

Modifying the Collegiate Accounting Curriculum to Prepare for the CPA Evolution Project

Incorporating Advances in Technology into Accounting Programs

By Kathleen M. Bakarich, Jacqueline A. Burke, John “Jack” Castonguay, and Ralph S. Polimeni

IN BRIEF

Technological innovation in the business environment has significantly impacted how CPAs work. In response to these technological advances, the American Institute of Certified Public Accountants (AICPA) and National Association of State Boards of Accounting (NASBA) have launched the CPA Evolution Project, which represents the greatest transformation of the Uniform CPA Examination in decades. Although the CPA exam has changed over the years to meet the needs of practice, the proposals currently on the drawing board will dramatically change the format and content of the exam. This article presents how one university has enhanced and adapted its curriculum at the undergraduate and graduate levels to both better prepare its students for the changing professional landscape, while anticipating the new CPA Licensure Model and the AICPA/NASBA CPA Evolution Model Curriculum.

The American Institute of Certified Public Accountants (AICPA) and the National Association of State Boards of Accounting (NASBA) have embarked on a joint “initiative aimed at evolving CPA licensure to reflect the skills and knowledge CPAs increasingly need in a technology-driven marketplace” (CPA Evolution: New CPA Licensure Model, 2021, p. 2, <https://bit.ly/3jgYZCw>). This initiative, referred to as the CPA Evolution Project, will have a major impact on CPA licensure qualifying pro-

grams at institutions of higher education. To help schools prepare for the changes contained within the Evolution Project, the AICPA, NASBA, and American Accounting Association (AAA) unveiled a sample Model Curriculum in mid-June 2021 (“CPA Evolution Model Curriculum,” AICPA & NASBA, <https://bit.ly/3A8SAQo>). In this paper, the authors identify how and why their university has enhanced its curriculum to respond to the Evolution Project, consistent with the Model Curriculum, referencing specific topics where applicable.





Why the Change is Necessary

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. These changes have significantly impacted how accountants perform their duties. As discussed in “Updating Accounting

Education for the ‘CPA Evolution’ ” (Pamela Neely and Keith Donnelly, *The CPA Journal*, September 2020), the dramatically different landscape in the accounting profession has changed the knowledge and skill sets needed. The Evolution Project cites the following major technological influences:

- Artificial intelligence
- Automation

- Big data
- Blockchain
- Cloud technology
- Data analytics.

In April 2018, the Association to Advance Collegiate Schools of Business (AACSB) International also addressed such changes by creating a new accounting accreditation standard for accounting programs, Standard

A5, which explicitly focuses on technology. Standard A5 states:

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 (Standard A5: Information technology skills, agility and knowledge for accounting graduates and faculty, p. 27, <https://bit.ly/37nTs7t>).

Accountants are now functioning in a transformed digital environment, and collegiate accounting programs must prepare their students for the changed profession and exam by giving them resources and curricula that match the needs of the profession. As dis-

topics, a complete curriculum review and restructuring is likely to be in order.

The CPA Evolution Project

The CPA Evolution Project proposes that the Uniform CPA Examination be composed of a basic core plus one of three specialties (i.e., disciplines) to be chosen by the individual exam candidate. *Exhibit 1*, obtained from the CPA Evolution resources provided by the AICPA, details these specialties (see also Susan Coffey and Colleen Conrad, “CPA Evolution. What is the early thinking on the three CPA exam disciplines?,” 2021, <https://future.aicpa.org/news/article/cpa-evolution-what-is-the-early-thinking-on-three-cpa-exam-disciplines>).

The project began in 2018 with a discussion of the present conceptual licensure model, which resulted in the creation of an exposure draft of guiding principles in 2019. In 2020, a model

- Critical thinking
- Professional judgment/skepticism
- Problem-solving
- Understanding of the business (including systems, controls, and risk)
- Data management and analysis
- Performance of System and Organization Controls (SOC) engagements.

