

Data Analytics in Accounting

McGraw Hill's Accounting Specific Course Offerings

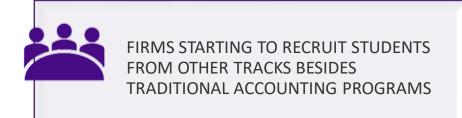


DATA ANALYTICS: Industry Demand





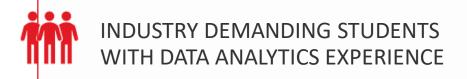
HUNDREDS OF MILLIONS OF DOLLARS ALREADY INVESTED IN DEVELOPING FIRMS' CAPABILITIES TO USE ANALYTICS TECHNIQUES

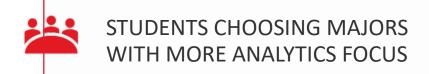


1,700% Increase in jobs containing Tableau skills, past decade



DATA ANALYTICS: Once a Trend, Now a Necessity







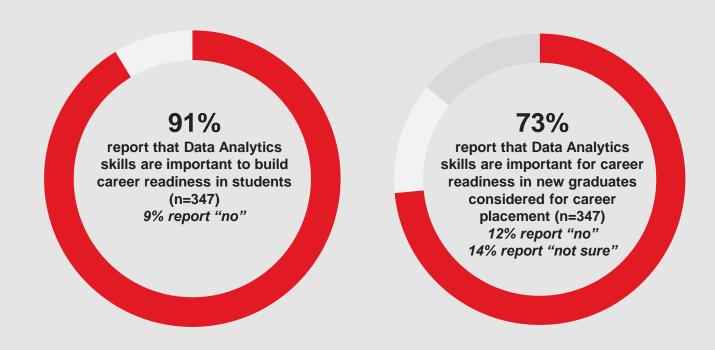






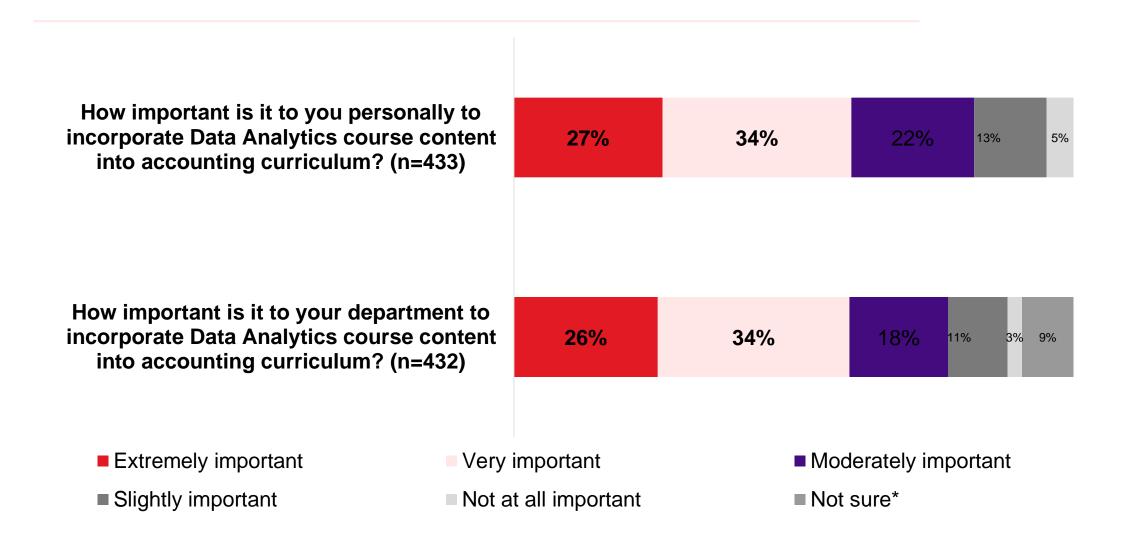
What We Say About Data Analytics

Nearly all (91%) of accounting instructors or administrators report that Data Analytics skills are important to build career readiness skills in students and nearly three-quarters (73%) report that Data Analytics skills are important for new graduates considered for placement





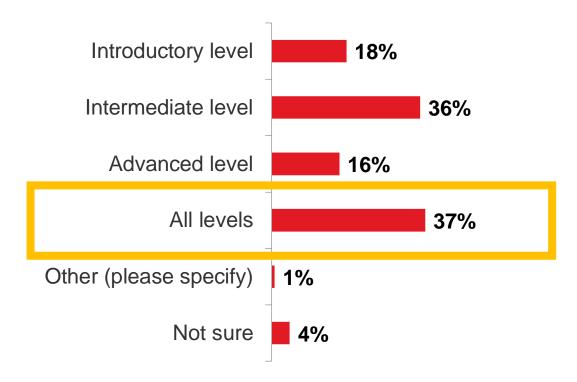
What We Say About Data Analytics:





What We Say About Data Analytics?

At what student level do you think Data Analytics should be introduced to students in the accounting curriculum? Please select all that apply. - Selected Choice (n=416)





In a recent survey, we received the following feedback...

100% Interested in incorporating, not sure where to start



Tucson Intermediate Accounting Pre-Work Survey 2019

Data Analytics up the Accounting Curriculum













Introductory,

 Initial Visualization Exposure and sophisticated Excel practice on smaller



INTRODUCTION TO DATA ANALYTICS









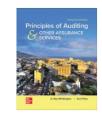






Intermediate, Cost, Tax

 Begin skill building & application







Auditing

 Working with large datasets to consider risks



Accounting Information **Systems**

• Deeper dive into **Excel & Software**



Capstone Data Analytics

- Dedicated training on data analysis process within 2 tracks:
- Green Track: Microsoft tools (including Excel, Power Query, and Power BI)
- Blue Track: Tableau tools (including Tableau Prep Builder and Tableau Desktop)
- Other tools covered: Access, SQL, IDEA, and Weka



datasets

Introductory Data Analytics

 Dedicated training on Excel & Tableau



Data Analytics Content Types

Data Visualization Exercises

- •Interpreting Accounting data from visuals
- Built with static visualizations, integrated into Connect
- Auto-graded calculation/interpretation



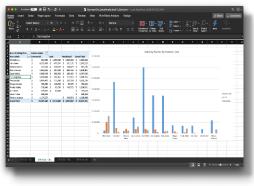
Tableau Dashboard Activities

- Scenario-based questions integrating active dashboards
- •Students manipulate active or live dashboards within Connect
- Auto-graded analysis/decision-making questions



