

# Wyoming Department of Education Required Virtual Education Course Syllabus

## BIG HORN COUNTY SCHOOL DISTRICT #1

Program Name	WYCA	Content Area	Vocational Education
Course ID	CAOT78102	Grade Level	9, 10, 11, 12
Course Name	Game Design I B	# of Credits	0.5
SCED Code	10203G0.5012	Curriculum Type	Connections Academy

### COURSE DESCRIPTION

*This course is for anyone who loves gaming and wants to design games. You'll learn how to use popular game design software to create engaging, interactive games in a variety of genres. In addition, you'll get a solid foundation in the basic concepts of game development. By the end of this course, you will have a variety of polished games for your game development portfolio.*

### WYOMING CONTENT AND PERFORMANCE STANDARDS

STANDARD#	BENCHMARK
CV12.1.1	College and career-ready students evaluate current knowledge and interests in order to set career goals.
CV12.1.2	College and career-ready students explore careers including outlook, salary, needed training, duties and lifestyle utilizing all available resources including mentors and industry experts.
CV12.1.3	College and career-ready students prepare an educational and career plan to enable them to gain desired knowledge and experience.
CV12.1.4	College and career-ready students demonstrate employability skills that enable them to be responsible and contributing citizens and employees.
CV12.4.1	College and career-ready students produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
CV12.4.2	College and career-ready students determine the meaning of symbols, key terms, and other content-specific words and phrases as they are used in technical context. (*Adapted from CCSS RL.9.11)
CV12.4.3	College and career-ready students acquire, manipulate, analyze, diagnose, and/or report information, using the appropriate technology.
CV12.4.4	College and career-ready students precisely follow a complex multistep procedure when performing technical tasks. (*Adapted from CCSS RL.9.3)
CV12.5.1	College and career-ready students manage resources to develop, analyze, and implement systems and applications.
CV12.5.2	College and career-ready students productively complete tasks taking constraints, priorities and resources into account.
CV12.5.3	College and career-ready students safely and ethically use current industry-standard tools and emerging technologies.
CV12.5.4	College and career-ready students utilize technology to develop innovative solutions or products.

### SCOPE AND SEQUENCE

UNIT OUTLINE	STANDARD#	OUTCOMES
<p><b>Unit 1: Programming Concepts</b></p> <p>This course is for anyone who loves gaming and wants to design games. The student will learn how to use popular game design software to create engaging, interactive games in a variety of genres. In addition, the student will get a solid foundation in the basic concepts of game development. By the end of this course, the student will have a variety of polished games for your game development portfolio.</p>	CV12.4.1, CV12.4.2, CV12.4.4, CV12.5.2, CV12.5.3, CV12.5.4	<ul style="list-style-type: none"> <li>• Define common mathematical terms as they relate to programming languages</li> <li>• Set up keyboard controls for a game object</li> <li>• Write a simple conditional statement to create an action in the video game that occurs because of a related action</li> <li>• Ensure that code is free of typical errors</li> </ul>
<p><b>Unit 2: Level Design</b></p> <p>This course is for anyone who loves gaming and wants to design games. The student will learn how to use popular game design software to create engaging, interactive games in a variety of genres. In addition, the student will get a solid foundation in the basic concepts of game development. By the end of this course, the student will have a variety of polished games for your game development portfolio.</p>	CV12.4.1, CV12.4.2, CV12.4.4, CV12.5.2, CV12.5.3, CV12.5.4	<ul style="list-style-type: none"> <li>• Explain the difference between portals and occluders</li> <li>• Apply the correction cycle to your game prototype so that players have a way to practice and improve within your game</li> <li>• Avoid common bugs in level design</li> <li>• Design a game environment that supports the gameplay of your prototype</li> </ul>
<p><b>Unit 3: Art Production in 2-D and 3-D Games</b></p> <p>This course is for anyone who loves gaming and wants to design games. The student will learn how to use popular game design software to create engaging, interactive games in a variety of genres. In addition, the student will get a solid foundation in the basic concepts of game development. By the end of this course, the student will have a variety of polished games for your game development portfolio.</p>	CV12.4.2, CV12.4.4, CV12.5.2, CV12.5.3, CV12.5.4	<ul style="list-style-type: none"> <li>• Describe how a game's art might represent a particular culture or historical time period</li> <li>• List the different specializations within video game art and give examples of the background knowledge needed for these specializations</li> <li>• Categorize visual art software according to its function</li> <li>• Create a seamless texture to use in your game prototype</li> </ul>

<p><b>Unit 4: Balancing and Ramping Gameplay</b>  This course is for anyone who loves gaming and wants to design games. The student will learn how to use popular game design software to create engaging, interactive games in a variety of genres. In addition, the student will get a solid foundation in the basic concepts of game development. By the end of this course, the student will have a variety of polished games for your game development portfolio.</p>	<p>CV12.4.2, CV12.4.4, CV12.5.2, CV12.5.3, CV12.5.4</p>	<ul style="list-style-type: none"> <li>• Describe the different elements that give your game good balance</li> <li>• Demonstrate the ramping involved in your video game, from level to level</li> <li>• Explain the steps in the game testing cycle</li> <li>• Discuss how video games can be made accessible to people with different abilities</li> </ul>
<p><b>Unit 5: Marketing Your Game</b>  This course is for anyone who loves gaming and wants to design games. The student will learn how to use popular game design software to create engaging, interactive games in a variety of genres. In addition, the student will get a solid foundation in the basic concepts of game development. By the end of this course, the student will have a variety of polished games for your game development portfolio.</p>	<p>CV12.1.1, CV12.1.2, CV12.1.3, CV12.1.4, CV12.4.1, CV12.4.2, CV12.5.2, CV12.5.4</p>	<ul style="list-style-type: none"> <li>• Discuss the legal considerations that go into marketing a game</li> <li>• Distinguish between the multiple agents that influence video game marketing: publishers, developers, marketers, distributors, retailers, and reviewers</li> <li>• Develop a strategy for marketing your own game</li> <li>• Evaluate a game in terms of government rating systems</li> </ul>