

**DES 213: Digital Tools in 3D Design**  
**Units: 2.0**  
**Fall 2019 | Friday | 12:00 p.m. - 2:40 p.m.**

**Contact Hours:**  
2 hrs 40 min per week

**Location:** @Mateo

**Instructor: Juan Ye (Jui)**

**Office:** @Mateo

**Office Hours:** Friday, 10:00 a.m. – 12:00 pm | by appointments only

**Contact Info:** Email: [juanye@usc.edu](mailto:juanye@usc.edu) | cellphone: 949-468-8552

**IT Help:** Timmy Chen

**Hours of Service:** Monday – Friday, 9:00 a.m. – 5:00 p.m.

**Contact Info:** Email: [timmyc@usc.edu](mailto:timmyc@usc.edu)

## Course Description

3D digital modeling, rendering, digital capture and production methods for product, package and environmental design. This course focuses on utilizing digital tools to visualize 3-dimensional design and assist problem-solving process.

The course is a requirement of all sophomore Roski design majors and is open to other students outside Roski as well. The breakdown of the course is as follows:

- 20% - Exposure to digital design history and contemporary tools comparison.
- 70% - Practicing digital design tools, creating and presenting individual design projects.
- 10% - Design thinking and research skills.

Other activities may include:

- Presenting a digital design project in front of peers.
- Interacting with guest lecturers - designers who have excellent digital design skills and portfolios.
- Attending required field trip(s), which might be Adobe and/or Autodesk.

## Learning Objectives

Upon completion of this course the students will be able to:

1. Analyze a variety of contemporary digital design tools and understand their differences.
2. Explore and practice digital design techniques of visual communication through transitional projects.
3. Create individual design proposals utilizing digital tools and present in creative forms.
4. Collaborate with peers to practice problem-solving strategies.
5. Explore art and design as a positive way to engage and educate in society through research, advocacy and action.

**Recommended Preparation:** Basic computer knowledge and experiences; research of contemporary digital design tools; visual communication skills; presentation skills.

**Prerequisite(s):** The prerequisite is FADN 102/DES 102. For department clearance, please contact Roski School of Art and Design.

## Course Notes

Grading Type: Letter Grade

Blackboard URL: All copies of lecture slides and other class information will be posted on Blackboard.

Students must attend class to succeed in the course (no make-ups).

No food or drink is allowed in the digital lab at Roski School of Art and Design.

All students will have access to Adobe Creative Suite and Lynda.com at USC.

## Technological Proficiency and Hardware/Software Required

Blender, Keynote, laptop computer with mouse.

## Required Readings and Supplementary Materials

Will be posted on Blackboard if necessary.

## Description and Assessment of Assignments

Class activities: lecture, demonstration, lab, critique

Types of work include: challenges (transitional projects, 2 weeks) and projects (midterm & final, 3 – 4 weeks).

Assessments: rubrics, 1-on-1 desk critiques, formal critiques.

## Grading Breakdown

Assignment	Points	% of Grade
Participation & Presentations	100	10
Challenge 1	100	10
Challenge 2	100	10
Challenge 3	100	10
Challenge 4	100	10
Midterm Project (P1)	200	20
Final Project (P2)	300	30
<b>TOTAL</b>	<b>1000</b>	<b>100</b>

## Grading Scale (Example)

Course final grades will be determined using the following scale

A	95-100
A-	90-94
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	59 and below

## Assignment Rubrics

Project rubrics will be posted on BlackBoard and sent by email along with each projects.

## Assignment Submission Policy

All projects have due dates. Assignments should be delivered electronically by email or though BlackBoard in forms of Blender file or PDF as instructed with each assignment. Late submission may cause grade reduction.

## Grading Timeline

Feedback will be provided throughout the whole semester.

## Additional Policies

Please inform me through email regarding the following conditions: late assignments, missed classes, attendance expectations, use of technology in the classroom, etc.

