

Art 107 ~ Advanced Projects in Digital Media Art worlds (worlds): creating the metaverse

Department of Art & Art History
San José State University
Spring 2021

Instructor	G. Craig Hobbs
Class Days/Time	Tuesday/ Thursday 12:00pm – 2:50pm
Classroom	Online via Zoom + Canvas
Email	gccraig.hobbs@sjsu.edu
Office Location	Online via Zoom (link will be provided)
Office Hours	Thursdays 10:00am – 12:00pm
Office Phone	408-924-4401 (please use email instead)
Department Office Location	Art 116
Department Website/ Email	http://www.sjsu.edu/art/ art@sjsu.edu

Course Description

Advanced Projects in Digital Media Art explores the intersection of art and technology through project-based creative research, design and development of interactive artworks. The Spring 2021 topic - *Worlds within Worlds: Creating the Metaverse* - addresses digital media art in 2D, 3D, and 4D time/ space through the creation of photogrammetry-based artworks and real-time immersive 3D worlds.

As a studio workshop, the course curriculum consists of software workshops, tutorials, assignments and both individual and collaborative projects. Art 107 workshops will be taught using techniques including 3D modeling, photogrammetry, real-time 3D world building, interactive immersive design and use of Adobe CS for digital content creation.

The course addresses critical and creative uses of technology for digital media art through required readings, discussion, and presentations on topics including: perspectival space, cybernetics, telepresence, immersive installation, interaction design and virtuality reality. Students are required to consider these and other issues in art, culture, and technology through regular research blog posts and in-class discussions coupled with course topics.

While recognizing the cultural importance of anime, manga, fan culture, memes, mimesis and more, students *are* required to produce original content in both their artmaking and writing. Culminating projects will consist of creating original images, objects, ideas and worlds uniquely your own through creative and conceptual application of skills learned.

Prerequisite: Art 75 + Art 101 Previous introductory digital media art experience and a commitment to in-class and self-directed learning and software practice is required.

Course Learning Objectives	
Upon completion of this course, students will be able to:	
LO1	Design and build immersive 2D/ 3D images, objects and worlds
LO2	Generate meaningful human-computer interaction using 2D and 3D content
LO3	Create photogrammetry models using 3D reconstruction from 2D imagery
LO4	Employ node-based editing to create 3D objects and worlds via Blender 3D
LO5	Collaborate remotely in 3D virtual spaces to create meaningful interactions across time, space, cultures and borders using https://hubs.mozilla.com
LO6	Write critically and creatively on contemporary issues in immersive arts and technology, tools and techniques while learning unique 2D/ 3D workflows
LO7	Deploy content and programming to generate immersive worlds in Unity through collaboration, 3D modeling and interaction within real-time worlds
LO8	Work collaboratively to build 3D models and immersive worlds for exhibition

Course Website/ Canvas Course Management System (CMS)

Copies of course materials - the syllabus, readings and course updates - are available via the SJSU Canvas course management system (CMS) <https://sjsu.instructure.com/> <https://sjsu.instructure.com> All assignments must be submitted via Canvas and GitHub. Canvas will also be used for periodic announcements and any changes to the course schedule. Please make sure your Canvas contact works by viewing the announcements during the first day of class. Please stay up to date weekly with materials on Canvas.

Course texts

Required readings and course programming assignments will be provided via Canvas CMS in PDF format. All software and workflow documentation is available online. Additional readings, links and course resources will be provided via Canvas CMS.

Course Protocols

The course schedule provides dates, topics, and assignments due on the day they are listed in the schedule, unless otherwise noted. The coursework is cumulative and requires a commitment to software practice to expand upon learned skills. Your ability to advance in 3D is directly linked to the amount of time you commit to learning and troubleshooting software, completing workshops, and creating both individual and collaborative projects.

You are expected to create work independently, on your own time, and in the classroom lab environment with others. You must create original code and digital art for this course. Fair use section 107, US Copyright Act educational and parody use aside, digital content downloaded from the internet should not be presented as your own work(s) of art unless a [significant transformation of the content has been achieved to create something new.](#)

Collaboration and Groups

Students working together will be graded based upon the success of the group, and should therefore plan accordingly to define roles and assure equal participation amongst collaborators at the beginning of group projects. Please inform the professor if you are having difficulties with the collaborative dynamic in your group before problems arise.

