

San José State University

Department of Art and Art History

Art 175, Data Visualization, Section 1

Spring 2018, Room 241

Instructor: Andrew Blanton

Office: Art 311

Email: andrew.blanton@sjsu.edu

Office Hours: T and TR 11-12

Class Day/Time: T TR 3:00-5:50

Class Website: https://github.com/ablanton/SJSU_ART_175_S18

Course Description

From Data Visualization, Interactive Data Manipulation, and Data Bending, this semester's ART 175 will be an exploration in working with data as a medium for art creation. Working with data and cross modal representation, this studio art class will be creating 3D sculptures using Maya and building real time virtual reality and augmented reality environments using Unity.

Course Goals and Student Learning Objectives

This semester we are pleased to be presented with a special opportunity to collaborate with the School of Music in building of realtime visualizations for a final performance scheduled at the end of the semester. Using realtime sensor data as well as sound, we will be creating visuals and environments that should push the boundaries of what this bleeding edge technology is capable of. We will be working with Max/MSP, Unity and Maya for the creation of visual. Students will be asked to engage critically with class material and think creatively about the use of software as a tool for art creation.

Learning Outcomes

Upon successful completion of this course, students will be able to:

LO1: Work with realtime data and think creatively about visual representation

LO2: Produce professional level art

LO3: Gain experience in working with realtime visual environments

LO4: Research artist using data as a medium

LO5: Build your Portfolio

Required Texts/Readings

Readings will be assigned throughout the class. No textbook is required for the class and all readings will be presented through the class blog. Suggested texts include:

Learning C# by Developing Games with Unity 5.x - Second Edition

Generative Design: Visualize, Program, and Create with Processing, Hartmut Bohnacker

Form+Code in Design, Art, and Architecture (Design Briefs), Reas, Casey

Beautiful Visualization: Looking at Data through the Eyes of Experts (Theory in Practice), Julie Steele

Classroom Protocol

Projects:

- There are three main individual projects for this course (in addition to smaller assignments).
- On workshop days (see the course outline chart for the dates), students should come to class with their in progress projects and hard-drives ready to work. If you have your own laptop and prefer to use that for your projects, bring it to class with you for the workshop days. You can not work from home on workshop days and must be available in class during the whole time on our work days.
- Students must **meet the deadlines** for their projects. No late projects will be accepted. On Idea + concept days (see the course outline chart for the dates) students should bring notes, storyboards, sketches, charts, and material that they have used to do research on the specific topic and concept that you are interested in for their project.

Participation:

- Participation in class discussions for readings, material that we watch in class, giving feedback to your peers on their work is **mandatory**. You are expected to actively participate in such discourses as they are some of the most important sections of our class.
- On Presentation days you must be able to explain and give a clear presentation of your work, research, and concepts. If you have a hard time talking in front of a crowd or remembering your points, use a notebook, powerpoint, sketches or bullet points for your presentations.
- For certain readings that I will be assigning in this course you are required to post one paragraph (400 word) response or a video with 4-5 sentences to our class blog. Those who simply summarize what they have read will not receive any points for their responses. You are asked to think critically and post something that questions, criticizes, endorses, and/or adds to the reading. I consider these small assignments as part of your class participation. See the course outline chart for deadlines for these responses.

Grades By Assignment:

Project One	10%
Project Two	10%
Project Three	10%
Project Four	15%
Project Five (Final)	15%
Assignment One	5%
Reading One	5%
Reading Two	5%
Reading Three	5%
Reading Four	5%
Attendance and Participation	15%
Total	100%

Grading Scale

Your coursework will be assessed according to the following rubric,

A = 100 - 90% ~ Exceptional. Student exhibits exemplary effort at comprehension and analysis of the required materials. All written and creative work is lucid and engaging.

B = 89 - 80% ~ Strong. Student completes assignment, and demonstrates a grasp of the key themes of each topic, but not all. Detail, creativity and critical analysis are present.