Selecting one discipline in passing the exam does not prevent candidates from practicing in other disciplines—all designations are expected to be afforded the same rights and privileges as others. For example, a CPA who became licensed by taking the tax compliance section of the exam may subsequently practice in information systems and controls. As stated by Yeaton, “there will be no ‘splintering’ of the credential, no CPA-Audit, CPA-Tax, or CPA-Information Systems” [Kathryn Yeaton, “The CPA (Exam) Evolution,” *The CPA Journal*, December 2020, pp. 6–9, <https://bit.ly/3fB9jUO>].

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Impact on Current College Students

Although the timeline is subject to change, one thing is certain: the CPA exam will undergo dramatic changes that will necessitate major curriculum changes. The authors believe that universities should not wait until final details are provided to begin implementing curriculum changes because current college freshmen and sophomores are expected to be subject to the updated certification curriculum model. At the AAA’s Annual Programs Leadership Group (APLG)/Federation of Schools of Accountancy (FSA) Joint Annual Conference in February 2021, the AICPA and NASBA presented possible topics that will be covered in the different sections (see *Exhibit 1*). The content is tentative, and a practice analysis will be conducted first before the final details are determined.

cussed by Polimeni and Burke (Ralph S. Polimeni and Jacqueline A. Burke, “Integrating Emerging Accounting Digital Technologies and Analytics into an Undergraduate Accounting Curriculum—A Case Study,” *Journal of Emerging Technologies in Accounting*, vol. 18, no. 1, pp. 159–73, 2021, <https://doi.org/10.2308/JETA-2020-042>), new technological innovations must be integrated at both the undergraduate and graduate levels. Although many accounting departments may have started a piecemeal implementation of these

format for the revised CPA exam was developed (*Exhibit 1*). A draft of new Uniform CPA Examination blueprints by the AICPA Board of Examiners is projected to be created by 2022, after a practice analysis is completed, with a target date of implementing the new exam in January 2024. As can be seen in *Exhibit 1*, technology is now a key component of the exam.

According to the AICPA and NASBA, the following skill sets and topics are also expected to have an increased emphasis on the new exam:



Complete Curriculum Review

The sections below discuss how one institution of higher education, Hofstra University, is planning to integrate new technological innovations throughout the curriculum within its undergraduate and graduate programs, and how it is restructuring the curriculum, consistent with the Model Curriculum, to better prepare students for entry-level positions in accounting. Note that the undergraduate Bachelor of Business Administration (BBA) curriculum changes have been approved by the New York State Education Department's (NYSED) Office of the Professions and the graduate changes are presently pending NYSED approval. A special Blue Ribbon Committee was established, comprising selected faculty from the accounting department, including the department chair, and headed by a senior tenured faculty member (Polimeni and Burke, 2021). The committee decided on a two-stage process: the first stage involved changes to the undergraduate program, the second involved changes to the graduate programs. To remain flexible, the curriculum was designed to be easily modified in response to future changes in the profession due to emerging technology, demands from employers, and subsequent changes to the CPA exam content or design.

Changes to the Undergraduate Program

Under the changes, which were submitted to NYSED in 2020 and recently approved, accounting majors will be required to complete a 13-credit concentration in Digital Accounting Technology, in addition to the other traditional required courses for undergraduate accounting majors. The undergraduate accounting curriculum consists of financial, managerial, cost, intermediate, and advanced accounting, as well as audit, individual taxation, and business tax-

ation (Polimeni and Burke, 2021). These courses will continue to provide the skills necessary for the core part of the exam, such as knowledge of financial statements, financial transactions and analysis, audit, and tax, as well as knowledge of specialized topics, such as government and not-for-profit accounting (as part of advanced accounting).

