

Beyond the Ledger: Using Accounting Software for Deeper Understanding

OR

Providing a Quality Tech Course With Limited Resources

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The session description:

Employers and accounting education accreditation standards require that our graduates have technology agility, but many of our departments lack the faculty expertise to deliver the coursework. **We are all working at or above capacity, so how do we get up to speed and deliver a quality course? How do we give our students tech tools to be career ready?** This session answers that question. This session will provide you with resources and contacts so that you can deliver a course even if you are not 100% comfortable with your tech skills. Even if you are not there yet, it's not about you – it's about your students. The desired outcome of this session is that you will have the resources to ensure that your students are tech ready. We will specifically discuss artificial intelligence, data analytics, Power BI, Alteryx, Blockchain, cybersecurity, Excel, and Robotic Process Automation.



Why we are here

Students need tech skills because

- *Employers*
- *Our Advisory Boards*
- *Accreditors*
- *Certification Exams*

We need to provide tech learning opportunities even if we have

- *Limited faculty expertise*
- *Limited technology support*



the CPA Exam

In the core:

- **Auditing and Attestation - Data and technology concepts** with a focus on understanding how data is structured and flows through underlying systems, verifying the completeness and accuracy of source data and using the outputs of data analytic techniques to assist in risk assessment or to complete planned procedures.
- **FAR - Data and technology concepts**, including the verification of the completeness and accuracy of source data used in the preparation of financial statements and the use of various sources of data and information
- **Taxation & Regulation - Data and technology concepts** including the verification of the completeness and accuracy of source data used to prepare returns and supporting schedules and the consideration of the outputs of automated validation checks and diagnostic tools that highlight potential errors or anomalies.



the CPA Exam

In the disciplines – BAR:

- **Data and technology concepts**, including the: Verification of the completeness and accuracy of source data used in comparing historical results to budgets and forecasts and deriving the impact of transactions and events (actual and proposed).
- Determination of methods to **transform data** to make it useful for decision-making.
- Determination of attribute structures, formats and sources of data needed to **prepare financial statement analysis**.
- Use of outputs from **data analytic techniques** to explain an entity's results or to identify and detect discrepancies.



the CPA Exam

In the disciplines – TCP:

- Data and technology concepts including the verification of the completeness and accuracy of source data used to prepare returns and supporting schedules



the CPA Exam

In the disciplines – ISC:

All Of It



AACSB A5

Standard A5: Consistent with mission, expected outcomes, and supporting strategies, accounting degree programs include learning experiences that develop skills and knowledge related to the integration of information technology in accounting and business. This includes the ability of both faculty and students to adapt to emerging technologies as well as the mastery of current technology. [INFORMATION TECHNOLOGY SKILLS, AGILITY AND KNOWLEDGE FOR ACCOUNTING GRADUATES AND FACULTY—RELATED BUSINESS STANDARD 4]



Basis for Judgment

- Consistent with the accounting unit's mission, accounting degree programs integrate current and emerging accounting and business practices in three primary components within the curricula:
 - Information systems and **business processes** including data creation, manipulation/management, security, and storage.
 - **Data analytics** including, for example, statistical techniques, clustering, data management, modeling, analysis, text analysis, predictive analytics, learning systems, or visualization.
 - **Technology agility** among learners and faculty should be developed, recognizing the need for continual learning of new skills needed by accounting professionals.
- Learner experiences integrate real-world business strategies, business acumen, privacy and security concerns, ethical issues, information systems and processes, and data management and data analytics tools. Graduates understand the capabilities of these tools, along with the impact and the associated risks and opportunities. Learning experiences may be supported by business, accounting, and other academic units.
- Incorporate a list of current and emerging technologies used in each accounting course in Table A-6. Do not include ordinary and usual software programs such as word processing or presentation software.
- The expectations for alignment with this standard for an accounting unit offering both undergraduate and master's level programs are higher than for an accounting unit offering only an undergraduate program.



