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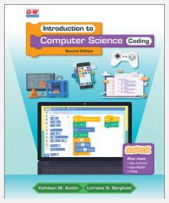
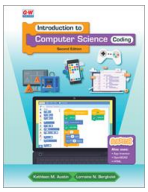
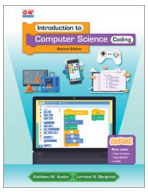
Goodheart-Willcox
Correlation of Introduction to Computer Science Coding ©2024
To Georgia Department of Education
Information Technology Career Cluster
Introduction to Software Technology
Course Number 11.44600 (Grade 7-9)



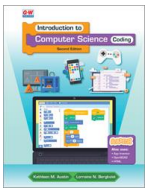
Course Task/Competency Lists		Correlating Textbook Pages
IT-IST-1	**Demonstrate employability skills required by business and industry.**	
1.1	Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities.	21, 41, 69
1.2	Demonstrate creativity by asking challenging questions and applying innovative procedures and methods.	24-25
1.3	Exhibit critical thinking and problem-solving skills to locate, analyze and apply information in career planning and employment situations.	24 - 25
1.4	Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity.	4 - 5
1.5	Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply teamwork skills.	24 - 28
1.6	Present a professional image through appearance, behavior, and language.	4 - 5
IT-IST-2	**Establish a personal online career portfolio and begin uploading relevant artifacts.**	
2.1	Compare a variety of secure online repositories and select the best one for specific career goals, such as Github for education, Dropbox, Jimdo, Uxfol.io, Portfoliobox and many others.	21, 41, 69
2.2	Establish an account for long-term use to upload professional artifacts over the course of the career pathway.	21, 41, 69
2.3	Upload a professional, true, and accurate résumé and cover letter seeking employment for a position representative of current skills and knowledge.	21, 41, 69
2.4	Upload additional standard job search items, such as digital badges and certificates earned for industry-recognized credentials.	21, 41, 69
2.5	Identify and upload industry-appropriate artifacts reflective of mastered skills throughout this course. Write and include a reflective entry for each artifact discussing steps taken, problems encountered and how they were overcome, and other pertinent information about the learning.	21, 41, 69
2.6	Organize the portfolio in a manner that makes documents and artifacts easy to locate and access for review.	21, 41, 69
IT-IST-3	**Explore, research, and present findings on positions and career paths in technology and the impact of technology on chosen career area**	
3.1	Develop technical reading and writing skills to follow instructions.	21, 41, 69



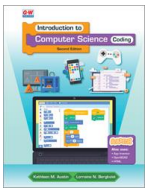
3.2	Use collaborative tools to communicate with team members, such as online meeting platforms, group messaging, and shared online documents and files.	21, 41, 69
3.3	Research specific IT careers, including post-secondary continuing education options, IT credentials, required job skills, potential salaries in Georgia, and work environment. Upload to online career portfolio.	4-6
IT-IST-4	**Demonstrate effective professional communication skills (oral, written, and digital) and practices that enable positive relationships with all audiences of a business.**	
4.1	Differentiate between the different audiences of a business, including users, clients, customers, contractors, vendors, and others.	21, 41, 69
4.2	Explain the impact of emerging technologies on a business and how it affects the bottom line.	4-6
4.3	Apply strategies for identifying routine software problems current to everyday life.	24-30
	a. Compose an appropriate report outlining procedures to correct an identified software problem. Upload to online career portfolio.	21, 41, 69
4.4	Demonstrate ability to assist all audiences in a professional manner.	21, 41, 69
	a. Actively listen to your audience to determine individual needs, such as specifications for a design, breaking down the specifications, and communicating to non-technical individuals.	21, 41, 69
	b. Ensure that your assistance promotes the best interests of the company.	21, 41, 69
4.5	Identify effective database strategies and create a database to maintain a customer list. Upload to online career portfolio.	21, 41, 69
4.6	Create a communication document utilizing advanced word processing, spreadsheet, presentation, electronic mail, and database script and app tools for business.	21, 41, 69
IT-IST-5	**Identify, describe, evaluate, and use appropriate technology for given situations.**	
5.1	Demonstrate understanding of set up of a basic computer workstation.	6-10
5.2	Identify input and output devices and ports, including keyboards, monitors, printers, touch screens, mice, peripheral connectors (e.g., USB, Lightning, HDMI, and emerging technologies), microcontrollers and sensors (e.g., GPS, temperature, accelerometer).	7-9
5.3	Describe and explore current and emerging software, including operating systems, application software, and applications for software development.	6-9



