



BUSI 3434: Data Visualization for Business Analytics

Fall 2026

Instructor	Mike Hine, Ph.D.
Email Address	mike.hine@carleton.ca
Class Times	Tuesday 2:35-5:25 PM
Modality	In-person
Office Hours	TBA
Office Location	
TA Name/Email	TBA

Pre-Requisites & Preclusions:

Prerequisites: BUSI 2401, STAT 2601

Course Description/Instructor's Statement

Carleton Calendar Description

Visual representation and presentation of data to facilitate understanding. This includes visual data exploration, perception, interpretation, and communication in exploratory and declarative situations. Practical skill development using current data visualization software.

Instructor's Course Description:

This course provides an introduction as well as hands-on experience in data visualization. It introduces students to design principles for creating meaningful displays of quantitative and qualitative data to facilitate managerial decision-making.

Course Learning Objectives:

- Develop an understanding of the fundamentals of communication and alignment around concepts that are required for effective data presentation
- Develop an introductory level of competency on Tableau
- Understand the fundamentals of visual data discovery including the ability to: select appropriate chart types and representation; and identify trends and distributions.
- Understand the fundamentals of visual data deployment including the ability to: select and use pre-attentive attributes; design and implement dashboards; and effectively apply storytelling principles
- Obtain basic knowledge needed to critique various visualizations and to identify design principles that make good visualizations effective.
- Have a basic understanding of some of the challenges present in making data understandable across a wide range of potential audiences.

Required/Optional Materials & Prices

- Must bring laptop to class
- Tableau Prep and Desktop

Textbook

Nussbaumer Knafllic, C. (2015). *Storytelling with Data: A Data Visualization Guide for Business Professionals*, Wiley. (available on Amazon).

Grading Scheme

Subject to change at instructor's discretion

<i>In-Class Exercises</i>	20%
<i>Take-home Assignments</i>	25%
<i>In-Class Skills Assessment</i>	20%
<i>Project (group)</i>	35%
Total	100%

All work is individual unless otherwise indicated. Each component of your grade will be assigned a percentage score. Your final course grade will be a weighted average of each of these components. You must complete all components of the class above with a passing grade to pass the course.

Late work is penalized 10% per day.

Course Schedule

The following schedule and number of deliverables may be changed at the discretion of the instructor.

Week	Date	Topic / In class exercise (ICE)	Readings
1	Sept. 15 th	Introduction and Background Materials	
2	Sept. 22 nd	Data Types and restructuring / ICE-1	Chapter 1
3	Sept. 29 th	Chart Types / Tableau Prep / ICE 2	Chapter 2
4	Oct. 6 th	Pre-attentive Attributes and Gestalt / ICE-3	Chapter 3, 4 (up to page 117)
5	Oct. 13 th	Color & Font / ICE-4	Chapter 4 (remainder)
6	Oct. 20 th	Maps / Tables / Aggregation / Assignment 1 Due / ICE-5	
	Oct. 27 th	---- FALL BREAK --- NO CLASS ---	
7	Nov. 3 rd	Dashboards / ICE-6	
8	Nov. 10 th	Evaluating and Improving Charts / ICE-7	Chapter 5-6
9	Nov. 17 th	Storytelling / ICE-8	Chapters 7-8
10	Nov. 24 th	Assignment 2 Due / In-Class Skills Assessment	

11	Dec. 1 st	Parameters / Level of Detail /ICE-9	
12	Dec. 8 th	Project Presentations	

Policies & Accommodations

<https://students.carleton.ca/course-outline/>

<https://carleton.ca/pmc/current-students/academic-accommodations/>



Stay updated with important notifications and announcements from Carleton University, by downloading the Carleton University App!

Preparation and Participation:

Lecture attendance is mandatory due to the nature of the in-class exercises (ICE). In general, the only reason for missing class is because of a medical situation. If you miss class because of a medical issue, you must apply for academic consideration within 24 hours of the deadline for in-class work. Failure to do so, will result in a 'zero' for that week's work. You are still required to complete the week's work EVEN if you have missed class with an approved academic consideration form. To request academic consideration, fill out the form here: <https://carleton.ca/registrar/academic-consideration-coursework-form/>

Deferred Skills Assessment:

In the event that you are unable to write the skills assessment due to extenuating circumstances (such as a death in the family, illness, etc.), you must provide appropriate supporting documentation to your professor. Upon review, a deferred assessment may be offered. Please note that students who do not provide valid documentation or fail to offer a reasonable explanation for missing an assessment will receive a grade of 0% for that course component.

The deferral assessment will be held on Monday, November 30 at 7:15am.

Use of Generative Artificial Intelligence

This is a human-centered course. In this course, evaluation focuses on what you can do *without* AI assistance. While you are welcome to use AI tools to explore ideas, study, or clarify concepts, all submitted work must represent your independent thinking and original effort. You cannot use AI to generate charts or any submitted course deliverables. Use AI for learning, not for producing graded submissions. Your understanding and reasoning—not AI output—will form the basis of assessment. Using AI for graded submissions constitutes an academic integrity violation.

