eDynamicLearning
CAREER & ELECTIVE COURSES

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

State: TX
State Course Title: Computer Programming I
State Course Code: 130.309
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
The student differentiates the concepts of integrity and confidentiality as related to technology in the business environment.			
(A) define business ethics	Intro to Programming 1b	Unit 6: Legal and Ethical Computing	Lesson 3
(B) distinguish between honest and dishonest business practices	Intro to Programming 1b	Unit 6: Legal and Ethical Computing	Lesson 3
(C) examine copyright and licensing issues in the software industry	Intro to Programming 1b	Unit 6: Legal and Ethical Computing	Lessons 1, 2
(D) analyze the effects of unethical practices on a business.	Intro to Programming 1b	Unit 6: Legal and Ethical Computing	Lesson 3
The student identifies and analyzes the client project software needs and requirements.			
(A) gather data to identify client and project requirements	Intro to Programming 1a	Unit 6: The Data Files	Lessons 2, 3
(B) identify input and output requirements	Intro to Programming 1a	Unit 3: Problems and Solutions	Lesson 1
(C) identify system processing requirements	Intro to Programming 1a	Unit 3: Problems and Solutions	Lesson 1
(D) develop program requirements and specifications.	Intro to Programming 1a	Unit 3: Problems and Solutions	Activity
The student develops an IT-based project plan to solve a specific problem.			
(A) define scope of work to meet client-based project needs	Intro to Programming 1a	Unit 3: Problems and Solutions	Lesson 1
(B) identify software development processes and issues	Intro to Programming 1a	Unit 1: Software Development 101	Lessons 1, 2
(C) explain the software system life cycle approach.	Intro to Programming 1a	Unit 1: Software Development 101	Lesson 2

The student designs a software application plan.			
(A) articulate the principles of system design such as procedural, object-oriented, and event driven processes	Intro to Programming 1a	Unit 1: Software Development 101	Lesson 3
(B) perform a logical design using appropriate software tools	Intro to Programming 1b	Unit 2: Plan for Success	Activity
(C) apply algorithmic and data structure concepts	Intro to Programming 1a	Unit 7: Running the Numbers	Lab, Activity
(D) identify constraints	Intro to Programming 1a	Unit 3: Problems and Solutions	Lesson 1
(E) identify modular design concepts	Intro to Programming 1b	Unit 1: Designing Programs	Lesson 3
(F) document the design specification using a defined procedure.	Intro to Programming 1b	Unit 1: Designing Programs	Activity
The student solves problems using different types and levels of programming languages and quality assurances.			
(A) differentiate among the concepts of data such as procedural, object-oriented, and event driven representation	Intro to Programming 1a	Unit 1: Software Development 101	Lesson 3
(B) identify current programming languages and the environment in which each is used	Intro to Programming 1a	Unit 2: Speaking the Language	Lessons 1-3
(C) produce procedural and object-oriented programs using structured coding with appropriate style and clarity of expression	Intro to Programming 1a	Unit 1: Software Development 101	Lesson 3
(D) demonstrate skill in program testing	Intro to Programming 1b	Unit 5: Running the Tests	Lab, Activity
(E) compare computed results with anticipated results to determine the reasonableness of the solutions	Intro to Programming 1b	Unit 5: Running the Tests	Lessons 1-3
(F) troubleshoot technological problems	Intro to Programming 1b	Unit 4: Quality Assurance	Lesson 1
(G) explain the software quality assurance process	Intro to Programming 1b	Unit 4: Quality Assurance	Critical Thinking 1, Lab
(H) follow established quality assurance procedures for testing, identifying problems, and tracking resolutions.	Intro to Programming 1b	Unit 4: Quality Assurance	Critical Thinking 1, Lab
(7) The student recognizes issues and complies with procedures for maintaining the security of computerized information.			
(A) identify risks to information systems facilities, data communications systems, and applications	Intro to Programming 1b	Unit 7: Safe and Secure	Lesson 1
(B) comply with federal and state legislation pertaining to computer crime, fraud, and abuse	Intro to Programming 1b	Unit 6: Legal and Ethical Computing	Lesson 2
(C) identify and select controls for information systems facilities, data communications, and applications appropriate to specific risks	Intro to Programming 1b	Unit 7: Safe and Secure	Lesson 2
(D) apply procedures used to recover from situations such as system failure and computer virus.	Intro to Programming 1b	Unit 7: Safe and Secure	Lesson 2