

STEM – The Future of Accounting Programs

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Accountants and
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Webinar Features and CPE Credit

Q&A

Asking Questions



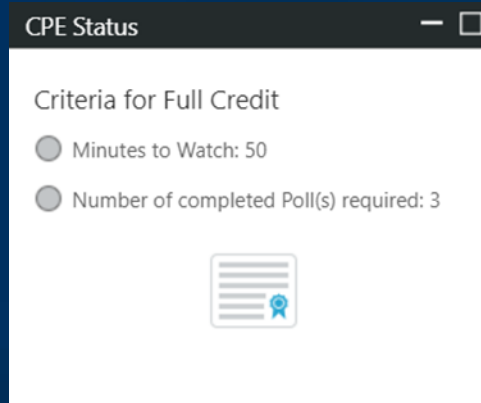
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CPE Credit



Moderator

**Laurie Burney, Ph.D., CMA, CSCA,
CPA (TN-inactive)**

**Associate Professor of Accounting
JE Bush Professor of Accounting
Hankamer School of Business
Baylor University
IMA Professor-in-Residence**



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Featured Presenter

J. Donald Warren, Jr., Ph.D., CPA
Director,
School of Accounting and Information Systems
Ben J. Rogers Chair and
Professor of Accounting
College of Business, Lamar University



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Donald Warren's Biography

J. Donald Warren, Jr. is the Director, School of Accounting & Information Systems in the College of Business at Lamar University located in Beaumont, Texas and the Ben J. Rogers Chair and professor of accounting. Prior to joining Lamar University, he was the Director, Master of Science in Professional Accountancy and Schlobach Distinguished Chair in Accounting and professor of accounting in the School of Management at Marist College located in Poughkeepsie, New York. He previously taught at the University of Hartford and Rutgers Business School. At Rutgers, he served as the Director of the Master of Accountancy in Financial Accounting and continues to serve as a Research Fellow and a member of the Advisory Board for the Rutgers Business School Continuous Auditing & Reporting Laboratory.

Don retired from PricewaterhouseCoopers LLP after a career of 31 years. Here he was responsible for the direction of the IT audit practice and served as a national consulting partner on accounting and auditing matters as well as the firm's liaison to the Securities and Exchange Commission. His other work experience includes the US Government Accountability Office and the Financial Accounting Standards Board.

Don is a member of the American Accounting Association, American Institute of Certified Public Accountants, and the Institute of Management Accountants.

Featured Presenter

Kofi Appiah Okyere, Ph.D., CPA
Director of Graduate Accounting Programs
Syracuse University



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Kofi Appiah Okyere's Biography

Dr. Kofi Appiah Okyere currently directs graduate accounting programs - main campus and online - at Syracuse University. He has headed Syracuse University programs at the university's campuses in New York City and London UK, as well as its main campus in Syracuse NY. He has experience in Big-4 public accounting and is actively engaged in the financial services profession, holding memberships in the American Accounting Association (AAA), Institute of Management Accounting (IMA), Association of International Certified Professional Accountants (AICPA) and the National Association of Corporate Directors (NACD). He is a member of the AICPA Subcommittee for Relations with the Judiciary.

Kofi has received several awards for teaching, research, and university service. He earned an MBA from Indiana University, a Ph.D. from the University of Wisconsin-Madison and is a licensed CPA.

Learning Objectives

1. Explain why an accounting degree should be considered a Department of Homeland Security (DHS) STEM designated degree program.
2. Discuss university and state processes in New York and Texas in seeking approval of an accounting program as a STEM designated degree program.
3. Identify the DHS CIP codes used for identifying accounting programs as STEM designated degree programs.