Technology Standards

- <https://www.journalofaccountancy.com/newsletters/extra-credit/aacsb-accounting-standard-a5.html>
- “AACSB-accredited schools and the firms that employ their graduates understand that agility will be vitally important to the future of the accounting profession as technology continues to change the way people work.”
- “Whether they teach R or Python, for example, doesn’t matter as much as that students are aware of the different technologies they can use for different decision-making processes,” she said.
- The AACSB accreditation team will “examine a school’s technology offerings in a more holistic manner to ensure that students are ready for their first position out of college.”
- When revising their technology strategies, schools should think about how they’re preparing students for the workplace. “The objective is to mirror in the classroom the technologies that students will be expected to be knowledgeable about when they hit the workforce,” Bryant said.



Strategic Priorities align with accreditation focus

Career Readiness & the Student Experience

By combining rigorous academic study with the Professional Development Program, certifications, and research, Trulaske is preparing career-ready graduates. We offer a growing list of programs of distinction that start with prospective students and progress to traditional and non-traditional students who then graduate to lifelong learners. We are forming a model for external engagement to improve student success. In partnership with private industry, we are launching the Trulaske Executive Education Program.



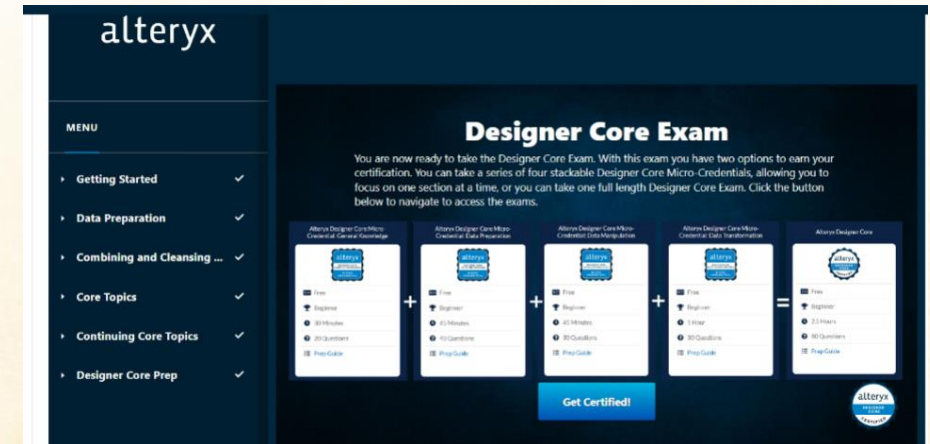
LinkedIn and LinkedIn Learning

- <https://www.linkedin.com/>
- Students
 - Professional network for both academic cohort and professionals
 - Source of opportunities
 - Universities have an interest in student success and branding
 - CPE –NASBA courses
 - Life-long learning and source of re-skilling and up-skilling
 - Tech courses in LinkedIn learning
 - This semester: AI, Cybersecurity, Blockchain, Power BI, teams
- You
 - Connection to the real world.
 - Source of expertise for the classroom – former students and others
 - Witness student success – My courses don't end at semesters end
 - Opportunity to help students later in career



Alteryx

- <https://www.alteryx.com/sparked/educators> and <https://community.alteryx.com/t5/Educators/gh-p/Educators>
- “Start teaching” to create account / Join our community for tools
- Jay Garcia <https://www.linkedin.com/in/ayxjaygarcia/>
- Download Alteryx with one year license. MacOS not supported.
- Academy/learning Paths/Getting Started to prepare for Alteryx Designer Core Certificate
- Accounting cases
- Sharing Configurations
- Trnka, Ben
 - <https://www.linkedin.com/in/ben-trnka-28a84962/>



Power BI

- If you don't already have it: <https://www.microsoft.com/en-us/download/details.aspx?id=58494>
- Previously used Wiley
- McGraw-Hill has Power BI course in SIMnet in May 2024
- Cases? See Resources later
- LinkedIn <https://www.linkedin.com/learning/paths/become-a-power-bi-specialist> or <https://www.linkedin.com/learning/paths/master-microsoft-power-bi-15399694>
- Udemy <https://www.udemy.com/course/microsoft-power-bi-up-running-with-power-bi-desktop/?couponCode=ST22FS22724>
- Datacamp - [Introduction to Power BI - DataCamp Learn](#)
- Visualization – Tableau? Do you remember Lotus 123?



