



Carleton
University

Sprett
School of Business

CARLETON UNIVERSITY
BUSI 3040 B
WINTER 2024
DATA ANALYTICS AND INFORMATION SYSTEMS FOR ACCOUNTING

Instructor: Naomi Fernando, CPA (she/her/hers)

Office: Nicol Building 7036

Office Hours: On Microsoft teams: Book a meeting with me [here!](#)

Alternatively, office hours can be available upon request.

Email: naomifernando@cunet.carleton.ca

Modality: Hyflex

Class Time: 8:35 am – 11:25 am

Pre-requisites: BUSI 1401 or BUSI 2400, and BUSI 3007 with a grade of C- or higher in each.

Course Calendar description from the [2023/2024 University calendar](#):

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.

Course 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.

Learning Outcomes:

After completing this course, students will be able to:

1. Understand 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. Gain insight from data using data visualization.
5. Interpret results from data analysis to stakeholders.
6. Apply data analytics to auditing, financial accounting, management accounting and tax.

Course materials:

Textbook: Vernon Richardson, Ryan Teeter, and Katie Terrell, Data Analytics for Accounting, 3rd Edition, McGraw Hill, 2023 (9781264444908).

Note: McGraw Hill Connect is required for this course.

Course Requirements & Methods of Evaluation:

Assessment Title	Assessment Description	Tool	Weight
Show me your work	Individual submissions based on in-class work (best 8 of 10 weeks)	MS Word	5%
Assignment 1: Basic Investigation	Individual analysis and report	MS Word , Excel	5%
Assignment 2: Comparing Tools	Perform analysis and create report	Excel and Power BI	20%
Assignment 3: Audit Data Analytics	Individually use audit data analytics to answer questions	MindBridge	5%
Assignment 4 (Group Project): Managerial Analytics	In a group, create dashboard and report, and present to stakeholders	Power BI or Tableau	25%
Final Exam (In person)	Analysis and response to questions	Power BI or Tableau, MS Word, Excel	40%
Total			100%

PRELIMINARY COURSE SCHEDULE:

Week #	Dates	Topic	Related Assessment	
			Participation (SMYW)	Assignment
1	January 12, 2024	Data Analytics for Accounting and Identifying the Questions		
2	January 19, 2024	Mastering the Data	SMYW 1	
3	January 26, 2024	Mastering the Data (Continued)	SMYW 2	Assignment 1 due January 26th by 11:59pm
4	February 2, 2024	Performing the Test Plan and Analyzing the Results	SMYW 3	
5	February 9, 2024	Communicating Results and Visualizations	SMYW 4	
6	February 16, 2024	Practice with Data Visualization Tool	SMYW 5	Assignment 2 due February 16th by 11:59pm.
February 19 -23 - Reading Week				
7	March 1, 2024	The Modern Accounting Environment	SMYW 6	
8	March 8, 2024	Audit Data Analytics Introduction to MindBridge	SMYW 7	
9	March 15, 2024	Managerial Analytics	SMYW 8	Assignment 3 due March 15th by 11:59pm.
10	March 22, 2024	Financial Statement Analytics	SMYW 9	
March 29 – No Class (Statutory Holiday)				
11	April 5, 2024	Assignment 4 Presentations		Assignment 4 due April 1st by 11:59pm
12	April 10, 2024	Tax Analytics	SMYW 10	

*Please note this schedule is subject to change

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 the 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, I will not offer 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 by 11:59pm:**

Assignment #	Due date
Assignment 1: Basic Investigation	January 26
Assignment 2: Comparing Tools	February 16
Assignment 3: Audit Data Analytics	March 15

Additional instructions will be provided in class and in Brightspace.

Instructions for registering for a Brightspace group:

On the BUSI 3040 course Brightspace page, select "Tools" in the top menu bar to see the drop-down list.

Select 'Groups' from this drop-down list.

Add yourself to a group that has 0 individuals in the group. Please do not add yourself to a group that already has someone in it.

