuss their current learning barriers and possible accommodations. Students are required to request accommodations for each term. 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 to ensure timely implementation. For accessibility supports, adaptive technology, learning strategies and disability-based funding, please register with Accessibility Services by emailing wellness.services@keyano.ca, or visiting www.wellnessxp.net/wellness/, or scanning this qr code below.



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 finding 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, or visiting www.wellnessxp.net/wellness/, or scanning this qr code below.



The **Library** provides students with research, information, and educational technology services and spaces as they engage in their studies. The Library is located at CC-166 or www.keyano.ca/library. Library staff are available to help students 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 [EDS \(EBSCO Discovery Service\)](#) on www.keyano.ca/library/find. 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. For all inquiries, please email askthelibrary@keyano.ca or [chat with us online](#).

The **Academic Success Centre (ASC)** 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 Business, Mathematics, Science, English, Humanities, Power Engineering, Upgrading/College Prep, and more. Peer Tutors are available to provide peer academic support to students in all college programs, such as Nursing, Business, Education, Environmental Science, among others. Students are encouraged to visit the Academic Success Centre at CC-119 to discuss strategies for academic success. Specialists in the Academic Success Centre also work with students to develop academic success plans, time management skills, study strategies, and homework plans. For additional information, please email Academic.Success@keyano.ca

Work Integrated Learning (WIL) is located in the ASC in CC-119. Career Services WIL staff assist students with their program-related WIL and co-op placements, provide resume advice, and support with using the GradLeaders platform. Additionally, they coordinate several career fairs for students throughout the academic year and host coop and resume workshops for students. Students can reach WIL by emailing: WIL@keyano.ca or by visiting them in person.

Course Syllabus Template Version 1.0

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Signatures & Date

Name of Instructor: Khushboo Sherwani

Instructor Signature: Khushboo Sherwani

Date: August 28, 2024

Name of Course Lead: Amani Edward

Course Lead Signature: _____

Date:

Name of Chairperson/Program Manager: Nermin Zukic

Chairperson/Program Manager Signature: _____

Date: