Georgia CTAE

Introduction to Digital Technology (11.41500) (2013)

Adopted 2013

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

1. **Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities.** IT-IDT-1.1
2. **Demonstrate creativity by asking challenging questions and applying innovative procedures and methods.** IT-IDT-1.2
3. **Exhibit critical thinking and problem-solving skills to locate, analyze and apply information in career planning and employment situations.** IT-IDT-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-IDT-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-IDT-1.5
6. **Present a professional image through appearance, behavior, and language.** IT-IDT-1.6

Explore, research, and present findings on positions and career paths in technology and the impact of technology on chosen career area. IT-IDT-2

1. **Develop technical reading and writing skills to follow instructions.** IT-IDT-2.1
2. **Work in a team to solve problems and share knowledge.** IT-IDT-2.2
3. **Explore the impact of digital technology on careers including non-traditional technology fields and careers in each of the Georgia Career Clusters.** IT-IDT-2.3
4. **Use collaborative tools to communicate with team members.** IT-IDT-2.4
5. **Describe how computing enhances traditional careers, and enables new careers.** IT-IDT-2.5
6. **Research post-secondary options for continuing education in IT field.** IT-IDT-2.6
7. **Research IT credentials needed and job requirements in various occupations.** IT-IDT-2.7

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8. **Describe the impact of having web design skills to build skills for chosen career.** IT-IDT-2.8

9. **Explore the game design industry for design, creation, and career options.** IT-IDT-2.9

Demonstrate effective professional communication skills (oral, written, and digital) and practices that enable positive customer relationships. T-IDT-3

1. **Recognize the importance of all customers to a business.** IT-IDT-3.1
   a. Identify organization's products and services. IT-IDT-3.1.A
   b. State the IT influence and impact on business. IT-IDT-3.1.B
   c. Communicate how technology can be used to create a solution to business challenge and present to customer in professional business format. IT-IDT-3.1.C
2. **Demonstrate ability to assist customers in a professional manner.** IT-IDT-3.2
   a. Actively listen to customers. IT-IDT-3.2.A
   b. Determine customers' individual needs. IT-IDT-3.2.B
   c. Project a professional business image (e.g., appearance, voice, grammar, word usage, enunciation, nonverbal communication). IT-IDT-3.2.C
   d. Interact with customers and colleagues in a professional manner (e.g., prompt, friendly, courteous, respectful, helpful, knowledgeable, and understandable). IT-IDT-3.2.D
   e. Ensure that your assistance promotes the best interests of the company. IT-IDT-3.2.E
3. **Determine the best method to maintain a customer list and communication platform.** IT-IDT-3.3
4. **Demonstrate understanding of word processing, spreadsheet, presentation, and database software as a communication tool for business.** IT-IDT-3.4

Identify, describe, evaluate, select and use appropriate technology. IT-IDT-4

1. **Identify hardware device functions, including peripherals devices, input devices, and portable hardware appropriate for specific tasks and emerging hardware as it impacts information technology.** IT-IDT-4.1
2. **Demonstrate understanding of set up a basic computer workstation.** IT-IDT-4.2
   a. Identify various computer types, internal components, connectors, monitors, keyboards, mice, printers, computer voltage, and power requirements. IT-IDT-4.2.A
3. **Describe and explore current and emerging software, including operating systems and application software.** IT-IDT-4.3
   a. Explain the function and purpose of software tools. IT-IDT-4.3.A
4. **Compare and contrast various hardware and software options for personal and business use.** IT-IDT-4.4

