



BUSI 3040B: Data Analytics and Information Systems for Accounting

Winter 2026

Instructor	Melissa Robertson, CPA (she/her/hers)
Email Address	MelissaRobertson@cunet.carleton.ca
Class Times	Wednesdays 2:35pm – 5:25pm
Modality	In-person
Office Hours	By appointment Wednesdays. Please arrange via email.

Pre-Requisites & Preclusions:

Prerequisite(s): 1. BUSI 1401 (or BUSI 2400), and BUSI 3017 or BUSI 3007 with a grade of C- or higher in each. or 2. Enrolment in the Post-Baccalaureate Diploma in Accounting, and BUSI 3017 or BUSI 3007 with a grade of C- or higher in either.

Course Description/Instructor's Statement

Carleton Calendar Description

Data analysis in accounting, working with and making sense of big data using various data analysis tools. Specific topics include; data collection, cleaning, analyzing, visualization, and decision making in different areas of accounting.

Includes: Experiential Learning Activity

Instructor's Description:

This course will focus on the application of data analysis in accounting. Students will learn theoretical and practical aspects of working with and making sense of big data. They will understand how data can provide insight into different accounting situations. Students will also learn about the application of data analytics to audit, financial, managerial accounting and tax.

Course Learning Objectives:

1. Recognize what data analytics is and how it is related to accounting information systems (AIS).
2. Assess the risks related to the use of AIS and identify the appropriate controls using different frameworks.
3. Use tools to collect, clean and analyze data.
4. Interpret results from data analysis to make quality decisions.
5. Present and communicate financial and non-financial information using data visualizations.
6. Apply data analytics to auditing, financial accounting, management accounting and tax.

Required Materials & Prices

1) **Textbook: Data and Analytics in Accounting: An Integrated Approach**

Dzuranin, Geerts, Lenk; 1st Edition; ISBN: 978-119-72315-8

Available at: <https://www.wiley.com/en-ca/Data+and+Analytics+in+Accounting%3A+An+Integrated+Approach.+1st+Edition-p-978119723158> (Note: Prices are subject to change.)

- E-Book Rental (150-day rental) for \$68.00
- E-Book for \$160.95

2) **Software (required):**

- Microsoft Excel
- Power BI (works on Windows computers only)
- Tableau (optional)
- Alteryx (optional)
- *Note: students without access to a Windows computer can access the school computers through CUWireless. Instructions for obtaining each of the above software through your school account will be provided on Brightspace.*

Textbook (s) available at the Campus Store in Nideyinàn or order online for pick up:
<https://carletonshop.ca/Course/term>

3) **Course Website (required):** www.carleton.ca/brightspace

- Weekly PowerPoint files (Please come to class prepared with either a hard copy, or soft copy accessible on a reasonable device (not your phone))
- Videos of class lectures
- Assignments and related submission Dropbox
- Additional materials: reference material, additional practice problems with solutions, listing of recommended textbook exercises.

Grading Scheme

Assessment Title	Assessment Description	Tool	Weight
Show me your work	Individual submissions based on weekly class material (best 8 out of 10 weeks).	MS Word, Excel and Power BI	5%
Assignment 1: (Individual)	Basic analysis and report.	MS Word, Excel	10%
Assignment 2: (Individual)	Perform analysis and create report.	MS Word, Excel and Power BI	10%
Assignment 3: (Individual)	Perform analysis and create report.	MS Word, Excel and Power BI	10%
Assignment 4: (Group Project)	In a group, create a dashboard and report, and present to stakeholders.	MS Word, Excel and Power BI	15%
Final exam (In-person)	Analysis and response to questions.	MS Word, Excel and Power BI	50%
Total			100%

Comments on Marking:

The assignments and final exam will be marked by the teaching assistant and the instructor together and follow a rigorous quality control process that reasonably assures that the grade awarded is fair. However, no system is 100% error-free, so it is possible that you may wish to call into question a grade that has been awarded. In the circumstances, please write a brief email describing the difficulty with the awarded grade to the instructor no later than seven calendar days following the date the assignment was handed back. Please be sure to include your student number and your assignment # in the email to enable us to properly identify it.

