

eDynamic Learning Course Title: Introduction to Networking 1a / 1b

State: TX
State Course Title: Networking
State Course Code: 130.305
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 the professional standards / employability skills as required by business and industry.			
(1)(A) identify and demonstrate 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;	Networking 1b	Unit 3: Network Design	Lesson 3
(1)(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;	Networking 1a	Unit 8: Networking Careers	Lesson 3
(1)(C) employ effective reading and writing skills;	Networking 1a	Unit 8: Networking Careers	Activity 1
(1)(D) employ effective verbal and nonverbal communication skills;	Networking 1a	Unit 8: Networking Careers	Activity 3
(1)(E) solve problems and think critically;	Networking 1a	Unit 8: Networking Careers	Lesson 3
(1)(F) demonstrate leadership skills and function effectively as a team member;	Networking 1a	Unit 8: Networking Careers	Lesson 3
(1)(G) identify and implement proper safety procedures;	Networking 1b	Unit 3: Network Design	Lesson 1
(1)(H) demonstrate an understanding of legal and ethical responsibilities in relation to the field of IT; and	Networking 1a	Unit 8: Networking Careers	Lesson 3
(1)(I) demonstrate planning and time-management skills such as project management, including initiating, planning, executing, monitoring and controlling, and closing a project.	Networking 1b	Unit 3: Network Design	Lesson 5
(2) The student identifies various employment opportunities in the IT field.			
(2)(A) select and research a specific job area with its accompanying duties and tasks;	Networking 1a	Unit 8: Networking Careers	Lesson 4
(2)(B) formulate a personal career plan along with the education, job skills, and experience necessary to achieve career goals; and	Networking 1a	Unit 8: Networking Careers	Lesson 2
(2)(C) develop a resume.	Networking 1a	Unit 8: Networking Careers	Activity 1

(3) The student relates core academic skills to the requirements of telecommunications and data network services.			
(3)(A) demonstrate effective verbal and written communication skills with individuals from varied cultures such as fellow workers, management, and customers;	Networking 1b	Unit 3: Network Design	Lessons 1-4
(3)(B) complete work orders for repair and installation;	Networking 1a	Unit 5: Fundamental Networking Concepts	Lesson 4
(3)(C) estimate supplies, materials, and labor costs on installation, maintenance, and repair work orders; and	Networking 1a	Unit 5: Fundamental Networking Concepts	Lesson 4
(3)(D) interpret technical documentation such as schematics, drawings, charts, diagrams, technical manuals, and bulletins.	Networking 1b	Unit 3: Network Design	Lesson 1
(4) The student acquires an understanding of telecommunications and data network services.			
(4)(A) explain digital and analog electronics theory;	Networking 1b	Unit 1: Internet Protocol Fundamentals	Lessons 1, 3
(4)(B) demonstrate knowledge of binary in relation to Internet Protocol (IP) addressing;	Networking 1b	Unit 1: Internet Protocol Fundamentals	Lessons 1, 3
(4)(C) distinguish the differences between a data packet and voice communications;	Networking 1b	Unit 5: Network Troubleshooting	Lesson 3
(4)(D) define the layers and functions of the Open System Interconnection model;	Networking 1a	Unit 5: Fundamental Networking Concepts	Lesson 3
(4)(E) explain Transport Control Protocol and IP fundamentals, including subnetting;	Networking 1b	Unit 1: Internet Protocol Fundamentals	Lessons 1, 3
(4)(F) distinguish between public and private networks;	Networking 1a	Unit 5: Fundamental Networking Concepts	Lesson 1
(4)(G) describe the standards and operations of wireless technologies in telecommunications and data networks;	Networking 1a	Unit 7: Wireless Networking	Lessons 5,6
(4)(H) differentiate between types of networks;	Networking 1a	Unit 5: Fundamental Networking Concepts	Lesson 1
(4)(I) identify national standards for data communication; and	Networking 1b	Unit 3: Network Design	Lessons 1-4
(4)(J) identify the potential benefits and problems for the future of telecommunications and data networking.	Networking 1b	Unit 3: Network Design	Lessons 1-4
(5) The student analyzes various types of configurations and upgrading.			
(5)(A) demonstrate understanding of components of telecommunications and data networks;	Networking 1a	Unit 5: Fundamental Networking Concepts	Lesson 4
(5)(B) identify major network operating systems;	Networking 1a	Unit 5: Fundamental Networking Concepts	Lesson 1
(5)(C) distinguish between different types of cables used in the telecommunications and data networking;	Networking 1a	Unit 6: Wired Networking	Lessons 2, 3

(5)(D) describe telecommunications and data networking media and connectors;	Networking 1a	Unit 5: Fundamental Networking Concepts	Lesson 2
(5)(E) differentiate among computer network topologies;	Networking 1a	Unit 5: Fundamental Networking Concepts	Lesson 1
(5)(F) explain the distinction between connectionless and connection transport;	Introduction to Networking 1a	Unit 5: Fundamental Networking Concepts	Lesson 4
(5)(G) explain the use of Transport Control Protocol and IP utilities;	Networking 1b	Unit 1: Internet Protocol Fundamentals	Lessons 1, 3
(5)(H) explain how to test, validate, and troubleshoot IP connectivity; and	Networking 1a	Unit 7: Wireless Networking	Lessons 5, 6
(5)(I) identify good practices to ensure network security.	Networking 1b	Unit 6: Network Security: Threats and Mitigation	Lesson 5
(6) The student recognizes and recommends the various types of network components to address industry needs.			
(6)(A) analyze various types and components of networks; and	Networking 1a	Unit 5: Fundamental Networking Concepts	Lesson 1
(6)(B) analyze the characteristics of networks to select the optimum configuration for an industry solution.	Networking 1a	Unit 7: Wireless Networking	Lessons 1,2
(7) The student develops a network design plan.			
(7)(A) produce planning documentation required prior to network implementation;	Networking 1b	Unit 3: Network Design	Lesson 1
(7)(B) explain the impact of environmental factors on computer networks;	Networking 1b	Unit 3: Network Design	Lesson 1
(7)(C) identify common peripheral ports and common network components such as hubs, routers, and switches;	Networking 1a	Unit 2: Computer Hardware Components	Lesson 6
(7)(D) develop an addressing scheme, including a subnetting chart;	Networking 1b	Unit 1: Internet Protocol Fundamentals	Lessons 1, 3
(7)(E) specify the tools that are commonly used to resolve network equipment problems;	Networking 1b	Unit 2: Network Services	Lesson 5
(7)(F) identify vendor testing documentation such as patches, fixes, and upgrades;	Networking 1a	Unit 5: Fundamental Networking Concepts	Lesson 2
(7)(G) demonstrate standard backup procedures and backup media storage practices; and	Networking 1a	Unit 7: Wireless Networking	Lesson 4
(7)(H) identify the factors that might affect performance in a network environment such as logic or frequency spectrum interference.	Networking 1a	Unit 7: Wireless Networking	Lessons 5,6
(8) The student provides support to computer users to maintain service.			
(8)(A) develop a written disaster recovery plan; and	Networking 1b	Unit 3: Network Design	Lesson 5

(8)(B) develop a written preventive maintenance plan.	Networking 1b	Unit 6: Network Security: Threats and Mitigation	Lesson 3
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