

eDynamic Learning Course Title: Principles of Information Technology 1a / 1b

State: TX

State Course Title: Principles of Information Technology

State Course Code: 130.302

State Standards: Information Technology

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.			
(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;	Principles of Information Technology 1a/b	1a: Unit 8: The World of IT Careers; 1b: Unit 7: Legal and Ethical Sides of IT	Unit 8: Lesson: 3; Unit 7: Lesson: 2
(B) employ effective verbal and nonverbal communication skills;	Principles of Information Technology 1a	Unit 8: The World of IT Careers	Lessons 1, 2
(C) employ effective reading and writing skills;	Principles of Information Technology 1a	Unit 8: The World of IT Careers	Lesson 2
(D) solve problems and think critically;	Principles of Information Technology 1b	Unit 5: Working Together with Info Tech	Lesson 2
(E) demonstrate leadership skills and function effectively as a team member;	Principles of Information Technology 1b	Unit 5: Working Together with Info Tech	Lesson 3
(F) identify and implement proper safety procedures; and	Principles of Information Technology 1a	Unit 8: The World of IT Careers	Lesson 2
(G) demonstrate planning and time-management skills such as storyboarding and project management, including initiating, planning, executing, monitoring and controlling, and closing a project.	Principles of Information Technology 1a	Unit 8: The World of IT Careers	Lesson 2

(2) The student identifies various employment opportunities in the IT field.			
(A) identify job opportunities and accompanying job duties and tasks;	Principles of Information Technology 1a	Unit 8: The World of IT Careers	Lesson 1
(B) research careers of personal interest along with the education, job skills, and experience required to achieve personal career goals; and	Principles of Information Technology 1a	Unit 8: The World of IT Careers	Lesson 1
(C) describe the functions of resumes and portfolios.	Principles of Information Technology 1a	Unit 8: The World of IT Careers	Lesson 2
(3) The student uses evolving and emerging technologies to exchange information.			
(A) identify and describe functions of various evolving and emerging technologies;	Principles of Information Technology 1b	Unit 4: The Good and the Bad: Trends and Threats	Lesson 1
(B) send and receive text information and file attachments using electronic methods such as email, electronic bulletin boards, and instant message services;	Principles of Information Technology 1b	Unit 3: Digitally Speaking; Unit 4: The Good and The Bad: Trends and Threats	Unit 3: Lessons 1-3; Unit 4: Lesson 4
(C) demonstrate effective Internet search strategies, including keywords and Boolean logic, using various available search engines;	Principles of Information Technology 1a	Unit 7: The World of IT Apps	Lesson 3
(D) identify the various components of a Uniform Resource Locator;	Principles of Information Technology 1a	Unit 4: Network Fundamentals	Lesson 3
(E) demonstrate ability to effectively test acquired information from the Internet for accuracy, relevance, and validity;	Principles of Information Technology 1a	Unit 7: The World of IT Apps	Lesson 3
(F) explain issues concerning computer-based threats such as computer viruses, malware, and hacking; and	Principles of Information Technology 1b	Unit 3: Digitally Speaking; Unit 4: The Good and The Bad: Trends and Threats	Unit 3: Lessons 1-3; Unit 4: Lesson 4
(G) explain issues concerning Internet safety such as identity theft, online predators, cyber-bullying, and phishing.	Principles of Information Technology 1b	Unit 3: Digitally Speaking; Unit 4: The Good and The Bad: Trends and Threats	Unit 3: Lessons 1-3; Unit 4: Lesson 4
(4) The student demonstrates knowledge of the hardware components associated with information systems.			
(A) identify major hardware components and their functions;	Principles of Information Technology 1a	Unit 1 - The Basics: Understanding Computer Hardware	Lessons 3, 4
(B) use available reference tools as appropriate; and	Principles of Information Technology 1a	Unit 7: The World of IT Apps	Lesson 3

(C) connect and use a variety of peripheral devices such as mouse, keyboard, microphone, digital camera, and printer.	Principles of Information Technology 1a	Unit 1: The Basics: Understanding Computer Hardware	Lesson 3
(5) The student demonstrates knowledge of the different software associated with information systems.			
(A) differentiate between systems and application software;	Principles of Information Technology 1a	Unit 3: Systems and Software 101	Lessons 1-4
(B) identify and explain major operating system fundamentals and components such as disk operations, graphical user interface components, and hardware drivers;	Principles of Information Technology 1a	Unit 1: The Basics: Understanding Computer Hardware	Lessons 1-3
(C) explain the purpose of file types across software products;	Principles of Information Technology 1a	Unit 3: Systems and Software 101	Lessons 1, 2, 4
(D) demonstrate use of computer numbering systems and internal data representation such as identifying the hexadecimal value of a color;	Principles of Information Technology 1a	Unit 3: Systems and Software 101	Lessons 1, 2
(E) compare and contrast open source and proprietary software;	Principles of Information Technology 1a	Unit 3: Systems and Software 101	Lessons 1-4
(F) explain use of system management tools;	Principles of Information Technology 1a	Unit 3: Systems and Software 101	Lessons 1-4
(G) apply proper file management techniques such as creating, naming, organizing, copying, moving, and deleting files;	Principles of Information Technology 1a	Unit 3: Systems and Software 101	Lessons 1, 2
(H) use appropriate file protection and security; and	Principles of Information Technology 1b	Unit 4: The Good and the Bad - Trends and Threats	Unit 4 - All Lessons
(I) explain the process for discovering, quarantining, and removing viruses from a computer system.	Principles of Information Technology 1b	Unit 4: The Good and the Bad - Trends and Threats	Unit 4 - All Lessons
(6) The student analyzes network systems.			
(A) identify hardware associated with telecommunications and data networking such as servers, routers, switches, and network connectors;	Principles of Information Technology 1a: Introduction	1a: Unit 1 - The Basics: Understanding Computer Hardware	1a: Unit 1 - L3, L4
(B) identify and describe various types of networks such as peer-to-peer, local area networks, wide area networks, wireless, and Ethernet;	Principles of Information Technology 1a	Unit 4: Network Fundamentals	Unit 4: Lesson 1
(C) identify functions of network operating systems; and	Principles of Information Technology 1a	Unit 4: Network Fundamentals	Lesson 3

(D) explain troubleshooting techniques for various network connection issues.	Principles of Information Technology 1a	Unit 4: Network Fundamentals	Lesson 1
(7) The student applies word-processing technology.			
(A) identify the terminology associated with word-processing software;	Principles of Information Technology 1a	Unit 5: Word Processing	Lessons 1-4
(B) edit a variety of text documents using functions such as pagination, appropriate white space, tab settings, and font style, size, and color; and	Principles of Information Technology 1a	Unit 5: Word Processing	Lesson 4
(C) create professional documents such as memorandums, technical manuals, or proposals using advanced word-processing features.	Principles of Information Technology 1a	Unit 5: Word Processing	Lesson 4
(8) The student applies spreadsheet technology.			
(A) identify the terminology associated with spreadsheet software;	Principles of Information Technology 1a	Unit 6: Spreadsheets and Databases	Lessons 1, 3
(B) use numerical content to perform mathematical calculations;	Principles of Information Technology 1a	Unit 6: Spreadsheets and Databases	Lesson 1
(C) use student-created and preprogrammed functions to produce documents such as budget, payroll, statistical tables, and personal check book register;	Principles of Information Technology 1a	Unit 6: Spreadsheets and Databases	Lesson 1
(D) identify, generate, and describe the function of comma separated value files;	Principles of Information Technology 1a	Unit 6: Spreadsheets and Databases	Lesson 1
(E) create and analyze spreadsheets incorporating advanced features such as lookup tables, nested IF statements, subtotals, cell protection conditional formatting, charts, and graphs; and	Principles of Information Technology 1a	Unit 6: Spreadsheets and Databases	Lesson 1
(F) perform sorting, searching, and data filtering in documents.	Principles of Information Technology 1a	Unit 5: Word Processing	Lesson 2
(9) The student explores computer programming concepts.			
(A) identify the function of compilers and interpreters;	Principles of Information Technology 1a/b	1b: Unit 1: Programming Like a Pro; 1b: Unit 2: Web Design; 1a: The world of IT Apps	Unit 1, Lesson: 4; Unit 2: Activity; Unit 7: Lab
(B) explain the difference between the operation of compilers and interpreters;	Principles of Information Technology 1a/b	1b: Unit 1: Programming Like a Pro; 1b: Unit 2: Web Design; 1a: The world of IT Apps	Unit 1, Lesson: 4; Unit 2: Activity; Unit 7: Lab