Note that students are required to obtain 120 credits to earn their undergraduate degree. Four of the 13 credits in the concentration are part of the students' general business core requirements and consist of an introductory Excel course and introduction to information systems course, both taught by the information systems and business analytics (ISBA) department. As part of the concentration, three new courses have been added to the curriculum. Students will be required to com-

plete an information technology (IT) auditing course, offered by the ISBA department, and two new accounting courses that focus on technology: introduction to strategic accounting technologies and applying strategic accounting technologies for decision making (Polimeni and Burke, 2021). The sidebar, Undergraduate Course Descriptions of New Accounting Courses, details specific information about the new courses. The two new accounting courses, combined with the additional IT auditing course,

will address the core portion's focus on digital acumen, critical thinking, and data analytics, as identified in the Model Curriculum. The concentration will also require all BBA accounting majors to acquire the Microsoft Expert Excel Certification (Polimeni and Burke, 2021). Coursework, as well as out of class resources, will be available to assist the students with preparing for the certification exam as needed. In addition to the two new accounting courses presented, all existing undergraduate accounting courses will be updated to integrate more technology and enhance students' understanding of the digital accounting environment.

Given that most undergraduate accounting students in the authors' department continue to graduate school to satisfy the 150-credit educational requirement, the enhanced

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undergraduate curriculum content is designed to address many of the key topic areas that are expected to be tested in the core content area of the new exam, as identified in the Model Curriculum. Students will continue to learn foundational accounting skills, but with a necessary digital focus. The course content at the undergraduate level will also help build knowledge that students can apply to their chosen exam discipline, focusing the content more on higher-order learning and less on reciting and understanding.

Exhibit 1 Individual Specialization Tracks— Examples of Possible Topics Tested		
Business Analysis and Reporting (BAR)	Information Systems Control (ISC)	Tax Compliance and Planning (TCP)
■ Assurance or advisory services	■ Business processes and information systems	■ Advanced individual and entity tax compliance
■ Financial statement analysis and reporting	■ Information technology	■ Individual and entity planning
■ Advanced technical accounting	■ Data governance	■ Personal financial planning
■ Financial and operations management	■ Internal control testing	■ Property transactions

Details provided by AICPA/NASBA at AAA’s APLG/FSA Joint Annual Conference, February 2021, and at <https://bit.ly/3CjfvdQ>. Individual topics subject to change.

Changes to the Graduate Programs

As students move into the graduate program, the courses become more specialized in nature, enabling them to further focus on one of the three specific disciplines that mirror the proposed exam’s structure. Note that although the tracks were designed to allow students to prepare for the new CPA exam disciplines,

Model Curriculum nor the curriculum described in this article are designed so that the core is matched only to undergraduate course content and the disciplines matched only to graduate course content. However, the graduate curriculum described below is intended to provide an advanced and specialized course of study, building on the foundational skills from the undergraduate program.

The enhanced undergraduate curriculum content is designed to address many of the key topic areas that are expected to be tested in the core content area of the new exam, as identified in the Model Curriculum.

they were not created for only that purpose. Because the accounting programs are accredited by the AACSB, the mission statement of the department and school guide the direction of curriculum change. Neither the

The descriptions below reflect the proposed changes brought about by technology and the proposed major restructuring of the CPA examination for the MS in Accounting and the MBA in Accounting programs at the

authors’ school. Note, as previously mentioned, these changes are pending NYSED approval.

MS in Accounting (30 credits). The newly proposed MS in Accounting program will provide students with a choice of two tracks designed to replicate two of the three disciplines—Business Analysis and Reporting (BAR) and Information Systems and Control (ISC)—in the proposed CPA Evolution, presented in *Exhibit 1*. The MS in Taxation program and the Tax Compliance and Planning (TCP) discipline are discussed further below. All MS in Accounting students will take the common core (21 credits) listed below. Students in the BAR and ICS tracks will be awarded the MS in Accounting degree with a concentration designation in BAC or ISC, respectively.

Common Core for the MS in Accounting Program (see the sidebar, Graduate Course Descriptions, for more detail):

- Communication in a Digital Accounting Environment (3 credits)
- Advanced Auditing in a Digital Environment (3 credits)
- Forensic Accounting and Fraud Examination (3 credits)
- Practicum in Accounting Analytics (3 credits)
- Business Valuation for Accountants (3 credits)
- Applied Research Capstone in Digital Accounting Technology (3 credits)
- Accounting Internship or Elective (3 credits).

