Virtual Reality and Digital Spaces
MMART-170 Spring/Fall 2025/2026
AI History, Theory, & Studio Practice
Syllabus

Instructors:

- **Joshua Dickinson -** jddickinson@peralta.edu
- **Gustavo Alfonso Rincon (PhD) -** grincon@peralta.edu

Class (Online): T/Th 1:25 - 2:25 pm
Tuesdays will be the main lecture and homework assignment
Thursdays will be a lab with open discussion and supplemental tutorials, material, & interviews.
Important Dates: Midterm Reviews & Final Reviews
Zoom Link: https://us06web.zoom.us/j/3579312431?pwd=VVBWdXUyTU5FLzcxUEdma0pueStwZz09

- **Important:** Please reach out to us if you're lost or confused at any point throughout the semester- **we're always happy to check in and help.**
- **Note:** This is an asynchronous course so most or all lectures/labs will be recorded.

Description: This course will introduce historical, theoretical, and practical tools for the creation of Virtual Reality experiences and Digital Worlds. Contemporary immersive media topics will be covered, such as visual rendering, VR scenes, game engines, generative AI, sound design, spatial audio, worldbuilding, environmental storytelling, interaction, tracking, character design, hyperreality, and the metaverse. We will focus on the question, **"What is Virtual Reality today and what can it become in the future?"**

Tools used throughout the course will include PlayCanvas, Unity, Unreal, Blender, and a number of AI packages for audio, visual, and language processing. The course will be designed in a way that it will be accessible to both beginning and advanced students, and with varying or even no access to rendering computers and VR headsets.

Students should leave with an understanding of how to create digital worlds with an emphasis on immersion and experience crafting. They will learn both contemporary and emerging techniques. They will create pieces throughout the course and for the final project that would be appropriate to include in a portfolio. We will attempt to create a collaborative project to upload as a living artifact of the course.

Assignments

- **Weekly Homework Assignments**
- **Weekly AV Media Links, Readings, & Tools**

Class Participation:

- **Class Discussion & Sharing of Assignments for Critique**

Class Online Discussion

- **Discord Link:** https://discord.gg/ARTUGknwEc.
  Please join our department server and find this course available under the "Virtual Reality" group. Use this for all class discussion for questions, feedback, and interaction. It will be one of the many digital spaces that we occupy and build during this course so **please keep it active, fun, and respectful.**

- **Canvas Link:** https://peralta.instructure.com/courses/72122

Student Outcomes

- Gain the knowledge and practical skills necessary to conceptualize, design, and create immersive virtual reality experiences and digital worlds.
- Become familiar with the historical and technical aspects of VR that make it unique
- Gain an understanding of the limitations and strengths of the medium
- Learn past "Dreams" of VR and the Metaverse while pondering its future

- Have gained experience with software tools such as PlayCanvas, Unity, and Blender
- Learn emerging creative tools such as generative AI and NeRFs
- Learned about environmental storytelling, immersion, and worldbuilding
- Have tried some form of VR first-hand
- Create a piece of original content related to digital worldbuilding to include in a portfolio

Methodology: This course will provide text, links, online resources, and tutorials to enhance student skills. Smaller projects within the course will grow to larger more substantial manifestations and a final project.

Required Reading, Software, and Materials: We will provide all required reading (https://scholar.google.com/), videos, and other lecture material free of charge. We will focus on free and easily accessible software throughout the course, however many paid tools will also be introduced and can be used if desired by the students. Students are responsible for gaining access to development computers and paid resources/software/hardware if desired but are not required to do so for success and completion of the course.

Evaluation Criteria: Grades will be calculated based on a point scale in regards to acumen of projects, comprehension of readings, homework/lab sessions, and participation.

- **70% Homework/Projects/Participation**
- **30% Final Project/Presentation and/or Documentation**

Grading Scale A=90-100%, B=80-89%, C=70-79%, D=60-69%, F=0-59%

Academic Dishonesty: Cheating & Plagiarism: Berkeley City College demands intellectual honesty. Proven plagiarism or any form of dishonesty associated with the academic process can result in the offender failing the course in which the offense was committed or expulsion from school. See the Berkeley City College Student Code of Conduct. **Note:** in this course **we encourage "remixing" and using found content**, but PLEASE always **cite your source** or ask your instructor if you are unsure what is permissible.

