Course Title: Computing for College and Careers 1b

State: TX
State Course Title: Principles of Information Technology
State Course Code: 130.302
State Standards: Career and Technical Education Standards
Date of Standards: 2015

TEKS	Course Title (a or b), if applicable, e.g. Game Design 1a	Unit Name(s)	Lesson(s) Numbers
(1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:			
(1)(A) identify and demonstrate work behaviors and qualities that enhance employability and job advancement such as regular attendance, attention to proper attire, maintenance of a clean and safe work environment, pride in work, flexibility, and initiative;	Computing for College and Careers 1b: Refining Your Interests	Unit 7: Follow the Leader	Activity
(1)(B) employ effective verbal and nonverbal communication skills;	Computing for College and Careers 1b: Refining Your Interests	Unit 4: Networking	Lessons 1-4
(1)(C) employ effective reading and writing skills;	Computing for College and Careers 1b: Refining Your Interests	Unit 2: Programming Basics	Activity
(1)(D) solve problems and think critically;	Computing for College and Careers 1a: Introduction	Unit 1: Introducing IT	Activity 1, 2
(1)(E) demonstrate leadership skills and function effectively as a team member;	Computing for College and Careers 1b: Refining Your Interests	Unit 7: Follow the Leader	Lessons 1-4
1)(F) identify and implement proper safety procedures; and	Computing for College and Careers 1a: Introduction	Unit 4: Using the Internet	Lesson 4
(1)(G) demonstrate planning and time-management skills such as storyboarding and project management, including initiating, planning, executing, monitoring and controlling, and closing a project.	Computing for College and Careers 1a: Introduction	Unit 8: Presentation Software	Activity
(2) The student identifies various employment opportunities in the IT field. The student is expected to:			
(2)(A) identify job opportunities and accompanying job duties and tasks;	Computing for College and Careers 1b: Refining Your Interests	Unit 7: Follow the Leader	Lessons 1-4

(2)(B) research careers of personal interest along with the education, job skills, and experience required to achieve personal career goals; and	Computing for College and Careers 1b: Refining Your Interests	Unit 7: Follow the Leader	Activity
(2)(C) describe the functions of resumes and portfolios	Computing for College and Careers 1a: Introduction	Unit 8: Presentation Software	Activity 1
(3) The student uses evolving and emerging technologies to exchange information. The student is expected to:			
(3)(A) identify and describe functions of various evolving and emerging technologies;	Computing for College and Careers 1a: Introduction	Unit 3: Software	Lessons 1, 2
(3)(B) send and receive text information and file attachments using electronic methods such as email, electronic bulletin boards, and instant message services;	Computing for College and Careers 1a: Introduction	Unit 5: Email	Activity
(3)(C) demonstrate effective Internet search strategies, including keywords and Boolean logic, using various available search engines;	Computing for College and Careers 1a: Introduction	Unit 4: Using the Internet	Lessons 1-4
(3)(D) identify the various components of a Uniform Resource Locator;	Computing for College and Careers 1a: Introduction	Unit 4: Using the Internet	Activity 2
(3)(E) demonstrate ability to effectively test acquired information from the Internet for accuracy, relevance, and validity;	Computing for College and Careers 1a: Introduction	Unit 4: Using the Internet	Lessons 3, 4
(3)(F) explain issues concerning computer-based threats such as computer viruses, malware, and hacking; and	Computing for College and Careers 1a: Introduction	Unit 1: Introducing IT	Lesson 3
(3)(G) explain issues concerning Internet safety such as identity theft, online predators, cyber-bullying, and phishing.	Computing for College and Careers 1a: Introduction	Unit 4: Using the Internet	Lesson 4
(4) The student demonstrates knowledge of the hardware components associated with information systems. The student is expected to:			
(4)(A) identify major hardware components and their functions;	Computing for College and Careers 1a: Introduction	Unit 3: Software	Activity 2
(4)(B) use available reference tools as appropriate; and	Computing for College and Careers 1a: Introduction	Unit 1: Introducing IT	Lesson 3
(4)(C) connect and use a variety of peripheral devices such as mouse, keyboard, microphone, digital camera, and printer	Computing for College and Careers 1a: Introduction	Unit 3: Software	Lessons 1, 2
(5) The student demonstrates knowledge of the different software associated with information systems. The student is expected to:			