C = 79 - 70% ~ Average. Student completes the assignment but may lack enthusiasm or drive to push the work into a detailed creative or critical space. Student performs little or no creativity or analysis. Problems exist: the work is underdeveloped or incomplete.

D = 69 - 60% ~ Poor. 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.

Rubric

Overall artwork Quality	exceptional	strong	average	poor
Comprehension of medium, history and cultural context	Challenges Medium technically and conceptually	Strong Technical and conceptual work	Technically working with a concept	Project working with no concept or Full concept with a model that does not work
Engagement with work	Multiple ideas and approaches considered in the creation of a unique work	Multiple ideas and approaches considered in the creation of an aesthetically strong work	An idea executed with expected outcome in a medium	Insufficient engagement to produce proposed work
Deliverable	Turned in on time with outstanding documentation on process and concept, portfolio ready	Turned in on time with full documentation of process and concept with superior reference and image, text video etc	Turned in on time with full documentation on process and concept	Turned in late with strong documentation of process and concept

Art 175/Data Visualization, Spring 2018, Course Schedule

Week	Date	Topics, Readings, Assignments, Deadlines
1	Thurs 1/25	Course Introduction /Overview of Syllabus Introductions (Instructor-Students) Git Registration + Maya Download + Unity Download Reading 1 Assigned

2	Tue 1/30	<p>Due: Reading 1</p> <p>Maya Tutorial 1: Intro to Maya basics</p> <p>Introduction to experimental 3D methods in Digital Media Art context</p>
2	Thurs 2/1	<p>Screen related works (narrative + modeling + lighting)</p> <p>Work on first modeling assignment</p>
3	Tue 2/6	<p>Due: Project One: Intro to Maya Basics + Modeling Assignment</p> <p>Maya Tutorial 2: Introduction to Lighting, Introduction to rendering</p> <p>Class exercise/Maya Problem Solving</p>
3	Thurs 2/8	<p>Screen Inspiration Videos</p> <p>Ideas + Concepts for the first project (each student must come to class with sketches/storyboard/research notes/and concepts they are interested in)</p> <p>Assign Reading 1</p>
4	Tue 2/13	<p>Due: Reading 1</p> <p>Maya Tutorial 3: Introduction to texture + 2D vs. 3D *** Workshop Day</p>
4	Thurs 2/15	Workshop Day (working on your second project)
5	Tue 2/20	<p>Due: Project Two</p> <p>Student Presentation of First Project</p>
5	Thurs 2/22	Student Presentation of First Project
6	Tue 2/27	<p>Maya Tutorial 4: Introduction to Keyframe Animation Timeline; Graph Editor; Playblast; Batch Rendering</p> <p>Class Exercise</p>
6	Thurs 3/1	<p>Screen: Related Videos</p> <p>Introduction to Maya with Unity</p> <p>Assign Reading 2</p>
7	Tue 3/6	<p>Due: Reading 2</p> <p>Ideas + Concepts for the third project (each team must come to class with sketches/research notes/and concepts they are interested in)</p> <p>Maya Problem Solving/Workshop Day <input type="checkbox"/></p> <p>Screen Related works</p>
7	Thurs 3/8	<p>Third Assignment Due</p> <p>Due: One page Concept for Third Project + Team Members</p>

