# eDynamicLearning
### CAREER & ELECTIVE COURSES

**Course Title: Game Design 1a and 1b**

**State: Texas**
**State Course Title: Video Game Design**
**State Course Code: 130.93**

**State Standards: Texas Essentials Skills and Knowledge**

**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:** | | | |
| (A)  identify and demonstrate positive work behaviors and personal qualities needed to be employable; | Game Design 1A | Unit 3: Game Pieces | Unit 3 Activity |
| (B)  demonstrate skills related to seeking and applying for employment; | Game Design 1A | Unit 3: Game Pieces | Unit 3 Activity |
| (C)  create a career portfolio to document information such as work experiences, licenses, certifications, and work samples; and | Game Design 1A | Unit 3: Game Pieces | Unit 3 Activity |
| (D)  demonstrate skills in evaluating and comparing employment opportunities. | Game Design 1A | Unit 3: Game Pieces | Unit 3 Activity |
| **(2)  The student applies academic knowledge and skills in video game design projects. The student is expected to:** | | | |
| (A)  apply English language arts knowledge by demonstrating skills such as correct use of content, technical concepts, vocabulary, grammar, punctuation, and terminology to write and edit a variety of documents; and | Game Design 1A and 1B | All units | All activities |
| (B)  apply mathematics knowledge and skills such as using whole numbers, decimals, fractions, and knowledge of arithmetic operations. | Game Design 1A and 1B | All units | All activities |
| **(3)  The student understands professional communications strategies. The student is expected to:** | | | |
| (A)  adapt language for audience, purpose, situation, and intent; | Game Design 1A and 1B | All units | All activities |
| (B)  organize oral and written information; | Game Design 1A and 1B | All units | All activities |
| (C)  interpret and communicate information; | Game Design 1A | Unit 7: The Business of Video Game Design | Unit 7 Lab |
| (D)  apply active listening skills; and | Game Design 1A | Unit 5: Developing a Game Design Document | Unit 5 Lab |
| (E)  communicate with diverse individuals. | Game Design 1A and 1B | All units | Discussion assignments |

| | | | |
|---|---|---|---|
| **(4)  The student understands and employs problem-solving methods and conflict-management skills. The student is expected to:** | | | |
| (A)  employ critical-thinking skills independently and in groups; and | Game Design 1A and 1B | All units | All activities |
| (B)  employ interpersonal skills in groups to solve problems. | Game Design 1A and 1B | All units | Discussion assignments |
| **(5)  The student applies cyber safety procedures. The student is expected to:** | | | |
| implement personal and professional safety rules and regulations. | Game Design 1A and 1B | All units | All activities |
| **(6)  The student applies leadership characteristics to student leadership and professional development activities. The student is expected to:** | | | |
| (A)  demonstrate leadership skills; and | Game Design 1A and 1B | All units | Discussion assignments |
| (B)  participate in a group setting. | Game Design 1A and 1B | All units | Discussion assignments |
| **(7)  The student applies ethical decision making and understands and complies with laws regarding use of technology in video game design. The student is expected to:** | | | |
| (A)  exhibit ethical conduct related to interacting with others such as maintaining client confidentiality and privacy of sensitive content and providing proper credit for ideas; | Game Design 1A | Unit 7: The Business of Video Game Design | Lesson 1 |
| (B)  discuss and apply copyright laws; | Game Design 1A | Unit 7: The Business of Video Game Design | Lesson 2 |
| (C)  model respect of intellectual property; | Game Design 1A | Unit 7: The Business of Video Game Design | Lesson 2 |
| (D)  demonstrate proper etiquette and knowledge of acceptable use policies; and | Game Design 1A | Unit 7: The Business of Video Game Design | Lesson 1 |
| (E)  analyze the impact of the video game design industry on society. | Game Design 1A | Unit 7: The Business of Video Game Design | Lesson 1 |
| **(8)  The student applies technical skills for efficiency. The student is expected to** | | | |
| employ planning and time-management skills to complete work tasks. | Game Design 1A | Unit 5: Developing a Game Design Document | Lesson 3 |
| **(9)  The student develops an understanding of video game design. The student is expected to:** | | | |
| (A)  demonstrate knowledge and appropriate use of computer operating systems; | Game Design 1A | Unit 1: From Tut to Mario: A History of Gaming | Lesson 4 |
| (B)  demonstrate appropriate use of hardware components, software programs, and storage devices; | Game Design 1A | Unit 1: From Tut to Mario: A History of Gaming | Lesson 4 |
| (C)  demonstrate knowledge of sound editing; | Game Design 1B | Unit 6: Crank Up the Volume | Lesson 3 |