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 the 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. For example, a single assignment may be two days late or two assignments may each be one day late with no penalty. There is no reason required. However, you need to email me before the deadline indicating that you will be late, but that you do plan on submitting your assignment. Once the two days have been used, no further late submissions will be accepted and any late submissions at that stage will receive 0. This is only applicable for individual assignments.

Group Project (25%)

Additional information regarding the group project will be provided on Brightspace. The assignment will be due **April 1st by 11:59 PM.**

Late submissions will not be accepted.

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 individual 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 (40%)

The final exam will be held in person during the final exam period (Apr 13-25). The duration of the exam will be 3 hours. The final examination will cover the whole course. **You need to obtain a minimum grade of 40% on the final exam to pass this course.**

Other

Marking

The assignments and final exam will be marked by the teaching assistants and the instructors 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 this circumstance, 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 assignments/tests were handed back. Please be sure to include your student number in the email to enable us to properly identify it.

Reduction of Bias

I make an effort 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 (grading all of question 1 before grading any of question 2), etc.

Brightspace

Brightspace will be used in this course. It is critical to use this learning tool on a regular basis. This is how I will communicate important information, so please make sure to check on a regular basis.

We will be using Brightspace as follows:

- To communicate with students on regular basis (e-mail, announcements, etc.)
- To post weekly agendas outlining recommended readings, deliverables, etc. each week
- To post notes of an administrative nature or updates to the course outline, if required
- To provide a place for you to upload your deliverables

To access Brightspace, type in the following URL: <https://brightspace.carleton.ca>

Student's Responsibilities with regards to deadlines

It is your responsibility to ensure that you meet (1) the SMYW deadlines, (2) the assignment deadlines, and (3) the final exam date and time. It's as easy as entering these in your calendar on your smart phone or paper agenda. You have your 2 flex days for individual assignments. These are the only accommodations I will give in terms of deadlines.

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
B15 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).

Required calculator in BUSI course examinations

If you are purchasing a calculator, we recommend any one 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 Spratt School of Business encourages group assignments in the school for several reasons. They provide you with opportunities to develop and enhance interpersonal, communication, leadership, follower-ship 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

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:

carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

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:

carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

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: carleton.ca/sexual-violence-support

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/>

IMPORTANT DATES AND DEADLINES

Date	Activity
WINTER TERM 2024	
January 1, 2024	Deadline for course outlines to be made available to students registered in full winter and early winter term courses.
January 4, 2024	University reopens.
January 8, 2024	Winter term begins. Full winter and early winter classes begin.
January 12, 2024	Last day for registration and course changes (including auditing) in early winter courses.
January 19, 2024	Last day for registration and course changes (including auditing) in full winter and late winter courses.
	Last day to withdraw from early winter courses with a full fee adjustment.
	Graduate students who have not electronically submitted their final thesis copy to the Faculty of Graduate and Postdoctoral Affairs will not be eligible to graduate in winter 2024 and must register for the winter 2024 term.
January 26-28, February 2-4, 2024	Full fall and late fall term deferred final examinations will be held.
January 31, 2024	Last day to withdraw from full winter courses and the winter portion of fall/winter courses with a full fee adjustment.

Date	Activity
February 1, 2024	Last day for academic withdrawal from early winter courses.
	Last day to request Formal Examination Accommodations for Feb/Mar final examinations from the Paul Menton Centre for Students with Disabilities. Note that it may not be possible to fulfil accommodation requests received after the specified deadlines.
February 9, 2024	Last day for summative tests or examinations, or formative tests or examinations totaling more than 15% of the final grade, in early winter term undergraduate courses, before the official Feb/Mar final examination period (see examination regulations in the Academic Regulations of the University section of the Undergraduate Calendar/General Regulations of the Graduate Calendar).
February 16, 2024	Last day of early winter classes.
	Last day for final take-home examinations to be assigned in early winter courses, with the exception of those conforming to the examination regulations in the Academic Regulations of the University section of the Undergraduate Calendar/General Regulations of the Graduate Calendar.
	Last day that can be specified by an instructor as a due date for term work for early winter courses.
	April examination schedule available online.
February 19, 2024	Statutory holiday. University closed.
	Deadline for course outlines to be made available to students registered in late winter courses.
February 19-23, 2024	Winter break, no classes.