ADA Accommodations Policy: It is the policy of Berkeley City College to provide appropriate accommodations to any student with a documented disability. If you have a need for accommodation in this course, please make an appointment with our Accommodative Services at 510-981-2929. The email for Maricela Becerra is mbecerra@peralta.edu and Lynn Massey is cmassey@peralta.edu

LGBTQ: There are additional LGBTQ resources available on campus, please contact the student rep at rrerin@gmail.com. There is also a single bathroom on the first floor (past financial aid) that is now for transgender use, but is available to all.

Veterans: There are additional resources for Veterans on campus. If possible, please inform me in advance of any information that may be helpful pertaining to class time, class activities, etc. Jennifer Lenahan is a representative here on campus and her email is bccvets@gmail.com

Student Rights and Responsibilities: Please refer to the Berkeley City College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Berkeley City College Student.

Course Structure and Policies: While extremely rare, the instructor may modify course layout based on discretion and progress of participants. If there are questions regarding course content, policy, or dialogue please inform the instructor.

Outline: Fall / Spring Semester(s): This course will introduce historical, theoretical, and practical tools for the creation of Virtual Reality experiences and Digital Worlds. We will provide a number of **interviews** by practitioners working in immersive media arts. We will focus on the question, **"What is Virtual Reality today and what can it become in the future?"**

Class Schedule: (Important: Weekly assigned readings and pre recorded lectures all linked on Canvas.)

Week 1 - Introduction: Introduction to the course topics, goals, and areas of exploration. Brief history of virtual reality both as an idea and applied technology. Explanation of the Final Project where we aim to build a collaborative world/exhibition/experience as a class.

Lecture: (Tues.) Class Topic Lecture

- **Topics:** What is VR and what can it become in the future? What is Worldbuilding? What is Immersion and how is it created?
- **Homework:**
    - Assignment 1: Artist/Designer Notebook
    - Assignment 2: View Lecture Link(s) - New Media Architectures: Introduction
    - Assignment 3: Review Weekly readings / Media links
        - Abridged History of VR: https://5dinstitute.org/when-did-virtual-reality-appear/
        - Jaron Lanier "Dawn of the New Everything" p.1-22
        - Maya Deren "Amateur Versus Professional"

Lab/Lecture (Thurs.): Current Events, & News (THEMAS) + Discussion + Student Meetings

Week 2 - Introduction to Generative AI: Introducing contemporary and emerging generative AI tools and methodologies. "How can AI enhance and increase creative output?" Discussion of tools such as Midjourney, Stable Diffusion, Polycam, Skybox.AI, Infinigen, RVC, MusicGen, and ChatGPT.

Lecture: (Tues.) Class Topic Lecture

- **Topics:** Introduction to Generative AI tools and Semantic Programming, Assistive Intelligence aka "Bicycle for the Mind," Biologically inspired design.
- **Homework:**
    - Assignment 1: Practice in Prompt Engineering: AI Study
    - Assignment 2: View all lecture link(s) - Tuesday/Thursday
    - Assignment 3: Review Weekly readings / Media links
        - The Direct from Imagination Era Has Begun
        - AI to Matter-Reality
        - Art and the science of generative AI
        - Tutorial on MJ Game dev process

Lab/Lecture (Thurs.): Current Events, & News (THEMAS) + Discussion + Student Meetings

Weeks 3 - Sound Design: Two weeks covering sound design, reactive audio, and generative tools in the sonic domain. Students learn about spatialization, 3D audio, and how to create immersive auditory experiences. Overview of standard audio processing techniques, effects, and synthesis.

Lecture:

- **Topics:** Spatialization and how to create a sense of immersion through auditory cues. 3D Audio. Directionality and position. Physiology, psychology, and technical aspects. Sound design. Effects to change audio perception.

- **Homework:**
    - Assignment 1: Exploring Soundscapes through "Deep Listening"
    - Assignment 2: View all lecture link(s) - Tuesday/Thursday
    - Assignment 3: Review Weekly readings / Media links
        - A Visual History of Spatial Sound
        - Foley Art

Lab/Lecture (Thurs.): Class Discussion + Current Events, & News (THEMAS) Lecture + Student Meetings

Weeks 4 - Reactive Audio and the Metaverse: Two weeks covering sound design, reactive audio, and generative tools in the sonic domain. Students learn about spatialization, 3D audio, and how to create immersive auditory experiences. Overview of standard audio processing techniques, effects, and synthesis.