Excel Analytics

- •Students work with complex datasets in live Excel
- •Use Excel-based tools to analyze data sets and derive solutions
- •Use a variety of Data Visualization techniques to communicate findings
- Goes beyond basic data manipulations & Excel skills]
- Auto-graded in Connect



Applying Tableau

- Hands-on usage and skillbuilding within free Tableau software (incl. tutorial/instructional videos)
- Auto-graded critical-thinking and calculation questions, requiring manipulation and interpretation of data sets

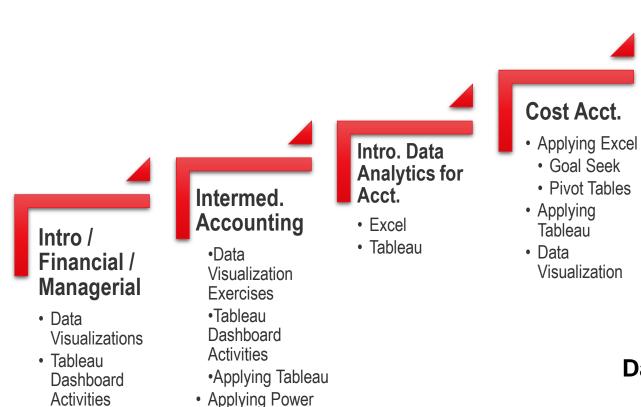
Applying PowerBl

- Introduce and teach students to drive better business decisions by analyzing data for insights
- Provide interactive visualizations & business intelligence capabilities
- Students create their own reports and dashboards, harnessing data to tell a compelling business story





Data Analytics in Accounting: Integrating across the curriculum



Βĺ

Applying TableauApplying Power

Excel Analytics

Auditing

IDEA

Taxation

Dashboard

Activities

Tableau

- Applying Tableau
- EY Helix Analyzer
- ACL Software

Acc. Info Systems

- Tableau
- Excel Power Pivot tables/ Filters

Data Analytics for Acct. (capstone)

- Tableau
- IDEA
- Access
- SQL
- Weka

Data Analytics looks different in different courses

Tableau & Power Bl

✓ In-demand skills

✓ Companies are hiring for analytical skills

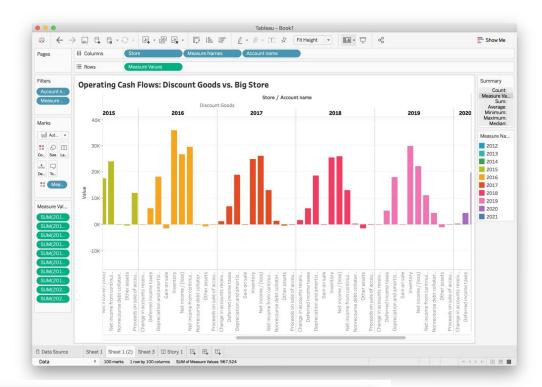
√ Student Engagement

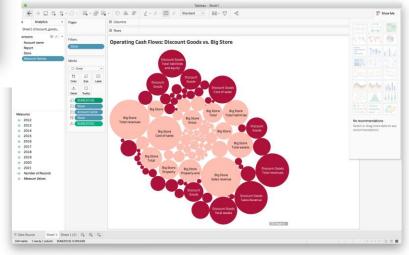
✓ Make data analytics come to life working hands on

√ Easy to use

✓ library of on-demand tutorials and a dedicated support









Introductory Accounting

Wild Series

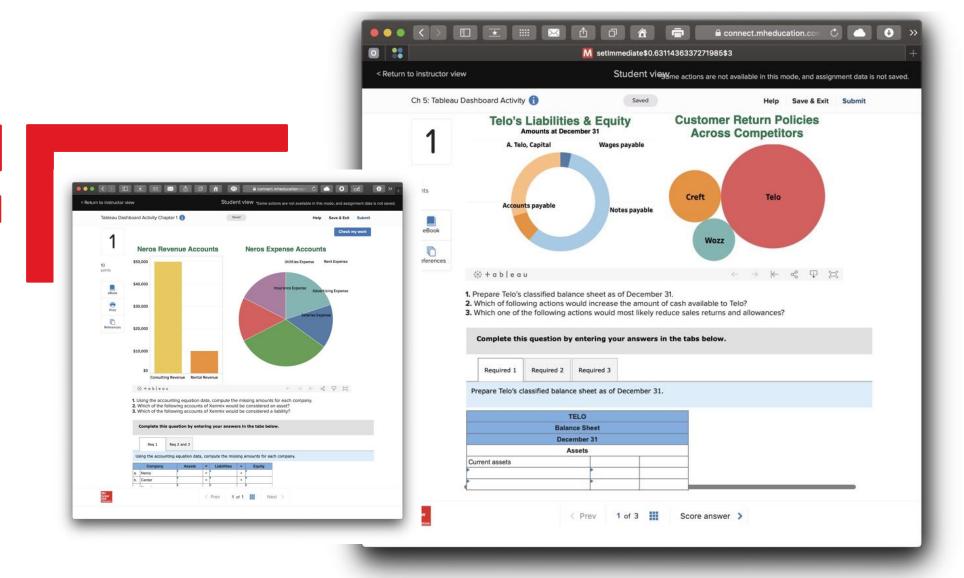
Your Team: Claire McLemore & Steve Schuetz

Updated 11.16.21

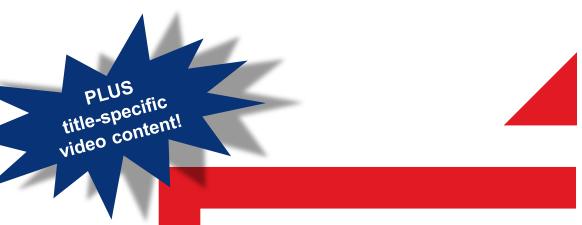
Data Analytics in Introductory Accounting

Introductory Accounting

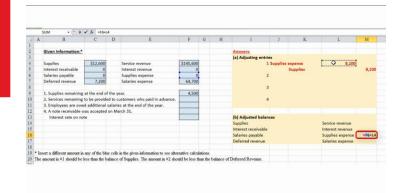
- Tableau Dashboard Activities
- Integrated Excel & Applying Excel
- Title-specific videos/content (over 1500 videos)