5.4	Explain the function and purpose of software tools, text editors, Integrated Development Environments (IDEs), and software development toolchains.	44, 361-363
IT-IST-6	**Understand, communicate, and adapt to a digital world.**	
6.1	Develop a working IT vocabulary specific to software and programming.	4-6
6.2	Describe trends in emerging, evolving, and future computer technologies and their influence on IT practices, such as mobile technology, cloud computing, and microcontrollers.	4-6
6.3	Recognize online risks and dangers in order to take appropriate actions to protect the business and self while using digital tools and resources.	24-29
6.4	Define and demonstrate folder and file management and the importance of content- management systems.	58
6.5	Identify and explain how to protect Personally Identifiable Information (PII) in a digital world (Refer to FERPA guidelines).	24-28
IT-IST-7	**Use computational thinking procedures to analyze and solve problems.**	
7.1	Explain the software development process to solve problems.	28-29
7.2	Explain the differences between various software development models such as the iterative and incremental model, scrum, and waterfall.	137
7.3	Explore commonly used documentation tools for design specifications, such as flowcharts, pseudocode, visual and textual storyboards.	55, 95
7.4	Create a table showing the most prevalent programming languages currently being used and determine industry tasks where each would be best utilized. Upload to online career portfolio.	12
IT-IST-8	**Create and organize webpages through the use of a variety of web programming design tools.**	
8.1	Understand and apply design principles to create professional appearing and functioning web pages.	350-380
8.2	Understand elements of web design, including HTML5, CSS3, responsive design, site usability and accessibility, relation of site to business, and story the site reveals about the business.	350-380
8.3	Describe how HTML5 and CSS3 are living web standards.	350-366
8.4	Understand the Document Object Model (DOM) used in web page organization and in the creation of dynamic web pages.	350-380
8.5	Design simple and dynamic webpages incorporating HTML5 elements (e.g., text, audio, video, and canvas elements such as SVG and other graphics), navigation, linking, forms and client-side scripting. Upload to online career portfolio.	350-380



8.6	Explain site accessibility in relation to standards, rules and laws including Web Accessibility Initiative (WAI) and Web Content Accessibility Guides (WCAG).	350-380
8.7	Explain the impact of mobile sites on the development of business.	9-10
8.8	Explore the trends and emerging issues for websites.	350-366
IT-IST-9	**Identify and explain the building blocks, principles, and ways to access code within programming languages used today.**	
9.1	Explain and apply the procedures used in current programming languages to access code libraries, scripts, and related coding principles.	264-265, 323-325
9.2	Describe a variety of programming languages used to solve problems.	12
9.3	Explain how sequence, selection, and iteration are building blocks of algorithms.	102, 137, 140
9.4	Explain how procedural abstraction is implemented to reuse code.	12-13
9.5	Demonstrate the principles of readability and self-documenting code.	12-13
	a. Use an appropriate naming convention in the creation of variables, functions and/or procedures.	12-13
	b. Use comments to assist others in understanding programs, algorithms, and functions and/or procedures.	12-13
IT-IST-10	**Design, develop, test, and implement programs using high-level programming languages.**	
10.1	Use various debugging and testing methods to ensure program correctness.	12-13
10.2	Explore text-editors and Integrated Development Environments (IDEs) in the use of software development for different software and hardware platforms.	44
10.3	Demonstrate the use of pair-programming in the development of new programs and applications.	12-13
10.4	Demonstrate the use of content-management systems to track changes and allow for multiple people to create, edit and modify source code files.	12-13
10.5	Create and access libraries and Application Programming Interfaces (APIs) in the development of programs or applications. Upload to online career portfolio.	292
10.6	Understand how data from an external source such as a file, database, or stream can be input, manipulated, and output in programs.	292
IT-IST-11	**Describe, analyze, develop, and follow policies for managing ethical and legal issues in the business world and in a technology-based society.**	
11.1	Demonstrate positive cyber citizenry by applying industry-accepted ethical practices and behaviors.	4-5



11.2	Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices.	5-6
11.3	Exercise digital citizenship as a lifelong learner.	4-5
11.4	Debate laws and regulations that impact the development and use of software.	4-5
11.5	Describe the various copyright licenses used in the creation and distribution of software.	358-359
11.6	Describe personal and legal consequences of inappropriate use of resources and online content, including but not limited to plagiarism, piracy, illegal downloading, copyright infringement, licensing infringement, and inappropriate use of software, hardware, and mobile devices.	358-359
IT-IST-12	**Explore how related student organizations are integral parts of career and technology education courses through leadership development, school and community service projects, entrepreneurship development, and competitive events.**	
12.1	Explain the goals, mission, and objectives of Future Business Leaders of America (FBLA) and/or Technology Student Association (TSA) and/or SkillsUSA.	4-5
12.2	Explore the impact and opportunities a student organization (FBLA, TSA, SkillsUSA) can develop to bring business and education together in a positive working relationship through innovative leadership and career development programs.	4-5
12.3	Explore the local, state, and national opportunities available to students through participation in related student organizations (FBLA, TSA, SkillsUSA) including but not limited to conferences, competitions, community service, philanthropy, and other student organization activities.	4-5
12.4	Explain how participation in career and technology education student organizations can promote lifelong responsibility for community service and professional development.	4-5
12.5	Explore the competitive events related to the content of this course and the required competencies, skills, and knowledge for each related event for individual, team, and chapter competitions.	4-5