Lecture:

- **Topics:** Reactive audio, Visualization, sound->sight. Animation and interpolation. Live coding and Shaders. Virtual reality concerts in the Metaverse.
- **Homework:**
    - Assignment 1: A Virtual Concert Report:
    - Assignment 2: View all lecture link(s) - Tuesday/Thursday
    - Assignment 3: Review Weekly readings / Media links
        - Making a Metaverse that Matters by Wagner James Au (pgs. 231-239)
        - Travis Scott Fortnite Concert, 2020
        - AURORA Virtual Concert, 2023

Lab/Lecture (Thurs.): Class Discussion + Current Events, & News (THEMAS) Lecture + Student Meetings

Week 5 - Game engines and graphics: Game engines and graphical techniques are demonstrated: 360-degree experiences, immersive worlds, and **Lecture:**

- **Topics:** Level Design, Environmental Art, Lights, 3D Sculpting, Finding and Creating Resources, Practical Demos, In-World Design
- **Homework:**
    - Assignment 1: **Practice in 3D Sketching and Level Design**
    - Assignment 2: View all lecture link(s) - Tuesday/Thursday
    - Assignment 3: Review Weekly readings / AV Media links
        - Design Book by R. Yang and co. Chpt. Blockout, Chpt. Env-Art, Chpt. Lighting
        - 3-min. Geometry Basics, 3-min. Rendering pipeline basics, 3-min. VR Design
        - Complexity , Complex Systems, SFI - Foundational Papers Collection

Lab/Lecture (Thurs.): Class Discussion + Current Events, & News (THEMAS) Lecture + Student Meetings

Week 6 - Worldbuilding and Experience Crafting: Focus on Worldbuilding and crafting experiences. Students will explore the psychology of immersion, hard vs. soft worldbuilding, and the application of these concepts in VR.

Lecture:

- **Topics:** Worldbuilding and crafting experiences. Psychology of immersion, hard vs. soft worldbuilding, storytelling, and the application of these concepts in VR. Hyper-reality.
- **Homework:**
    - Assignment 1: Worldbuilding Style Exploration
    - Assignment 2: View all lecture link(s) - Tuesday/Thursday
    - Assignment 3: Review Weekly readings / Media links
        - Hyper-Reality: The Art of Designing Impossible Experiences by C. Hickman
        - Video Essay on Hard vs. Soft Worldbuilding by Timothy Hickson
        - The role of disruption in world building by Alex McDowell

Lab/Lecture (Thurs.): Class Discussion + Current Events, & News (THEMAS) Lecture + Student Meetings

Week 7 - Contemporary VR Toolkits: This week introduces contemporary VR toolkits in Unity, Unreal, and PlayCanvas. We will discuss Vision OS and Apple's “Spatial Computing” SDKs.

Lecture:

- **Topics:** This week introduces contemporary VR toolkits in Unreal, Unity, and PlayCanvas. We may discuss Vision OS and Apple's “Spatial Computing” SDKs as well as the surrounding topics. Interaction will be demonstrated.
- **Homework:**
    - Assignment 1: VR: Hardware & Frameworks
    - Assignment 2: View all lecture link(s) - Tuesday/Thursday
    - Assignment 3: Review Weekly readings / Media links
        - 2D->3D AI Tool: https://huggingface.co/spaces/jiawei011/dreamgaussian

Lab/Lecture (Thurs.): Class Discussion + Current Events, & News (THEMAS) Lecture + Student Meetings

Week 8 - Input and Control: Overview of input and control mechanisms in VR, including hand tracking, motion tracking, and foveated rendering. We will explore speculative and experimental possibilities in human-computer interaction (HCI).
Lecture:

- **Topics:** Overview of input and control mechanisms in VR, including hand tracking, motion tracking, optical, and inertial systems. We will explore speculative and experimental possibilities in human-computer interaction (HCI).
- **Homework:**
    - Assignment 1: Catch-up Week and Brainstorming VR
    - Assignment 2: View all lecture link(s) - Tuesday/Thursday
    - Assignment 3: Review Weekly readings / Media links
        - Inertial Tracking - NASA
        - Watercolor animation study
        - Touch Designer Tutorial

Lab/Lecture (Thurs.): Class Discussion + Current Events, & News (THEMAS) Lecture + Student Meetings

Week 9 - Environmental Storytelling: This week covers environmental storytelling, architectural connections, and capturing environments through photogrammetry. It introduces NERFs and other technologies.
Lecture:

- **Topics:** This week covers environmental storytelling, architectural connections, and capturing environments through photogrammetry. It introduces NERFs and other technologies.
- **Homework:**
    - Assignment 1: Environmental Storytelling & Capture
    - Assignment 2: View all lecture link(s) - Tuesday/Thursday
    - Assignment 3: Review Weekly readings / Media links
        - Game Developer , Dan Carson , Dan Carson Blog
        - Best Text->Music tool: https://www.stableaudio.com/
        - MusicGen: https://ai.honu.io/papers/musicgen/

Lab/Lecture (Thurs.): Class Discussion + Current Events, & News (THEMAS) Lecture + Student Meetings

Weeks 10 - Collaborative Worldbuilding: These weeks explore collaborative and improvisatory worldbuilding, introducing Universal Scene Description (USD), PS4 Dreams, and the Metaverse. The focus is on crafting worlds from within, speaking or dreaming the world into existence, and the concept of “trading experiences.” We will continue to expand on the techniques we have learned, building more resources and preparing to place them into our final project exhibition space.
Lecture:

- **Topics:** Collaborative and improvisatory worldbuilding, Introducing Universal Scene Description (USD), Crafting worlds, Speaking or Dreaming the world into existence, Concept of “trading experiences
- **Homework:**
    - Assignment 1: Final Project Planning Assignment
    - Assignment 2: View all lecture link(s) - Tuesday/Thursday
    - Assignment 3: Review Weekly readings / Media links
        - What you need to know Universal Scene Description (USD)
        - Plumbing for the Metaverse
        - The state uf USD - Epic Games

Lab/Lecture (Thurs.): Class Discussion + Current Events, & News (THEMAS) Lecture + Student Meetings

Weeks 11 - Sounds within Collaborative Worldbuilding: These weeks explore collaborative and improvisatory worldbuilding, introducing Universal Scene Description (USD), PS4 Dreams, and the Metaverse. The focus is on crafting worlds from within, speaking or dreaming the world into existence, and the concept of “trading experiences.” We will continue to expand on the techniques we have learned, building more resources and preparing to place them into our final project exhibition space.
Lecture:

- **Topics:** We will explore topics surrounding collaborative and improvisatory worldbuilding, introducing Sound - Granular Synthesis. The focus on the concept of " Experiences as sound."
- **Announcement:** Please continue to plan and develop your Final Project over the next few weeks. Ask questions if needed! Please add your New Art City email address to this spreadsheet so we can add you as collaborators on the Exhibition World.
- **Homework:**
    - Assignment 1: A Student Critique Format
    - Assignment 2: View all lecture link(s) - Tuesday/Thursday
    - Assignment 3: Review Weekly readings / Media links
        - Silo First Encounter, Silo Unfiltered Audio, Silo Presets , Silo First Look

Lab/Lecture (Thurs.): Class Discussion + Current Events, & News (THEMAS) Lecture + Student Meetings

- **Topics:** NMA Futures: Case Studies: Stockhausen by Professor G. Rincon
    - Karlheinz Stockhausen
    - Electronic Music | Computer Music & …

Week 12 - Final Project: We will finish building a collective VR experience that serves as a living class artifact. Each student will contribute to an online exhibition space, while creating documentation for personal portfolios and possibly a group publication after the end of the semester.

Lecture:

- **Topics:** Final Project explanation and successful completion criteria
- **Announcement:** We made a short video showing how getting added as a curator works. Seems to be fine, so students who are having issues please make sure you used the same email account that you put on the list or watch this video demonstration.
- **Homework:**
    - Assignment 1: Concept to Schematic Design Narrative
    - Assignment 2: View all lecture link(s) - Tuesday/Thursday
    - Assignment 3: Review Weekly readings / Media links
        - Semiotics for Beginners by Daniel Chandler
        - New Art City: Exhibition by Matteo Campella

Lab/Lecture (Thurs.): Class Discussion + Current Events, & News (THEMAS) Lecture + Student Meetings

- **Topics:** NMA Futures: References: Art + Information by Professor G. Rincon
    - Art + Information
    - Computer History
    - Electronic Music
    - Composition & Tech

Week 13 - Final Project: Class exhibition and Student Project Continued.

