GAME 104: 2D Design for Games – Spring 2024 Syllabus

Information

Location: G313
Time: 3:30-4:45 pm, Monday & Wednesday
Instructor: John David McGrew
Email: jmcgrew4@gmu.edu
Office Hours: Tues. & Thurs. 10:30 am - 12 pm, G553 (email for appointment)

Learning Assistant: Hyoju Yang
Email: hyang34@gmu.edu
Office Hours: TBA (email for appointment or Kakao ID: yanghj099)

Instructional Mode

The course is currently designed as a face-to-face course in the Mason Korea building but may be adjusted to accommodate or adhere to changing conditions.

Description

Explores elements and principles of two-dimensional design in the digital game context. Digital painting programs are used to create 2d game assets using proper production techniques and industry-standard pipelines. Technical and aesthetic aspects of 2d art production are discussed as traditional visual art elements are leveraged to create introductory game surfaces and layouts. Limited to three attempts.

Succeeding in this Course

Students who attentively attend each class, participate, take notes, read & follow instructions, start and turn in assignments on time, spend adequate time (9+ hours per week) outside of class on projects, and communicate with the instructor are far more likely to succeed in this course. Digital 2D art creation goes beyond memorizing facts and requires students to learn how to problem-solve and take on new creative challenges.

Course Outcomes & Objectives

- Build skills in and develop a knowledge of 2D Game art tools, techniques, and observational digital painting
- Create diffuse and alpha maps for games using 2D paint programs
- Build an understanding of game art styles and communication through visual design via VSTARS, concepts, and style guides
- Develop a basic knowledge of the technical aspects of digital imagery for games (color spaces, lossy vs lossless, pixel density)
- Create sprites using pixel art
- Develop an understanding of traditional art elements (line, shape, color, texture, form, value, space)
- Produce clean, properly sized, and properly formatted digital images for integration into a game engine
- Identify the major kinds of 2D images used to produce games and know the general process used to make that art

Program Outcomes & Objectives

- Students will have a cross-disciplinary understanding of game production and intermediate abilities in each discipline to create across the production pipeline
- Students will be able to communicate and collaborate effectively as team members through aural, visual, and written media

Required Software & Hardware

Required software is available on Game Design classroom lab computers for on-campus work:
Autodesk 3DS Max 2023 (free student version available through students.autodesk.com)
Photopea or Adobe Photoshop CC (7-day trial and student discount subscription available at adobe.com)
Wacom tablet or supported equivalent tablet (tablets are available for check-out from ITS)
Headphones that can plug into the computer's USB or audio jack
Physical & Cloud storage for back-ups (Google Drive, Microsoft OneDrive, Apple Cloud, etc...)

Grading

Assignments are graded on a point scale, based on the assignment rubric. Criteria for assignments often include: Completeness, Adherence to Requirements, Technical Execution, and Visual Aesthetic Quality.

Assignments   - 775 points

Exercises   - 150 points

Final Project - 150 points

Assessment
90% or above will receive an "A" grade.
80-89% will receive a "B" grade.
70-79% will receive a "C" grade.
60-69% will receive a "D" grade.
59% or below will receive a grade of "F"

A minimum grade of "C" or above is required for Game Design Majors and Minors to take upper-level coursework for which this course is a prerequisite (example: GAME 231).

Late Work and Resubmissions
Deadlines are a key aspect of the game and film industries. Students are expected to turn in all work by the due date. An assignment turned in within the first week after the due date will receive a 10% grade penalty. An assignment turned in within the second week after the due date will receive a 20% grade penalty. Any assignment turned in more than two weeks after the due date will receive a failing grade.

Students can resubmit any assignment twice for a new grade. Resubmissions must be turned in no later than two weeks after the initial submission was graded. In case of the final project, the deadline for resubmissions is no later than the beginning of the final exam time. If the initial submission was turned in late, any late penalties will also apply to the resubmitted work's grade.

Participation & Attendance
Students are expected to attentively attend each class for the full scheduled time and actively participate in class. Although there are no direct penalties for attendance, students may receive a **grade penalty of up to 25% of the final grade for lack of participation in class**, including not being present and active in class discussions and activities. Please reach out to the teacher with any issues surrounding participation and attendance.

Course Schedule
The class schedule is available on the course's Blackboard shell. Please consult the schedule often and attend class regularly to ensure you meet all class requirements.

