

Art 250-OL TIA: Intro to Augmented Reality
Summer Session 2023
Hartwick College
Department of Art & Art History

Assoc. Professor:	Joseph Von Stengel
Art 250:	Intro to Augmented Reality
Office Hrs:	online by email or Zoom

Course Description

Augmented reality enhances the experience of the real physical world. This is done through the use of digital 3D objects, 2D images, video and auditory elements that are mediated through technology. This course will explore the creation of augmented reality experiences utilizing the Membit and Artivive smartphone apps. It will also cover useful skills and software for creating digital assets used to build augmented reality experiences. Technology requirements: 2019 or newer smartphone, a computer or tablet with access to the internet. Most of the required software/apps for this course are free, but there are a couple that students need to purchase. Online asynchronous. EL, GEO2

Purpose

This course is an introduction to the concepts and ideologies used by professional digital media artist and designers to create smartphone based augmented reality experiences. We will learn the basics of 2D image and 3D object creation and manipulation to gain a solid foundation of the elements required to create an AR experience. From this understanding we can break the rules and experiment. We will focus on creating immersive and overlaid spatial, virtual experiences. We will consider content, context, and of course technique.

Learning Outcomes

At the completion of this course, students will:

- 1 – Create and manipulation digital images for AR at an introductory level.

2 - Create 3d models with texture wrapping for AR at an introductory level

3 - Create an augmented reality experience at an introductory level

4 – Understand the technical aspects of digital media related to augmented reality at an introductory level.

5 – Gain basic knowledge of Membit and Artivive AR apps. Gain basic knowledge of Tinkercad, Vectary and Photopea webware.

Outcomes Assessment

1 – 8 assignments and 8 projects will be assigned during the semester. Assignments are used for skill building and idea generation. Projects are used to assess student's ability and knowledge.

a. projects are reviewed using the rubric below

2 – Projects will conclude with a critique where students will receive input from the professor.

3 – Students will present a portfolio of AR experiences at the end of the semester.

Supplies

- 2019 or newer Smartphone
- Updated Computer with internet access

Attendance

- Students are required to work an average of 20 hours every Monday – Friday averaging out to 4 hours a day for in class time, plus outside class work.

Evaluation

20% Assignments

10% Project 1 AR 2D layer based Experience Artivive

10% Project 2 AR 2D layer based Experience Membit

10% Project 3 AR 3D Experience Artivive

10% Project 4 AR 2D & 3D Experience Artivive

10% Project 5 AR 3D Experience Membit

10% Project 6 AR 3D Immersive Experience Membit

10% Project 7 Final AR Experience Membit

10% Project 8 Final Portfolio

Grades are determined through the following Rubric: Craftsmanship, Aesthetic, Consideration, Effort & Directions

Craftsmanship - the quality and skill used in the creation and a presentation of your finished projects and assignments.

Aesthetic - the visual appearance of the content of your finished project. Your images aesthetic quality in consideration of the composition and the images subject matter.

Consideration - this is the area that looks at the depth of your project. How does what you created function in society, what does it say (or not say)? How are you using image qualities to effect this.

Effort - Did you try or not? If this comes easy to you then you really need to work hard to show effort.

Directions - all projects have specific directions on how to name files and when projects are due. following the directions makes it easier for me to work with and review your files. all projects are expected to be complete on the due date.

Turning in Projects & Assignments

* Most projects and assignments for this class will be turned in through Google Photos

1. D2L provides the dates Assignments and Projects are due.
2. D2L explains how and where to hand in Assignments and Projects.
3. Late projects are due exactly one week from the due date. Late projects will lose $\frac{1}{2}$ a letter grade. Projects will not be accepted after the late date.

Expectations

- While online you are expected to be respectful. You can and should be critical as long as it is constructive.
- You are expected to keep your equipment in working order for the entire semester.
- Each student is expected to complete all projects, assignments, readings and Quizzes.
- Keep in mind Augmented Reality is cutting edge technology. There is no universal system so everything we use is in Beta. This means there can and will most likely be a few bumps in the road. If you run into problems, let the professor

know immediately. Be patient, be creative, and remember you are graded on the journey not the final outcome.