Data Analytics in Introductory Accounting



Excel Tools: Integrated Excel & Applying Excel



1.53 Mil

Tableau Dashboard

Activities

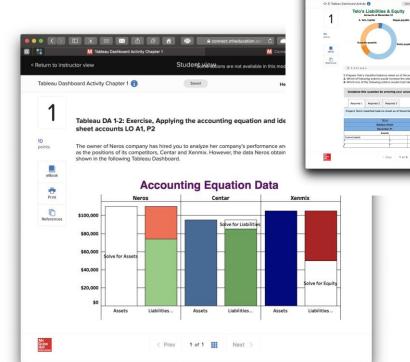


Tableau Dashboard Activities

3 DIFFERENT LEVELS & APPROX 100 TDAS

TDA: Quick Study

- 5-10 minutes
- Reading Financial & Managerial Data from Dashboards
- Auto-graded assignments

HW: before or early in coverage

TDA: Exercise

- 10-20 minutes
- Applying Financial & Managerial Data from Dashboards
- Auto-graded assignments

HW: after first day coverage

TDA: Mini Case

- 15-25 minutes
- Interpreting & Decision Making using Financial & Managerial Dashboards
- Auto-graded assignments

HW: later in coverage & in-class

Data Analytics Content in Introductory Accounting Wild Franchise by Title

TITLE	Data Analytics Offer
Fundamental Accounting Principles	✓ Tableau Dashboard Activities✓ Integrated Excel, Applying Excel, Excel Sims
Financial and Managerial Accounting	✓ Tableau Dashboard Activities✓ Integrated Excel, Applying Excel, Excel Sims
Managerial Accounting	✓ Tableau Dashboard Activities✓ Integrated Excel, Applying Excel, Excel Sims
Financial Accounting Fundamentals	✓ Tableau Dashboard Activities✓ Integrated Excel, Applying Excel, Excel Sims
Financial Accounting: Information for Decisions	 ✓ Tableau Dashboard Activities (w/ algo versions) ✓ Integrated Excel (w/ algo versions), Applying Excel, Excel Sims



Financial Accounting

4 different franchises

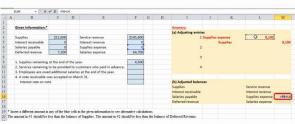
Your Team: Lauren Schur & Noelle Bathurst

Updated 11.16.21

Data Analytics in Financial Accounting

PLUS title-specific video content!

Excel Tools: Integrated Excel & Applying Excel



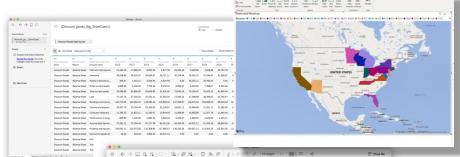
Data Visualization Exercises

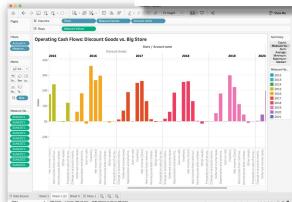


Tableau Dashboard Activities



Applying Tableau Applying Power BI





Data Analytics in Financial Accounting: Spotlight on Spiceland

- New Data Analytics assignments teach students how to use software tools to derive financial insights and communicate them to stakeholders.
- Build basic Excel skills through Integrated Excel and Applying Excel
- Interpret visual data sets and interact with live Tableau dashboards
- Gain hands-on experience creating dashboards in Applying Tableau and Applying Power BI (coming in 2022!)



Data Analytics in Financial Accounting: Spotlight on Edmonds IFAB

- The Edmonds approach helps students think like business professionals, building analysis and conceptual skills. New Data Analytics assignments teach students to use software tools to derive financial insights about business.
- Build basic business skills through Excel Simulations
- Interpret and engage with visual data sets in live Tableau dashboards
- Use Applying Tableau capstone project to gain hands-on experience



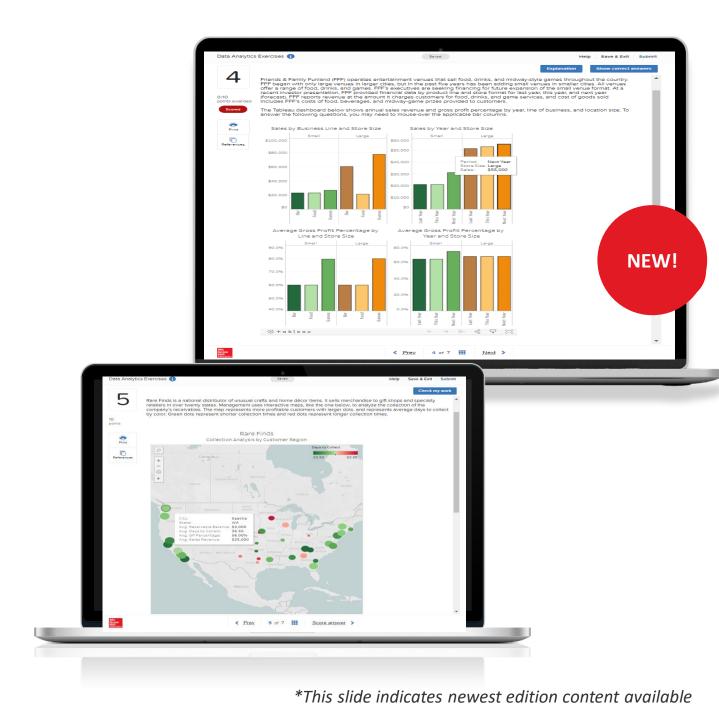
Data Analytics in Financial Accounting: Spotlight on Edmonds FFAC

- The Edmonds approach helps students think like business professionals, building analysis and conceptual skills. New Data Analytics assignments teach students to use software tools to derive financial insights about business.
- Build basic business skills through Excel Simulations
- Interpret and engage with visual data sets in live Tableau dashboards
- Use Applying Tableau capstone project to gain hands-on experience



