CTE HYBRID Course:
Principles of Information Technology/Exploring Careers
2015-2016 Scope and Sequence

UNIT 1: Hardware Components

1. **Keyboards, Mice, and other Input Devices**
2. **Peripheral Devices**
3. **Introduction to Digital Cameras**
4. **Introduction Scanners**

Knowledge and Skills	**§130.272 (c) – Principles of Information Technology** (4) The student demonstrates knowledge of the hardware components associated with information systems. The student is expected to: **§127.3 (c)) – Career Exploration** (1) The student explores personal interests and aptitudes as they relate to education and career planning.
Student Expectations	**The student will:** **§130.272 (c) – Principles of Information Technology** (B) identify major hardware components and their functions such as the central processor unit, input and output peripherals, and storage system and devices; (C) use available reference tools such as user manuals, both online and written, as appropriate; (D) demonstrate understanding of the process of connecting peripherals devices; and (E) demonstrate the proficiency in the use of a variety of input devices such as mouse, keyboard, microphone, digital camera, printer, scanner, and optical disk reader. **§127.3 (c) – Career Exploration** (B) explore the career clusters as defined by the U.S. Department of Education • Understand the purpose of Career Clusters. • Analyze the different aspects of Career Clusters. • Understand the skills needed for various careers. **Utilize Naviance to:** • develop Career and College Readiness Plan • develop SMART Goals
Resources	**Online Resources:** Naviance - https://succeed.naviance.com Virtual Job Shadow: https://www.virtualjobshadow.com/ http://cte.unt.edu/it/curriculum/principles Communication Devices http://www.computermuseum.li/Testpage/Jacquard-Punched-Card-Loom.htm History of NC -- Numerical Control: Jacquard Punched Card Loom Machine (1801) http://marsrovers.nasa.gov/home/index.html **Textbooks:** Exploring Careers, Glencoe/McGraw-Hill Division, 2004 Peter North's Introduction to Computers 4th Edition Lesson 2: Standard Methods of Input PC Upgrade and Repair Simplified 2nd Edition

UNIT 2: SELF-EXPLORATION

1. **Self-Exploration**
   Learning Styles
   Type Learner - Do What You Are™ (Naviance Personality Assessment)
2. **Career Awareness**
   Career Key™ - (Naviance Interest Assessment)
3. **Occupational exploration & Research of Job Market**
4. **Decision making process**
5. **Investigating IT Employment Opportunities**

Knowledge and Skills	§127.3 (c) – Career Exploration (1)The student explores personal interests and aptitudes as they relate to education and career planning. (2) The student analyzes personal interests and aptitudes regarding education and career planning. (3) The student analyzes college and career opportunities. (4) The student evaluates skills for personal success §130.272 (c) – Principles of Information Technology (1) The student demonstrates the necessary skills for career development, employability, and successful completion of course outcomes. (2) The student identifies various employment opportunities in the information technology field.
Student Expectations	The student will: §127.3 (c) – Career Exploration (A) complete, discuss, and analyze the results of personality, career interest, and aptitude assessments; (B) explore the career clusters as defined by the U.S. Department of Education; (C) summarize the career opportunities in a cluster of personal interest; (D) research current and emerging fields related to personal interest areas; (E) determine academic requirements in career fields related to personal interest areas; (F) explore how career choices impact the balance between personal and professional responsibilities; and (G) research educational options and requirements using appropriate technology. (A) create a personal career portfolio; (B) make oral presentations that fulfill specific purposes using appropriate technology; (C) develop and analyze tables, charts, and graphs related to career interests; (D) determine the impact of technology on careers of personal interest; (A) determine academic requirements for transition from one learning level to the next; (B) explore opportunities for earning college credit in high school such as advanced placement courses, International Baccalaureate courses, dual credit, and local and statewide articulated credit; (D) discuss the impact of effective college and career planning; (E) demonstrate decision-making skills related to school and community issues, programs of study, and career planning; (D) use effective time-management and goal-setting strategies; (E) effectively use information and communication technology tools; and (F) identify skills that can be transferable among a variety of careers §130.272 (c) – Principles of Information Technology (A) identify and demonstrate positive work behaviors that enhance employability and job advancement such as regular attendance, promptness, attention to proper attire, maintenance of a clean and safe work environment, appropriate voice, and pride in work;