Instructional Sequence

- 1 basics of digital image editing and manipulation in Photopea webapp
- 2 download and set up Google Photos and learn basic concepts of AR production
3. learn the basics of Artivive's Bridge webapp and AR video experiences
4. learn how to create a layer based AR experience in Photopea webapp
5. learn how to create a layer based spatial AR experience in Artivive Bridge
6. learn how to document an AR experience for social media and portfolio
7. learn how to make basic 3d models in Tinkercad webapp
8. learn how to texture wrap a 3d model and export for AR in Vectary webapp
9. learn how to create an AR experience with 3d models in Artivive Bridge webapp
10. learn the basics of creating AR experiences using Membit app
11. learn the basics of AR Photography
12. 2d based augmented reality experience using Photopea and Membit
13. 3d based augmented reality experience using Tinkercad, Vectary and Membit
14. Final AR experience & portfolio

Academic Adjustments and/or Modifications

Students must present the professor with an updated 'Academic Plan Letter' for the semester in order to be eligible for academic adjustments.

Hartwick College is committed to upholding and maintaining all aspects of the Federal Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973. If a student with a disability wishes to request academic accommodations, they should contact Lara Sanford, Director of AccessAbility Services, at sanfordl@hartwick.edu, or AccessAbilityServices@hartwick.edu. AccessAbility Services is located on the 5th floor of Yager Library in the Center for Student Success. Any information regarding a student's disability will remain confidential. Requests for academic adjustments should be made as early as possible.

ACADEMIC HONESTY

Students are expected to know and abide by Hartwick's policy on Academic Honesty, and to ask questions when they are unsure of what they need to do to ensure that their work remains clearly their own. Briefly, claiming others' ideas as one's own, or borrowing others' ideas or language without providing proper credit, is considered plagiarism, which is a violation of academic dishonesty. If a student isn't sure how to provide the proper credit for others' ideas when using them in an assignment, they

should ask the instructor. The Writing Center is also a great resource for this! Because charges of academic dishonesty can have serious consequences, the successful strategy is to seek help and ask questions before an assignment is due.

<https://www.hartwick.edu/academics/student-services/academic-affairs/academic-policies/>.

TITLE IX/SEXUAL MISCONDUCT

Hartwick College is committed to equal opportunity and providing a safe community free from all forms of sexual misconduct including sexual/gender-based harassment, discrimination, dating or domestic violence, stalking, sexual exploitation, and sexual assault. If you wish to make an official report to the College or have questions about the College's policy and procedures regarding sexual misconduct, please contact the Title IX Coordinator, Michael Arno, at arnom@hartwick.edu or (607) 431-4293. Online reporting and policy information is available at <https://www.hartwick.edu/about-us/employment/human-resources/title-ix/>.

If you wish to speak confidentially about an incident of sexual misconduct, please contact one of the following resources: Perrella Wellness Center, Health - (607) 431-4120, or Counseling – (607) 431-4120; or Opportunities for Otsego's Violence Intervention Program – (607) 432-4855.

All other employees, including faculty, are responsible employees at Hartwick College and are required to report any incident of sexual misconduct that is personally reported to them to the Title IX Coordinator so that support and resources can be provided for all parties.

COVID-19

Any COVID-19 updates will be provided on the College website (<https://www.hartwick.edu/about-us/covid-19-updates/>). Instructors will communicate with students about any specific adjustments that are being made to their courses, such as modality of instruction, expectations for participation, and any changes to assigned work; students should check their Hartwick email accounts frequently for information from their instructors.

COUNSELING

As a student you may experience a range of issues that can cause barriers to learning. These might include strained relationships, anxiety, stress, alcohol/drug problems, feeling down, or loss of motivation. The Counseling Center is available to help with these issues and may be reached by calling (607) 431-4420 or emailing counselingcenter@hartwick.edu. Counseling services are free of charge and confidential. Heart, a peer counseling service, is also available if you are more comfortable talking with a fellow student who has been trained to offer information and support in a safe, non-judgmental atmosphere. To reach a Heart Peer Counselor, call (607) 431-5050 or email heart@hartwick.edu.