Technology Intensive and Online Courses

This course adopts an online classroom delivery format via Zoom. Requirements for the course include internet connectivity and access to the Zoom videoconferencing software along with a computer to participate in the classroom activities and submit assignments. See [University Policy F13-2](http://www.sjsu.edu/senate/docs/F13-2.pdf) <http://www.sjsu.edu/senate/docs/F13-2.pdf> for more details.

Department Advising

For information about majors and minors in Art & Art History, for a change of major/minor forms and a list of advisors: <http://www.sjsu.edu/art/> or the Art & Art History department office in ART 116, 408-924-4320, art@sjsu.edu

Art and Art History Library Liaison

The Art and Art History library liaison is **Gareth Scott**, a resource for academic and creative research. You may contact Gareth via email at gareth.scott@sjsu.edu or via phone (408) 808-2094 at the Dr. Martin Luther King, Jr. Library/ 4th Floor

Art 107 Assignments and Grading Policy

Submission requirements and rubric are defined in the assignment prompts on Canvas. See course schedule for details. The course schedule provides dates, topics, and assignments *due on the day they are listed in the schedule, unless otherwise noted.*

Date	Assignment	%pts
02/04	Assignment #1 = Online reading response/ blog post v1.0 due	5%
02/16	Assignment #2 = 3D models posted to https://hubs.mozilla.com	10%
02/25	Assignment #3 = Blender 3D Projects due	10%
03/18	Assignment #4 = Photogrammetry Projects due	20%
04/15	Assignment #5 = Collaborative Group Proposal due	10%
04/22	Assignment #6 = Unity Earth Day Worlds due	5%
05/13	Assignment #7 = Final/ Collaborative Project Presentations due	20%
02/04 - 05/21	Assignment #8 = Final/ Research blog post + 4 reading responses due on various dates and topics throughout the semester ~ 02/18, 03/11, 04/06, 04/29, 05/21 and culminating research blog entries	20%
TOTAL		100%
<i>* All assignment rubrics and requirements will be provided in detail via Canvas well in advance of the due date. All assignments must be submitted via Canvas. Assignment due dates are listed in the Art 107 course schedule with a breakdown of weekly topics, techniques, reading assignments, workshops and both collaborative and individual projects.</i>		

Grading Policy/ Rubric

A = 100 - 90% ~ Excellent = Student exhibits exemplary effort at comprehension and application of the required materials. All creative and technical work is engaging.

B = 89 - 80% ~ Average = Student completes assignments, and demonstrates a grasp of key creative and technical concepts. Student participates actively in the classroom.

C = 79 - 70% ~ Below Average = Student completes the assignment but may lack enthusiasm or drive to push the work into a detailed creative or critical space. The work lacks creative and aesthetic effort. The work is underdeveloped, incomplete or broken.

D = 69 - 60% ~ Unsatisfactory = Student does not complete the work as assigned. Substantial problems exist in student's work.

F = < 60% ~ Fail = Student does not submit work, or work is below unsatisfactory level.

Late Work Policy

Work is considered late if posted after the due date/time. The default time for submission of work is the beginning of class, unless specified otherwise in the schedule. For each day the work is late (marked each 24 hours by the day and time of original deadline), the work decreases by half a grade (a B+ goes to B-, a B- to a C+, etc.)

On Grading in the Arts

Grading is a process claimed to be objective. Yet there is, on the other end of that process an individual – the professor – with a subjective opinion that guides the grading process. As a university professor I do not believe in the use of subjective aesthetic judgment to grade artworks. What one person believes is beautiful, another person may perceive as abject. As such, although aesthetic opinions and critical discussion are a part of this course, the use of aesthetic opinion is never alone a metric for assessing the value of art.

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs Syllabus Information web page located here ~

<http://www.sjsu.edu/gup/syllabusinfo/>

University Policy S16-9, states the following language must be included in this syllabus, “Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit per week) for instruction, preparation/studying, or course related activities, including but not limited to internships, labs, and clinical practica. Other course structures will have equivalent workload expectations as described in the syllabus.”