	(B) identify and demonstrate positive personal qualities such as flexibility, open-mindedness, initiative, listening attentively to speakers, and willingness to learn new knowledge and skills; (C) employ effective reading and writing skills; (D) employ effective verbal and nonverbal communication skill; (E) solve problems and think critically; (A) identify job opportunities and accompanying job duties and tasks; (B) research careers of personal interest along with the education, job skills, and experience required to achieve personal career goals; and (C) describe understanding of the functions of resumés and portfolios. **Utilize Naviance to:** • Complete Personality Assessment • Complete Interest Assessment
Resources	**Online Resources:** Naviance - https://succeed.naviance.com Virtual Job Shadow: https://www.virtualjobshadow.com/ How to Study www.how-to-study.com How to Study www.howtostudy.org http://www.mtsu.edu/~studskl/hd/hemis.html http://frank.mtsu.edu/~studskl/hd/hemispheric_dominance.html http://www.web-us.com/brain/braindominance.htm **Textbooks:** Exploring Careers, Glencoe/McGraw-Hill Division, 2004

UNIT 3: Design and Publications

1. **Design Principles**
2. **Using Text Effects**
3. **Cutting Edge Technology**
4. **Formatting a Research Paper Using MLA Style**
5. **Identifying File Types, Purposes & Extensions**
6. **Basic Spreadsheet Formulas**
7. **Introduction to Desktop Publishing**
8. **Introduction to Basic Webpage Design**

Knowledge and Skills	**§130.272 (c) – Principles of Information Technology** (1) The student demonstrates the necessary skills for career development, employability, and successful completion of course outcomes. (2) The student identifies various employment opportunities in the information technology field. (3) The student uses emerging technologies to exchange information. (4) The student demonstrates knowledge of the hardware components associated with information systems. (5) The student demonstrates knowledge of the different software associated with information systems. (7) The student applies word processing technologies. (11) The student applies designs and web publishing techniques **§127.3 (c) – Career Exploration** (1) The student explores personal interests and aptitudes as they relate to education and career planning. (2) The student analyzes personal interests and aptitudes regarding education and career planning. (3) The student analyzes college and career opportunities. (4) The student evaluates skills for personal success.
Student Expectations	**The student will:** **§130.272 (c) – Principles of Information Technology** (B) identify and demonstrate positive personal qualities such as flexibility, open-mindedness, initiative, listening attentively to speakers, and willingness to learn new knowledge and skills; (C) employ effective reading and writing skills; (D) employ effective verbal and nonverbal communication skill; (E) solve problems and think critically; (F) demonstrate leadership skills and function effectively as a team member; (H) demonstrate an understanding of legal and ethical responsibilities in relation to the field of information technology; and (I) demonstrate planning and time-management skills such as project management and storyboarding. (A) identify job opportunities and accompanying job duties and tasks; (B) research careers of personal interest along with the education, job skills, and experience required to achieve personal career goals; and (A) identify and describe functions of various new and emerging technologies; (B) send and receive text information and file attachments using electronic methods such as email, electronic bulletin boards, and instant message services; (C) demonstrate effective internet search strategies; including keywords and Boolean logic using various available search engines. (D) dissect and identify the various components of a Uniform Resource Locator; (H) demonstrate ethical use of Internet and online resources, including citation of source;

(E) demonstrate proficiency in the use of a variety of input devices such as mouse, keyboard, microphone, digital camera, printer, scanner, and optical disk reader.

(A) differentiate between systems and application software;
(B) identify and understand major operating system fundamentals and components;

(J) identify open source and proprietary licenses;
(K) demonstrate proper use of system management tools;

(A) identify the terminology associated with word processing software and it's functions;
(B) identify the operation of mobile devices such as personal data assistants and cell phones;
(C) edit a variety of text documents using functions such as pagination, appropriate white space, tab settings, and font style, size, and color.
(E) demonstrate ability to effectively test acquired information from the Internet for accuracy, relevance, and validity;
(D) create professional letters using advanced word-processing features.
(F) produce desktop publishing documents incorporating both texts and graphics such as business cards, newsletters with mastheads, and advertisement flyers;

(A) understand the rationale behind error messages and symptoms of hardware failures;
(B) know interrupt sequences and beep codes;
(C) identify priorities and interrupts at the system level;

(C) identify and describe design principles such as contrast, repetition, alignment, and proximity.
(F) identify and describes types and styles of typeface used for publications such as serif and sans serif

§127.3 (c) – Career Exploration
(D) determine the impact of technology on careers of personal interest;
(G) research educational options and requirements using appropriate technology.