Blockchain

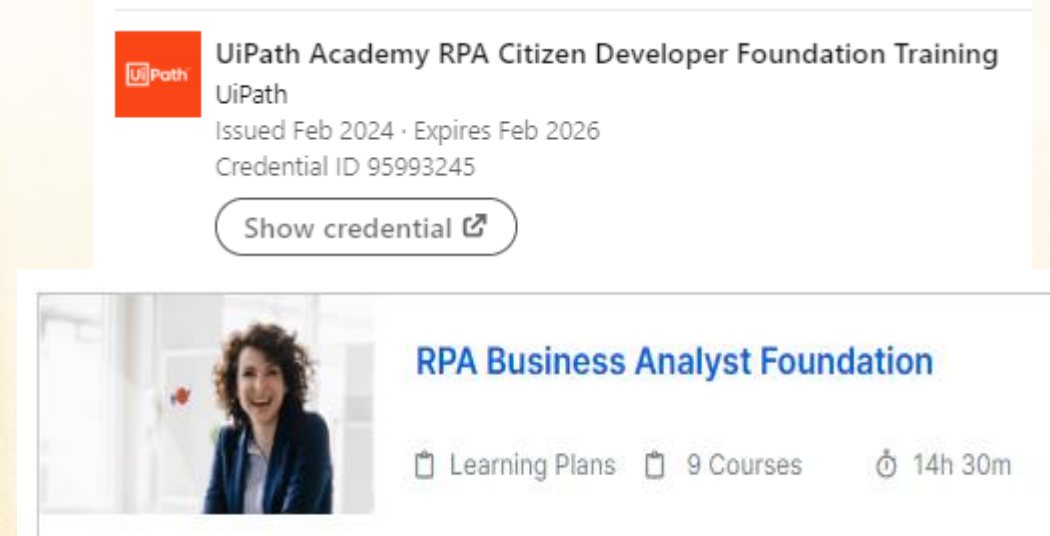
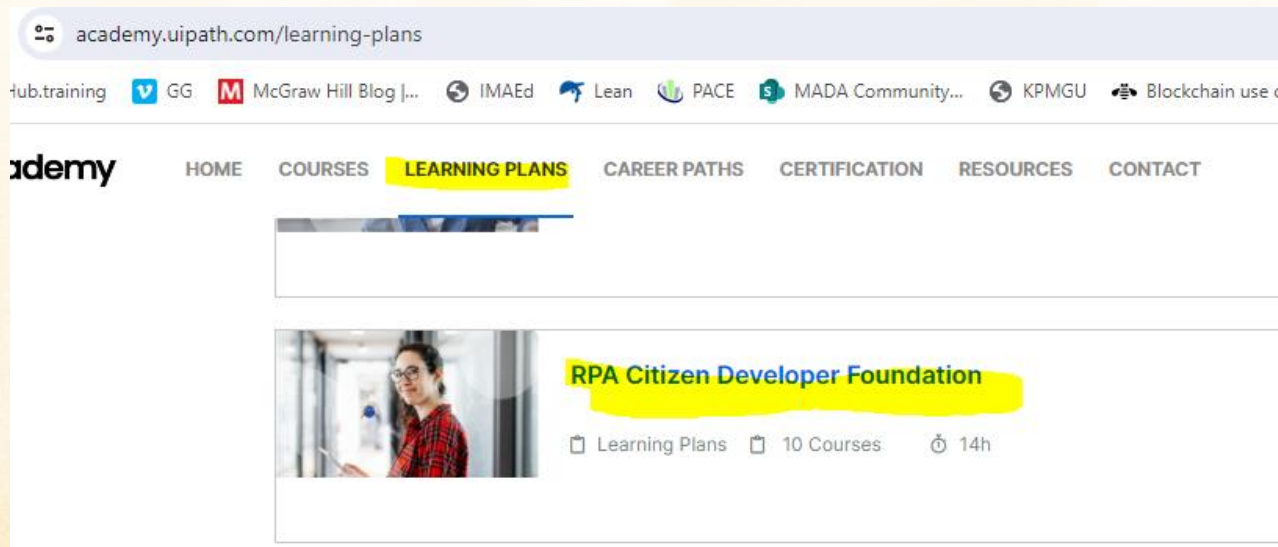
- Guest speaker to discuss use cases
- LinkedIn learning to emphasize DeFi and Smart Contracts.
- <https://www.linkedin.com/learning/paths/getting-started-in-blockchain>
- Blockchain game <https://www.christiansonjs.com/blockchain-game/> and <https://www.youtube.com/watch?v=v58PDrkNIQk>
- <https://hbr.org/2022/01/how-walmart-canada-uses-blockchain-to-solve-supply-chain-challenges>