(5)(A) differentiate between systems and application software;	Computing for College and Careers 1a: Introduction	Unit 3: Software	Lessons 1, 2
(5)(B) identify and explain major operating system fundamentals and components such as disk operations, graphical user interface components, and hardware drivers;	Computing for College and Careers 1a: Introduction	Unit 3: Software	Activity 2
(5)(C) explain the purpose of file types across software products;	Computing for College and Careers 1a: Introduction	Unit 4: Using the Internet	Activity 2
(5)(D) demonstrate use of computer numbering systems and internal data representation such as identifying the hexadecimal value of a color;	Computing for College and Careers 1a: Introduction	Unit 6: Spreadsheets and Databases	Lessons 1-4
(5)(E) compare and contrast open source and proprietary software;	Computing for College and Careers 1a: Introduction	Unit 3: Software	Lessons 1, 2
(5)(F) explain use of system management tools;	Computing for College and Careers 1a: Introduction	Unit 4: Using the Internet	Activity 2
(5)(G) apply proper file management techniques such as creating, naming, organizing, copying, moving, and deleting files;	Computing for College and Careers 1a: Introduction	Unit 6: Spreadsheets and Databases	Lessons 1-4
(5)(H) use appropriate file protection and security; and	Computing for College and Careers 1a: Introduction	Unit 6: Spreadsheets and Databases	Lessons 1-4
(5)(I) explain the process for discovering, quarantining, and removing viruses from a computer system.	Computing for College and Careers 1a: Introduction	Unit 1: Introducing IT	Activity 1, 2
(6) The student analyzes network systems. The student is expected to:			
(6)(A) identify hardware associated with telecommunications and data networking such as servers, routers, switches, and network connectors;	Computing for College and Careers 1b: Refining Your Interests	Unit 4: Networking	Lessons 1-4
(6)(B) identify and describe various types of networks such as peer-to-peer, local area networks, wide area networks, wireless, and Ethernet	Computing for College and Careers 1a: Introduction	Unit 1: Introducing IT	Activity 1, 2
6)(C) identify functions of network operating systems; and	Computing for College and Careers 1a: Introduction	Unit 2: Hardware	Lessons 1-4
(6)(D) explain troubleshooting techniques for various network connection issues.	Computing for College and Careers 1a: Introduction	Unit 2: Hardware	Lessons 1-4
(7) The student applies word-processing technology. The student is expected to:			

(7)(A) identify the terminology associated with word-processing software;	Computing for College and Careers 1a: Introduction	Unit 3: Software	Activity 2
(7)(B) edit a variety of text documents using functions such as pagination, appropriate white space, tab settings, and font style, size, and color; and	Computing for College and Careers 1a: Introduction	Unit 8: Presentation Software	Activity 1
(7)(C) create professional documents such as memorandums, technical manuals, or proposals using advanced word-processing features	Computing for College and Careers 1a: Introduction	Unit 5: Email	Activity
(8) The student applies spreadsheet technology. The student is expected to:			
(8)(A) identify the terminology associated with spreadsheet software;	Computing for College and Careers 1a: Introduction	Unit 4: Using the Internet	Lessons 1-4
(8)(B) use numerical content to perform mathematical calculations;	Computing for College and Careers 1a: Introduction	Unit 4: Using the Internet	Lessons 1-4
(8)(C) use student-created and preprogrammed functions to produce documents such as budget, payroll, statistical tables, and personal checkbook register;	Computing for College and Careers 1a: Introduction	Unit 4: Using the Internet	Lessons 1-4
(8)(D) identify, generate, and describe the function of comma separated value files;	Computing for College and Careers 1a: Introduction	Unit 4: Using the Internet	Lessons 1-4
(8)(E) create and analyze spreadsheets incorporating advanced features such as lookup tables, nested IF statements, subtotals, cell protection conditional formatting, charts, and graphs; and	Computing for College and Careers 1a: Introduction	Unit 4: Using the Internet	Lessons 3, 4
(8)(F) perform sorting, searching, and data filtering in documents.	Computing for College and Careers 1a: Introduction	Unit 4: Using the Internet	Lessons 1-4
(9) The student explores computer programming concepts. The student is expected to:			
(9)(A) identify the function of compilers and interpreters;	Computing for College and Careers 1b: Refining Your Interests	Unit 2: Programming Basics	Activity
(9)(B) explain the difference between the operation of compilers and interpreters;	Computing for College and Careers 1b: Refining Your Interests	Unit 2: Programming Basics	Activity
(9)(C) identify various computer languages and how the languages are used in software development;	Computing for College and Careers 1b: Refining Your Interests	Unit 2: Programming Basics	Activity
(9)(D) recognize data representation in software development such as string, numeric, character, integer, and date;	Computing for College and Careers 1a: Introduction	Unit 6: Spreadsheets and Databases	Lessons 1-4

