This course will offer an introductory study of the medium of virtual reality, its interface techniques and programming paradigms. Topics include physical interface devices; methods of manipulating a virtual world; evaluating VR applications and programming VR applications.

This course will explore both head-based displays, taking advantage of the low-cost Oculus Rift technology, as well as projective VR displays, available at IUIC room 105. Programming examples will include both simply OpenGL techniques as well as through the Unity game engine. Some of the assignments will involve C/C++ programming, and some will involve the C# or JavaScript implementation in the Unity development environment.

Most of the software will be platform independent, working in Linux, OSX and MS-Windows.

The final quarter of the semester will involve the creation of a project of the student's design that incorporates multiple topics covered during the course of the semester.