Agenda

- Accounting: A STEM Discipline
- Initiatives
 - Academic
 - Congressional
 - International
 - IMA
- Skill Set and Student Career Interest
 - Gen Z
 - Skill Set
- University Processes to Obtain STEM Designation for Accounting
 - New York
 - Texas



Accounting: A STEM Discipline

Accounting: A STEM Discipline

- Emphasis of the four STEM fields: innovation, problem-solving and critical thinking using computers and technology-based systems
- Technology driven processes:
 - Are the foundation for recording and summarizing accounting transactions
 - Provide management with timely financial and operational information
- Emerging technologies in accounting (e.g., ERP systems, distributed systems, blockchain, RPA, and Quantum Computing)



Poll Question 1:

What does STEM stand for?

- a. Science, Technology, Engineering, the Arts, and Mathematics
- b. Science, Technology, English, and Mathematics
- c. Science, Technology, Engineering, & Mathematics
- d. Science, Technology, Engineering, & Management

Poll Question 1 Results: (Placeholder)

Accounting: a driving force in the evolution of technology

- Underlying the evolution of technology is to compile timely, relevant and accurate financial and accounting information
- 1955: General Electric first commercial use of computer (UNIVAC) to process payroll
- 1960's: Introduction of Management Information Systems and development of EDI
- 1970's: Personal computers arrived
- Visicalc: the first spreadsheet software that enabled financial modeling on the personal computer.
- First accounting software for personal computers



Accounting: a driving force in the evolution of technology

- 1980's: Supply Chain Management and use of personal computers to track cost and maximize profits
- 1990's: Rise of the Internet, eCommerce, Y2K issues, ERP systems
- 2000's: Data Analytics, Blockchain, Robotic Process Automation, AI, Machine Learning



Initiatives



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NASBA



AACSB



NASBA/AICPA CPA Evolution Project

CPA exam changes effective January 2024:

- Core Areas: (1) Accounting; (2) Tax and (3) Technology *plus*
- One of three disciplines: ([1] tax compliance and planning, [2] business analysis and reporting or [3] information systems and controls

“Technological innovation in the business environment--through data analytics, artificial intelligence, robotics, and other technologies--is the major impetus for the changes in the Uniform CPA Examination...”¹

¹ "Updating Accounting Education for the 'CPA Evolution'" (Pamela Neely and Keith Donnelly, The CPA Journal, September 2020)



Curricula Changes to Address the CPA Evolution Project

CPA exam changes effective January 2024:

Incorporate the following into accounting curricula:

- Data analytics
- IT audit
- Cybersecurity
- Blockchain
- Other related topics (e.g., emerging technologies such as RPA)



Poll Question 2:

Which organization is not currently pursuing the recognition of accounting as STEM?

- a. Institute of Management Accountants (IMA)
- b. National Association of State Boards of Accountancy (NASBA)
- c. American Institute of CPAs (AICPA)
- d. US Securities & Exchange Commission (SEC)

Poll Question 2 Results: (Placeholder)

AACSB Accreditation Standards (2018)

Included in A-5, Basis of Judgement

Consistent with mission, accounting degree programs integrate current and emerging accounting and business practices in **three primary components** within the curricula.

1. **Information systems and business processes** including data creation, manipulation/management, security, and storage.
2. **Data analytics** including, for example, statistical techniques, clustering, data management, modeling, analysis, text analysis, predictive analytics, learning systems and visualization.
3. **Developing information technology agility** among students and faculty, recognizing the need for continual learning of new skills needed by accounting professionals



Congressional Initiative

Accounting STEM Pursuit Act of 2021

Bipartisan legislation Introduced by

- ❑ Rep. Victoria Spartz (R-IN) & Rep. Haley Stevens (D-MI)
- ❑ Senator Susan Collins (R-ME) & Senator Jack (D-NV)

- Clear and logical integration between accounting and technology
- The profession continues to advance its use of technology to serve the public interest
- Accounting professionals: technological leaders who
 - manage and analyze big data,
 - ensure data security,
 - manage cybersecurity risk,
 - work alongside Information Technology professionals



International Initiative

International Auditing and Assurance Standards Board

- Exploring the Growing Use of Technology in the Audit, with a Focus on Data Analytics



IMA Initiatives Addressing Changing Skill Set of Management Accountants

- **A Strategic Goal:** Master technology that directly impacts IMA members and our value proposition
- Technology Solutions & Practices Committee created
 - To inform members about existing and emerging technology solutions and practices (in a vendor-independent manner) to enable accountants and financial professionals in business and their organizations to be more strategically effective and efficient.



