

Course Description

Gaming Technology is designed for 10 - 12th grade students. Students will learn a brief history of games and their development purposes in other societies around the world as well as in the United States. Students will develop and evaluate games using a variety of technologies and strategies. Students will participate in game development and experiment with coding. Students will also have the opportunity to design and evaluate mobile apps or gaming models. Students will create collaborative multimedia presentations. This course provides a pathway for students to learn relevant technical skills and prepare themselves for career opportunities/college.

Course Goals and/or Major Student Outcomes

Students will engage in the use of relevant technology applicable across the curriculum. This course provides a rigorous curriculum designed to prepare students for additional coursework or career readiness. Students will use technical knowledge to expand, synthesize, develop, and design games or computer applications.

Course Outline

Unit 1

History of Games

In this unit students research and create a time-line of historical relevance and connect game theory. Game genres and publishing is explored and students engage in a variety of activities to connect past and present. Evolution and origin of games is explored and students use information to formulate ideas about the connections presented in material from a historical perspective.

Unit 2

Designing Process

Students unfold the game design basics using the perspective of current game designers. The process involves such aspects as brainstorming and writing a story to engage players. Through a variety of activities and writing assignments students will create storyboards and be able to connect detailed developments of design as related to real world applications. Students will also analyze written and drawn storyboards

from current state of the art game designers. Students will learn game structure from designer perspectives that bridge learning to real world applications.

Unit 3

Software

Students will be introduced to Adobe CS6 a relevant software suite of graphic design and web development applications. Students will create and design projects individually as well as collaboratively with other students using Illustrator, photo shop, Fireworks and Dreamweaver. One example would be using Illustrator a professional drawing tool to construct an image. Students will also be introduced to HTML program language and use Dreamweaver to create simple webpages. Using this program suite will allow students to connect software design tools and allow a deeper connection to the overall gaming design process. Design structure, symmetry, and gameplay elements provide a technical mapping as students build foundation of knowledge.

Unit 4

Game Creation

Emphasis on structure, process, audience, and purpose also theme/genre and character development.

Using Stencil, Twine, Game Maker and/or other software technologies students will learn the process for creating an actual “live” game. Using a storyboard students will create a game using the writing the story approach. The “story” will then be used to create a game. Considerable amount of time will be spent on character and rule development. Students will be able to create and evaluate strategies and game playability both individually and in small groups. An extension lesson would be to have other students come engage in play of their games created and evaluate based on common criteria. Students will build upon design and broaden their overall understanding gaming through technology. Students will participate in online forums or blogs to interface with other student environments. Students will have the opportunity to interface and interact with other students creating a peer forum to discuss technology developments and design techniques. Additionally, students can collaborate collectively to critique and rate/rank student projects.

TEXTS

TITLE: The Guide to Great Video Game Design

Edition: 2nd

Publisher: 2014 John Wiley and Sons LTD

Author: John Wiley

TITLE: The Game Makers Apprentice: Game Development for Beginners

Edition: 2nd

Publisher: Apress

Author: Jacob Habgood and Mark Overmars

Supplemental TEXTs

TITLE: Game Design Workshop

Edition: 3rd

Publisher: CRC Press

Author: Tracy Fullerton

Title: Video Game Storytelling, What every Developer Needs to Know about Narrative Technology

Edition: 2nd

Publisher: 2014 Watson-Guption

SOFTWARE

Stencil www.stencyl.com

Wix www.wix.com

NetLogo <http://ccl.northwestern.edu/netlogo/>

Game Maker Software program

Adobe CS6

Key Assignments:

Unit 1

- Students create a historical timeline multimedia presentation.
- Informational Essay
- Small group presentation findings

Unit 2:

- Conduct research
- Create 4 - 6 Storyboards
- Multimedia presentations
- Peer Editing /Rubric Design

Unit 3

- Students will create 3 webpages using animation, graphic artwork, images, music, and sound
- Create a flowchart of elements of game mechanics.
- Completion of tutorials in Adobe CS6 – Photoshop, Illustrator, and Dreamweaver

Unit 4

- Students create storyboard including core gameplay, controls, rules, modes of play and other features specific to their game.
- Students create a prototype of a game or simulation and playtest the functionality of the game. Students will test and compare and contrast different games and user experiences.

Instructional Methods and/or Strategies

Writing Assignments

Independent Internet Research

Troubleshooting errors and revision

Small Group Instruction

Independent practice, partner, or group work

Student Projects

SDAIE strategies when needed to supplement second language learners

Oral discussion/Evaluation

Peer Evaluation

Checks for understanding to see all students are learning

Collaborative Learning groups

Context for Course

This course is focused around information technology with an emphasis on Arts media and entertainment. The course is designed to develop and awareness of the importance of emerging technology and the role it plays through games. Applications allow students to explore and understand game development, creation, design and the increased game technology connections in society today.

History of Course Development

The original course was developed at the Spring 2014 University of California Curriculum Integration (UCCI) Institute focusing on subject area “b” English and Career Technical Education (CTE) industry sector of Information and Communication Technologies. Writing Games for Social Change coursework was approved last year by the SMJUHS. Our department goals were to create more “g” elective courses and by using the original course material we were able to create a similar class with challenging and relevant career technical elements.