Syllabus

Data Analytics for Professional Accountants (ACCTG 522)

Why study Accounting Analytics?

Data analytics for professional accountants (accounting analytics) is a set of techniques that professional service firms can use to gain insight from their own, client, and other data to make better decisions. In combination with emerging technologies, the promise of data analytics has been described as the fourth industrial revolution. This means that data & analytics skills are becoming increasingly important and central for the provision of professional accounting services. In this course, students will benefit from the interest and promise of accounting analytics techniques by studying the analytical mindset. To further unlock the value of accounting analytics, students will design, perform, interpret, and communicate insight from raw data by developing a practical analytic skillset using multiple analytic software tools.
I am excited to undertake our accounting analytics journey together!
Asher

How this course fits into the MPAcc program:

Advanced Cases in Assurance Services (ACCTG522) is a required course in the MPAcc and concentrates on the study of the analytical mindset through data-driven case studies in audit and assurance practices. Students will also enhance their adaptability and resilience mindset by examining different assurance settings and questions, using multiple software packages, and incorporating multiple data types and quality. Students will work in teams and communicate questions and conclusions drawn from data analytics, using verbal communication, written communication, and data visualization. Students will use the questioning and innovation mindsets when identifying the underlying purpose of assurance related services, areas for judgment, and areas of opportunity for integrating data analytics and other emerging technology. The skills and tools from Data Analytics for Professional Accountants (ACCTG522) will provide a foundation for data exercises in this class.

Key learning objectives:

- **Students will be able to design and perform Extract, Transform and Load (ETL) solutions:**
  - By cleaning raw data
  - By merging multiple datasets together
  - By automating data ingestion
  - By extracting more complex data structures including XBRL and JSON
- **Students will be able to design, perform, interpret, and communicate data analytics solutions:**
  - By computing visualizations for descriptive analysis

- By computing forecasts and predictive analytics
- By computing machine learning-based analytics
- By extracting more complex data structures including XBRL and JSON

- **Students will become adaptable and resilient to changing data & analysis circumstances:**
  - By using multiple different software to solve problems
  - By programming or using python code
  - By working in diverse teams on unstructured problems
  - By collecting financial and other data from public sources to support a large project

- **Students will be able to identify and compare opportunities for the use of data analytics innovative settings:**
  - By examining potential uses of drone technology
  - By examining potential uses of satellite technology
  - By examining the use of process mining

Prerequisites, required texts, materials, and software:

- Students are required to be enrolled in the MPAcc program. There are no other formal prerequisites for this course, however, students are encouraged to complete the Foster Microsoft Excel for Business online (or equivalent) course prior to starting, or during, the Autumn quarter.
- There is no required text for this course. If you wish to explore a topic in greater depth, please ask your instructor for recommendations.
- Materials outlining the required deliverables, templates, sample code/solutions, background readings and/or cases are accessed via Canvas.
- Students will be using specialized software in this course all of which will be made available on the Foster remote labs, an open-source or cloud-based setting, or from a subscription.

Required Deliverables:

Assessment in this course is focused on providing you with feedback on how well you can undertake and communicate analysis in audit cases, with an increased weight on the use of data analytics. You will be assessed on both written and verbal communication as well as the ability to effectively work in your teams and as an individual. Deliverable submission portals and grades are all maintained on the ACCTG522 Canvas page. The deliverables page provides submission links. A summary of the components of the deliverables used to determine your grade are below, detail for each assessment follows:

Assessment	Assessment Type	Deliverables	Due Date	Grade Percentage
Professionalism	Individual	Polls; Verbal and Written Communication	All quarter	25%
Individual Case Submissions	Individual	Software and Written Memo	11/24	25%
Final Project Check-In Meeting	Team	Meeting	10/27	10%
MPAcc Fall Common Final Project	Team	Presentation, report and materials	TBD, Final Week of Classes	40%

Professionalism: An individual assessment of student professionalism throughout the quarter. Students are expected to maintain a professional approach to work and approach all classes as professional engagements. Part of this grade is determined via deliverables relating to a case, pollEverywhere engagement, written responses to cases and verbal communication in class.
Individual Case Submissions: Software in the form of Alteryx workflows and individual written short-answer responses based on the Alteryx SparkEd Case Studies for Accounting and Finance Professionals.
Final Project Check-In Meeting: Teams will meet one-on-one with the instructor to discuss their proposed use of data analytics to enhance Financial Statement Analysis.
MPAcc Fall Common Final Project: The Common Final Project which is a team based presentation focusing on the use of real-time data to support financial statement analysis for the initiation of a pairs trading strategy (one long position and one short position) for two chosen public companies. Teams select how they will narrow their analysis to two firms through the use of a screening analysis and other preliminary analysis.

