USD 233 – OLATHE DISTRICT SCHOOLS

Course Title: Game Art Creation

Credit: ½
Grade Level: 10, 11
Course Length: 1 Semester

**Course Description:**

This course provides a foundation in the tools, techniques, and production methods for art creation for 2D/3D games. Working with a variety of mediums students will learn figure and structural drawing, fundamentals of 2D and 3D art, concept art for game development, drawing character, environment, and user interface art, animation concepts and principles, modeling, texturing, and animating game art.

**Prerequisites:** Intro to Gaming

**Instructional Materials:** Textbooks-3D Game Art "f/x & Design", Game Art "The Graphic Art of Computer Games". (Textbooks are subject to change without notice)

Teacher designed mini projects, web site projects/lessons, software included lessons/tutorials/projects.

**Instructional Strategies:** Direct instruction, demonstration, graphic organizers, application exercises, projects, cooperative groups, case studies, guest speakers, DVD(s), videos, internet.

**Assessments:** Daily work performance, teacher observation, rubric, checklist, classroom discussion, projects, research relevant to topic, application performance, exams, conferencing, portfolio, written response, sketchbook, journaling, self evaluation.

**Course Objectives:**

- Learn appropriate game art for specific purposes.
- Develop an understanding of basic game art development.
- Understand Basic Elements of polygonal modeling.
- Develop textures and low poly models that show control of various gaming structures and characters.
- Apply visual communications knowledge and skills to express ideas imaginatively.
- Use critical thinking, and problem solving to communicate ideas visually.
- Produce game art and animation that demonstrate basic knowledge of expository and narrative communication processes and game development.
- Develop skill in the use of techniques, procedures and gaming art concepts.

- Learn appropriate use of graphic images, game art elements, and production strategies to add impact and realism to a game.

**Course Content:**

## I. Introduction to 3D Game Art

- 3D Game Art Development
- Game Art Terminology
- Gaming Art Technology/Development

## II. Gaming Production Process

- Game Art strategies
- Game Art Teams
- Game Art Work Flow

## III. Game Art Sources

- The Right Image for the Job.
- Working With 2D Images
- Texture Creation
- Tiling
- Color Reduction
- Sizing
- Defect and Hot-Spot Removal
- Weathering and Aging
- Scanners
- Cleaning up Scanned Images
- Digital Cameras
- Graphic Tablets
- Online Resources
- Game Art Sources
- Examining Top Games
- Using 3D Applications to Create 2D Assets
- Using Other Software to Create Game Assets

## IV. Game Textures: The Basics

- Base Textures

- Tiling Textures
- Advanced Tiling
- Creating Base Textures

## V. Advanced Texture Creation and Management

- Planning Your Texture Library
- Creating Advanced Textures from Bases

## VI. Logos

- Create a Logo
- The Design Process
- Trademark Your Logo
- Creating Game Logos
- Sprites

## VII. Menus and Interfaces

- Intro
- Ten Usability Principles
- Ten Usability Heuristics as they apply to games
- Creating a typical 3D Menu
- Level Editor

## VIII. Automating Texture Creation

- Intro
- Using Keyboard Shortcuts
- Working with Unflattened Images
- Using Automation Commands
- Creating Custom Brushes
- Using Action Sets
- Adding Action to Event Lines.

## IX. Introduction to MAYA Gaming

- Introduction
- The Polygon Toolset
- Modeling
- UV Mapping
- Games and Character Setup
- Games and Animation
- Beyond Low Poly

## X. Concept Art

- Tools
- Planning for Sketches
- Generic Human Proportions

## XI. Sketching Characters

- Human Characters
- Female Marine
- Civil War Soldier
- Cartoon Characters
- Animals

## XII. Sketching Vehicles

- Car
- Van
- Mech Robot

## XIII. Modeling In 3D

- Low Poly Techniques
- Human Characters
- Ancient Barbarian
- Extrude all Shapes
- Refining the Objects
- Attaching the Objects Together
- Adding Accessories
- Extruding the Hand
- Refining The Hand
- Attaching the Hand
- Variations
- Female Marine
- Princess
- Civil War Soldier
- Cartoon Characters
- Animals

## XIV. Modeling Vehicles

- Sci-Fi Van
- Car
- Mech Robot
- Review

- Human Characters
- Ancient Barbarian
- Extrude all Shapes
- Refining the Objects

**XV. UV Mapping Coordinates**

- Mapping Characters
- Human
- Cartoon
- Animals
- Vehicles

**XVI. Texturing Characters & Vehicles**

- Human
- Cartoon
- Animals
- Vehicles
- Mech Robot

**METHODS OF EVALUATION OF COMPETENCIES:**
Evaluation of student mastery of course competencies will be accomplished using the following grading scale.

## Grading:

A = 90 -100%
B = 80 - 89%
C = 70 - 79%
D = 60 - 69%
F = 0 - 59%

## Extra Credit: The instructor must approve project.

0-5 points is given for extra credit per approved project. Project must be finished and handed in on specified date at the beginning of class. Only four approved projects per semester allowed.