Georgia CTAE

Coding for FinTech (11.46300) (2020)

Adopted 2020

Demonstrate employability skills required by business and industry. IT-CFT-1

1. **Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities.** IT-CFT-1.1
2. **Demonstrate creativity by asking challenging questions and applying innovative procedures and methods.** IT-CFT-1.2
3. **Exhibit critical thinking and problem-solving skills to locate, analyze and apply information in career planning and employment situations.** IT-CFT-1.3
4. **Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity.** IT-CFT-1.4
5. **Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply team-work skills.** IT-CFT-1.5
6. **Present a professional image through appearance, behavior, and language.** IT-CFT-1.6

Design, develop, and maintain a dynamic web/mobile financial application. FIN-CFT-2

1. **Develop scripting code using Javascript, Python, or other scripting languages.** FIN-CFT-2.1
2. **Analyze existing industry Application Programming Interfaces (API) used in financial services code.** FIN-CFT-2.2
3. **Write a sample API that models financial services code used in industry.** FIN-CFT-2.3
4. **Identify security protocols used in industry to secure financial transactions and records, including encryption, User Authentication, two-part authentication, and biometrics.** FIN-CFT-2.4
5. **Identify protections against intrusion such as cross-site scripting, Structured Query Language (SQL) injection, denial of service, and other forms of attack.** FIN-CFT-2.5

	6. Identify anti-money laundering, counterterrorism, and social engineering attacks involving the movement of money. FIN-CFT-2.6
Develop web/mobile financial applications that can dynamically access databases. FIN-CFT-3	1. Create a database that models a financial system. FIN-CFT-3.1 2. Demonstrate knowledge of Structured Query Language (SQL) access to a database table. FIN-CFT-3.2 3. Create and edit a database-stored procedure. FIN-CFT-3.3 4. Connect a computer program to a database using a connection string that is not hard coded into source code. FIN-CFT-3.4
Apply controller architecture to connect client-side views to server-side data models. FIN-CFT-4	1. Program a controller that safely connects an application's data model to appropriate user views using an industry standard programming language, (e.g., C#, .NET Core, Ruby on Rails). FIN-CFT-4.1 2. Create and summarize the user validation login system for the application. FIN-CFT-4.2
Program a well-designed User Interface (UI) for use within FinTech. FIN-CFT-5	1. Investigate real-world banking applications and develop a model application's UI. FIN-CFT-5.1 2. Demonstrate and explain use of UI platforms such as Bootstrap, Rails, or other interface models to program the interface designed in element 5.1. FIN-CFT-5.2
Evaluate and validate web/mobile financial applications for conformance to financial services industry standards. FIN-CFT-6	1. Review industry financial security standards including Sarbanes Oxley Act (SOX), Payment Card Industry Data Security Standard (PCI DSS), Gramm-Leach-Bliley Act (GLBA), Federal Financial Institutions Examination Council (FFIEC), and others. FIN-CFT-6.1 2. Identify and explain the use and implementation of software security protocols related to digital identity such as Multi-Factor Authentication (MFA), Google Authenticator, Microsoft Authenticator, Open Authorization (OAuth) APIs that integrate with each other, use of tokenization/Anonymization of Pay Card Industry (PCI) and Personally Identifying Information (PII) data, and PCI/DSS. FIN-CFT-6.2 3. Detail the use of consumer (user) disclosures and how it relates to privacy and information security. FIN-CFT-6.3 4. Discuss accessibility issues surrounding e-commerce and banking. FIN-CFT-6.4
Examine how related student organizations are integral parts of career and technology education courses	1. Research the history of Future Business Leaders of America (FBLA). FIN-CFT-7.1 2. Discuss the mission, purpose, motto, colors, official dress, and other distinguishing characteristics of FBLA. FIN-CFT-7.2

through leadership development, school and community service projects, and competitive events. FIN-CFT-7

3. **Explain how participation in FBLA can promote lifelong responsibility for community service, professional growth, and development.** FIN-CFT-7.3

4. **Create a personal leadership plan to participate in programs, conferences, community service, and competitive events on the local, state, and national level that align with the competencies, skills, and knowledge of this course.** FIN-CFT-7.4