In addition to the common core, the BAR proposed program track requires students to take the following courses:

- Seminar in Contemporary Accounting Theory, BAR (3 credits), and
- Business Analytics (BAN) elective (3 credits), chosen under advisement, and
- IT elective (3 credits), chosen under advisement.

The accounting seminar will focus on a critical examination and dis-



cussion of current issues impacting accounting theory, business analysis, and reporting. This course will provide an easy path to integrate current or emerging accounting issues not covered in specific courses or not yet identified as a CPA exam topic. The other two electives will be sourced from the ISBA Department and cover skills identified as part of the BAR or ISC disciplines. Once the final blueprint is provided by the AICPA for the new CPA exam, the above can easily be modified if necessary.

In addition to the common core, the ISC proposed program track requires students to complete the following IT courses offered by the ISBA Department:

- Information Systems for Managers (3 credits), and
- Six credits from the following IT electives:
 - Database Management Systems (3 credits)
 - Cyber Attack Protection and Prevention Strategies (3 credits)
 - Digital Forensics (3 credits)
 - Information System Risk Management & Cybersecurity (3 credits)
 - Information Privacy, Regulation and Policy (3 credits).

As with BAR, the above structure can be changed easily if necessary. For example, if the final CPA exam blueprint lists a heavy focus on information systems risk management, the Information System Risk Management & Cybersecurity course could become a requirement, leaving only one 3-credit elective. The IT electives cover areas identified in the Model Curriculum, such as information security and protection and the use and governance of data.

MS in Taxation (30 credits). The MS in Taxation program at the authors' school is currently being reviewed, in consultation with the department's advisory board, to determine what changes should be made

Undergraduate Course Descriptions of New Accounting Courses

Note: The course descriptions presented below represent a modified summary of information that has been previously published by the *Journal of Emerging Technologies in Accounting* in "Integrating Emerging Accounting Digital Technologies and Analytics into an Undergraduate Accounting Curriculum—A Case Study" (Polimeni & Burke, pp. 167–168, 2021, vol. 18, no. 1, <https://doi.org/10.2308/JETA-2020-042>).

Introduction to Strategic Accounting Technologies (3 credits)

Course Description:

This course will focus on the introductory application of current accounting technologies and software programs available to collect and analyze accounting data sets. It concentrates on developing students' competencies in current/emerging technologies and focuses on how accounting professionals can effectively and efficiently assess and implement relevant technologies to satisfy strategic accounting needs. Discussions will focus on the interrelationships of these technologies with the accounting environment, including internal controls, ethical issues, fraud, forensics, risk assessment, and/or cybersecurity. Students will build and develop introductory skills in core accounting technologies enabling them to provide meaningful insights into accounting and business-related data. Topics include data collection, data exploration, data preparation, workflow automation, data analysis, blockchain, and basic programming, coding and artificial intelligence. Technology tools will be driven by instructor specific—decision and current trends.

Connection to new CPA Model Curriculum:

This course is designed to provide hands-on instruction of current and emerging technologies. Students will build introductory skills in various technologies, while also focusing on the accounting information systems environment. This course addresses digital acumen and data analytic skills identified as part of the accounting and data analytics module, and an understanding of IT processes and controls that are part of the audit and accounting information systems module, in the core portion of the Model Curriculum. The course will also enable undergraduate students to develop skills that are useful for both the BAR and ISC concentrations in the new CPA exam, such as advanced data analytics skills (BAR), advanced data concepts (BAR), data preparation/manipulation (ISC) and cybersecurity risk management (ISC). (See CPA Evolution Model Curriculum.)

Applying Strategic Accounting Technologies for Decision Making (3 credits)

Course Description:

In this capstone course, students will combine accounting and technology skills learned throughout the accounting curriculum to provide meaningful insights into accounting questions. Given an accounting issue, students will focus on using oral and written communications to frame the problems and ask the right questions, and will critically analyze and apply appropriate technological tools to find solutions. Students will be required to demonstrate their technical agility by selecting the appropriate technology to analyze, design, implement, automate, and/or evaluate accounting processes. Upon completion of this course, students will be able to leverage technologies to understand and analyze accounting issues and produce data-driven solutions.