| | | | |
|---|---|---|---|
| (D)  demonstrate knowledge of file formats and cross-platform compatibility; | Game Design 1B | Unit 6: Crank Up the Volume | Unit 6 Lab |
| (E)  acquire and exchange information in a variety of electronic file sharing formats; and | Game Design 1B | Unit 6: Crank Up the Volume | Unit 6 Lab |
| (F)  evaluate visual information by recognizing the use of principles and elements of design. | Game Design 1B | Unit 3: Enter Level One | Unit 3 Lab |
| **(10)  The students employs an appropriate design process to create and modify solutions to problems. The student is expected to:** | | | |
| (A)  combine graphics, images, and sound; | Game Design 1B | Unit 6: Crank Up the Volume | Unit 6 Activity 2 |
| (B)  apply principles of design; | Game Design 1B | Unit 3: Enter Level One | Unit 3 Lab |
| (C)  develop and reference technical documentation; and | Game Design 1A | Unit 5: Developing a Game Design Document | Lessons 1-2 |
| (D)  edit products. | Game Design 1B | Unit 2: Go 3D! | Lessons 3-4 |
| **(11)  The student researches the history and evolution of video game design. The student is expected to:** | | | |
| (A)  explain the history of video game design; | Game Design 1A | Unit 1: From Tut to Mario: A History of Gaming | Lesson 1 |
| (B)  describe how changing technology is affecting the industry; | Game Design 1B | Unit 2: Go 3D! | Unit 2 Lab |
| (C)  analyze the use of symbols in video game design of diverse cultures; | | | |
| (D)  compare current video game design technologies with historical technologies; | Game Design 1A | Unit 1: From Tut to Mario: A History of Gaming | Lesson 1 |
| (E)  compare various styles of video game design; and | Game Design 1A | Unit 4: Let's Talk Shop About Game Mechanics! | Lesson 1 |
| (F)  explore emerging and innovative video game design technologies and software. | Game Design 1B | Unit 2: Go 3D! | Unit 2 Lab |
| **(12)  The student understands and applies video game design principles, elements, and techniques. The student is expected to:** | | | |
| (A)  employ audience identification, script writing, character design, storyboarding, and audio and delivery formats; | Game Design 1A | Unit 6: Narratology: Storytelling in Games | Lessons 1-3 |
| (B)  describe and use motion paths, scripting, programming, and interactivity; | Game Design 1B | Unit 4: Get Physical | Lessons 1-5 |
| (C)  describe lighting and perspective; and | | | |
| (D)  describe and use production processes such as titles, credits, and special effects. | Game Design 1B | Unit 6: Crank Up the Volume | Lessons 1-2 |

| | | | |
|---|---|---|---|
| **(13) The student evaluates a product using critical-thinking skills. The student is expected to** | | | |
| evaluate products and product quality against established criteria and rubrics. | Game Design 1A | Unit 2: What's in a Game? | Unit 2 Lab |
| **(14) The student presents oral or written evaluations of video game design projects. The student is expected to:** | | | |
| (A) identify the intended audience; | Game Design 1A | Unit 5: Developing a Game Design Document | Lessons 1-2 |
| (B) describe aesthetics; | Game Design 1A | Unit 5: Developing a Game Design Document | Lessons 1-2 |
| (C) explain the storyline; | Game Design 1A | Unit 5: Developing a Game Design Document | Lessons 1-2 |
| (D) summarize subject matter; and | Game Design 1A | Unit 5: Developing a Game Design Document | Lessons 1-2 |
| (E) discuss the use of sound. | Game Design 1B | Unit 6: Crank Up the Volume | Lesson 3 |
| **(15) The student creates video game design projects. The student is expected to** | | | |
| use a variety of techniques and software programs. | Game Design 1A | Unit 3: Game Pieces | Lesson 4 |
| **(16) The student differentiates current programming languages. The student is expected to:** | | | |
| (A) discuss the use of computer programming languages in other fields of study; and | Game Design 1A | Unit 8: Let's Make a Game! | Lesson 3 |
| (B) demonstrate knowledge of specific programming terminology and concepts. | Game Design 1A | Unit 8: Let's Make a Game! | Lessons 1-4 |
| **(17) The student applies problem-solving strategies. The student is expected to** | | | |
| apply design specifications, step-wise refinement, or algorithm development. | Game Design 1A | Unit 5: Developing a Game Design Document | Lessons 1-2 |
| **(18) The student develops coding with correct and efficient use of expressions. The student is expected to** | | | |
| use user-defined functions; proper operator precedence; and sequential, conditional, and repetitive control structures. | Game Design 1A | Unit 8: Let's Make a Game! | Lesson 3 |
| **(19) The students applies constructive criticism to products. The student is expected to** | | | |
| seek and respond to advice from peers and professionals in delineating technological tasks. | Game Design 1A | Unit 4: Let's Talk Shop About Game Mechanics! | Unit 4 Activity 2 |
| **(20) The student uses research skills and electronic communication, with appropriate supervision, to create new knowledge. The student is expected to:** | | | |