Date	Activity
February 24-25, March 2-3, 2024	Final examinations in early winter undergraduate courses will be held.
February 26, 2024	Late winter classes begin.
March 1, 2024	Last day for receipt of applications to Bachelor of Architecture, Bachelor of Industrial Design, Bachelor of Information Technology (Interactive Multimedia and Design), Bachelor of Music and Bachelor of Social Work degree programs for the fall/winter session.
	Last day for receipt of applications for admission to an undergraduate program for the summer term.
	Last day for receipt of applications for admission from candidates who wish to be guaranteed consideration for financial assistance (including Carleton fellowships, scholarships and teaching assistantships) administered by Carleton University. Candidates whose applications are received after the March 1 deadline may be considered for the award of a fellowship, scholarship or teaching assistantship (Graduate students only).
March 8, 2024	Last day to withdraw from late winter term courses with a full fee adjustment.
March 15, 2024	Last day for academic withdrawal from full winter, late winter, and fall/winter courses.
	Last day to request Formal Examination Accommodations for April full winter, late winter, and fall/winter final examinations from the Paul Menton Centre for Students with Disabilities. Note that it may not be possible to fulfil accommodation requests received after the specified deadlines.
March 15-17, 2024	Early winter undergraduate deferred final examinations will be held.

Date	Activity
March 27, 2024	Last day for summative tests or examinations, or formative tests or examinations totaling more than 15% of the final grade, in full winter term or fall/winter undergraduate courses, before the official April final examination period (see examination regulations in the Academic Regulations of the University section of the Undergraduate Calendar/General Regulations of the Graduate Calendar).
March 29, 2024	Statutory holiday. University closed.
April 1, 2024	Last day for graduate students to submit their supervisor-approved thesis, in examinable form to the department.
	Last day for receipt of applications for admission to an undergraduate degree program for the fall/winter session from applicants whose documents originate from outside Canada or the United States, except for applications due March 1.
	Last day for receipt of applications from potential spring (June) graduates.
April 3, 2024	Last day for summative tests or examinations, or formative tests or examinations totaling more than 15% of the final grade, in late winter term undergraduate courses, before the official final examination period (see examination regulations in the Academic Regulations of the University section of the Undergraduate Calendar/General Regulations of the Graduate Calendar).
April 10, 2024	Winter term ends.
	Last day of full winter, late winter, and fall/winter classes.
	Classes follow a Friday schedule.
	Last day for final take-home examinations to be assigned, with the exception of those conforming to the examination regulations in the Academic Regulations of the University section of the Undergraduate Calendar/General Regulations of the Graduate Calendar.

Date	Activity
	Last day that can be specified by an instructor as a due date for term work for full winter and late winter courses.
April 11-12, 2024	No classes or examinations take place.
April 13-25, 2024	Final examinations in full winter, late winter, and fall/winter courses will be held. Examinations are normally held all seven days of the week.
April 25, 2024	All final take-home examinations are due on this day, with the exception of those conforming to the examination regulations in the Academic Regulations of the University section of the Undergraduate Calendar/General Regulations of the Graduate Calendar.
May 1, 2024	Last day for receipt of applications for undergraduate internal degree transfers to allow for registration for the summer session.
May 10, 2024	Graduate students who have not electronically submitted their final thesis copy to the Faculty of Graduate and Postdoctoral Affairs will not be eligible to graduate in spring 2024 and must register for the summer 2024 term.
May 17-29, 2024	Full winter, late winter, and fall/winter deferred final examinations will be held.
June 1, 2024	Last day for receipt of applications for admission to an undergraduate program for the fall/winter session except for applications due March 1 or April 1.
June 15, 2024	Last day for receipt of applications for undergraduate degree program transfers for the fall term.