Connection to new CPA Model Curriculum:

This course is designed to build on the hard skills developed in the Introduction to Strategic Accounting Technologies course. It focuses on skills identified as part of the accounting and data analytics module in the core portion of the Model Curriculum, such as problem-solving, critical thinking, digital acumen and financial data analytics. The course will also further develop students' understanding of business processes and the IT environment, part of the audit and accounting information systems module in the core portion of the Model Curriculum. The course will also enable undergraduate students to further develop skills that are useful for both the BAR and ISC concentrations of the new CPA exam.

Graduate Course Descriptions (subject to NYSED approval)

Communication in a Digital Accounting Environment (3 credits)

This course prepares students to effectively and professionally communicate and present themselves in a digital accounting environment. Using various digital communication tools, students will learn how to modulate language as appropriate, ranging from “plain English” to accounting verbiage. The course will focus on appropriately and effectively communicating accounting data to diverse stakeholders, such as board of directors, clients, potential clients, management and colleagues within the same and/or cross-functional disciplines. Topics will include career preparation, digital branding, online etiquette via social media, and/or other digital tools. Various forms of communication will be addressed, including emails, memos, reports, visual output presentations, social media, and video conferencing.

Connection to new CPA Model Curriculum:

This course is designed to build necessary communication skills for the accounting profession, including advanced data visualization and communicating results on advanced data analytics, both identified as part of the BAR discipline.

Advanced Auditing in a Digital Environment (3 credits)

This course focuses on current developments in auditing practice and the use of advanced accounting technologies to enhance audit procedures. Students will apply technology tools to simulated audit scenarios. Through the lens of auditing, the interrelationship between risk assessment, internal controls, and the accounting information system will be examined.

Connection to new CPA Model Curriculum:

This course is designed to build advanced audit skills in areas such as IT governance and risk assessment, tests of

internal controls, and SOC (system and organization controls) engagements, identified as part of the ISC discipline. The course will also further enhance students' audit skills for the core portion of the exam.

Forensic Accounting and Fraud Examination (3 credits)

This course provides an in-depth discussion and analytical approach to the role of the forensic accountant in different aspects of fraud examination and deterrence. Topics include the design and implementation of controls, fraud schemes, cybercrime, criminology, corruption, bribery, complex frauds, financial statement fraud, interviewing and interrogation, as well as the various roles of the investigator, valuation analyst, and litigation support team.

Connection to new CPA Model Curriculum:

This course is designed to build skills in financial statement analysis, advanced financial transactions, and advanced data analytics, identified as part of the BAR discipline or core portion of the exam. It will also incorporate topics identified as part of the ISC discipline, such as IT governance and risk assessment, performing procedures, and tests of controls.

Practicum in Accounting Analytics (3 credits)

Topics covered relate to practical applications of analytics in the accounting profession. Students will use analytic tools and methods to develop accounting insights from data. Students will use descriptive and predictive models to summarize data, identify trends, and make recommendations based on the data provided. Students will further develop questions and provide answers to accounting questions through regular hands-on exercises and a capstone accounting analytics project partnering with companies.

to match the Evolution Project. At minimum, it is expected that robotic process automation software programs, data analytical tools, and other technology will be integrated into the courses to properly prepare students for the new exam and entry-level tax positions. Content changes will also be integrated as necessary. It is expected that students will earn a concentration designation in Tax Compliance and Planning, consistent with the third proposed CPA licensure discipline. This program will not include the “common core”

proposed for BAR and ISC, except for the Communication in a Digital Accounting Environment course.

MBA in Accounting (36 credits).

