



ACCT 5124 AP
Data Analytics for Professional Accountants

Course Outline
Fall 2022

| | |
|------------------------|--|
| Instructor: | Devin Fraser, CPA, CA, CFE |
| Email: | devin.fraser@carleton.ca |
| Class Time: | Sec A: Monday's 6:00 to 9:00pm Sec P: Tuesday's 6:00 to 9:00pm |
| Class Location: | Sec A: Online (Zoom) Sec P: Nicol 4040 |
| Modality: | Blended. See "Modality, Preparation, and Participation" on page 3. |
| Final Exam: | December 17, 2022 from 9:00am EST to 12:00pm EST <i>in-person</i> |
| Office Hours: | By appointment as requested. |

Course Calendar Description:

Data and information analysis with application to professional accounting (0.25 credit).

Course Description and Learning Objectives:

Data has proliferated in business and managers and accountants need to understand the implications for decision-making and tap into the data to provide better insights into a firm, client, customer, supplier, etc. This course is intended to provide students with an understanding of data analytic thinking and terminology as well as hands-on experience with data analytics tools and techniques. Students will leave this course with the skills necessary to translate accounting and business problems into actionable proposals that they can competently present to managers.

Course Prerequisites:

Must be enrolled in the MAcc program.

Course Materials

Recommended Textbook (not required)

Vernon Richardson, Katie Terrell, and Ryan Teeter, **Data Analytics for Accounting**, 1st/2nd/3rd Edition, McGraw Hill

Drop Course Policy:

The last day for withdrawal with a full fee adjustment is November 11, 2022. Withdrawals after this date will result in a permanent notation of WDN on the official transcript. The last day for academic withdrawal is November 15, 2022.

Intellectual Property:

All course materials are protected by copyright and remain the intellectual property of the Instructor. Students registered in the course may only use course materials for their own educational use. Students are not permitted to reproduce or distribute lecture notes, assignments, exam questions, or other course material publicly for commercial or non-commercial purposes without express written consent from the Instructor. Any suspected violations will be referred to the Dean. See the section titled "Academic Integrity" below.

Methods of Evaluation:

| Component | Weight |
|---------------------------|---------------|
| Case 1 (group) | 20% |
| Case 2 (group) | 20% |
| <i>Final Exam:</i> | |
| Case 3 (individual) | 30% |
| Case 4 (individual) | 30% |

Group Cases / Assignments:

The cases are posted on Brightspace and will be completed in groups of 4. You will place yourself into a group during the Week 1 class. The cases involve the application and integration of major concepts covered in the course in order to solve problems and issues presented in the case scenarios.

Late Assignments:

To ensure fairness for all students, penalties will be applied to late assignments. There is a 24 hour no-questions-asked grace period after each assignment deadline in-case of emergencies. If you are unable to complete the assignment by the deadline, due to something that comes up last minute, you may submit within the 24 hour grace period and no penalty will be applied. To request permission to submit late, please email the instructor. Once the 24 hour grace period has expired, assignments will be accepted for an additional 24 hours at which time a penalty of twenty percent (20%) will be applied. For example, an assignment that would normally merit a grade of 80% would receive a grade of 80% if submitted within 0 to 24 hours of the deadline or 60% if submitted between 24 and 48 hours of the deadline. Assignments will not be accepted at all after 48 hours and a grade of 0% will be awarded.

Final Examination:

The final exam is comprehensive, covering the material of the entire course. The final exam will consist of two cases, similar to those cases done prior, to be completed individually. The cases may require the use of Microsoft Excel, Power Query, and/or Power BI. The cases may also require written responses to various questions.

The Final Exam will be held **in-person** on December 17, 2022 from 9:00am EST to 1:00pm EST. If you are studying from outside of the Ottawa area, you may apply to Scheduling and Examination Services to write your exam remotely. For more information, please see: <https://carleton.ca/ses/distance-exams/>. You must obtain a minimum score of 50% on the Final Exam to receive a B- or above in the course.

Deferred Final Exam:

Students unable to write a final examination because of illness or other circumstances beyond their control must contact the instructor and the MAcc office in writing to request a deferred exam. Permission may be granted when the absence is supported by a medical certificate and or appropriate document(s) to support the reason for the deferral. The deferred final exam will be a completely different exam.

Modality, Preparation, and Participation:

Delivery of the course will be blended (synchronous and asynchronous). Each week you will find videos on Brightspace (asynchronous portion). These videos cover theoretical material related to the course learning objectives, as well as practical instructional introductions to the various tools and software used in this course. It's mandatory to watch the videos before attending class.

The live lectures (synchronous portion) will make up the remainder of your class time each week. The live lectures will be held in-person (for Section P) or Online by Zoom (for Section A).

Some weeks will require you to prepare for the in-class case before coming to class. To prepare for the case, you will need to watch the videos prior to class, read the in-class case, and complete the "prior to class" requirements within the case. This is a chance for you to practice some of the basics of the tool that was introduced in the videos before coming to class. If you need any assistance completing the pre-class work, please reach out to myself or your course mentor.

