

# Introduction to Hardware Technology (11.44800) (2021)

Adopted 2021

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

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

**Establish a personal online career portfolio and begin uploading relevant artifacts.** IT-IHT-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.** IT-IHT-2.1
- 2. Establish an account for long-term use to upload professional artifacts over the course of the career pathway.** IT-IHT-2.2
- 3. Upload a professional, true, and accurate résumé and cover letter seeking employment for a position representative of current skills and knowledge.** IT-IHT-2.3
- 4. Upload additional standard job search items, such as digital badges and certificates earned for industry-recognized credentials.** IT-IHT-2.4

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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. [IT-IHT-2.5](#)
  6. Organize the portfolio in a manner that makes documents and artifacts easy to locate and access for review. [IT-IHT-2.6](#)
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Explore, research, and present findings on positions and career paths in technology and the impact of technology on chosen career area. [IT-IHT-3](#)

1. Develop technical reading and writing skills to follow instructions. [IT-IHT-3.1](#)
  2. Work in a team to solve problems and share knowledge. [IT-IHT-3.2](#)
  3. Use collaborative tools to communicate with team members, such as online meeting platforms, group messaging, and shared online documents and files. [IT-IHT-3.3](#)
  4. Explore the impact of emerging technologies on careers, including non-traditional technology fields and careers in each of the Georgia Career Clusters. [IT-IHT-3.4](#)
  5. 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. [IT-IHT-3.5](#)
  6. Explore careers in IT focused on customer relationships. [IT-IHT-3.6](#)
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Demonstrate effective professional communication skills (oral, written, and digital) and practices that enable positive relationships with all audiences of a business. [IT-IHT-4](#)

1. Differentiate between the different audiences of a business, including users, clients, customers, contractors, vendors, and others. [IT-IHT-4.1](#)
2. Recognize the importance of each audience to a business. [IT-IHT-4.2](#)
  - a. Identify organizations' products and services. [IT-IHT-4.2.A](#)
  - b. Explain the impact of Information Technology (IT) to a business and how it affects the bottom line. [IT-IHT-4.2.B](#)
  - c. Communicate how technology can be used to create solutions to business challenges and present to stakeholders in professional business format. [IT-IHT-4.2.C](#)
  - d. Demonstrate an ability to provide "value-add" partnership between IT and business. [IT-IHT-4.2.D](#)

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- 3. Demonstrate ability to assist all audiences in a professional manner.** IT-IHT-4.3
    - a. Actively listen to your audience. IT-IHT-4.3.A
    - b. Determine the individual needs of the audience. IT-IHT-4.3.B
    - c. Project a professional business image (e.g., appearance, voice, grammar, word usage, enunciation, nonverbal communication). IT-IHT-4.3.C
    - d. Interact with customers and colleagues in a professional manner (e.g., prompt, friendly, courteous, respectful, helpful, knowledgeable, and understandable). IT-IHT-4.3.D
    - e. Ensure that your assistance promotes the best interests of the company. IT-IHT-4.3.E
  - 4. Determine the best method to maintain a customer list and communication platform.** IT-IHT-4.4
  - 5. Demonstrate understanding of word processing, spreadsheet, presentation, and database software as a communication tool for business.** IT-IHT-4.5
  - 6. Develop a working IT vocabulary.** IT-IHT-4.6
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**Identify, evaluate, select, and use appropriate technology.** IT-IHT-5

- 1. Identify hardware device functions, including peripheral devices, input devices, and portable hardware appropriate for specific tasks and emerging hardware as it impacts the workplace and society.** IT-IHT-5.1
  - 2. Demonstrate understanding of how to set up a basic computer workstation, including various computer types, internal components, connectors, monitors, keyboards, mice, printers, computer voltage, and power requirements.** IT-IHT-5.2
  - 3. Describe trends in emerging, evolving, and future computer technologies and their influence on IT practices, such as mobile technology, computing tablets, and cloud computing.** IT-IHT-5.3
  - 4. Recognize online risks and dangers in order to take appropriate actions to protect the business and self while using digital tools and resources.** IT-IHT-5.4
  - 5. Demonstrate ability to access, navigate and use online resources and technologies.** IT-IHT-5.5
  - 6. Define and demonstrate folder and file management and the importance of data back-up procedures.** IT-IHT-5.6
  - 7. Explore hardware devices outside of the traditional PC/laptop scenario such as wearables, IoT devices, smart devices, and the role that these devices are filling in the connected world.** IT-IHT-5.7
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Explore and explain the basics of Customer Relationship Management (CRM). IT-IHT-6