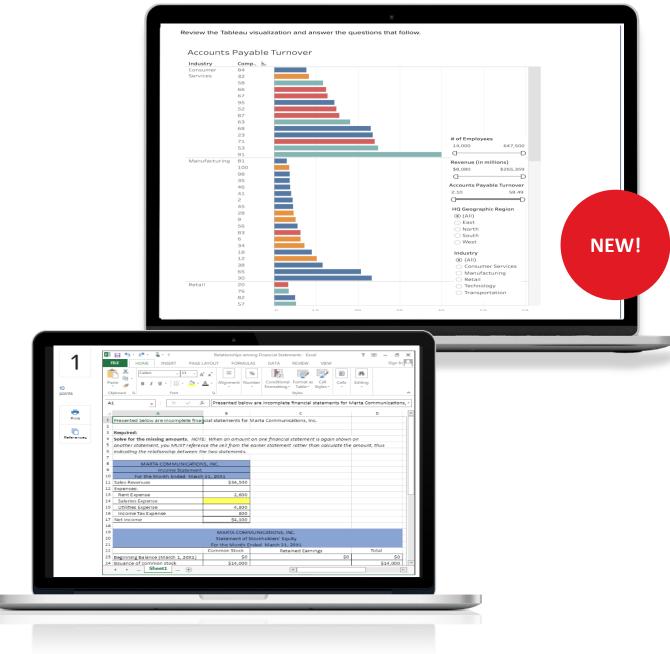
Data Analytics in Financial Accounting: Spotlight on Phillips

- New Data Analytics assignments teach students how to use software tools to derive financial insights and communicate them to stakeholders.
- Learn and practice Excel formulas and functions in Accounting context with Integrated Excel
- Interpret visual data sets and interact with live Tableau dashboards
- Watch custom-created newsmagazine style videos on current topics, like Big Data and Sustainability



Data Analytics in Financial Accounting: Spotlight on Libby

- New Data Analytics assignments teach students how to use software tools to derive financial insights and communicate them to stakeholders.
- Learn and practice Excel formulas and functions in Accounting context with Integrated Excel
- Interpret visual data sets and interact with live Tableau dashboards



Data Analytics Content in Financial Accounting (by title)

Title	Data Analytics Offer
Spiceland Financial Accounting	 ✓ Integrated Excel & Applying Excel ✓ Data Visualizations Exercises ✓ Tableau Dashboard Activities ✓ Applying Tableau ✓ Applying Power BI (coming in 2022!)
Phillips Fundamentals of Financial Accounting	 ✓ Integrated Excel ✓ Tableau Dashboard Activities ✓ Flash Topic Videos (Big Data)
Libby Financial Accounting	✓ Tableau Dashboard Activities
Wild Financial Accounting: Info for Decision Making	✓ Integrated Excel✓ Tableau Dashboard Activities
Edmonds Intro Financial Accounting for Business	✓ Integrated Excel✓ Tableau Dashboard Activities✓ Applying Tableau
Edmonds Fundamentals of Financial Accounting Concepts	✓ Applying Excel✓ Tableau Dashboard Activities✓ Applying Tableau

^{*}This grid indicates newest edition content available



Managerial Accounting

4 different franchises

Your Team: Lauren Schur & Noelle Bathurst

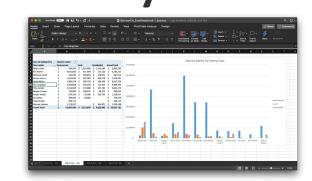
Updated 11.16.21

Data Analytics in Managerial Accounting

Tableau Dashboard Activities

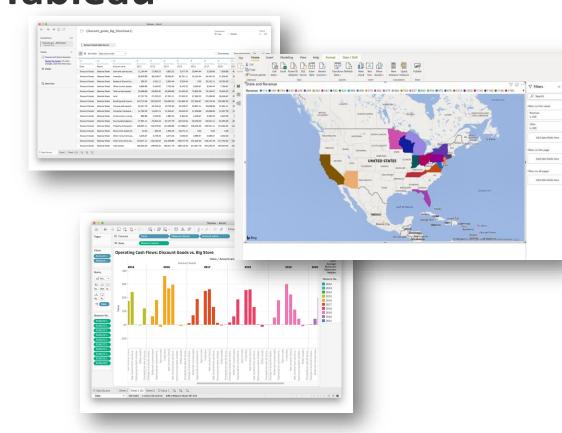


Excel Tools: Integrated Excel & Excel Analytics



Applying Tableau

Applying Power BI



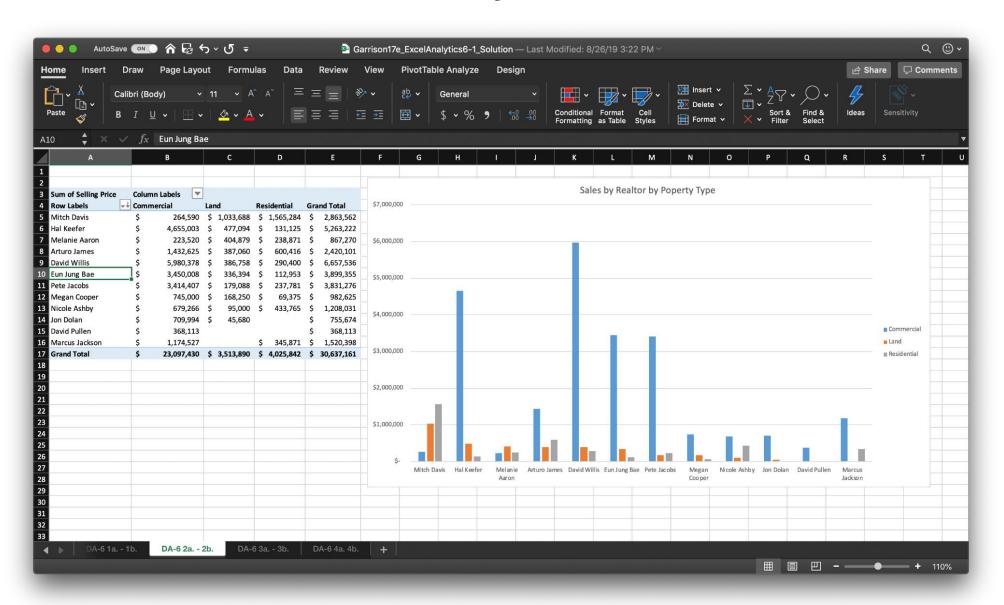
Data Analytics in Managerial Accounting: Spotlight on Garrison

New Data Analytics Exercises teach students how to:

- Use software tools to derive managerial insights and communicate them to stakeholders
- Use more sophisticated data analysis tools in Excel to analyze and derivate managerial insights
- Communicate their findings in visually compelling ways
- Interpret and build data visualization dashboards in Tableau, Power BI, and Excel

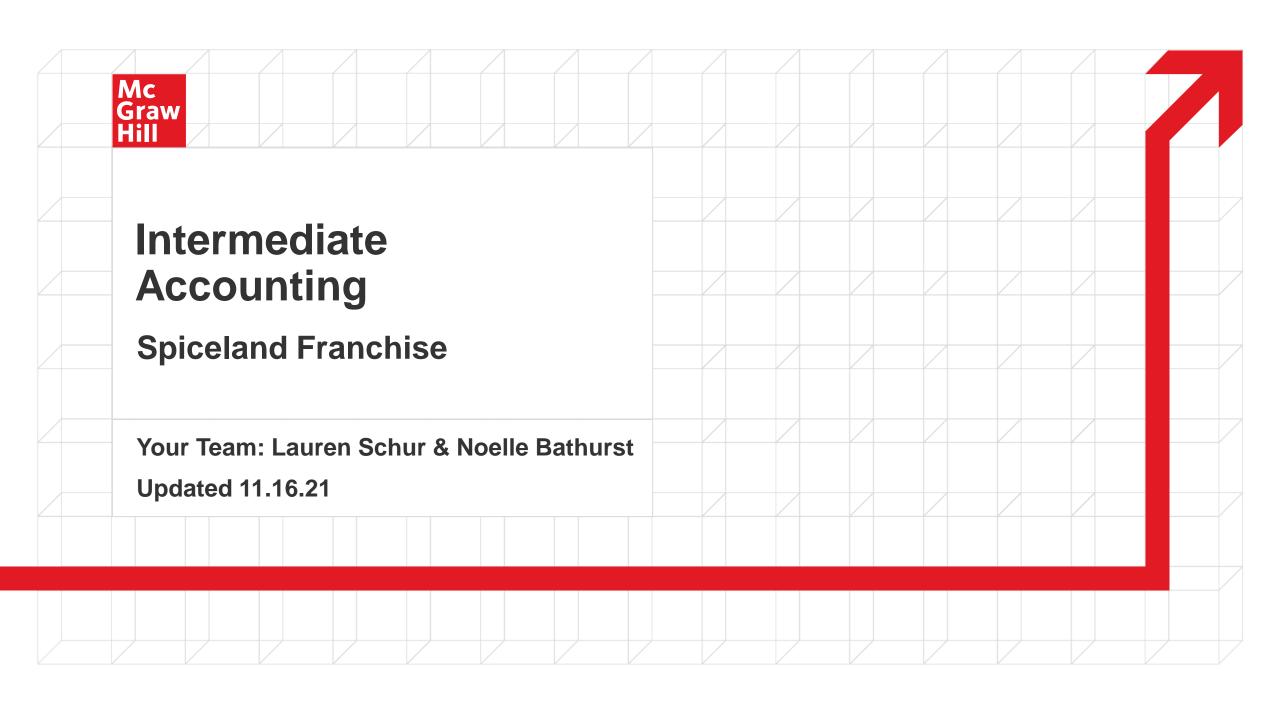


NEW! Excel Analytics in Garrison



Data Analytics Content in Managerial Accounting (by title)

AUTHOR	Data Analytics Offer
Garrison	 ✓ Integrated Excel & Excel Analytics ✓ Tableau Dashboard Activities ✓ Applying Power BI ✓ Applying Tableau
Brewer	 ✓ Integrated Excel & Excel Analytics ✓ Tableau Dashboard Activities ✓ Applying Power BI ✓ Applying Tableau
Noreen	 ✓ Integrated Excel & Excel Analytics ✓ Tableau Dashboard Activities ✓ Applying Power BI ✓ Applying Tableau
Edmonds FMAC	✓ Integrated Excel✓ Applying Tableau
Hilton	✓ Tableau Expressions of Excel Regression
Whitecotton	 ✓ Integrated Excel ✓ Tableau Dashboard Activities ✓ Applying Tableau ✓ Data Analytics Continuing Case
Wild	 ✓ Integrated Excel ✓ Tableau Dashboard Activities *This grid indicates newest edition content available



Data Analytics in Intermediate Accounting



Data Visualization



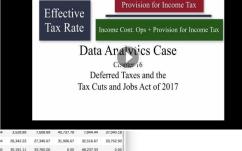
Tableau Dashboard Activities

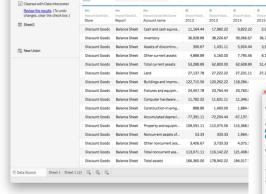


Applying Power BI



Applying Tableau

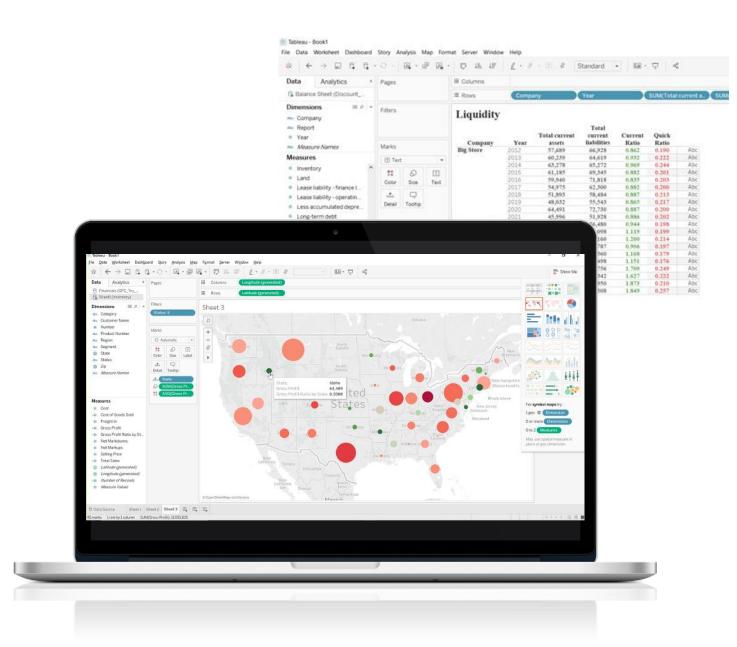






Data Analytics in Intermediate Accounting: Spotlight on Spiceland

- New auto-graded Data Analytics tools teach students how to build data analytics skills, interact with live Tableau dashboards in Connect, and apply their skills with hands-on work in freely available Tableau and Power BI software
- Instructors need not be Tableau experts themselves
- Step-by-step instructions and videos guide students
- Immediate feedback and autograded capabilities in Connect