(D) discuss the impact of effective college and career planning;
(E) demonstrate decision-making skills related to school and community issues, programs of study, and career planning;

(A) implement effective study skills for academic success
(B) use interpersonal skills to facilitate effective teamwork;
(E) effectively use information and communication technology tools; and

Resources	
	Online Resources: 1) (Choices) http://www.wrksolutions.com/for-individuals/career-planning/career-exploration/choices-planner 2) (VJS) http://www.virtualjobshadow.com/HoustonISD/ 3) (Plan Your Path) http://www.houstonisd.org/planyourpath 4) Texas Genuine- http://texasgenuine.org/ 5) Workforce Solutions- http://www.wrksolutions.com/for-individuals/career-planning/career-exploration/choices-planner 6) The Career Key- http://www.careerkey.org/ 7) Live Career Resume Builder-http://www.livecareer.com/ 8) Texas Reality Check-http://www.texasrealitycheck.com/ 9) Career Planning: Focus on Occupations- http://www.wrksolutions.com/whenigrowup/ **Textbooks** Exploring Careers, Glencoe/McGraw-Hill Division, 2004

	MLA Handbook of Writers of Research Papers, seventh edition

UNIT 4: SAFETY

1. **Job Safety Skills**
2. **Copyright**

Knowledge and Skills	**§130.272 (c) – Principles of Information Technology** (1) The student demonstrates the necessary skills for career development, employability, and successful completion of course outcomes. (3) The student uses emerging technologies to exchange information. (5) The student demonstrates knowledge of the different software associated with information systems. (10) The student applies presentation management technology. (12) The student understands and demonstrates legal and ethical procedures as they apply to the use of information technology.
Student Expectations	**The student will:** (A) identify and demonstrate positive work behaviors that enhance employability and job advancement such as regular attendance, promptness, attention to proper attire, maintenance of a clean and safe work environment, appropriate voice, and pride in work; (C) employ effective reading and writing skills; (D) employ effective verbal and nonverbal communication skill; (E) solve problems and think critically; (G) identify and implement proper safety procedures; (H) demonstrate an understanding of legal and ethical responsibilities in relation to the field of information technology (E) demonstrate ability to effectively test acquired information from the Internet for accuracy, relevance, and validity; (H) demonstrate ethical use of Internet and online resources, including citation of source. (F) demonstrate understanding of file extensions and the purpose of file types across software products; (B) create, save, edit, and produce presentations with appropriate handouts and speaker notes; and (C) create a non-linear presentation incorporating links, hyperlinks, audio, and graphics. (A) demonstrate ethical use of online resources; (B) adhere to copyright rules and regulations; (C) differentiate between copyright and trademarks; (D) explain the concept of intellectual property; (E) examine the consequences of plagiarism;
Resources	**Online Resources:** Job Safety Skills Society – http://www.jobsafetyskills.com/instresourceman.html Center Disease for Control and Prevention – www.cdc.gov

UNIT 5: PROFESSIONALISM

1. **Character Education**
2. **Cyber bullying**
3. **Exploration Time Usage**
4. **Dress for Success**
5. **Naviance: Growth Mindset**

Knowledge and Skills	**§127.3 (c) – Career Exploration** (4) The student evaluates skills for personal success.
Student Expectations	**The student will:** (A) implement effective study skills for academic success; (B) use interpersonal skills to facilitate effective teamwork; (C) use a problem-solving model and critical-thinking skills to make informed decisions; (D) use effective time-management and goal-setting strategies; (E) effectively use information and communication technology tools; and (F) identify skills that can be transferable among a variety of careers. • Building on the pillars of good character - Caring, Citizenship, Fairness, Respect, Responsibility, Trustworthiness o Word/trait of the month/week, Codes and rules of conduct, Student-designed T-shirts, Oral Presentation • What can you do when someone is mean to you online? • What kinds of things count as bullying? • How does bullying make other people feel? • Realize that time is a resource. • Evaluate time usage. • Analyze the importance of time management. • Manage time more efficiently. • First Impressions • Dress as way to make a good impression - Don't wear tight, baggy, or provocative clothes **Utilize Naviance to:** • Overcome obstacles - Turning I Can't Into How Can I • Complete Mindset Self Reflection
Resources	**Online Resources:** Naviance - https://succeed.naviance.com Virtual Job Shadow: https://www.virtualjobshadow.com/ Experience Works - http://goo.gl/5Gxj3 http://www.stompoutbullying.org http://www.dressforsuccess.org Houston Dress in Business http://goo.gl/1J6HJ