Teams will present in the Thursday MPAcc classes in the final week of the course. All teams are required to attend all presentations on both days. More details can be found at the MPAcc Common Final Project page.

Administrative Matters:

Instructor:	Asher Curtis, PhD. Herbert O. Whitten Endowed Associate Professor of Accounting. (abcurtis@uw.edu).
Class Times:	Mondays and Wednesdays at 10:30AM to 12:20PM.
Location:	PACCAR 392.
Office Hours:	Monday and Wednesday 1:30PM to 2:00 PM in PACCAR 414 or by appointment; Zoom by appointment.

Religious Accommodations:

Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at Religious Accommodations Policy. Accommodations must be requested within the first two weeks of this course using the Religious Accommodations Request form.

MPAcc Policies and Further Questions:

Questions about the content of this course should first be directed to the instructor. Please see the MPAcc orientation materials for important administrative details regarding the program that apply to all courses in the MPAcc program and the UW https://registrar.washington.edu/staffandfaculty/syllabi-guidelines/ for important university policy and guidelines. If you have any additional questions, please contact the MPAcc Office (mpacc@uw.edu).

Generative AI Policy

This policy outlines expectations for the responsible and ethical use of generative AI technologies, including large language models (LLMs) such as ChatGPT, in this course. These tools can significantly enhance learning, productivity, and creativity–but must be used transparently and professionally to support a respectful and effective learning environment.

Permitted Use:

Generative AI may be used to assist with idea generation, research, document drafting, programming, editing, and other academic work, provided the output is critically reviewed, refined, and understood by the student or team. Use of AI is encouraged when it enhances the learning process.

Student Responsibility:

Students are responsible for the accuracy, relevance, and integrity of any work submitted, including content influenced or generated by AI tools. Errors introduced by generative AI–factual, analytical, or interpretive–will be treated as student errors and may result in reduced grades.

Disclosure & Ethics:

Students may be asked to disclose when and how they used generative AI tools in individual or team assignments. In cases where the use of AI significantly contributes to the submission (e.g., coding assistance, text drafting), students should include a brief statement describing the use.

Unacceptable Use:

Submitting AI–generated content without understanding it, using AI to bypass individual learning (e.g., for comprehension–based quizzes or

in–class polls), or allowing AI to make up sources or misrepresent work is a violation of course expectations and academic integrity.

This policy may be updated as the role of AI in education continues to evolve.

Tentative Course Schedule

Class	Date	Day	Topic
Class 0	Monday, September 22, 2025	Monday	Orientation
Class 1	Wednesday, September 24, 2025	Wednesday	Introduction to the Analytics Mindset and Skillset
Class 2	Monday, September 29, 2025	Monday	Introduction to Extracting, Transforming and Loading Data
Class 3	Wednesday, October 1, 2025	Wednesday	ETL and Textual Analytics
Class 4	Monday, October 6, 2025	Monday	Advanced ETL and Textual Analytics 1
Class 5	Wednesday, October 8, 2025	Wednesday	Advanced ETL and Textual Analytics 2
Class 6	Monday, October 13, 2025	Monday	Enron Forensic Email Analysis, Conclusion, and Deliverable
Class 7	Wednesday, October 15, 2025	Wednesday	Innovative Data Sources and Tools: Generative AI
Class 8	Monday, October 20, 2025	Monday	Introduction to EDGAR Explorer and SEC API data
Class 9	Wednesday, October 22, 2025	Wednesday	EDGAR Explorer 2
Class 10	Monday, October 27, 2025	Monday	Preliminary Proposal Meetings
Class 11	Wednesday, October 29, 2025	Wednesday	Enhanced FSA with Data Analytics
Class 12	Monday, November 3, 2025	Monday	Generative AI Workshop
Class 13	Wednesday, November 5, 2025	Wednesday	Accounting & Finance Function 1 (Alteryx SparkED)
Class 14	Monday, November 10, 2025	Monday	Accounting & Finance Function 2 (Alteryx SparkED)
Class 15	Wednesday, November 12, 2025	Wednesday	Accounting & Finance Function 3 (Alteryx SparkED)
Class 16	Monday, November 17, 2025	Monday	The Alteryx Challenge!
Class 17	Wednesday, November 19, 2025	Wednesday	Advanced Analytics and Final Project Workshop
Class 18	Monday, November 24, 2025	Monday	Advanced Analytics and Dashboards for Communication
Class 19	Wednesday, November 26, 2025	Wednesday	Thanksgiving Break (No Class)
Class 20	Monday, December 1, 2025	Monday	Final Project Workshop 1
Class 21	Wednesday, December 3, 2025	Wednesday	Course Conclusion and Final Project Workshop 2