## Course Schedule: A Weekly Breakdown

	Topics/Daily Activities	Lab Session	Deliverable/ Due Dates
<b>Week 1</b> Aug 30	Course Overview Syllabus Explanation Projects Introduction	<i>(see Blackboard for links to all class lectures, demos, &amp; resources – Weekly Announcements)</i>	/
<b>Week 2</b> Sep 6	Digital design history Contemporary digital design tools Demo: Blender Basics - Navigation/Windows - Import & Export	Design Brief: Challenge 1 (C1) “Objects” – design a toolbox for your daily work and tell us your story	Research on digital design tools
<b>Week 3</b> Sep 13	Demo: Blender (Continued) - Creating Objects - Editing Objects	1-on-1 Desk Critiques Work on C1	Progress: C1
<b>Week 4</b> Sep 20	Demo: Blender (Continued) - Modifier	1-on-1 Desk Critiques Design Brief: Challenge 2 (C2) “Abstract Forms” – design an abstract geometric form Design Brief: Midterm Project (P1) “Complicated Forms”– design a futuristic mobility	Due: C1
<b>Week 5</b> Sep 27	Demo: Blender (Continued) - Materials 1	1-on-1 Desk Critiques Work on C2	Progress: C2
<b>Week 6</b> Oct 4	Demo: Blender (Continued) - Materials 2	1-on-1 Desk Critiques Work on P1	Due: C2 Progress: P1
<b>Week 7</b> Oct 11	Midterm Presentations	Group Critiques & Discussion	Due: P1
<b>Week 8</b> Oct 18	<b>Fall Recessment (No Class!)</b>		
<b>Week 9</b> Oct 25	Demo: Blender (Continued) - Lighting	1-on-1 Desk Critiques Design Brief: Challenge 3 (C3) “Fluid” – create a fluid simulation for a tsunami scene	Practice by Own
<b>Week 10</b> Nov 1	Demo: Blender (Continued) - Environment	1-on-1 Desk Critiques Work on C3	Progress: C3
<b>Week 11</b> Nov 8	Demo: Blender (Continued) - Rendering	1-on-1 Desk Critiques Design Brief: Challenge 4 (C4) “Characters” – design yourself as a 3d object/character Design Brief: Final Project (P2) “Animations” – create an animated storyline of yourself using your object/character	Due: C3

<b>Week 12</b> Nov 15	Demo: Blender (Continued) - Camera - Animation Basics	1-on-1 Desk Critiques Work on C4	Progress: C4
<b>Week 13</b> Nov 22	Demo: Blender (Continued) - Blender Python Intro	1-on-1 Desk Critiques Work on P2	Due: C4 Progress: P2
<b>Week 14</b> Nov 29	<b>Thanksgiving Holiday (No Class!)</b>		
<b>Week 15</b> Dec 6	Group Critiques & Discussion	Work on P2	Progress: P2
<b>FINAL</b> Dec 13	Final Presentations	Group Critiques & Discussion	Due: P2

## Statement on Academic Conduct and Support Systems

### Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” [policy.usc.edu/scampus-part-b](http://policy.usc.edu/scampus-part-b). Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

### Support Systems:

*Student Counseling Services (SCS) – (213) 740-7711 – 24/7 on call*

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. [engemannshc.usc.edu/counseling](http://engemannshc.usc.edu/counseling)

*National Suicide Prevention Lifeline – 1 (800) 273-8255*

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. [www.suicidepreventionlifeline.org](http://www.suicidepreventionlifeline.org)

*Relationship and Sexual Violence Prevention Services (RSVP) – (213) 740-4900 – 24/7 on call*

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. [engemannshc.usc.edu/rsvp](http://engemannshc.usc.edu/rsvp)

*Sexual Assault Resource Center*

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: [sarc.usc.edu](http://sarc.usc.edu)

*Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086*

Works with faculty, staff, visitors, applicants, and students around issues of protected class. [equity.usc.edu](http://equity.usc.edu)

*Bias Assessment Response and Support*

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. [studentaffairs.usc.edu/bias-assessment-response-support](http://studentaffairs.usc.edu/bias-assessment-response-support)

*The Office of Disability Services and Programs*

Provides certification for students with disabilities and helps arrange relevant accommodations. [dsp.usc.edu](http://dsp.usc.edu)

*Student Support and Advocacy – (213) 821-4710*

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. [studentaffairs.usc.edu/ssa](http://studentaffairs.usc.edu/ssa)

*Diversity at USC*

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. [diversity.usc.edu](http://diversity.usc.edu)

*USC Emergency Information*

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. [emergency.usc.edu](http://emergency.usc.edu)

*USC Department of Public Safety – UPC: (213) 740-4321 – HSC: (323) 442-1000 – 24-hour emergency or to report a crime.*

Provides overall safety to USC community. [dps.usc.edu](http://dps.usc.edu)