Tool #5 Robotic Process Automation

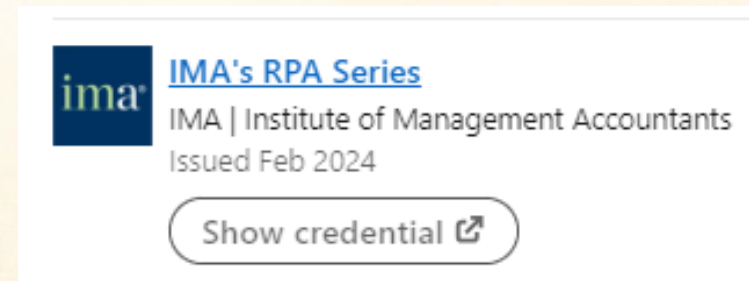
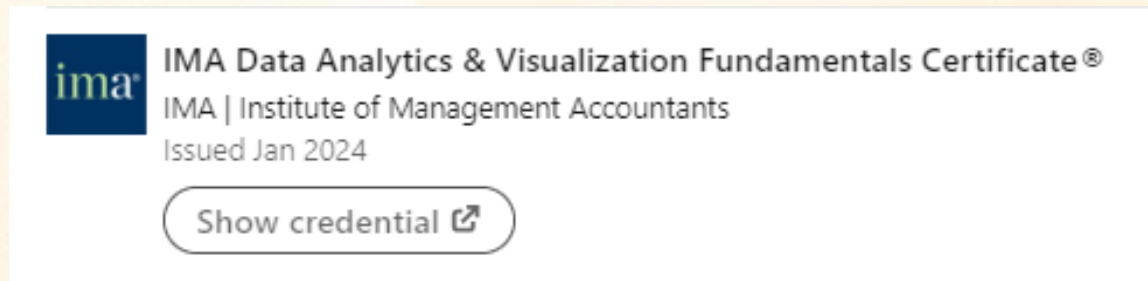
UiPath

- AI and automation cited as two biggest disruptive changes to profession: “Robotic Process Automation in Public Accounting” in Vol. 33, No. 4 / Dec 2019 Accounting Horizons.
- Contacts: <https://www.linkedin.com/in/kristina-kaldon/> and <https://www.linkedin.com/in/michaela-rosenmayer/>
- <https://www.uipath.com/rpa/academic-alliance/academic-studio-download/>



Institute of Management Accountants

- Cost is \$25 for student membership with discount code “STU25”
- IMA Data Analytics & Visualization Fundamentals Certificate (9 hours CPE) to start Data Analytics portion of course
- IMA RPA Series to kick off RPA (2 hours CPE) to start RPA portion of course
- Many other free courses



Excel and more

- See Trent in the Exhibit Hall
- Advisory boards, employers, former students, articles – MORE Excel
- Progressive training so it can be spread across courses
- Black Belt skill coverage: <https://certificates.simnetonline.com/874e5e06-bac3-4959-9638-26ac731cd6f1#gs.55snf8>
- Badging - Completion (white and purple belts) and Achievement (yellow and black). Achievement badges can be co-branded with your own design/logo
- Students have access to trainings indefinitely and can revisit them as needed.
- Has MOS Excel Expert training modules
- Access, Word, PowerPoint, Power Query/Pivot. Power BI coming in May, 2024