(9)(E) identify and explain the concept of algorithms; and	Computing for College and Careers 1b: Refining Your Interests	Unit 3: Programming in Practice	Activity
9)(F) describe the flow of a structured algorithm, including linear and iterative instructions such as using a flow chart	Computing for College and Careers 1b: Refining Your Interests	Unit 3: Programming in Practice	Activity
(10) The student explores database technology. The student is expected to:			
10)(A) identify the terminology associated with database software and database functions;	Computing for College and Careers 1b: Refining Your Interests	Unit 1: Web Design	Lessons 1-4, Activity
(10)(B) explore the application of databases;	Computing for College and Careers 1a: Introduction	Unit 1: Introducing IT	Activity 1, 2
(10)(C) identify and explain the purpose and elements of a query language;	Computing for College and Careers 1b: Refining Your Interests	Unit 2: Programming Basics	Lessons 1-4
(10)(D) identify and explain the purpose of fields and records; and	Computing for College and Careers 1a: Introduction	Unit 5: Email	Lessons 2-4
(10)(E) describe the process of constructing a query, including multiple search parameters.	Computing for College and Careers 1a: Introduction	Unit 5: Email	Lessons 2-4
(11) The student applies presentation management technology. The student is expected to:			
(11)(A) identify the terminology and functions of presentation software; and	Computing for College and Careers 1a: Introduction	Unit 8: Presentation Software	Activity
(11)(B) create, save, edit, and produce presentations incorporating advanced features such as links, hyperlinks, audio, and graphics.	Computing for College and Careers 1a: Introduction	Unit 4: Using the Internet	Activity 2
(12) The student applies design and web publishing techniques. The student is expected to:			
(12)(A) identify the terminology associated with web page development and interactive media;	Computing for College and Careers 1b: Refining Your Interests	Unit 1: Web Design	Activity
(12)(B) identify and explain design elements such as typeface, color, shape, texture, space, and form	Computing for College and Careers 1b: Refining Your Interests	Unit 1: Web Design	Activity
(12)(C) identify and explain design principles such as unity, harmony, balance, scale, and contrast;	Computing for College and Careers 1a: Introduction	Unit 3: Software	Lessons 1, 2
(12)(D) identify and explain common elements of Hyper Text Markup Language (HTML) such as tags, stylesheets, and hyperlinks; and	Computing for College and Careers 1b: Refining Your Interests	Unit 2: Programming Basics	Lessons 1-4

(12)(E) create a web page containing links, graphics, and text using appropriate design principles.	Computing for College and Careers 1b: Refining Your Interests	Unit 1: Web Design	Lessons 1-4, Activity
(13) The student understands and demonstrates legal and ethical procedures as they apply to the use of information technology. The student is expected to:			
(13)(A) explain and demonstrate ethical use of technology and online resources;	Computing for College and Careers 1b: Refining Your Interests	Unit 6: Legal and Ethical Issues	Lessons 1-4
(13)(B) adhere to intellectual property laws;	Computing for College and Careers 1b: Refining Your Interests	Unit 6: Legal and Ethical Issues	Lessons 1-4
(13)(C) explain the concept of intellectual property laws, including copyright, trademarks, and patents and consequences of violating each type of law;	Computing for College and Careers 1b: Refining Your Interests	Unit 6: Legal and Ethical Issues	Lessons 1-4
(13)(D) examine the consequences of plagiarism;	Computing for College and Careers 1b: Refining Your Interests	Unit 6: Legal and Ethical Issues	Lessons 1-4
(13)(E) identify and explain unethical practices such as hacking, online piracy, and data vandalism; and	Computing for College and Careers 1b: Refining Your Interests	Unit 6: Legal and Ethical Issues	Lessons 1-4
(13)(F) demonstrate ethical use of online resources, including citation of source.	Computing for College and Careers 1b: Refining Your Interests	Unit 6: Legal and Ethical Issues	Lessons 1-4