

# POINT CLOUDS + UNREAL WORLDS: AN INTRODUCTION TO IMMERSIVE TECHNOLOGIES

Arch 256-002

Instructor: Dawn Gilpin, [dgilpin@umich.edu](mailto:dgilpin@umich.edu)

Meeting Time: T+TH 8:30 - 11:30am

Oct 26 - Dec 11

Architecture Computer Lab 2109



Michigan Stadium 5th Floor Suites. Scanned by EIPC team members. Registration by Xin Li.

## OVERVIEW

This course introduces students to advanced techniques in 3D laser scanning and the foundations of measuring as technical extensions of disciplinary conventions in architecture representation. The course will focus on providing students with a comprehensive understanding of how these tools can be used to make more vivid design ideas, spatial narratives and positions developed in architecture studios. The course will cover a range of topics including:

**3D Laser Scanning:** Understanding the fundamentals of 3D laser scanning, including the equipment and software required, and how it can be used to capture accurate and detailed 3D models of real-world objects and environments. Each student will be certified with use of the FARO scanner by end of the semester. This will be the primary focus of this course.

**Measuring:** Understanding the fundamentals of triangulation, including how to collect measure and translate through drawing.

This module introduces workflows, the role of visualization software, and platforms that support immersion such as VR headsets, large scale projection, MiDEN, and LED stages.

Throughout the course, students will work on a series of projects that will allow them to apply the skills they have learned in a practical context.