We try our best to reduce unintentional bias in grading by, for example and when possible, grading anonymously, using clear and specific rubrics, and grading tests one question at a time (e.g. grading all of question 1, then question 2, etc.).

Preparation and Participation:

Students are expected to come prepared to each lecture by reviewing and completing the pre-work assigned for each class, which will be posted on Brightspace the Thursday preceding each class. Each class will have a component for participation with the submission of a Show Me York Work assignment, which you are expected to attend in-person to complete during class time. This course is designed for delivery in real-time, with the exceptions of those dates noted in the course schedule.

Show me your work (5%):

This course is heavily practice-based. You can't simply read the textbook to develop the required skills. You will practice techniques by completing labs, cases, and problems.

After class each week, you will be asked to upload your work resulting from one of the problems we complete together in class. The submissions will be reviewed for completion and reasonableness but not graded in detail. The purpose of the grades is to provide you with a reward for participating in problem-solving during the lectures. Think of it as getting credit each week for participation and completion of a recommended problem. There will be 10 "Show Me Your Work" and only 8 will be counted towards your final participation grade and you can drop your two lowest scores.

Showing me your work earns you 5% of your final grade in this course.

Because of the flexibility built into this component of your grade, there will be no extensions or make-up opportunities for this part of the course grade.

Individual assignments – 3 in total (30%):

The assignments will be due on the following dates:

<u>Assignment #</u>	<u>Due date</u>
Assignment 1: Basic Investigation	January 23, 2026, by 11:59 pm
Assignment 2: Analysis and Report	February 27, 2026, by 11:59 pm
Assignment 3: Analysis and Report	March 13, 2026, by 11:59 pm

Assignments are done individually. Students will NOT put names on their assignments. I will be able to assess assignments anonymously to maintain impartiality throughout the marking process.

Group Project (15%):

Additional information regarding the group project will be provided on Brightspace. The assignment will be due March 25, 2025, by 11:59pm. Late submissions will not be accepted. Additional instructions will be provided in Brightspace.

At the end of the term, you should complete and submit an Evaluation Form where you will evaluate every team member's contribution to the team effort (including your own). Consistent poor peer evaluations may result in reduced individual grades on team assignments. Thus, your final grade for the Team Project will be based on:

1. The quality of the report/presentation; and
2. Peer evaluation. Additional instructions will be provided in Brightspace.

Final Exam

Final Exam (50%) The final exam will be held in person during the final exam period. The duration of the exam will be 3 hours. The final examination will cover the whole course. **You will need to obtain a minimum grade of 40% on the final exam to pass this course.**

Important note on final exam: The final exam will be **in person** and will be written by Students on Carleton's computers in a computer lab. This is applicable for all students of the course, including students enrolled in the PBDA program.

Course Schedule

Week #	Dates**	Topic	Related Assessment	
			Participation (SMYW)	Assignment
1	07-Jan-26	Data Analytics in the Accounting Profession and Foundational Data Analysis Skills		
2	14-Jan-26	Motivation and Objectives for Data Analysis	SMYW 1	
3	21-Jan-26	Introduction to Data Visualizations and Reports	SMYW 2	Assignment 1 due by 23-Jan-26 by 11:59pm
4	28-Jan-26	Analysis: Data Preparation	SMYW 3	
5	4-Feb-26	Analysis: Data Preparation	SMYW 4	
6	11-Feb-26	Analysis: Information Modelling (<i>Online class this week – Pre-recorded</i>)	SMYW 5	
Week Feb 16 – 20 – Reading Week				
7	25-Feb-26	Analysis: Information Modelling cont'd, Control Assessment and the Technological Environment	SMYW 6	Assignment 2 due by 27-Feb-26 by 11:59pm
8	4-Mar-26	Analysis: Data Exploration	SMYW 7	
9	11-Mar-26	Interpreting Data Analysis Results and Communicating Data Analysis Results	SMYW 8	Assignment 3 due by 13-Mar-26 by 11:59pm
10	18-Mar-26	MindBridge	SMYW 9	
11	25-Mar-26	Recent Data and Analyses Developments in Accounting	SMYW 10	Assignment 4 (Group project) due by 25-Mar-26 by 11:59pm
12	1-Apr-26	Final Review Class	N/A	

