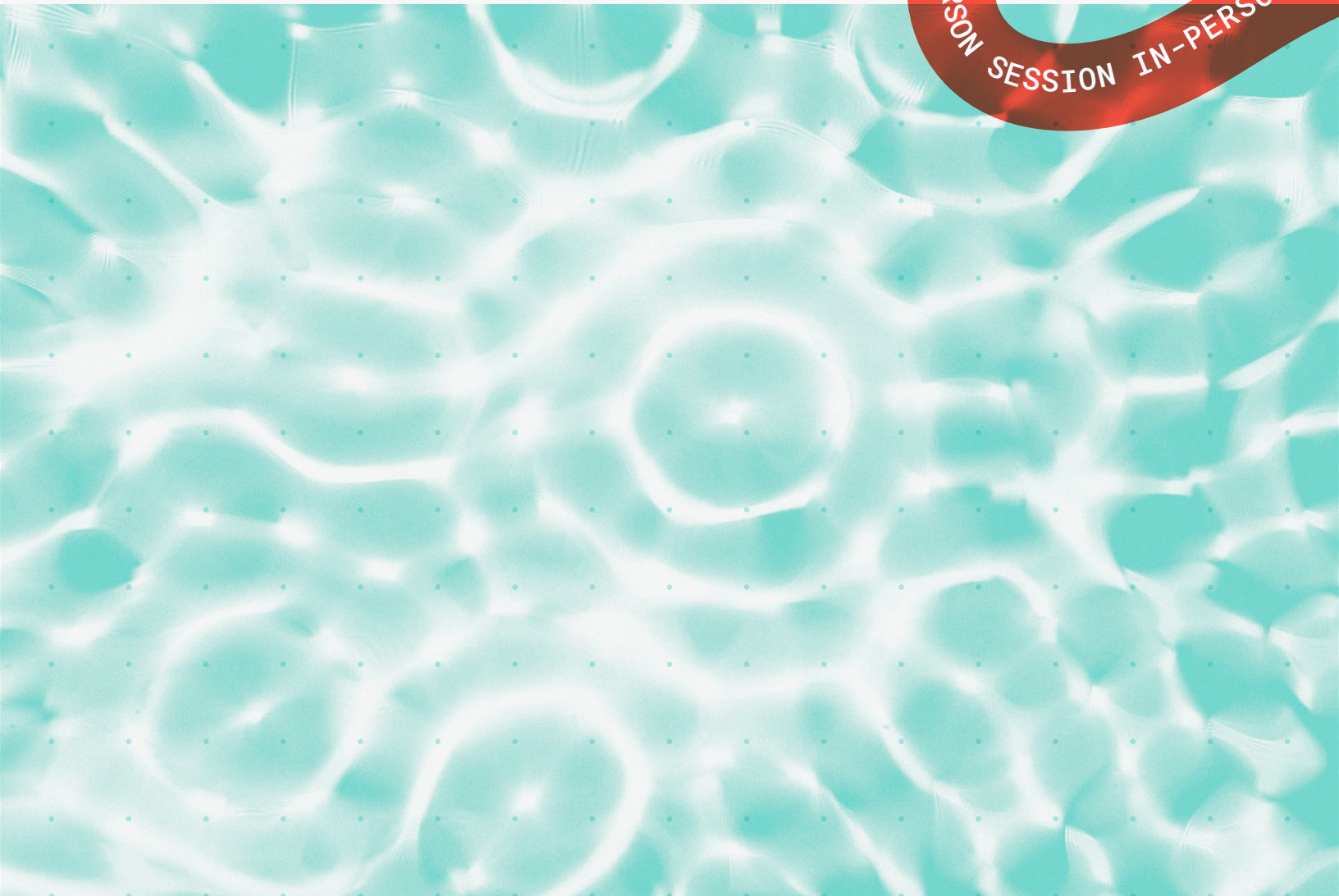




UCLA Sci Art Lab + Studio

RUBRIC & COURSE INFORMATION



COURSE TITLE

Sci | Art Lab + Studio

COURSE UNITS

4 UC Credits
Pass / No Pass

COURSE NUMBER

DESMA 6

FACULTY + STAFF

UCLA PROFESSORS (CURRICULUM / LECTURES) :

Dr. Victoria Vesna,
Art|Sci Center, Department of Design
Media Arts, Founder + Director

Dr. James Gimzewski,
Department of Chemistry, Scientific
Director

INSTRUCTORS :

Ivana Dama, Lead Instructor

Maryam Razi

Ivy Lovett

Gabriel Tolson

TEACHING ASSISTANTS :

Avery Collins-Byrd

Eliana Gelman

Katharine Niles

Subin Lee

VISITING PROFESSORS :

Dr Adam Stieg,
CNSI Associate Director, SciArt Director
Emeritus

Dr. Vuk Uskokovic, UC Irvine

Dr. Sam Lilak, UCLA

Dr. Santiago Torres, UCLA

David Roy, Yale University

Mick Lorusso, UCLA

Jeremy Kamal, Harvard University

ADMISTRATIVE STAFF

Rachel Youn

TECHNICAL STAFF

John Brumley

COURSE OVERVIEW

Sci|Art Lab+Studio Summer Institute offers a cutting-edge, 4-credit lab/studio course to High School students on methodologies for applying the scientific method and creative processes as complementary tools for art, design and innovation.

