

University of New Mexico

School of Architecture + Planning

Emergent Technologies for Designers

Spring 2025

Arch 462 | 662 | Section 001

Tuesday - 2:00-4:30

P139 Hybrid Classroom

Course Syllabus

INSTRUCTOR:

John-Mark Collins

Adjunct Faculty

School of Architecture + Planning

Abstract:

This course will focus on the exploration of emergent technology and the potential it has for affecting cultural, social and spatial development. Students will be exposed to immersive and interactive media, virtual reality, projection mapping, and augmented reality, as a means of creating new experiences for a hybrid [digital + analog] world. We will also explore the human connection to and interaction with technologies

The course will focus on developing content for:

- visualizations of social, political, environmental and other data sets
- explore the potential of immersive, virtual, mixed and augmented reality interactive media
- develop narratives that enhance human understanding of the emerging world

Modules:

Introduction: Current Technology Landscape

Module #1: 360-degree Photography & Photogrammetry

Module #2: XR, AR & Hybrid Virtual Environments

Module #3: Projection Mapping and Media-Enhanced Spatial Environments

Module #4: Final Project (Combination of learned techniques)

Assignments & Projects:

Assignment #1: Introduction, Presentation & Website

Project 1: 360° Video & Photo Tours

Project 2: Photogrammetry

Project 3: Virtual Environments / AR / XR

Project 4: Projection Mapping / Spatial Design

Final Project: TBD

Grading Summary:

| | |
|--------------------------|--------------------------|
| Assignment #1 | (5%) 50 points |
| Project 1 | (10%) 100 points |
| Project 2 | (10%) 100 points |
| Project 3 | (20%) 200 points |
| Project 4 | (20%) 200 points |
| Final Project | (30%) 300 points |
| Participation/Attendance | (5%) 50 points |
| Total | 100% (1000 total points) |

Qualified students with disabilities needing appropriate academic adjustments should contact me as soon as possible to ensure your needs are met in a timely manner. Handouts are available in alternative accessible formats upon request.

Contact Information:

John-Mark Collins

Office Hours: by appointment (Thursdays preferable)

E-mail: jmcjedi@unm.edu

Grading and Evaluation Criteria

Evaluations: review of all work will be conducted by the instructor

Grade A (superior/excellent)

-Excellent work; exceeding requirements and learning objectives of the class

Grade B (good/better than average)

-Better than average work; significant progress to course objectives

Grade C (competent/average)

-Competent work; meeting the course requirements and course objectives

Grade D (below average/not passing)

-Below average work, insufficient progress and not meeting the course learning objectives

Grade F (Failing)

-Unacceptable work, effort is not being made to complete assignments; no progress has been made in course learning objectives

Attendance Policy

Attendance in this class is **MANDATORY**. Class begins at 2:00 p.m. and concludes at 4:30 p.m.

Attendance at all of the events in the course is essential if you are to maximize your educational experience.

This course meets in person. However, there may be circumstances that require ZOOM or other online means of attendance - these meetings are also **MANDATORY** to attend.

Attendance will be taken at the beginning of each class. If you arrive more than 10 minutes late you will be counted as absent. Attendance will be taken at the beginning of each class. If you arrive more than 10 minutes late you will be counted as absent. If you miss more than three classes the instructor will withdraw you.

To be excused from any event, please contact the instructor with the extenuating circumstances in a timely fashion. Emergencies happen, so please be communicative about any issues that may affect your ability to be present in class.

Required Materials

Please bring your computer to every class, you will be performing in-class tasks (most likely everyday).

Please also purchase an external hard drive (or use one you currently have) for backup storage [2 TB] and transporting of digital work generated in class and lab.

Web archive:

Every student will create a web archive. This will be your own catalog of the project evolution throughout the semester. This archive can be displayed through the student website or stored in another location that is accessible or shared with the instructor.

This will be due Monday of the incoming week throughout the semester.

* This is to be an academic (not personal) web archive. All students will maintain the highest ethical standards in their web database. Any misuse (see IT UNM computer usage policy) will be cause for withdrawal from class.

Digital Portfolio

Please document all work concurrently, failure to submit will result in a final grade reduction. Your portfolio will be your website and its contained submissions.

Authorship of Work

All design work submitted by students must be produced by the individual enrolled in the class. Students who fail to meet this requirement will be subject to University policy concerning Academic Dishonesty (<http://handbook.unm.edu/policies/section-d/d100.html>).

Ownership of Work:

The school holds the right to all work created at the university. This material will be utilized for accreditation review. Additionally, the student generated websites, class website and final project event are public facing. By reading this syllabus and acknowledging the potential public visibility of your work, you give the instructor and department the right to display your work. Please see the instructor with any concerns or issues regarding the presentation of your work as it relates to this course.

Late Work:

Late work will not be accepted unless it qualifies as an Excused Absence (see Attendance Policy) or other approved extenuating circumstances. All assignments and requirements will be effectively met on time and by the date indicated. Late assignments will be downgraded at instructor's discretion at 10% per day beyond the initial due date.

Incomplete Work:

Incomplete work will result in a grade reduction. All assignments are to be completed at the date indicated by the instructor.

Grading Concerns:

Concerns regarding grades on a particular assignment should be brought to the attention of the instructor within one week of the student's receipt of the assignment grade.