***Important note: Class schedule is subject to change.**

****Refer to Academic Calendar for dates University Closed Dates and Holidays**
<https://calendar.carleton.ca/academicyear/>

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!

Late Assignments:

Late policy for individual assignments

The assignment deadlines afford plenty of time after the completion of related course material and as such, should be sufficient. Do not wait until the last minute to attempt assignments. Sometimes, despite our best efforts and for good reasons, we can't meet our deadlines. In this course, you have two days of grace that you can apply to missed deadlines. You may have a single assignment submitted two days late with no penalty, or two assignments submitted one day late without penalty. There is no reason required. However, there are rules to apply this in order to receive the grace period:

1. You need to email me (melissarobertson@cunet.carleton.ca) BEFORE the deadline indicating that you will be submitting late, but that you plan to submit your assignment.
2. Once the two days have been used, no further late submissions will be accepted and any late submissions at that stage receive a 0.
3. This policy is only applicable to individual assignments.

Late policy for SMYW and Group Project

There are no exceptions for late submissions on the 'Show Me Your Work' labs or for the group project. Any submissions after the due date will not be assessed.

Deferred final exams:

If you wish to defer a **Formal Final Exam**, you – the student – must reach out to the registrar's office with the proper documentation prior to the deadline (please refer to <https://carleton.ca/registrar/deferral/> for dates). Once the request has been put through, your instructor will be notified for their approval.

Use of Generative Artificial Intelligence

This course is a hybrid course when it comes to AI use. AI use will vary by assignment. Some activities will explicitly invite you to use AI tools; others will require work completed independently (e.g. the final exam).

In some cases, you will be encouraged to use generative-AI tools (e.g., ChatGPT, Claude, Copilot) as thought partners and assistants to enhance the quality of your work. These tools can be very helpful for data analytics and reporting, but they also have limitations.

This course will encourage thoughtful use with the appropriate professional judgment and professional skepticism. Always verify outputs, apply judgment, and cite AI use when relevant. The goal is to elevate your learning and capabilities with the assistance of tools that can help you.

Please read each assignment's instructions carefully for permitted and prohibited uses. When AI is used, be transparent about how you used it and apply critical judgment to verify its accuracy and relevance.

You can access resources related to citing Generative AI on the [MacOdrum Library website](#). Additional resources are also available on Carleton's [Artificial Intelligence Hub](#).

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
BC1 Knowledge <i>Graduates will be skilled in applying foundational business knowledge to appropriate business contexts.</i>				✓
BC2 Collaboration <i>Graduates will be collaborative and effective contributors in team environments that respect the experience, expertise and interest of all members.</i>			✓	
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>				✓
BC4 Communication <i>Graduates will be effective and persuasive in their communications.</i>				✓
BI5 Global Awareness (BIB ONLY) <i>Graduates will be globally-minded.</i>	✓			

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).

Required calculator in BUSI course 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).

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

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, visit the Equity Services website: [Pregnancy Academic Accommodation Information - Equity and Inclusive Communities](#)

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, visit the Equity Services website: [Academic Regulations for Students with Religious Obligations < Carleton University](#)

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. carleton.ca/pmc

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 its 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: [Sexual Violence Prevention & Survivor Support - Equity and Inclusive Communities](#)

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. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

For more information on academic accommodation, please contact the departmental administrator or visit: students.carleton.ca/course-outline

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 bcom@sprott.carleton.ca or at bib@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/>