Course material includes virtual lab visits, remote workshops facilitating hands-on experiments, and recorded lectures with world renowned artists and scientists. Through virtual engagement students will be exposed to the work of scientists and artists that explore new forms of creative expression, communication and collaboration within this multidisciplinary field.

To facilitate the application of our course material, students will develop an original concept for a collaborative final project under the challenge of 'Imagine the Impossible'. Building off of course material and guided by the assistance and skill of the base SciArt Team, student groups will create and deliver a multimedia presentation to share their work and ideas during the program's live streamed closing ceremony.

ASSESSMENT + GRADING CRITERIA

CLASS ATTENDANCE & PARTICIPATION

(TOTAL POINTS POSSIBLE: 20)

10 points for participation and 10 points for attendance

Students are required to attend and actively engage in class activities - synchronous and asynchronous. You must be present and listen to all of the lectures, workshops and films that work with your time zone. If too early or too late, you are required to watch the recorded sessions and blog about the topics covered so you don't fall behind.

MIDTERM PROJECT

(TOTAL POINTS POSSIBLE: 30)

Students are required to complete at least four Workshops' project assignments. Students will create a folder on google drive for each project and submit it to their instructor for review.

After participating in required workshops, students should commit to complete at least four of the corresponding projects' assignments.

BLOGS

(TOTAL POINTS POSSIBLE: 20)

8 blogs are required to receive a full credit

Keeping with the goal of shifting traditional concepts of classwork and homework to facilitate more dynamic, peer-to-peer learning and discussion, students are required to complete seven blog assignments in response to the content introduced in lectures and workshops throughout the course.

In the written blog assignment students are asked to expand upon the ideas presented in the chosen lectures/ workshops, and are expected to think critically about the content and take it further with their own research and connections.

Students are asked to specifically search for online resources and provide both links and images as part of this assignment.

Each morning, the Blogs of the Day are selected, highlighted and discussed during the lecture.

FINAL PROJECT

(TOTAL POINTS POSSIBLE: 30)

Students will develop an original concept for a collaborative final project under the challenge of 'Imagine the Impossible'. Students will form collaborative groups based on interests and instructor facilitation.

With the guidance and the knowledge base of the Sci|Art Team individuals or groups of students will create and deliver a multimedia presentation of their final project during the closing ceremony.

LEARNING OBJECTIVES + COURSE GOALS

- G1.** Expose students to the works of scientists and artists that explore new forms of creative expression, communication, and collaboration within this multidisciplinary field.
- G2.** Highlight historical perspectives and modern trends at the interface of art, science and technology. **G3.** Introduce students to current scientific and artistic research
- G4.** Promote the exploration of creative aspects of scientific research and innovation.
- G5.** Offer broad understanding of the impact of science on contemporary art and popular culture.
- G6.** Promote the development of proposals and ideas that could serve as prototypes for either art projects or scientific research study.

STUDENT LEARNING OUTCOMES

Upon successful completion of the course, the student will be able to:

- SL01.** Recognize the connections between cutting-edge scientific research, popular culture and contemporary art;
- SL02.** Distinguish historical perspectives and modern trends at the interface of art, science and technology;
- SL03.** Demonstrate a broad knowledge of the wide spectrum of scientific topics that directly influence culture at large;
- SL04.** Differentiate the implications of theory and practice on the application of scientific and artistic concepts;
- SL05.** Assess the implications of social, political and ethical contexts that influence scientific and technological innovation and paradigm shifts;
- SL06.** Propose an original concept for a collaborative project under the challenge of 'Imagine the Impossible'.

LECTURES

A collection of daily lectures, delivered by a team of SciArt Instructors that serve to highlight historical perspectives and modern trends at the interface of art, science and technology.

In addition, a collection of special seminars given by leaders and visionaries in the fields of art and science supplement the course materials.

These lectures and subsequent discussions serve to stimulate an open discourse between the students and active participants in these fields in a comfortable, low-pressure setting.

In order to expand discussion, encourage student participation and foster learning, recorded lectures will be available on the course website the day after they are delivered.

LECTURES + WORKSHOPS

The Sci|Art Lab+Studio team offers a series of hands-on workshops that introduce you to multidisciplinary topics through a short lecture and then a quick exercise.

Students are required to attend all lectures / workshops.

Students will choose four topics covered that they will expand on with longer projects that will be further developed for midterm and finals.

SCI-FI FILMS

An undeniable connection between science, culture, imagination and creativity has undoubtedly manifested through science fiction writing and film.