Taxation

Spilker, Jones & Cruz

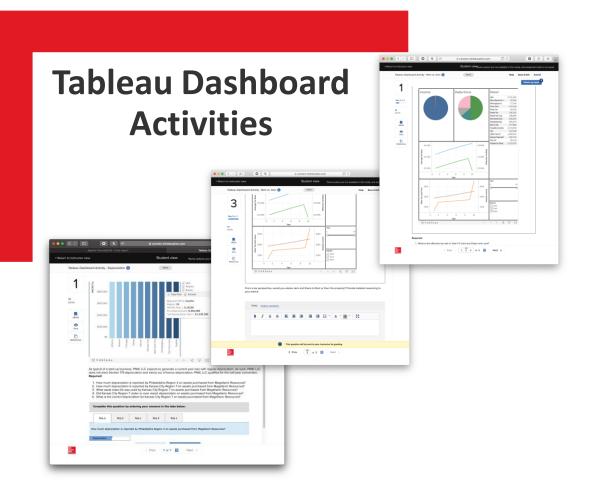
Your Team: Claire McLemore & Kathleen Klehr

Updated 11.16.21

Data Analytics in Taxation

Available for Spilker, Jones & Cruz





Data Analytics Content in Taxation (by title)

Title	Data Analytics Offer
Spilker Taxation of Individuals and Business Entities	✓ Tableau Dashboard Activities✓ Integrated Excel
Spilker Taxation of Individuals	✓ Tableau Dashboard Activities✓ Integrated Excel
Spilker Taxation of Business Entities	✓ Tableau Dashboard Activities✓ Integrated Excel
Spilker Essentials of Federal Taxation	✓ Tableau Dashboard Activities✓ Integrated Excel
Jones Principles of Taxation	✓ Tableau Dashboard Activities✓ Integrated Excel
Cruz Fundamentals of Taxation	✓ Tableau Dashboard Activities✓ Integrated Excel



Auditing

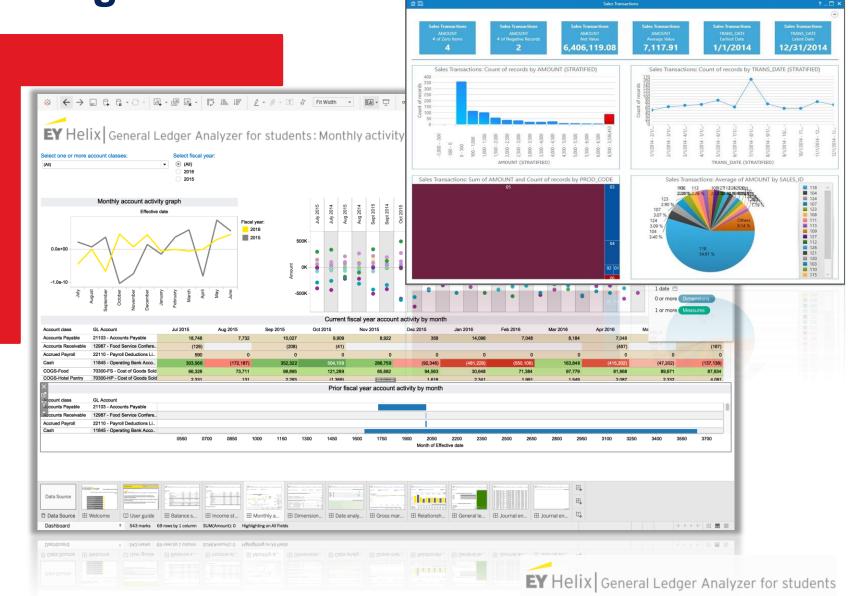
Messier, Louwers, Whittington

Your Team: Lauren Schur & Danielle McLimore

Updated. 11.16.21

Data Analytics in Auditing

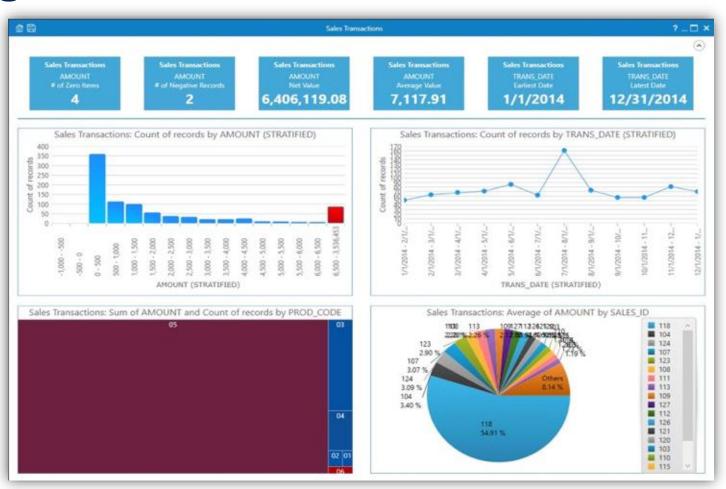
- IDEA
- Applying Tableau
- EY Audit Software (Helix)
- ACL Software



Data Analytics in Auditing: IDEA

Louwers Messier Whittington

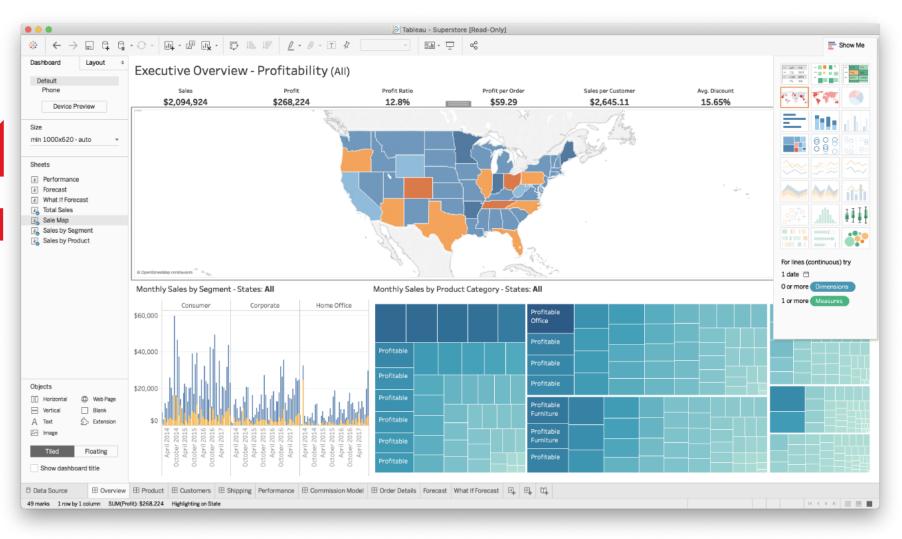
Available in Connect, with auto grading where possible. Also available outside of Connect.