8	Tue 3/13	Unity Tutorial 2 Class exercise/Maya Problem Solving
8	Thurs 3/15	Screen: Related Videos Introduction to VR In Class: Work on Third Project
9	Tue 3/20	Third Project DUE Presentation Day ---> Student Presentation of Third Project
9	Thurs 3/22	Third Project DUE Presentation Day ---> Student Presentation of Third Project
10	Tue 3/27	Spring Break — no class!
10	Thurs 3/29	Spring Break — no class!
11	Tue 4/3	Introduction of 4rd project Unity Tutorial 3 Assign Reading 3
11	Thurs 4/5	Due: Reading 3 Screen Videos + Class Discussion
12	Tue 4/10	Show and Tell: Different Maya/Unity Components (Student Presentations)
12	Thurs 4/12	ATC Class will meet in MLK
13	Tue 4/17	Fourth Project Due Presentation Day ---> Student Presentation of Fourth Project
13	Thurs 4/19	Fourth Project Due Presentation Day ---> Student Presentation of Fourth Project
14	Tue 4/24	Unity Tutorial 4 In class exercise
14	Thurs 4/26	Assign Reading 4 Screen Videos + Class Discussion
15	Tue 5/1	Due: Reading 4 In class: working on final/problem solving Workshop Day For Final
15	Thurs 5/3	In class: working on final/problem solving Workshop Day For Final
16	Tue 5/8	Presentation Day ---> Student Presentation of Final Project
16	Thurs 5/10	Presentation Day ---> Student Presentation of Final Project

Final	TBA	Students should have their final documentation submitted to the class git repo
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Department Advising

For information about majors and minors in Art & Art History, for 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](tel:408-924-4320), art@sjsu.edu

Art Building After Hours Access Policy

Please see the attached document for further information. Contact Bill Alley (Bill.Alley@sjsu.edu) or Lydia Black (Lydia.Black@sjsu.edu) if you have questions.

University Policies

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester's [Catalog Policies](http://info.sjsu.edu/static/catalog/policies.html) section at <http://info.sjsu.edu/static/catalog/policies.html>. Add/drop deadlines can be found on the current academic year calendars document on the [Academic Calendars webpage](http://www.sjsu.edu/provost/services/academic_calendars/) at http://www.sjsu.edu/provost/services/academic_calendars/. The [Late Drop Policy](http://www.sjsu.edu/aars/policieslatedrops/policy/) is available at <http://www.sjsu.edu/aars/policieslatedrops/policy/>. Students should be aware of the current deadlines and penalties for dropping classes.

Information about the latest changes and news is available at the [Advising Hub](http://www.sjsu.edu/advising/) at <http://www.sjsu.edu/advising/>.

Consent for Recording of Class and Public Sharing of Instructor Material

[University Policy S12-7](http://www.sjsu.edu/senate/docs/S12-7.pdf), <http://www.sjsu.edu/senate/docs/S12-7.pdf>, requires students to obtain instructor's permission to record the course:

“Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor's permission to make audio or video recordings in this class. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material.”

“Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his/her approval. You may not publicly share or upload instructor generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent.”

Academic integrity

Your commitment, as a student, to learning is evidenced by your enrollment at San Jose State University. The [University Academic Integrity Policy S07-2](http://www.sjsu.edu/senate/docs/S07-2.pdf) at <http://www.sjsu.edu/senate/docs/S07-2.pdf> requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The [Student Conduct and Ethical Development website](http://www.sjsu.edu/studentconduct/) is available at <http://www.sjsu.edu/studentconduct/>.

Campus Policy in Compliance with the American Disabilities Act

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. [Presidential Directive 97-03](http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf) at http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf requires that students with disabilities requesting accommodations must register with the [Accessible Education Center](http://www.sjsu.edu/aec) (AEC) at <http://www.sjsu.edu/aec> to establish a record of their disability.

Accommodation to Students' Religious Holidays

San José State University shall provide accommodation on any graded class work or activities for students wishing to observe religious holidays when such observances require students to be absent from class. It is the responsibility of the student to inform the instructor, in writing, about such holidays before the add deadline at the start of each semester. If such holidays occur before the add deadline, the student must notify the instructor, in writing, at least three days before the date that he/she will be absent. It is the responsibility of the instructor to make every reasonable effort to honor the student request without penalty, and of the student to make up the work missed. See [University Policy S14-7](http://www.sjsu.edu/senate/docs/S14-7.pdf) at <http://www.sjsu.edu/senate/docs/S14-7.pdf>