Art 107 Course Schedule Spring 2021

Note: Assignments are due on the day listed in the schedule, unless otherwise noted.
If you have any questions, contact the professor *in advance of the due date*.

Week	Date	Topics, Assignments, Deadlines
1	01/28	Introductions, course introductions, tools and resources + Q&A <i>Assignment #1 is provided</i>
2	02/02	Intro to worlds (worlds) Software, tools, processes and techniques overview
	02/04	2D worlds and images (redux) Photography, Digital Video, Raster/ Vector, Generative & Realtime content creation and generation for inclusion in worlds Assignment #1/ Blog post due = Online reading response v1.0
3	02/09	3D space and objects in Blender I Understand 3D software environments
	02/11	3D space and objects in Blender II Create, alter, and manipulate 3D objects
4	02/16	2D ~> 3D space and objects in Blender III Create 3D objects from 2D images Assignment #2 due = 3D models posted to https://sketchfab.com
	02/18	Sculpting 3D objects in Blender IV Sculpting in 3D Blog post due = Online reading response 2.0
5	02/23	Space Time Continuum ~ 2D/ 3D/ 4D Time and interaction as dimensional space
	02/25	Space Time Continuum ~ 2D/ 3D/ 4D Music and SoundFx in the creation of worlding Assignment #3 due = Blender 3D Projects Due
6	03/02	Introduction to Photogrammetry Introduction to techniques and methods in the PG metaverse
	03/04	Photogrammetry Workflows 2D ~> 3D Scanning, Point clouds, Editing & Viewing

Week	Date	Topics, Assignments, Deadlines
7	03/09	Photogrammetry Scanning and Editing I Photoscanning real world objects using Trnio (iOS)
	03/11	Photogrammetry Scanning and Editing II Object, Person, Exterior, and Interior Subjects and Techniques Blog post due = Online reading response 3.0
8	03/16	Photogrammetry Scanning and Editing III Videogrammetry and AR scanning tools and techniques
	03/18	Photogrammetry Scanning and Editing IV Model editing and publishing via https://sketchfab.com Assignment #4 due = Final Photogrammetry Projects
9	03/23	Whose worlds? Cultural identity in immersive environments
	03/25	Whose Stories? Location based & experiential/ experimental forms of immersion Collaborative Groups Formed
10	03/30	Spring Break ~ No class meeting!
	04/01	Spring Break ~ No class meeting!
11	04/06	World Building in Unity Creating worlds within worlds: metaverse musings Blog post due = Online reading response 4.0
	04/08	Dimensions in space and time in Unity Environments, Textures, Lighting, Sound and VFX
12	04/13	Intro to Worlds in Unity I Combining assets to create worlds (worlds) Assignment #5 due = Collaborative Group Proposal
	04/15	Intro to Worlds in Unity II Creating environments for immersive experiences in Unity
13	04/20	Navigating Open 3D Space in Unity Realtime navigation and exploration in Unity
	04/22	Unity Earth Day Model the Earth in Unity Assignment #6 due = Unity Earth Day Worlds

Week	Date	Topics, Assignments, Deadlines
14	04/27	Unity Workshop and Lab III World building in Unity through collaboration and skill sharing
	04/29	Unity Workshop and Lab IV World building in Unity through collaboration and skill sharing Blog post due = Online reading response 5.0
15	05/04	Final Collaborative Project Lab I Collaborative group work in lab on their worlds (worlds)
	05/06	Final Collaborative Project Lab II Collaborative group work in lab on their worlds (worlds)
16	05/11	Final Collaborative Presentations I Final presentation of collaborative group projects
	05/13	Final Collaborative Presentations II Final presentation of collaborative group projects Assignment #7 due = Final Collaborative Projects are due online
Final Exam	05/21	Final Exam Friday, May 21 st Assignment #8 due = Final Research Blogs/ 3D Portfolio Due
		<i>Note: This schedule is subject to change. You will be notified of any changes in a timely manner in class and via Canvas. Any changes will not affect your ability to complete the above assigned coursework.</i>

The end.