Data Analytics in Auditing: Applying Tableau

Applying Tableau

- Messier
- Whittington





Messier, Auditing & Assurance Services 12e



Understanding platform differentiation boosts critical-thinking and problem-solving skills

Data Analytics Content in Auditing (by title)

Auditing Title	Data Analytics Offer
Louwers	✓ New module on Data Analytics
	✓ KPMG Case using Tableau to assess fraud and risk
	✓ IDEA Auditing Software
	✓ Data Sets provided can be used by any analytics software
	✓ Apollo Shoes Audit Simulation Case: includes data analytics component
Messier	✓ Applying Tableau
	✓ IDEA Auditing Software
	✓ UiPath
	✓ EY Helix Cases
Whittington	✓ IDEA Auditing Software
	✓ ACL
	✓ Applying Tableau

Caseware IDEA Audit Software: is a powerful data analysis tool designed to help auditors, accountants and other finance professionals perform data analysis quickly to help improve audits and identify control breakdowns.

Tableau: is a powerful analytics tool that helps students see and understand data. Give your students a leg up in the real-world with experience using Tableau; letting them access, visually analyze, and understand data while creating interactive worksheets.

Ernst & Young Foundation Content & Cases: Provides students experience working with large datasets and considering risks using case material developed by EY's Ernst & Young Foundation. Instructors & students are provided with access to The Ernst & Young Academic Resource Center; specifically, the EY P-Card case data and the opportunity to explore the audit data analytics process in great depth while using EY's proprietary Tableau analyzer tool, EY Helix.

This grid indicates newest edition content available



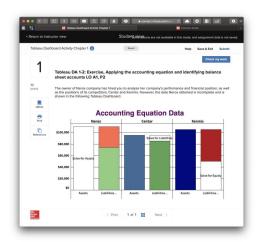
Cost Accounting Lanen, Blocher

Your Team: Lauren Schur & Danielle McLimore

Updated 11.16.21

Data Analytics Content Types in Cost Accounting

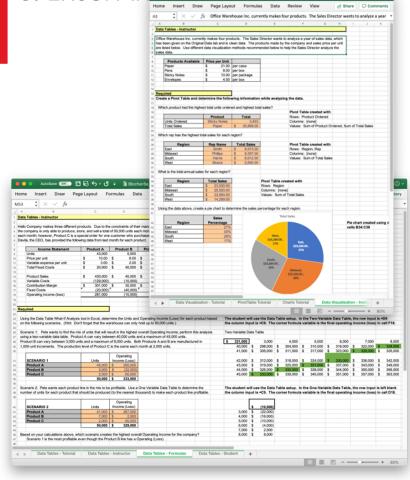
Data Visualization Exercises



Applying Tableau



Excel Tools: Integrated Excel, Applying Excel & Excel Analytics



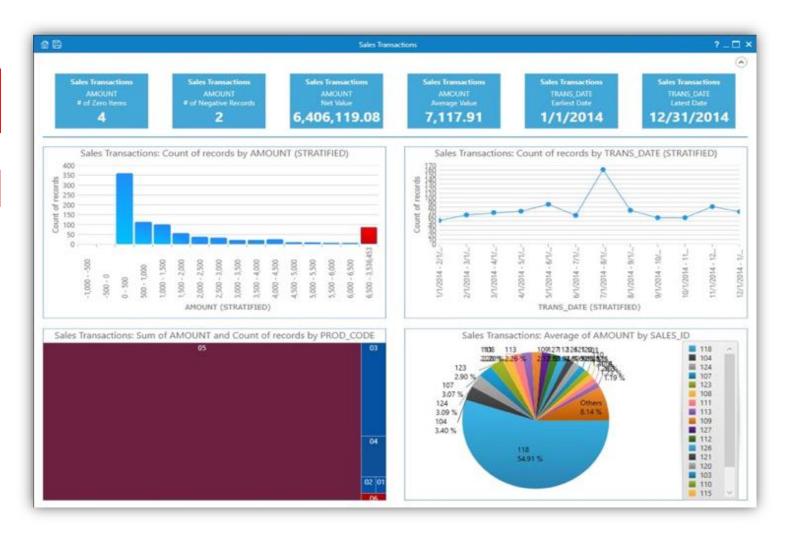
Data Analytics Content in Cost Accounting (by title)