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IMA Initiatives Addressing Changing Skill Set of Management Accountants

CPE offerings, among others:

- Blockchain 101 by IMA
- Cybersecurity Alert
- Ethics in the Digital Age
- IMA Data Analytics & Visualization Fundamentals Certificate



Skill Set and Student Career Interest



Skill Set for Today's Accountant

- Included in the Forbes August 2022 list skill set for today's accountant are:
 - Knowledge of spreadsheets and MS-Excel
 - Current on latest trends: e.g., cloud computing and blockchain impact on accounting,
 - Critical thinking and problem solving

Skill Set for Today's Accountant

According to the Institute of Management Accountants and Robert Half

- Employers are facing significant talent gaps in
 - Identifying key data trends
 - Data mining and extraction
 - Technological acumen
 - Statistical modeling and data analysis
- Department of Labor Bureau of Labor Statistics states analytical and critical thinking skills are required for accountants



STEM Fields Top Choice of Gen Z Students

- 2022 Career Interest Survey of 11,495 “high achieving” students:
 - 19% plan to enter business or corporate career field
 - 16% plan a career in business
 - 12% plan a career in technology
 - Median salary expectation for first full time job \$50,000 to \$69,999



Poll Question 3:

The Department of Labor Bureau of Labor Statistics states that analytical and critical thinking skills are required for accountants.

- a. True
- b. False

Poll Question 3 Results: (Placeholder)

State Processes to Obtain STEM Designated Degree



New York Process to Obtain STEM Designated Degree

- University reviews curriculum for STEM Content
- NYSED Approves Curriculum Changes
- University votes on STEM status for program(s)

The Case of Syracuse University's Lubin School of Accounting: MSA Program

- Accounting Faculty
- Masters Board @ College level.
- College faculty
- University Senate: Curriculum Committee
- NY State Board of Education
- University Senate & Registrar's Office



Texas Process to Obtain STEM Designated Degree

- Accounting Committee formed to explore and research STEM designated degree requirements
- Approval Process:
 - Accounting Faculty
 - College of Business Appropriate Curriculum Committee (e.g., undergraduate or graduate)
 - University Curriculum Committee
 - Texas State University System Board of Regent
 - Texas Higher Education Coordinating Board

Texas Process to Obtain STEM Designated Degree

Approved STEM designated degrees

- Master of Science in Professional Accounting
- Bachelor of Business Administration in Management Accounting & Analytics



Poll Question 4:

Have you considered applying for STEM designation for your accounting program?

- a. Yes
- b. No
- c. N/A

Poll Question 4 Results: (Placeholder)

Department of Homeland Security
STEM Designated Programs
CIP Codes for Accounting

STEM CIP Codes for Accounting

- 52.13 Management Sciences and Quantitative Methods
 - 52.1301 Management Science
 - 52.1302 Business Statistics
 - **52.1399 Management Sciences and Quantitative Methods, Other**
- **Department of Homeland Security
STEM Designated Program List**
- <https://www.ice.gov/sites/default/files/documents/stem-list.pdf>



Homeland
Security

Questions and Answers



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Thank you to Our Featured Presenters!



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Final Reminders

► **Complete the Evaluation poll** – 2 options

- On your screen
- Evaluation Survey icon at the bottom of your console

► **Access to your CPE Certificate** – 2 options

- Click the “CPE” icon at the bottom of your console
or
- Click the link in your post-event e-mail

► Please print a copy of the CPE certificate for your records.

► Your CPE credit will be automatically recorded in your transcript.

Thank you!



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