To facilitate a conversation regarding the historical impacts of science fiction on both popular culture and ongoing trends in technology, a Sci-Fi Film Series is curated by the Sci|Art Team. Students are also encouraged to suggest movies they would like to share.

Course Schedule

IN PERSON
SESSION

DAY 01 ENVIRONMENT

09:00am-10:30am

Introductions
Directors, Instructors, TAs

10:30am-11:30am

Ice Breaker Games
Get to know students/ Assign groups and
instructors

11:30am-12:30pm

How to Keep a Sketchbook and Lab Notebook | Ivy
Lovett, Gabriel Tolson, & Josh Larson

12:30pm-01:30pm

Lunch

01:30pm-02:00pm

Instructors go over blog assignment and rubric/
curriculum | Ivana Dama and John Brumley

02:00pm-05:30pm

GROUP 1: Lab Tour | Large Plasma Device [LAPD]
GROUP 2: Lab Tour | CNSI Advanced Light
Microscopy and Spectroscopy Laboratory

Course Schedule

IN PERSON
SESSION

DAY 02 NANO

| | |
|-----------------|--|
| 09:00am-09:30am | Blog Report Team check-ins & attendance |
| 09:30am-11:00am | Nanotechnologies in the Quest for the Invisibly Small Dr. Vuk Uskokovic |
| 11:00am-12:00pm | Spectacle of Spectacles: A Brief History of Spectacle Design Through the Lens of Art History Maryam Razi (Part 1) |
| 12:00pm-01:00pm | Lunch |
| 01:00pm-02:00pm | Spectacle of Spectacles: A Brief History of Spectacle Design Through the Lens of Art History Maryam Razi (Part 2) |
| 02:00pm-05:30pm | GROUP 2: Lab Tour Large Plasma Device [LAPD] GROUP 1: Lab Tour CNSI Advanced Light Microscopy and Spectroscopy Laboratory |

DAY 03 MICRO BIO

| | |
|-----------------|---|
| 09:00am-09:30am | Blog Report Team check-ins & attendance |
| 09:30am-12:30pm | Exploring the Hidden Dimension of Fungi Sam Shoemaker |
| 12:30pm-01:30pm | Lunch |
| 01:30pm-02:30pm | Botanical Garden Tour |
| 03:00pm-05:30pm | Cyanomagic: Unveiling the Blue Alchemy Eli Joteva |

Course Schedule

IN PERSON
SESSION

DAY 04 DATA

09:00am-09:30am

Blog Report
Team check-ins & attendance

09:30am-11:30am

Mapping Technoflesh: a Phenomenology of Digital Interface | Gabriel Tolson

11:30am-12:30pm

Features / Embeddings / Latent Space | John Brumley

12:30pm-01:30pm

Lunch

01:30pm-05:30pm

Sculpting With Digital Debris | Ivy Lovett

05:30pm-07:00pm

Screening Night

DAY 05 SPACE

09:00am-09:30am

Blog Report
Team check-ins & attendance

09:30am-12:30pm

A Window to the Universe: Astronomy & Astrophysics | Dr. Santiago Torres
PLANETARIUM VISIT

12:30pm-01:30pm

Lunch

01:30pm-05:30pm

Water Rocketry | David Roy

Course Schedule

IN PERSON
SESSION

DAY 06 MARINE BIOLOGY + ART

10:00am-03:00pm

Beach Field Trip | Emma Akmakdjian

DAY 07 VIBRATIONS

09:00am-09:30am

Blog Report
Team check-ins & attendance

09:30am-11:00am

Oscillations & Waves | Josh Larson

11:00am-12:30pm

Exploring Sound Art through MIDI Synthesizers |
Ivana Dama (Part 1)

12:30pm-01:30pm

Lunch

01:30pm-02:30pm

Exploring Sound Art through MIDI Synthesizers |
Ivana Dama (Part 2)

02:30pm-05:30pm

The Hidden Voices of Our Devices | Ariel Uzal

Course Schedule

IN PERSON
SESSION

DAY 08 GENETICS + ANIMAL BODIES

09:00am-09:30am

Blog Report
Team check-ins & attendance

09:30am-11:00am

Final Project Proposal
Students begin working with their teams, instructors and workshop leaders hop in and out of rooms to help students.

11:00am-12:30pm

HOX Zodiac | Maryam Razi

12:30pm-01:30pm

Lunch

01:30pm-04:00pm

The Incredible, Humble Pigeon | Aaron Blaisdell

04:00pm-05:30pm

Ethical Considerations When Using Medical Bodies
Within An Artistic Framework | Katharine Niles

DAY 09 ECOLOGY

09:00am-09:30am

Blog Report
Team check-ins & attendance

09:30am-11:00am

Future of Landscapes | Jeremy Kamal

11:00am-05:30pm

Work on Final Projects

DAY 10 FINAL PRESENTATION

09:00am-10:00am

Group Prep for Lecture

10:00am-03:00pm

Final Presentation