(C) identify various computer languages and how the languages are used in software development;	Principles of Information Technology 1b	Unit 1: Programming Like a Pro	Lesson 1
(D) recognize data representation in software development such as string, numeric, character, integer, and date;	Principles of Information Technology 1a	Unit 6: Spreadsheets and Databases	Lessons 2, 3
(E) identify and explain the concept of algorithms; and	Principles of Information Technology 1b	Unit 1: Programming Like a Pro	Lessons 1-4
(F) describe the flow of a structured algorithm, including linear and iterative instructions such as using a flow chart.	Principles of Information Technology 1b	Unit 1: Programming Like a Pro	Lessons 1-4
(10) The student explores database technology.			
(A) identify the terminology associated with database software and database functions;	Principles of Information Technology 1a	Unit 6: Spreadsheets and Databases	Lessons 1, 3
(B) explore the application of databases;	Principles of Information Technology 1a	Unit 6: Spreadsheets and Databases	Lessons 1, 3
(C) identify and explain the purpose and elements of a query language;	Principles of Information Technology 1a	Unit 6: Spreadsheets and Databases	Lessons 2, 3
(D) identify and explain the purpose of fields and records; and	Principles of Information Technology 1a	Unit 6: Spreadsheets and Databases	Lesson 2
(E) describe the process of constructing a query, including multiple search parameters.	Principles of Information Technology 1a	Unit 6: Spreadsheets and Databases	Lessons 2, 3
(11) The student applies presentation management technology.			
(A) identify the terminology and functions of presentation software; and	Principles of Information Technology 1b	Unit 6: The Big Presentation	Lesson 1
(B) create, save, edit, and produce presentations incorporating advanced features such as links, hyperlinks, audio, and graphics.	Principles of Information Technology 1b	Unit 6: The Big Presentation	Lesson 1
(12) The student applies design and web publishing techniques.			
(A) identify the terminology associated with web page development and interactive media;	Principles of Information Technology 1b	Unit 2: Web Design	Lesson 1
(B) identify and explain design elements such as typeface, color, shape, texture, space, and form;	Principles of Information Technology 1b	Unit 2: Web Design	Lesson 1

(C) identify and explain design principles such as unity, harmony, balance, scale, and contrast;	Principles of Information Technology 1b	Unit 2: Web Design	Lesson 1
(D) identify and explain common elements of Hyper Text Markup Language (HTML) such as tags, stylesheets, and hyperlinks; and	Principles of Information Technology 1b	Unit 2: Web Design	Lesson 2
(E) create a web page containing links, graphics, and text using appropriate design principles.	Principles of Information Technology 1b	Unit 2: Web Design	Lesson 2
(13) The student understands and demonstrates legal and ethical procedures as they apply to the use of information technology.			
(A) explain and demonstrate ethical use of technology and online resources;	Principles of Information Technology 1a	Unit 7: The World of IT Apps	Lesson 3
(B) adhere to intellectual property laws;	Principles of Information Technology 1a/b	1a: Unit 4: Network Fundamentals; 1b Unit 7: Legal and Ethical Sides of IT	Unit 4: Lesson: 1; Unit 7: Lesson: 2
(C) explain the concept of intellectual property laws, including copyright, trademarks, and patents and consequences of violating each type of law;	Principles of Information Technology 1a/b	1a: Unit 4: Network Fundamentals; 1b Unit 7: Legal and Ethical Sides of IT	Unit 4: Lesson: 1; Unit 7: Lesson: 2
(D) examine the consequences of plagiarism;	Principles of Information Technology 1a/b	1a: Unit 4: Network Fundamentals; 1b Unit 7: Legal and Ethical Sides of IT	Unit 4: Lesson: 1; Unit 7: Lesson: 2
(E) identify and explain unethical practices such as hacking, online piracy, and data vandalism; and	Principles of Information Technology 1a/b	1a: Unit 4: Network Fundamentals; 1b Unit 7: Legal and Ethical Sides of IT	Unit 4: Lesson: 1; Unit 7: Lesson: 2
(F) demonstrate ethical use of online resources, including citation of source.	Principles of Information Technology 1a/b	1a: Unit 4: Network Fundamentals; 1b Unit 7: Legal and Ethical Sides of IT	Unit 4: Lesson: 1; Unit 7: Lesson: 2