Course Schedule:

| Class Date | Coverage |
|--|---|
| <p style="text-align: center;">1</p> Sec A: Nov 1 Sec P: Nov 1 | <p>Prior to Class:</p> <ul style="list-style-type: none"> - Video: Introduction to Data Analytics <p>During Class:</p> <ul style="list-style-type: none"> - Discussion: Accounting Data Analytics and Identifying the Questions (Ch 1) - Guest Speaker: Data Analytics in Practice |
| <p style="text-align: center;">2</p> Sec A: Nov 7 Sec P: Nov 8 | <p>Prior to Class:</p> <ul style="list-style-type: none"> - Video: Mastering the Data (Ch 2) - Video: Introduction to Microsoft Excel - Pre-Class Prep: Complete the pre-class requireds within the case <p>During Class:</p> <ul style="list-style-type: none"> - Case: Using <u>Microsoft Excel</u> to cleanse and visualize data |
| <p style="text-align: center;">3</p> Sec A and P: Week of Nov 14 | <p>During Week 3 (NO LIVE CLASSES - FULLY ASYNCHRONOUS WEEK*):</p> <ul style="list-style-type: none"> - Video: Performing the Test Plan and Analyzing Data (Ch 3) - Video: Financial Statement Analytics (Ch 8) - Video: Introduction to Power Query - Video: Case - Using <u>Power Query</u> to extract, transform and load data |
| <p style="text-align: center;">4</p> Sec A: Nov 21 Sec P: Nov 22 | <p>Prior to Class:</p> <ul style="list-style-type: none"> - Video: Communicating the Results and Visualizations (Ch 4) - Video: Managerial Analytics (Ch 7) - Video: Introduction to Power BI - Pre-Class Prep: Complete the pre-class requireds within the case <p>During Class:</p> <ul style="list-style-type: none"> - Case: Using <u>Power BI</u> to visualize and analyze data |
| <p style="text-align: center;">5</p> Sec A: Nov 28 Sec P: Nov 29 | <p>Prior to Class:</p> <ul style="list-style-type: none"> - Video: Tax Analytics (Ch 9) <p>During Class:</p> <ul style="list-style-type: none"> - Discussion: The Modern Accounting Environment (Ch 5) - Discussion: Audit Data Analytics (Ch 6) |
| <p style="text-align: center;">6</p> Sec A: Dec 5 Sec P: Dec 6 | <p>Prior to Class:</p> <ul style="list-style-type: none"> - N/A <p>During Class:</p> <ul style="list-style-type: none"> - Discussion: Data Analytics on the CFE |

* I will be hosting a drop-in session during Week 4 for anyone who would like to come discuss Week 3 material and/or the Week 3 Power Query case. More details to be announced in-class.

Contribution to Learning Goals of the Program ([MAcc](#)):

| Program Learning Goal | Competencies Not Covered | Competencies Introduced (only) | Competencies Taught But Not Assessed | Competencies Taught and Assessed |
|---|--------------------------|--------------------------------|--------------------------------------|----------------------------------|
| <p>MA1 Technical Competencies</p> <p><i>Graduates will possess the technical abilities expected of professional accountants in all functional areas.</i></p> | | | | X |
| <p>MA2 Problem-Solving and Decision-Making</p> <p><i>Graduates will be skilled in problem-solving and decision-making.</i></p> | | | | X |
| <p>MA3 Enabling Competencies</p> <p><i>Graduates will possess the essential skills of a professional accountant including professional and ethical behaviour, communication, self-management, and teamwork and leadership.</i></p> | | | | 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 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, 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 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/>

COVID-19 Information:

For the most recent information about Carleton's COVID-19 response and required measures, please see the [University's COVID-19 webpage](#) and review the [Frequently Asked Questions \(FAQs\)](#). Should you have additional questions after reviewing, please contact covidinfo@carleton.ca

Please note that failure to comply with University policies and mandatory public health requirements, and endangering the safety of others are considered misconduct under the [Student Rights and Responsibilities Policy](#). Failure to comply with Carleton's COVID-19 procedures may lead to supplementary action involving Campus Safety and/or Student Affairs.

It is important to remember that COVID is still present in Ottawa. The situation can change at any time and the risks of new variants and outbreaks are very real. There are [a number of](#)

[actions you can take](#) to lower your risk and the risk you pose to those around you including being vaccinated, wearing a mask, staying home when you're sick, washing your hands and maintaining proper respiratory and cough etiquette.

Feeling sick? Remaining vigilant and not attending work or school when sick or with symptoms is critically important. If you feel ill or exhibit COVID-19 symptoms do not come to class or campus. If you feel ill or exhibit symptoms while on campus or in class, please leave campus immediately. In all situations, you must follow Carleton's [symptom reporting protocols](#).

Masks: Carleton has paused the [COVID-19 Mask Policy](#), but continues to strongly recommend masking when indoors, particularly if physical distancing cannot be maintained. It may become necessary to quickly reinstate the mask requirement if pandemic circumstances were to change.

Vaccines: Further, while proof of vaccination is no longer required as of May 1 to attend campus or in-person activity, it may become necessary for the University to bring back proof of vaccination requirements on short notice if the situation and public health advice changes. Students are strongly encouraged to get a full course of vaccination, including booster doses as soon as they are eligible, and submit their booster dose information in [cuScreen](#) as soon as possible. Please note that Carleton cannot guarantee that it will be able to offer virtual or hybrid learning options for those who are unable to attend the campus.

All members of the Carleton community are required to follow requirements and guidelines regarding health and safety which may change from time to time. For the most recent information about Carleton's COVID-19 response and health and safety requirements please see the [University's COVID-19 website](#) and review the [Frequently Asked Questions \(FAQs\)](#). Should you have additional questions after reviewing, please contact covidinfo@carleton.ca.