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UNIT 6: EXPLORE THE WORLD OF WORK

1. **Career Interest Profiler (Naviance Career Assessment)**
2. **Explore Human Relationship Skills**
3. **Technology Use in the Workplace**
4. **Resume Writing**

Knowledge and Skills	**§127.3 (c) – Career Exploration** (7) The student develops skills for professional success. **§130.272 (c) – Principles of Information Technology** (1) The student demonstrates the necessary skills for career development, employability, and successful completion of course outcomes. (2) The student identifies various employment opportunities in the information technology field. (7) The student applies word-processing technology.
Student Expectations	**The student will:** **§127.3 (c) – Career Exploration** (A) demonstrate effective verbal, nonverbal, written, and electronic communication skills; (B) evaluate the impact of positive and negative personal choices, including use of electronic communications such as social networking sites; • Gather career information and identify their career interests • Develop a Career Exploration Plan • Examine Work Related to Individuals and Society • Explain How Businesses Operate • Practice the Characteristics of Valued Workers • Practice the Job Application Process • Practice Communication Skills • Practice Relationship Skills • Practice Teamwork • Examine the Implications of technology on careers • Explore the use of technology • Demonstrate knowledge and skills in the use of computer and other technologies. **§130.272 (c) – Principles of Information Technology** (C) employ effective reading and writing skills; (C) describe understanding of the functions of resumés and portfolios. (B) improve the touch-system skill using the keyboard and keypad to input data; **Utilize Naviance to:** • Complete Career Assessment
Resources	**Online Resources:** Naviance - https://succeed.naviance.com Virtual Job Shadow: https://www.virtualjobshadow.com/ Experience Works - http://goo.gl/5Gxj3 Cultural Impact of Computer Technology: http://goo.gl/Z4GxW Purdue OWL Writing – http://owl.english.purdue.edu/owl/resource/543/01/ Best Sample Resumes – http://www.bestsampleresume.com/sample-student-resume/high-school-student-resume.html

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	Textbooks: Exploring Careers, Glencoe/McGraw-Hill Division, 2004

UNIT 7: Internet and Networking

1. **Basic Internet Functions**
2. **Networks and Hackers**

Knowledge and Skills	**§130.272 (c) – Principles of Information Technology** (1) The student demonstrates the necessary skills for career development, employability, and successful completion of course outcomes. (3) The student uses emerging technologies to exchange information. (6) The student analyzes network systems.
Student Expectations	**The student will:** **§130.272 (c) – Principles of Information Technology** (C) employ effective reading and writing skills; (C) demonstrate effective Internet search strategies, including keywords and Boolean logic using various available search engines; (D) dissect and identify the various components of a Uniform Resource Locator; (E) demonstrate ability to effectively test acquired information from the Internet for accuracy, relevance, and validity; (A) identify hardware associated with telecommunications and data networking such as servers, routers, switches, hubs, and network connectors; (B) identify and describe various types of networks such as peer-to-peer, local area networks, wide area networks, wireless token ring, and Ethernet; (C) identify and describe functions of network operating systems; and (D) explain troubleshooting techniques for various network connection issues.
Resources	**Online Resources:** 10) (Choices) http://www.wrksolutions.com/for-individuals/career-planning/career-exploration/choices-planner 11) (VJS) http://www.virtualjobshadow.com/HoustonISD/ 12) (Plan Your Path) http://www.houstonisd.org/planyourpath 13) Texas Genuine- http://texasgenuine.org/ 14) Workforce Solutions- http://www.wrksolutions.com/for-individuals/career-planning/career-exploration/choices-planner 15) The Career Key- http://www.careerkey.org/ 16) Live Career Resume Builder-http://www.livecareer.com/ 17) Texas Reality Check-http://www.texasrealitycheck.com/ 18) Career Planning: Focus on Occupations- http://www.wrksolutions.com/whenigrowup/