Contribution to Learning Goals of the Program ([BCom](#), [BIB](#)):

Program Learning Goal	Competencies Not Covered	Competencies Introduced (only)	Competencies Taught But Not Assessed	Competencies Taught and Assessed
CHECK (X) ONE PER ROW				
BC1 Knowledge <i>Graduates will be skilled in applying foundational business knowledge to appropriate business contexts.</i>		X		
BC2 Collaboration <i>Graduates will be collaborative and effective contributors in team environments that respect the experience, expertise and interest of all members.</i>	X			
BC3 Critical Thinking <i>Graduates will be discerning critical thinkers, able to discuss different viewpoints, challenge biases and assumptions, and draw conclusions based on analysis and evaluation.</i>		X		
BC4 Communication <i>Graduates will be effective and persuasive in their communications.</i>			X	
BI5 Global Awareness (BIB ONLY) <i>Graduates will be globally-minded.</i>	X			

ADDITIONAL INFORMATION

Course Sharing Websites

Materials created for this course (including presentations and posted notes, labs, case studies, assignments, and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).

Recommended Calculator for Examinations

If you are purchasing a calculator, we recommend anyone of the following options: Texas Instruments BA II Plus (including Pro Model), Hewlett Packard HP 12C (including Platinum model), Staples Financial Calculator, Sharp EL-738C & Hewlett Packard HP 10bII

Group work

The Sprott School of Business encourages group assignments in the school for several reasons. They provide you with opportunities to develop and enhance interpersonal, communication, leadership, followership, and other group skills. Group assignments are also good for learning integrative skills for putting together a complex task. Your professor may assign one or more group tasks/assignments/projects in this course. Before embarking on a specific problem as a group, it is your responsibility to ensure that the problem is meant to be a group assignment and not an individual one.

Grading

In accordance with the Carleton University Undergraduate Calendar (p 34), the letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100	B+ = 77-79	C+ = 67-69	D+ = 57-59
A = 85-89	B = 73-76	C = 63-66	D = 53-56
A - = 80-84	B - = 70-72	C - = 60-62	D - = 50-52
F = Below 50			

Grades entered by Registrar:

WDN = Withdrawn from the course

DEF = Deferred

Academic Regulations

University rules regarding registration, withdrawal, appealing marks, and most anything else you might need to know can be found on the university's website, here:

<http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/>

Requests for Academic Accommodation

Carleton is committed to providing academic accessibility for all individuals. You may need special arrangements to meet your academic obligations during the term. The accommodation

request processes, including information about the *Academic Consideration Policy for Students in Medical and Other Extenuating Circumstances*, are outlined on the Academic Accommodations website (students.carleton.ca/course-outline).

Pregnancy Accommodation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, please review the [pregnancy academic accommodation process](#).

Religious obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, please review the [religious academic accommodation process](#).

Academic Accommodations for Students with Disabilities

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. For more details, visit the [Paul Menton Centre website](#).

Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and where survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit the [Equity and Inclusive Communities website](#).

Accommodation for Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, see the [Senate Policy on Accommodation for Student Activities \(PDF, 25 KB\)](#).

Academic Consideration for Medical and Other Extenuating Circumstances

Due to medical and other extenuating circumstances, students may occasionally be unable to fulfil the academic requirements of their course(s) in a timely manner. The university supports the academic development of students and aims to provide a fair environment for students to succeed academically. Medical and/or other extenuating circumstances are circumstances that

are beyond a student's control, have a significant impact on the student's capacity to meet their academic obligations, and could not have reasonably been prevented. Students may request Academic Consideration for Coursework or Other Academic Deliverable. For further information please review the [Procedure for Academic Consideration](#) and the [FAQ page](#).

Scheduling and Examination Support

Scheduling and Examination Services provides various supports for both in-term and end-of-term tests and exams. Details can be found on the [Exam Support website](#).

Academic Integrity

Violations of academic integrity are a serious academic offence. Violations of academic integrity – presenting another's ideas, arguments, words or images as your own, using unauthorized material, misrepresentation, fabricating or misrepresenting research data, unauthorized co-operation or collaboration or completing work for another student – weaken the quality of the degree and will not be tolerated.

Process: If an alleged violation occurs, all relevant documentation will be forwarded to the Dean. If the allegation proves true, the penalties may include; a grade of Failure on the submitted work and/or course; academic probation; a refusal of permission to continue or to register in a specific degree program; suspension from full-time studies; suspension from all studies at Carleton; expulsion from Carleton, amongst others. **For a first offence, at a minimum, the penalty assigned will normally be a zero on the submitted work and at least a minimum full grade reduction of the final course grade. For a second offence, at a minimum, the penalty assigned will normally lead to a suspension from studies.**

Students are expected to familiarize themselves with and follow the Carleton University Student Academic Integrity Policy which is available, along with resources for compliance at: <https://carleton.ca/registrar/academic-integrity/>.

Sprott Student Services

The Sprott Undergraduate Student Services Office offers program advising and overall student success support. Our team is available to discuss your academic goals and your program progression plans. We can also work with you to develop strategies for success, including study skills for Business. If you experience any difficulty this term or if you would like to access support, please contact our team at academicadvising@sprott.carleton.ca.

Centre for Student Academic Support

The Centre for Student Academic Support (CSAS) is a centralized collection of learning support services designed to help students achieve their goals and improve their learning both inside and outside the classroom. CSAS offers academic assistance with course content, academic writing and skills development. Visit CSAS on the 4th floor of MacOdrum Library or online at: carleton.ca/csas.

Important Information:

- Students must always retain a copy of all work that is submitted.
 - All final grades are subject to the Dean's approval.
 - For us to respond to your emails, we need to see your full name, CU ID, and the email must be written from your valid CARLETON address. Therefore, in order to respond to your inquiries, please send all email from your Carleton CMail account. If you do not have or have yet to activate this account, you may wish to do so by visiting <https://carleton.ca/its/get-started/new-students-2/>
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