

CSCI 1030 – Intro to Computer Science: Game Design
(previously CSCI 142 and CSCI 130)

Syllabus

Course Description:

Introduces the design of computer and video games. Students learn the practical aspects of game implementation using computer game engines and 3D graphics tools, while simultaneously studying game concepts like history, genres, storylines, gameplay elements and challenges, and the design process. No computer science background required. 3.0 credit hours.

Instructor: Prof. Jason Fritts

Course URL: <http://cs.slu.edu/~fritts/csci1030/>

Textbooks: *to be determined*

List of Topics:

<i>Topic</i>
Introduction to Computer and Video Games
History of Computer Games
Purposes of Computer Games (not just for entertainment...)
Today's Computer Game Industry (a multi-disciplinary industry)
Player Motivation and Marketing
Genres of Computer Games
The Game Setting (History, Background, Storyline, and Setting of the Game)
Types of Challenges in Computer Games
Storytelling in Games
Character Development in Games (both Avatars and NPCs)
Gameplay Mechanics
The Game Design Process and Design Documents
Computer Game Engines (e.g. Unity, Game Maker, etc.)
Building the Game World/Setting
Textures and Image Manipulation (for creating/editing textures)
Objects (both 2D and 3D) and Collisions
Creating Static 3D Objects
Creating Dynamic (Animate-able) 3D Objects
Employing Audio in Computer Games