Lecture:

- **Topics:** Final Project Exhibition Design, Process, and Narrative.
- **Homework:**
    - Assignment 1: Design Process, Narrative, and Problems (Student Meetings)
    - Assignment 2: View all lecture link(s) - Tuesday/Thursday
    - Assignment 3: Review Weekly readings / Media links
        - Toward a theory of perspective perception in pictures by Aaron Hertzmann
        - No Priors Ep. 39 | With OpenAI Co-Founder & Chief Scientist Ilya Sutskever

Lab/Lecture (Thurs.): Class Discussion + Current Events, & News (THEMAS) Lecture + Student Meetings

- **Topics:** NMA Futures: References: Art + Information by Professor G. Rincon
    - A.I. in Culture: History + Philosophy + Science + Theory
    - DigitalFutures: Art, AI, Computation, & Quantum - a future???

Week 14 - Final Project Presentations: All students will present a project (5 minute) including class critique.

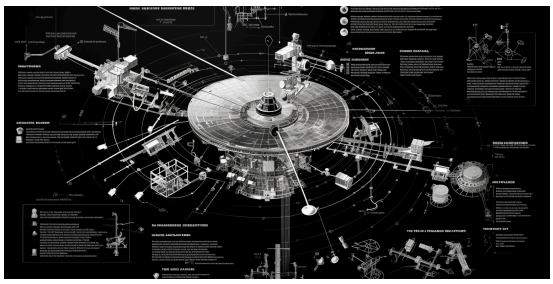
Final Class Meeting (Tues.)

- **Topics:** Final Project Student Presentations

Reviews - Student Presentations (Thurs.)

Final Project: "Virtual Payload: A Record of Art & Rebellion in the Cosmos"

Virtual Reality and Digital Spaces - Final Project
Deadline: Last day of Class.
Call for Submissions



Our goal is to embody the themes that define our time through Art & Design Activism

History:
The NASA Voyager 1 Mission, launched in the U.S. in 1977 during the President Jimmy Carter administration, the Golden Record was an audiovisual time capsule made as physical records. The project lead was Carl Sagan. His life and work on the project can be viewed through the lens of art, content, history, and news. We revisit that moment in a lecture as well as a science of hope to inspire humanity's future.

Cinematic Science Fiction examples discussing first contact & space include: Close Encounters of the Third Kind, Contact, Arrival, and Interstellar – also match the pace of scientific discovery and awareness of the vastness of the Cosmos. We will be building from SETI and artists and researchers inspired in this area of "what is life" including Andy Gracie, Bruce Damer, Douglas Kahn, Interspecifics, John Jenkins, Marko Peljhan, Margaret Wierthheim, Meredith Sattler, Sasha Samochina, & Yasamam Sheri.

We are inspiring our combined powers of imagination through Speculative Design Futures, Future Casting, & World Building – as techniques to make the most creative gestures of Art ever dreamed.

Background: In the vastness of the cosmos, a new endeavor is underway. NASA and the European Space Agency (ESA) have embarked on the groundbreaking **Voyager 3 Mission**, aiming to send another representation of humanity into an archive collection into the depths of space on an interstellar probe. This mission is set to be a testament to humanity's creativity, resilience, and achievements, carrying with it a representation of Earth's cultural and scientific legacy. Searching for connection within the vastness of space with another potential intelligent life form.

However, in the age of activism – distributed hackers, a group of rebellious Artists with a creative spirit has risen to gain agency in this process. **We are a collective united by the belief that the opportunity to speak for humanity should not be monopolized by institutions and those in power.** The intervention is a part of creating a "People's Record", our response to this challenge to be heard throughout space-time. We aim to contribute by "inserting" our own messages to the payload. What are our messages that embody our human spirit of creative rebellion, technological re-appropriation, imaginative graffiti, and artistic speculative imagination?

Voyager 3, unlike its predecessors, offers us unprecedented possibilities – a legacy that will potentially live on for many generations to come. The satellite embodies the latest technologies with advanced physical media encoding and a full Turing complete programming language at our disposal. We as "Art Activists" will infuse the planned payload with a wealth of digital audiovisual material – that share our views of the world today. We are curating what "we" see, hear, and imagine. If we believe the Universe is self-contained and that gravitational forces can shift the course of the satellite back to Earth – Hundreds of Millions of years into the future, what will this time capsule show?

Our goal is to include artistically the digitized media languages of today – virtual reality experiences, 3D assets, cinema, design, writings, still images, and sounds, allowing us to create a multifaceted portrayal of our era – using the tools of today – A.I. + Human Imagination.

