LEARNING MORPHOLOGY, VIRTUALLY NATURALLY

We will develop an integrated curriculum and software tools, in the Unity language, to project 3D anatomical data into an immersive environment, using augmented and/or virtual reality. This will create deeply engaged learning opportunities for students of the anatomical sciences (medicine, nursing, physical therapy, dentistry, embryology, human gross anatomy, histology, veterinary anatomy, functional morphology, as well as architecture and engineering), in particular.

We will empower students to comprehend the topography of the inner body as naturally as walking through a home. Tools will include the capacity to modify transfer functions, create regions of interest, make measurements, crop structures, record coordinates, overlay stacks of data, etc., as well as use a multiplayer capacity where teams are in the same virtual space interacting with the data, while talking with each other, regardless of where the members are physically located. For example, an instructor could be on campus while students could engage from anywhere in the world.

Our software will handle any 3D data (ultrasound, SEM, optical tomography, CT, MRI). Thus, the project will build a foundation for increasing access to the U through online learning and expanding outreach and engagement.

COLLABORATORS

COLLEEN FARMER
College of Science
School of Biological Sciences
Project Owner

MARK DURHAM
School of Dentistry

KATHRYN MOORE
School of Medicine
Neurobiology & Anatomy

PROJECT INFO
FUNDED PROJECT AMOUNT
$30K