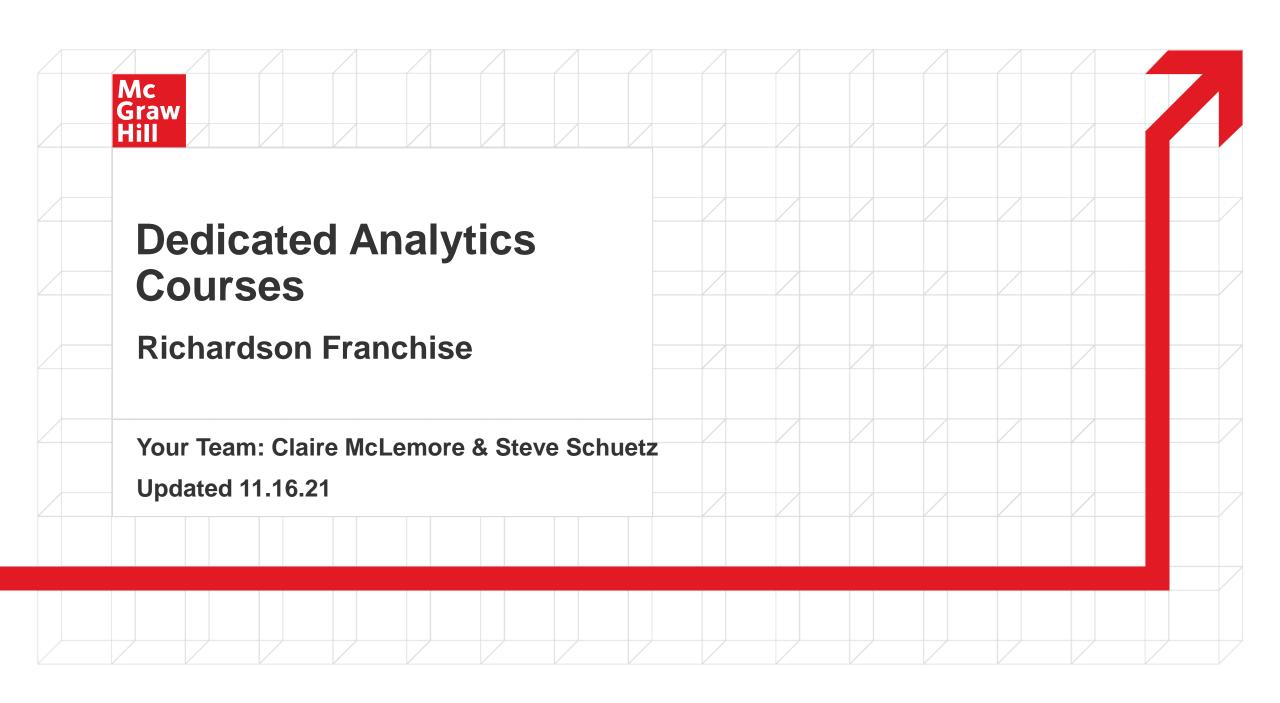
AUTHOR	Data Analytics Offer
Blocher	✓ Integrated Excel & Applying Excel ✓ Applying Tableau
Lanen	✓ Excel Analytics Exercises

Data Analytics Content Types in Gov't & Not-For-Profit: Reck

Excel Analytics

- Reck
- Copley coming soon!





Dedicated Data Analytics Texts: Richardson, Teeter, & Terrell

Introduction to Data Analytics for Accounting

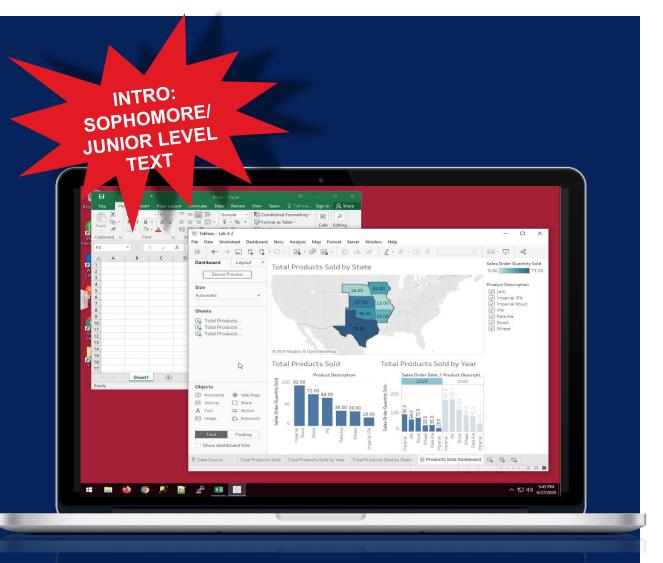
- Intro
- PRE-REQS: Financial & Managerial
- Focus: Excel & Tableau
- Uses the AMPS Model
 - Ask the Question
 - Master the Data
 - **Perform** the Analysis
 - Share the Story

Data Analytics for Accounting

- Capstone
- PRE-REQS: Auditing, Intermediate, Tax, AIS, etc.
- Focus 2 Tracks:
 - Green Track: Microsoft tools (including Excel, Power Query, and Power BI)
 - Blue Track: Tableau tools (including Tableau Prep Builder and Tableau Desktop)
 - Other tools covered: Access, SQL, IDEA, and Weka
- Uses the IMPACT Model:
 - **Identify** the questions
 - Master the data
 - Perform the test plan
 - Address and refine the results
 - Communicate insights
 - Track the outcomes



Richardson: Introduction to Data Analytics for Accounting



Introduction to Data Analytics for Accounting will provide hands-on learning with more than 50 Labs:

- Each lab has two datasets one dataset is used in a base lab for learning and an alternate dataset is used for student assessment.
 - ✓ The initial lab includes lots of handholding with easy step-by-step instructions.
 - ✓ The alternate lab includes no handholding and students have a new set of data to complete the lab on their own.
 - ✓ Both labs come with assessments that require students to take a screenshot and answer five MC questions.



Richardson: Data Analytics for Accounting



Data Analytics for Accounting features comprehensive cases that have the students explore Dillard's sales data:

- ✓ Requires student use of Remote Desktop hosted by Walton College at the University of Arkansas.
- ✓ Offers 6 tables with more than 360 million records to explore.
- Expose students to real world data integrity problems.
- ✓ Each comprehensive lab in the textbook details different data cleaning, analysis, modeling, and visualization techniques.

Richardson: Data Analytics for Accounting

New Features

01 Color Coded Multi-Track Labs:

Instructors have the flexibility to guide students through labs using two different tool tracks or both:

- Green Track: Microsoft tools (including Excel, Power Query, and Power BI)
- Blue Track: Tableau tools (including Tableau Prep Builder and Tableau Desktop)
- Each track is clearly identified and supported with additional resources.

02 Lab Example Outputs:

Each lab begins with an example of what students are expected to create. This provides a clear reference and guide for student deliverables.

03 Lab Videos:

All labs are now designed with an inline video that provides guidance for the student to complete the lab.

04 Auto-Graded Problems:

The quantity and variety of autograded problems and labs that are assignable in McGraw Hill Connect® have been expanded.

05 Discussion and Analysis questions:

Now available as manually graded assignments in McGraw Hill Connect®



Connect Pre-Built Course Package

- OLC Certified Connect Courses:
 High quality, pedagogically sound digital content that is instructionally designed for student success (reading, homework, and assessment for each chapter)
- Sample Syllabi: highlights the assignments and policy settings in the pre-built course
- Course Key: a spreadsheet that lists all the assignments and policy settings

