Virginia CTE

Game Design and Development (8400/ 36 weeks)

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A Demonstrating Personal Qualities and Abilities GDD.1

1 Demonstrate creativity and innovation. GDD.1.1

2 Demonstrate critical thinking and problem solving. GDD.1.2

3 Demonstrate initiative and self-direction. GDD.1.3

4 Demonstrate integrity. GDD.1.4

5 Demonstrate work ethic. GDD.1.5

B Demonstrating Interpersonal Skills GDD.2

6 Demonstrate conflict-resolution skills. GDD.2.6

7 Demonstrate listening and speaking skills. GDD.2.7

8 Demonstrate respect for diversity. GDD.2.8

9 Demonstrate customer service skills. GDD.2.9

10 Collaborate with team members. GDD.2.10

C Demonstrating Professional Competencies GDD.3

11 Demonstrate big-picture thinking. GDD.3.11

12 Demonstrate career- and life-management skills. GDD.3.12

13 Demonstrate continuous learning and adaptability. GDD.3.13

14 Manage time and resources. GDD.3.14

15 Demonstrate information-literacy skills. GDD.3.15

16 Demonstrate an understanding of information security. GDD.3.16

17 Maintain working knowledge of current information-technology (IT) systems. GDD.3.17

18 Demonstrate proficiency with technologies, tools, and machines common to a specific occupation. GDD.3.18

19 Apply mathematical skills to job-specific tasks. GDD.3.19

20 Demonstrate professionalism. GDD.3.20

.1 Demonstrate reading and writing skills. GDD.3.21

.2 Demonstrate workplace safety. GDD.3.22

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D Examining All Aspects of an Industry GDD.4

23 Examine aspects of planning within an industry/organization. GDD.4.23

24 Examine aspects of management within an industry/organization. GDD.4.24

25 Examine aspects of financial responsibility within an industry/organization. GDD.4.25

26 Examine technical and production skills required of workers within an industry/organization. GDD.4.26

27 Examine principles of technology that underlie an industry/organization. GDD.4.27

28 Examine labor issues related to an industry/organization. GDD.4.28

29 Examine community issues related to an industry/organization. GDD.4.29

30 Examine health, safety, and environmental issues related to an industry/organization. GDD.4.30

E Addressing Elements of Student Life GDD.5

31 Identify the purposes and goals of the student organization. GDD.5.31

32 Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult. GDD.5.32

33 Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects. GDD.5.33

34 Identify Internet safety issues and procedures for complying with acceptable use standards. GDD.5.34

F Exploring Work-Based Learning GDD.6

36 Reflect on lessons learned during the WBL experience. GDD.6.35

37 Explore career opportunities related to the WBL experience. GDD.6.36

38 Participate in a WBL experience, when appropriate. GDD.6.37

G Exploring the History, Culture, and Purpose of Games GDD.7

39 Define a game. GDD.7.39

40 Differentiate between entertainment, serious games, and simulation. GDD.7.40

41 Define terms associated with the game industry. GDD.7.41

42 Examine the cultural connections and/or sensitivities of games. GDD.7.42

43 Analyze the influence of the game industry and serious games on society. GDD.7.43

44 Summarize the history of game development. GDD.7.44

45 Interpret the significant role of controversy in the development of games. GDD.7.45

dentifying Ethical Concerns in Game Design GDD.8

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I6 Differentiate between public domain and intellectual property. GDD.8.46

47 Adhere to intellectual property laws. GDD.8.47

48 Describe ethical issues related to the game industry. GDD.8.48

49 Analyze the implications of ethical and unethical behavior. GDD.8.49

I Exploring Game Industry Fundamentals GDD.9

50 Identify game genres. GDD.9.50

51 Differentiate among the classifications of games. GDD.9.51

52 Describe trends in the gaming industry. GDD.9.52

53 Describe gaming hardware. GDD.9.53

54 Identify organizational components associated with game design. GDD.9.54

J Introducing Games GDD.10

55 Explain the foundations of a successful game. GDD.10.55

56 Describe the components of game design. GDD.10.56

57 Design a game prototype. GDD.10.57

58 Create a physical model/mock-up of a game. GDD.10.58

59 Develop a production plan for the game design. GDD.10.59

60 Perform quality assurance (QA). GDD.10.60

61 Examine a game for accessibility. GDD.10.61

62 Create user documentation. GDD.10.62

K Examining Narrative Design GDD.11

63 Define narrative design. GDD.11.63

64 Identify the components of storytelling. GDD.11.64

65 Explain perspective. GDD.11.65

66 Plan the setting. GDD.11.66

67 Evaluate game assets. GDD.11.67

68 Design game assets. GDD.11.68

69 Analyze a storyboard. GDD.11.69

L Creating Game Art GDD.12

70 Animate game assets. GDD.12.70

71 Create art for a game. GDD.12.71

72 Create a sprite. GDD.12.72

73 Edit an image using image editing software. GDD.12.73

74 Apply the elements of design. GDD.12.74

75 Apply the principles of design. GDD.12.75

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76 Describe the components of 3D images. GDD.12.76

77 Create visual effects (VFX) for games. GDD.12.77

M Incorporating Audio Components in Game Design GDD.13

78 Manipulate sounds. GDD.13.78

79 Incorporate sounds appropriate to a particular game scenario. GDD.13.79

80 Evaluate the role of sound and music. GDD.13.80

N Utilizing Logic and Programming GDD.14

81 Identify types of game engines. GDD.14.81

82 Identify game engines. GDD.14.82

83 Identify game development techniques. GDD.14.83

84 Describe different platforms for game development. GDD.14.84

85 Apply a script. GDD.14.85

O Building a Game GDD.15

86 Complete a game design document. GDD.15.86

87 Develop storyboards. GDD.15.87

88 Create games. GDD.15.88

P Examining Marketing Strategies GDD.16

89 Explain how market segmentation is used to identify a target market. GDD.16.89

90 Examine marketing strategies and their importance. GDD.16.90

Q Preparing for Career Opportunities GDD.17

91 Compile a multimedia portfolio. GDD.17.91

92 Explore careers associated with game design. GDD.17.92