1. Describe trends in emerging, evolving, and future CRM Systems and their influence on IT practices. IT-IHT-6.1
2. Define and demonstrate the basics and importance of asset management. IT-IHT-6.2
3. Understand the different roles of the IT Helpdesk and the requirements of each. IT-IHT-6.3
4. Demonstrate satisfactory customer service skills in a CRM-based environment. IT-IHT-6.4

Explore and explain the basic components of computer networks. IT-IHT-7

1. Demonstrate understanding of the OSI model and how it relates to network communications. IT-IHT-7.1
2. Describe common network features, such as routing, switching, network security devices, basic topologies, and networking standards. IT-IHT-7.2
3. Illustrate and describe the functions of various types of networks, including wireless. IT-IHT-7.3
4. Explain key issues in data transmission. IT-IHT-7.4
5. Identify factors which affect the range and speed of wireless service. IT-IHT-7.5
6. Explore networking trends and issues affecting business and personal use. IT-IHT-7.6

Use computational thinking procedures to analyze, troubleshoot, and solve problems. IT-IHT-8

1. Apply strategies for identifying routine hardware and software problems current to everyday life. IT-IHT-8.1
2. Identify compatibility issues and describe operational problems caused by hardware errors. IT-IHT-8.2
3. Explain how technology can be used to solve problems. IT-IHT-8.3
4. Explore commonly used documentation tools for design specifications, such as flowcharts and visual and textual storyboards. IT-IHT-8.4
5. Define and demonstrate understanding of Knowledge-Based articles (KB) and the impact of research-based troubleshooting. IT-IHT-8.5
6. Demonstrate an understanding of Computational Problem Solving as a part of Computational Thinking. IT-IHT-8.6

Describe, analyze, develop, and follow policies for managing ethical and legal issues

1. Demonstrate positive cyber citizenry by applying industry accepted ethical practices and behaviors. IT-IHT-9.1

**in the business world and in a technology-based society.** IT-IHT-9

- 2. Recognize the ethical and legal issues while accessing, creating, and using digital tools and resources in order to make informed decisions.** IT-IHT-9.2
- 3. Exercise digital citizenship as a lifelong learner.** IT-IHT-9.3
  - a. Promote and model digital etiquette and responsible social technology interactions, permanence of digital footprints, online image and presence, etc. IT-IHT-9.3.A
- 4. Understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.** IT-IHT-9.4
- 5. Demonstrate an understanding of technology-related problems such as Internet addiction, mobile phone addiction, and always-connected devices.** IT-IHT-9.5
- 6. Describe personal and legal consequences of inappropriate use of resources and online content.** IT-IHT-9.6
  - a. Plagiarism, piracy, illegal downloading, copy-right infringement, licensing infringement, inappropriate use of software, hardware, and mobile devices. IT-IHT-9.6.A
- 7. Identify security issues and trends affecting computers and information privacy.** IT-IHT-9.7
  - a. Virus, open or free networks, user control methods, file sharing, etc. IT-IHT-9.7.A
- 8. Describe the use of computer forensics to prevent and solve information technology crimes and security breaches.** IT-IHT-9.8
- 9. Identify criminal activity in relationship to cybercrime, the Internet, and Internet trafficking.** IT-IHT-9.9
  - a. Common internet crimes, techniques to identify criminal activity and prevention actions related to cybercrime. IT-IHT-9.9.A
- 10. Understand newly emerging technologies like AI and Deepfakes and their impact on ethical and legal issues in business.** IT-IHT-9.10
- 11. Understand and apply ethical behavior when working with intellectual property.** IT-IHT-9.11
- 12. Understand fundamental ethical frameworks such as IT Compliance and laws and precedents from industry affect how IT operates. Differentiate between national, state, local, and industry ethical standards and how they affect the role of IT in an organization.** IT-IHT-9.12

**Use tools, diagnostic procedures and troubleshooting techniques for personal**

- 1. Recognize and apply the basic aspects of troubleshooting theory, such as power and cable connections, compatibility, and other basic issues.** IT-IHT-10.1

computer components. IT-IHT-10

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2. Recognize the names, purposes, characteristics, and appropriate application of tools used in computer repair. IT-IHT-10.2
  3. Identify and apply basic diagnostic procedures and troubleshooting techniques. IT-IHT-10.3
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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-IHT-11

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1. Explain the goals, mission, and objectives of Future Business Leaders of America (FBLA) and/or Technology Student Association (TSA) and/or SkillsUSA. IT-IHT-11.1
  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. IT-IHT-11.2
  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. IT-IHT-11.3
  4. Explain how participation in career and technology education student organizations can promote lifelong responsibility for community service and professional development. IT-IHT-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-IHT-11.5