The Exhibition Theme: "Virtual Payload: A Record of Art & Rebellion in the Cosmos" is an art exhibition that invites artists, designers, media creators, and hackers to participate in this audacious act of defiance. Our mission is to address the themes that define our time, transcending the boundaries of Earth and reaching into the cosmos. As an act of futuristic graffiti /vandalism, **we will embed our message as a hidden virus**

manifested as a series of virtual environments within the Voyager 3 source code. This content will be released to humanity after NASA's launch and could be discovered as a time capsule by future humans or extraterrestrial lifeforms during Voyager 3's journey outside of our solar system – into the vastness of space.

Themes to be explored within your submissions:

- **Virtual Worldbuilding and Imagined Futures:** Envision alternative worlds and realities, offering hope and inspiration for a better future. VR as it exists or its potential.
- **AI and Humanity:** Reflect on the interplay between artificial intelligence, its promises, and its implications for our future.
- **Techno-Optimism and Its Discontents:** Explore the contrasting narratives of optimism and skepticism surrounding technological progress.
- **Control and Liberation:** Unearth the dynamics of control, surveillance, and the quest for freedom in the digital age.
- **Institutional Power and Resistance:** Scrutinize the role of institutions and the struggles for a more democratic, equitable world.
- **Seeing the Unseen:** Provide a voice to disempowered, often unseen people of the world. Provide representation for their civilizational role.
- **Capturing the Everyday:** Capture items or environments representative of our world that wouldn't otherwise be included in NASA's collection. (photogrammetry, etc.)
- **Virtual Realities and Digital Spaces:** Envisioning digital realms of all forms, the new bounds of human creativity expanded through digital tools.
- **Rebelliousness of Human Creative Spirit:** What picture of humanity would be complete without showing an example of our definitive free spirit?
- **Other:** This is your message to the cosmos and the future.

Submission Guidelines: We encourage artists, designers, and hackers – creative minds from all walks of life to participate. Submissions can include, but are not limited to:

- Digital art and animations
- Virtual reality experiences
- Digital environments
- 3D models and assets
- Video
- Written works
- Soundscapes and music compositions
- Sketches
- Concept Art
- Photogrammetry and Motion Capture
- Interactive systems

Important Details: Submissions should be in a digital format compatible with Voyager 3's encoding capabilities (New Art City) . All submissions have the option to remain anonymous, respecting the covert nature of our mission. The chosen artworks will be revealed in the form of an art exhibition held on Earth, as well as becoming part of the Voyager 3 payload for a future audience among the stars.

Submission Deadline: Submit your work by December 13th, 2023 to our class portal in Canvas.

Join us in this act of creative Artistic rebellion. This virtual payload, or "People's Record" is our opportunity to ensure that our voices, our hopes, and our dreams are heard beyond the confines of our home planet, offering a unique perspective of our time to the cosmos. Together, let's redefine what it means to make art, to hack systems, and to reach for the stars.

"Virtual Payload: A Record of Art and Rebellion in the Cosmos" awaits your contributions as we prepare to make our mark on the universe.

Final Project Presentation Assignment

A Student Critique Format

Objectives: To formalize a structure for critique expectations for both student and critic.
Critique is a foundational practice with hundreds of years of history. Your strategy of presentation should be finalized well in advance and rehearsed.
Reference: Technology, Humanities, Engineering, Math, Arts, & Sciences (THEMAS)

1. **<u>One-page summary:</u>**
    - Each students requesting a critique are required to submit a one-page summary that includes the following:
    - Title and date of the creation of the work/research presented.
    - All collaborators and their contribution. (Creative and/or technical).
    - A summary of the technical component of the work; a list of tools created and novel implementations.
    - An abstract of 150 to 250 words framing the conceptual grounding of the work.
    - Two representative images of the work. (Representative image, diagram and/or code sample.)
    - References that inspired the work. (3 references maximum)
    - Important: Give your critics an idea about the feedback you need?

2. **<u>Format of Student Presentations: (Video Presentations) - 12 slides max</u>**
   The presentations should proceed as follows:
    - Present your work clearly in a video recorded 3- to 5-minute verbal presentation summarizing the major points of the one-page summary. (Google Slides are encouraged)
    - Start the presentation with initial introduction
    - Use images and text as needed (No more than 12 slides max should be used).
      Important: Videos and screen captured videos are encouraged.
    - Conclusion: Please summarize your project

Note:

<u>Discipline Specific Critique Format References:</u>

This is meant to be a positive experience, built on mutual trust and open dialogue that investigates core issues of the art/research presented.