Level 4: Excel Black Belt

McGraw Hill

Issued Nov 2023

Credential ID 87374248

Show credential 



Primarily ChatGPT and Gemini

- Focus on prompt engineering and uses.
- LinkedIn trainings
 - <https://www.linkedin.com/learning/how-to-research-and-write-using-generative-ai-tools/meet-your-ai-creative-collaborator>
 - <https://www.linkedin.com/learning/introduction-to-prompt-engineering-for-generative-ai/joining-the-nlp-revolution>
 - <https://www.linkedin.com/learning/advanced-prompt-engineering-techniques/prompting-to-make-ai-systems-more-useful>
- Assignments:
 - Prompt an intermediate level accounting question to an AI and evaluate the answer. But now know of “drift” so quality of AI answer may shift over time and additional LLM training.
 - End of semester reflection for semester: How are you using AI?
 - Post an AI-aided and edited article to LinkedIn about what you learned this semester that is particularly relevant to your career.
 - Trust papers – write two AI-aided papers (860 – 900 words) and (1,600 – 2,000 words) on organizational trust or trust relative to our digital ecosystem with reflection on AI use. Editing and attribution.



Resources # 1

CPA Firm: EY

- [EY Academic Resource Center | EY – US](#)

Course and competency <small>*Optional **Variable, based on topic or student/faculty choice</small>	Alternative data (Case series)	Bank Investment Portfolios	Big Deals	BioPharma	Cybersecurity Enron	Cybersecurity Liberty Data Systems	Cybersecurity Blue Yarrow Unicorns	Cybersecurity LoginAnalysis	Cybersecurity Escape Room	Data Snipper (case series)	Digital assets (EY Helix Blockchain Analyzer)	DuPont	ETL (Case series)	EDGAR Explorer – Inline XBRL	EDGAR Explorer 2 – Submissions API	ETL in R	ETL with RegEx	Fairview Inc. (Case series)	Gamification	IntegrateCo	Oh Canada (Case series)	P-Card	Peach State University Hotel (EY Helix GL Analyzer) (Case series)	Process mining (Case series)	Swindle in the age of AI: a forensics challenge	Tax Technologist	TechWear	Timp Health	Tech Explorer	The 360	Trina' s Trinkets	Viz-a-thon	
Introduction to Accounting																																	**
Cost and Management Accounting																														**			**
Intermediate Financial Accounting																													**			**	
Accounting Information Systems																													**			**	
Auditing (including both external and internal audit)																													**			**	
Tax																													**			**	
Fraud																													**			**	
Data Analytics																													**				
Business Statistics																																	

TechHub.training

- This is similar to the Alteryx weekly challenges - <https://community.alteryx.com/t5/Weekly-Challenges/bd-p/weeklychallenge>
 - A good source of cases of all types and levels.
- Challenges – ChatGPT, Alteryx, Python, Excel, Quickbooks, Tableau, Excel&VBA, SQL&Power BI, UiPath, SQL, Celonis
- Have not used this yet, but it looks interesting.



P u l l i n g i t a l l t o g e t h e r

“Peer reviewers want to see that schools aren’t just teaching technology in one or two AIS courses, but that they’ve integrated it departmentwide in a thoughtful manner.”

- Intentionally sequence your coursework to build and reinforce skills.
- Include tech even if you are not confident in your skills. Our students need the exposure to be career-ready.
- You don’t have to start from scratch; Good mini-courses are available
- In the tension between stability and change, get used to more change and less stability.
- We, by choice, are life-long learners. It is time to learn.
- The first pancake may be a throwaway despite your best efforts. The second one is usually good.



If I can help...

My LinkedIn About section indicates

“I am interested in linking with students, former students, academicians interested in finding better ways to teach and learn, practicing accountants who would like to share the current state of practice, or anyone who might have a position (e.g., internship, full-time employment) or learning experience for accounting students.”

Let me know if I can help – Brunyan@missouri.edu or via LinkedIn.