Honor Code
It is expected that students adhere to the George Mason University Honor Code as it relates to integrity regarding coursework and grades. The Honor Code reads as follows: "To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the university community, have set forth this Honor Code: Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work." More information about the Honor Code, including definitions of cheating, lying, and plagiarism, can be found on the Committee of Academic Integrity's website at https://masonkorea.gmu.edu/resources-and-services/cai/overview.

Diversity, Equity, and Inclusion

This class strives to provide an equitable learning atmosphere for all students. Communication and actions among students, the instructor, and anyone else in the class is to be respectful and free of any malice, discriminatory language or actions, derogatory language, or hate speech. Students are evaluated based on the merit of their work, without regard to gender, ethnicity, race, nationality, sexual identity, religion, or political affiliation.

Changes to Syllabus and Schedule

The instructor reserves the right to make changes and adaptations to the syllabus and schedule as needed. Any changes will be announced in class.

*This GAME 104 course and syllabus are adapted from materials provided by the Computer Game Design Program and Professor Greg Grimsby of the GMU Fairfax Campus.

Course Schedule

Expect to work 9+ hours per week outside of class on assignments for this course.

Unless otherwise stated, all assignments are due on Monday at 3:30 pm before class starts. For this course, a week is defined as **beginning at 3:30 pm each Monday** and **ending at 3:30 pm on the following Monday.**

To help you manage your schedule and time to complete the assignments in this course, please follow the recommended timeline below. If you have a question or concern or encounter a problem with an assignment, please contact your instructor immediately so we can discuss and work out a resolution (jmcgrew4@gmu.edu).

Weeks	Lessons	Due Dates
Week 1 Feb. 19 & 21	**Lesson 1:** 2D Game Art: Introduction and History	
Week 2 Feb. 26 & 28	**Lesson 2:** Color Spaces, Depths, Palettes, and Photoshop 101	**Due Date: March 4, 10:30 am** **Assignment 1 - Box Cover & Back (50 pts)**

Week 3 March 4 & 6	**Lesson 3:** Photoshop: Line Drawing	**Due Date: March. 11, 10:30 am** **Assignment 2 - Dungeon Map (50 pts)**
Week 4 March 11 & 13	**Lesson 4:** Painting Tone	**Due Date: March. 18, 10:30 am** **Assignment 3 - Funky Painting (100 pts)**
Week 5 March 18 & 20	**Lesson 5:** Texturing 3D Models I	
Week 6 March 25 & 27	**Lesson 6:** Texturing 3D Models II	**Due Date: April 1, 10:30 am** **Assignment 4 - Mech Texturing (100 pts)**
Week 7 April 1 & 3	**Lesson 7:** Texturing 3D Characters	
Week 8 April 8 & 10 - No Classes	**Spring Recess & National Assembly Election - No Class on April 8-10**	
Week 9 April 15 & 17	**Lesson 10:** Art Styles	**Due Date: April 22, 10:30 am** **Assignment 5 - Character Texture (100 pts)**
Week 10 April 22 & 24	**Lesson 11:** Sprites & Pixel Art	**Due Date: April 29, 10:30 am** **Assignment 6 - Art Style Summary (50 pts)**
Week 11 April 29 (**No Class on May 1**)	**Lesson 12:** Animating Sprites & Unity 101	

Week 12 May 8 (**No Class on May 6**)	**Lesson 13:** Concept Art	**Due Date: May 13, 10:30 am** **Assignment 7 - Animated Pixel Art (50 pts)**
Week 13 May 13 & 16 (**Wednesday classes on Thursday, May 16, No Class on May 15**)	**Lesson 14:** Vector Shapes	**Due Date: May 20, 10:30 am** **Assignment 8 - Previz Document (25 pts)**
Week 14 May 20 & 22	**Lesson 14:** AI Art	**Due Date: May, 27, 10:30 am** **Assignment 9 - Milestone 1**
Week 15 May 27 & 29	**Lesson 15:** Final Project I	**Due Date: June 3, 11:59 pm** **Assignment 9 - Milestone 2**
Week 16 June 3	Final Project Session	**Due Date: June 12, 11:59 pm** **Assignment 9 - Final Project**
Final Project Wednesday, June 12, 11:59 pm	We will not be meeting in person during the final exam time. Please use the time to finish and submit your final project	**Due Date: June 12, 11:59 pm** **Assignment 9 - Final Project**