Use the following examples as guides:

- **Art Critique:**
    a. Sign
    b. Sentence
    c. Statement
- **Architecture (Design/Engineering) Critique:**
    a. Main problem
    b. Process with analysis, concept and precedents
    c. Solution citing novelty
- **Media Arts Critique:**
    a. Conceptual Framework
    b. Artistic motivations and/or Research Problem
    c. Technical focus (Technical achievements and/or novelty)
- **Music (Performance Art) Critique:**
    a. Foreground
    b. Middleground
    c. Background

3. **<u>Submit (all) material to Canvas.</u>**

References: All Readings & AV Media Important: (Recorded Lecture(s) are only linked on Canvas.)

- **Articles & AV Media:** (Important: Please refer to our online weekly lecture notes to find our AV/Reading weblinks.)
- **Books:**

Adler, Mortimer J., and Charles Van Doren. *How to read a book*. Simon and Schuster, 1972.
Benedikt, Michael. "Cyberspace: First Steps." MIT Press, 1991.
Berger, John. "Ways of Seeing." 1972.
Bleecker, Julian, et al. *The Manual of Design Fiction*. 2022.
Bratton, Benjamin H. *The Stack: On Software and Sovereignty*. MIT Press, 2016.
Broeckmann, Andreas. *Machine Art in the Twentieth Century*. MIT Press, 2016.
Buolamwini, Joy. *Unmasking AI: My mission to protect what is human in a world of machines*. Random House, 2024.
Caldarelli, Guido. "Networks: A Very Short Introduction." OUP Oxford, 2012.
Carter, Marcus, and Ben Egliston. *Fantasies of virtual reality: Untangling fiction, fact, and threat*. MIT Press, 2024.
Calzati, Stefano. *Quantum Ecology: Why & How New Information Technologies Will Reshape Societies*. MIT Press, 2024.
del Campo, Matias, *Diffusions in architecture: artificial intelligence and image generators*. Wiley & Sons, 2024.
del Campo, Matias, and Neil Leach,eds. *Machine Hallucinations: Architecture & Artificial Intelligence*. Wiley & Sons, 2022.
Deleuze, Gilles, and Félix Guattari. *Anti-Oedipus: Capitalism and Schizophrenia*. Penguin, 2009.
Deleuze, Gilles., and Félix Guattari. "A Thousand Plateaus: Capitalism and Schizophrenia." *U of Minnesota P*, 1987.
D'ignazio, Catherine, and Lauren F. Klein. *Data Feminism*. MIT Press, 2023.
Dunne, Anthony, and Fiona Raby. *Speculative Everything*. MIT Press, 2024.
Floridi, Luciano. *Information: A Very Short Introduction*. OUP Oxford, 2010.
Gleick, James. *The information: A History, a Theory, A Flood*. Vintage, 2011.
Gowers, Timothy. *Mathematics: A Very Short Introduction*. Vol. 66. Oxford Paperbacks, 2002.
Graham, Beryl, and Sarah Cook. *Rethinking Curating: Art after New Media-Leonardo Books*. MIT Press, 2010.
Grau, Oliver. *Virtual Art: from Illusion to Immersion*. MIT Press, 2004.
Haacke, Hans. *Working Conditions: The Writings of Hans Haacke*. The MIT Press, 2016.
Hensel, Michael, C. Hight, and A. Menges. "Space Reader: Heterogeneous Space in Architecture." *Wiley & Sons,* (2009).
Holland, John H. *Complexity: A Very Short Introduction*. OUP Oxford, 2014.
Holland, J.H., Hidden Order: How Adaptation Builds Complexity. Cambridge, Mass.: Basic Books, 1996.
Hosale, Mark-David, Sana Murrani, and Alberto de Campo, eds. *Worldmaking as Techné: Participatory Art, Music, and* Architecture. Riverside Architectural Press, 2018.
Kelly, Mary, and Juli Carson. "Mary Kelly's Concentric Pedagogy: Selected Writings." (2024): 1-336.
Lanier, Jaron. *Dawn of the new everything: Encounters with reality and virtual reality*. Henry Holt and Company, 2017.
Lanier, Jaron. *Who owns the future?*. Simon and Schuster, 2014.
Leach, Neil. *The Anaesthetics of Architecture*. MIT Press, 1999.
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