In addition to the current 27-credit common core for all MBA students, a new 9-credit concentration for accounting majors has been developed and is pending NYSED approval. The following courses are required:

- Communication in a Digital Accounting Environment (3 credits)
- Practicum in Accounting Analytics (3 credits)

In addition to the above, students must select one of the following courses:

- Advanced Auditing in a Digital Environment (3 credits)
- Forensic Accounting and Fraud Examination (3 credits)
- Business Valuation for Accountants (3 credits)

The MBA program will not focus on any of the three CPA exam disciplines, because the authors have observed that most of our students pursuing the MBA degree seek career opportunities outside of public accounting. However, based

Connection to new CPA Model Curriculum:

This course is designed to build skills in advanced data analytics, identified as part of the BAR discipline and core portion of the exam, as well as the use of data and controls, identified as part of the ISC discipline, as well as ongoing development of students' digital acumen (part of the core portion of the exam).

Business Valuation for Accountants (3 credits)

Accountants must be able to prepare valuation estimates for clients and attest to the reasonableness of valuation established by others during audits, tax planning, and consulting engagements. The course will focus on the interpretation of accounting information to analyze financial statements, cash flows, and earnings, and how valuation is determined through the strategic analysis of companies, assets, and business interests. Students will use their analytical skills and applicable technology tools to establish independent forecasts of firm value and equity prices.

Connection to new CPA Model Curriculum:

The course is designed to build skills identified as part of the BAR discipline, such as accounting research, financial statement analysis and planning techniques.

Applied Research Capstone in Digital Accounting Technology (3 credits)

This capstone course will focus on practical research and applications of current and emerging technologies in the accounting profession. During the semester, guest speakers from the accounting profession or academia will make presentations and engage the class in discussions. Students will develop research skills and strengthen their knowledge

of the trends and impact of current and emerging technologies in accounting. The focus will be on applied research and research that is relevant to the practice of accounting. Building on knowledge and skill sets learned in prior courses, students will have the opportunity to strengthen their technology agility and gain a practical understanding of their research by completing several independent hands-on projects utilizing current and emerging technologies. Students will be required to learn a current or emerging technology program on their own and solve one or more projects using this program. Ethical and social impacts of emerging technologies used in the accounting profession will also be explored. Students will present their findings throughout the semester, concluding with a final capstone project.

Connection to new CPA Model Curriculum:

This course is designed to build skills in accounting research and advanced data analytics, identified as part of the BAR discipline, and the use and management of data in the ISC discipline, as well as ongoing development of students' digital acumen (part of the core portion of the exam).

Accounting Internship (3 credits)

Students work a minimum of 100 hours in the semester for selected accounting organizations in their area of specialization. Students may be remunerated for this work. Students report to a faculty supervisor to provide weekly updates. Students prepare a written evaluation of the internship work at the completion of the course.

Connection to new CPA Model Curriculum:

This course is not directly related to the CPA Model Curriculum. Students will be encouraged to pursue an internship that relates to their designated track. ■

on admission and program requirements, students in the MBA program will still meet the educational requirements for CPA licensure.

Adapting to Change

Technology is constantly changing and the accounting profession must adapt to survive. The AICPA and NASBA recognize this reality and have responded through significant changes to the Uniform CPA Examination and their proposed Model Curriculum. Even after the format and content of the new CPA examination

are finalized, it can be expected that the exam and accounting curriculum will continue to evolve. The authors recognize that each institution of higher education will need to adopt a curriculum that best reflects its mission, based upon its resources, opportunities, and constraints. ■

Kathleen M. Bakarich, PhD, CPA, is an assistant professor of accounting, department of accounting, taxation & legal studies in business, Hofstra University, Hempstead, N.Y. **Jacqueline A. Burke, PhD, CPA**,

is the department chairperson and Chaykin Distinguished Professor in Accounting, department of accounting, taxation & legal studies in business, Hofstra University. **John "Jack" Castonguay, PhD, CPA (Va.)**, is an assistant professor of accounting, department of accounting, taxation & legal studies in business, Hofstra University. **Ralph S. Polimeni, PhD, CPA**, is the Chaykin Endowed Chair in Accounting and a professor of accounting, department of accounting, taxation & legal studies in business, Hofstra University.



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