

VCIL-1441: GAME ART AND ASSET DESIGN

Cuyahoga Community College

Viewing: VCIL-1441 : Game Art and Asset Design

Academic Term:

Fall 2020

Subject Code

VCIL - VC-Illustration

Course Number:

1441

Title:

Game Art and Asset Design

Catalog Description:

Asset and environment design for various game design and virtual realty platforms. Emphasis on concept development and production ready 2D and 3D assets for use in Game Engines, Virtual and Augmented Reality platforms.

Credit Hour(s):

3

Lecture Hour(s):

2

Lab Hour(s):

3

Requisites

Prerequisite and Corequisite

VCIL-1640 3D Design or concurrent enrollment.

Outcomes

Course Outcome(s):

NEEDS OUTCOME

Essential Learning Outcome Mapping:

Critical/Creative Thinking: Analyze, evaluate, and synthesize information in order to consider problems/ideas and transform them in innovative or imaginative ways.

Oral Communication: Demonstrate effective verbal and nonverbal communication for an intended audience that is clear, organized, and delivered effectively following the standard conventions of that language.

Objective(s):

1. Describe various 2D and 3D Design tools and systems used to create game ready artwork.
2. Identify primary tools and best practices to create raster and vector based 2D assets.
3. Modify primitive objects into complex assets by using move, scale, rotate and extrusion of fundamental geometry and polygon components.
4. Experiment with different strategies and workflows to produce game assets for characters, props assets, environment and level design.
5. Explain benefits of 2D and 3D assets as they relate to platform and device optimization.
6. Identify and implement basic concept documents, style guides and other resources to build comprehensive assets to populate a game or simulation that are optimized for target device, promote continuity and adhere to technical requirements of a projects design document.

Course Outcome(s):

Produce a concept document and style guide of 2D and 3D assets for games, simulations and other interactive entertainment projects

Objective(s):

1. Explore using reference images and materials to establish examples of best practices in game design industries and emulate successful examples.
 2. Develop a body of designs and artwork for a game based project that is prepared for presentation from both inside and outside of the Game Engine environment.
-

Methods of Evaluation:

1. Written assignments
2. Laboratory exercises
3. Case studies
4. Projects
5. Presentations
6. Class Portfolio

Course Content Outline:

1. History of Game Art and Visual Design
 - a. Early Game Assets
 - b. Monochromatic
 - c. 8 bit to 16 bit progression
 - d. 2D and 3D Visual Assets
 - e. Peripheral and Subordinate Art
2. Game Assets 2D
 - a. Raster
 - b. Vector
 - c. Formal aspects of Design
 - i. Form
 - ii. Color
 - iii. Composition
 - d. Sprites, Sprite Sheets and VFX
 - e. Perspective, top-down, side scrolling and orthographic
 - f. 2D Animation Methods
 - g. Modular Assets for variable designs
 - h. Environment and Level Visualization
 - i. User Interface and Heads Up Displays
 - j. Interactive Elements
 - k. Optimization for
3. 3D Game Assets & Development
 - a. Industry Standard vs Independent Tools
 - b. Modeling
 - c. Sculpting
 - d. Topology
 - e. Materials
 - f. Textures
 - g. Shaders
 - h. Rigging
 - i. Animation
 - j. Optimization
4. Environment Design
 - a. Concept Document
 - b. World Building
 - c. Design Documents
 - d. Asset Sheets
 - e. Annotation and Narratives
 - f. Level Design
5. Presentation
 - a. Concept Development
 - b. Design Documents

- c. Technical Demo
- d. Sandbox
- e. Vertical Slice
- f. Developer/Design Blog
- g. Project Portfolio

Resources

Jesse Schell. *The Art of Game Design*. 3rd. AK Peters/CRC Press, 2019. Juky. <https://learning.oreilly.com/library/view/the-art-of/9781351803632/>

Daniel Silber. *Pixel Art for Game Developers*. CRC Press, 2015. <https://learning.oreilly.com/library/view/pixel-art-for/9781482252316/>

Eliot Lilly. *Big Bad World of Concept Art for Video Games*. Design Studio Press, 2015. https://www.amazon.com/Big-World-Concept-Video-Games/dp/1624650201/ref=asc_df_1624650201/?tag=hyprod-20&linkCode=df0&hvadid=312057344057&hvpos=1o2&hvnetw=g&hvrnd=12523110743614301904&hvpon=&hvptwo=&hvqmt=&

Eyal Assef. *Rigging for Games*. Focal Press, 2015. https://learning.oreilly.com/search/?query=concept%20art&extended_publisher_data=true&highlight=true&include_assessments=false&include_case_studies=true&include_courses=true&include

Top of page

Key: 4348