| | | | |
|---|---|---|---|
| (A) participate with electronic communities as a learner, initiator, contributor, and teacher or mentor; | Game Design 1A and 1B | All units | All activities |
| (B) extend the learning environment beyond the school walls with digital products created to increase teaching and learning in the foundation and enrichment curricula; and | Game Design 1A and 1B | All units | All activities |
| (C) participate in relevant, meaningful activities in the larger community and society to create electronic projects. | Game Design 1A and 1B | All units | All activities |
| **(21) The student uses technology applications to facilitate evaluation of communication processes and products. The student is expected to:** | | | |
| (A) write technology specifications for planning/evaluation rubrics documenting variables, prompts, and programming code internally and externally; and | Game Design 1A | Unit 5: Developing a Game Design Document | Lessons 1-2 |
| (B) debug and solve problems using reference materials and effective strategies. | Game Design 1A | Unit 8: Let's Make a Game! | Lesson 3 |
| **(22) The student understands technology concepts, systems, and operations as they apply to game programming. The student is expected to:** | | | |
| (A) identify basic game components, including the game engine, game play subsystems, data structures, models, and interfaces; | Game Design 1A | Unit 2: What's in a Game? | Lessons 1-4 |
| (B) generate random numbers in a program; | Game Design 1A | Unit 2: What's in a Game? | Lesson 4 |
| (C) create a program implementing conditional statements; | Game Design 1A | Unit 8: Let's Make a Game! | Lesson 4 |
| (D) develop an appropriate data model; | Game Design 1A | Unit 8: Let's Make a Game! | Lesson 3 |
| (E) demonstrate an understanding of and apply object-oriented game programming; | Game Design 1A | Unit 8: Let's Make a Game! | Lesson 3 |
| (F) demonstrate an understanding of game programming essentials, including event-driven programming, communicating with messages, and device management; | Game Design 1A | Unit 8: Let's Make a Game! | Lesson 3 |
| (G) demonstrate an understanding of the role of game events, the animation loop, and game timing; | Game Design 1B | Unit 5: Accept the Mission | Lessons 4-5 |
| (H) demonstrate an understanding of the role of game engines; | Game Design 1A | Unit 3: Game Pieces | Lesson 4 |
| (I) apply basic game screen design and layout, including visual controls, user interfaces, menus, and options; | Game Design 1B | Unit 6: Crank Up the Volume | Lessons 1-2 |
| (J) use game control design to understand, access, and control input devices; | | | |
| (K) demonstrate an understanding of and apply game animation, including the principles of animation and frame-based animation; | Game Design 1B | Unit 1: Get Artistic | Lessons 3-4 |
| (L) demonstrate an understanding of game events, including listeners, triggers, and timed events; | Game Design 1B | Unit 3: Enter Level One | Lesson 4 |
| (M) demonstrate an understanding of and implement collision detection, including models and sprite collisions; | Game Design 1A | Unit 8: Let's Make a Game! | Lesson 2 |

| | | | |
|---|---|---|---|
| (N)  demonstrate an understanding of player progression, including leveling, linear progression, and maintaining high score data; and | Game Design 1B | Unit 3: Enter Level One<br>Unit 5: Accept the Mission | Lesson 1<br>Lesson 2 |
| (O)  demonstrate an understanding of algorithmic decision making. | Game Design 1A | Unit 2: What's in a Game? | Lesson 1 |