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Understand, communicate, and adapt to a digital world. IT-IDT-5	1. **Develop a working IT vocabulary.** IT-IDT-5.1 2. **Describe trends in emerging, evolving, and future computer technologies and their influence on IT practices.** IT-IDT-5.2 a. Mobile technology, computing tablets, cloud computing. IT-IDT-5.2.A 3. **Recognize online risks and dangers in order to take appropriate actions to protect the business and self while using digital tools and resources.** IT-IDT-5.3 4. **Demonstrate ability to access, navigate and use online resources and technologies.** IT-IDT-5.4 5. **Define and demonstrate folder and file management and the importance of data back-up procedures.** IT-IDT-5.5
Explore and explain the basic components of computer networks. IT-IDT-6	1. **Develop a working networking vocabulary including networking media, topologies, network operating systems, models and protocols, codes and standards, addressing, diagnostics, routing, WAN services, network security networking software, tools, and equipment.** IT-IDT-6.1 2. **Illustrate and describe the functions of various types of networks including wireless.** IT-IDT-6.2 3. **Explain key issues in data transmission.** IT-IDT-6.3 4. **Characterize the purposes, features and functions of the following network components: Switches, Bridges, Routers, Gateways, CSU / DSU, NICs, ISDN adapters, WAPs, Modems, Transceivers, Firewalls.** IT-IDT-6.4 5. **Identify factors which affect the range and speed of wireless service.** IT-IDT-6.5 6. **Explore networking trends and issues affecting business and personal use.** IT-IDT-6.6
Use computational thinking procedures to analyze and solve problems. IT-IDT-7	1. **Apply strategies for identifying routine hardware and software problems current to everyday life.** IT-IDT-7.1 2. **Identify compatibility issues and describe operational problems caused by hardware errors.** IT-IDT-7.2 3. **Explain how technology can be used to solve problems.** IT-IDT-7.3 4. **Explain software development process used to solve problems.** IT-IDT-7.4 5. **Explore commonly used documentation tools for design specifications.** IT-IDT-7.5 a. Flowcharts, visual and textual storyboards. IT-IDT-7.5.A

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Create and organize webpages through the use of a variety of web programming design tools. IT-IDT-8	1. **Understand and apply design principles to create professional appearing and functioning web pages.** IT-IDT-8.1 2. **Understand elements of web design.** IT-IDT-8.2 a. HTML, CSS, responsive design, site usability, relation of site to business, story the site reveals about the business. IT-IDT-8.2.A 3. **Design simple webpages incorporating media elements (e.g., sound, video, graphics, text, motion graphics), navigation, and linking.** IT-IDT-8.3 4. **Explain the impact of mobile sites on the development of business.** IT-IDT-8.4 5. **Explore the trends and emerging issues for websites.** IT-IDT-8.5
Design, develop, test and implement programs using visual programming. IT-IDT-9	1. **Utilize drag and drop software to develop programs.** IT-IDT-9.1 2. **Understand and use objects.** IT-IDT-9.2 3. **Explain how sequence, selection, iteration are building blocks of algorithms.** IT-IDT-9.3 4. **Explore mobile devices/emulators to design develop and implement mobile computing applications.** IT-IDT-9.4 5. **Use various debugging and testing methods to ensure program correctness.** IT-IDT-9.5 6. **Describe a variety of programming languages used to solve problems.** IT-IDT-9.6 7. **Incorporate music and art to enhance creativity in projects.** IT-IDT-9.7
Describe, analyze, develop and follow policies for managing ethical and legal issues in the business world and in a technology-based society. IT-IDT-10	1. **Demonstrate positive cyber citizenry by applying industry accepted ethical practices and behaviors.** IT-IDT-10.1 2. **Recognize the ethical and legal issues while accessing, creating, and using digital tools and resources in order to make informed decisions.** IT-IDT-10.2 3. **Exercise digital citizenship as a lifelong learner.** IT-IDT-10.3 a. **Promote and model digital etiquette and responsible social technology interactions, permanence of digital footprints, online image and presence, etc.** IT-IDT-10.3.A 4. **Understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.** IT-IDT-10.4 5. **Describe personal and legal consequences of inappropriate use of resources and online content.** IT-IDT-10.5

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a. Plagiarism, piracy, illegal downloading, copy-right infringement, licensing infringement, inappropriate use of software, hardware and mobile devices. IT-IDT-10.5.A

6. **Identify security issues and trends affecting computers and information privacy.** IT-IDT-10.6

a. **Virus, open or free networks, user control methods, file sharing, etc.** IT-IDT-10.6.A

7. **Describe the use of computer forensics to prevent and solve information technology crimes and security breaches.** IT-IDT-10.7

8. **Identify criminal activity in relationship to cybercrime, the Internet, and Internet trafficking.** IT-IDT-10.8

a. Common internet crimes, techniques to identify criminal activity and prevention actions related to cybercrime. IT-IDT-10.8.A

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. IT-IDT-11

1. **Explain the goals, mission and objectives of Future Business Leaders of America.** IT-IDT-11.1

2. **Explore the impact and opportunities a student organization (FBLA) can develop to bring business and education together in a positive working relationship through innovative leadership and career development programs.** IT-IDT-11.2

3. **Explore the local, state, and national opportunities available to students through participation in related student organization (FBLA) including but not limited to conferences, competitions, community service, philanthropy, and other FBLA activities.** IT-IDT-11.3

4. **Explain how participation in career and technology education student organizations can promote lifelong responsibility for community service and professional development.** IT-IDT-11.4

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.** IT-IDT-11.5