Personal Support & Health:

COVID-19 Health and Awareness. UNM is a mask friendly, but not a mask required, community. To be registered or employed at UNM, Students, faculty, and staff must all meet UNM's [Administrative Mandate on Required COVID-19 vaccination](#). If you are experiencing COVID-19 symptoms, please do not come to class. If you have a positive COVID-19 test, please stay home for five days and isolate yourself from others, per the [Centers for Disease Control \(CDC\) guidelines](#). If you do need to stay home, please communicate with me at: jmcjedi@unm.edu. I can work with you to provide alternatives for course participation and completion. UNM faculty and staff know that these are challenging times. Please let us know that you need support so that we can connect you to the right resources and please be aware that UNM will publish information on websites and email about any changes to our public health status and community response.

[Additional Support:](#)

[Student Health and Counseling \(SHAC\)](#) at (505) 277-3136. If you are having active respiratory symptoms (e.g., fever, cough, sore throat, etc.) AND need testing for COVID-19; OR If you recently tested positive and may need oral treatment, call SHAC.

[LoboRESPECT Advocacy Center](#) (505) 277-2911 can offer help with contacting faculty and managing challenges that impact your UNM experience.

Accommodations: I can make appropriate accommodations that will support you in this class by collaborating with you and the [Accessibility Resource Center](https://arc.unm.edu/)(<https://arc.unm.edu/>). It is important that you take the initiative to inform me of your accommodations needs, as I am not legally permitted to inquire. In accordance with University Policy 2310 and the Americans with Disabilities Act (ADA), academic accommodations may be made for any student who notifies the instructor of the need for an accommodation. Students who may require assistance in emergency evacuations should contact the instructor as to the most appropriate procedures to follow.

OR

Accommodations: UNM is committed to providing courses that are inclusive and accessible for all participants. As your instructor, it is my objective to facilitate an accessible classroom setting, in which students have full access and opportunity. If you are experiencing physical or academic barriers, or concerns related to mental health, physical health and/or COVID-19, please consult with me after class, via email/phone or during office/check-in hours (I am not legally permitted to inquire about the need for accommodations). We can meet your needs in collaboration with the [Accessibility Resource Center](https://arc.unm.edu/) (<https://arc.unm.edu/>) at arcsrvs@unm.edu or by phone **(505) 277-3506**.

Support: Contact me at jmcjedi@unm.edu or in office/check-in hours and contact:

[Accessibility Resource Center](https://arc.unm.edu/) (<https://arc.unm.edu/>) at arcsrvs@unm.edu - **(505) 277-3506**.

Master Schedule Spring 24

Introduction / 360 / Photogrammetry

| | Wk | day | time | event |
|---|-----|---------|-----------|---|
| 1 | Tue | 1/21/25 | 2:00-4:30 | Introduction Examples & Process Assignment #1 & Project #1 |
| 2 | Tue | 1/28/25 | 2:00-4:30 | 360 Video & Photography Project #1 Workday Assignment #1 DUE |
| 3 | Tue | 2/4/25 | 2:00-4:30 | Photogrammetry Discussion & 360 Video & Photography |
| 4 | Tue | 2/11/25 | 2:00-4:30 | Project #1 DUE Project #1 Presentations Project #2 |

Virtual / Augmented Environments Module

| | Wk | day | time | event |
|---|-----|---------|-----------|--|
| 5 | Tue | 2/18/25 | 2:00-4:30 | AR / VR / XR Virtual & Augmented Software Photogrammetry Workday/Questions Project #3 Overview |
| 6 | Tue | 2/25/25 | 2:00-4:30 | Project #2 DUE Project #2 Presentations (4:15-5:30) |
| 7 | Tue | 3/4/25 | 2:00-4:30 | AR & VR Details and workday |
| 8 | Tue | 3/11/25 | 2:00-4:30 | Project #3 DUE AR & VR presentations Project #4 Outline |
| 9 | Tue | 3/18/25 | 2:00-4:30 | SPRING BREAK |

Projection Mapping / Spatial Module

| | Wk | day | time | event |
|----|-----|---------|-----------|---|
| 10 | Tue | 3/25/25 | 2:00-4:30 | Intro to Projection Mapping Project #4 Outline |
| 11 | Tue | 4/1/25 | 2:00-4:30 | Projection Mapping Software Overview |
| 12 | Tue | 4/8/25 | 2:00-4:30 | Project #4 DUE Virtual Environments Presentations |

FINAL PROJECT

| | Wk | day | time | event |
|----|-----|---------|-----------|--|
| 13 | Tue | 4/15/25 | 2:00-4:30 | Final Project Overview |
| 14 | Tue | 4/22/25 | 2:00-4:30 | Final Project Workday |
| 15 | Tue | 4/29/25 | 2:00-4:30 | Final Project Workday (NO CLASS) |
| 16 | Tue | 5/6/25 | 2:00-4:30 | Final Project Workday (NO CLASS) |
| 16 | Tue | 5/13/25 | TBD | FINAL PRESENTATIONS / GALLERY SHOW Location TBD |

Information:

All information, syllabus and assignments will be posted on Canvas: <https://canvas.unm.edu>
Additionally (and more importantly) all information will also be posted on the class website:
<https://johnmarkcollins.wixsite.com/emergent-technology>