

DSGN 411 Physical Interaction Design

The course introduces physical interaction design in new media works with microcontroller and sensor technologies and explores interaction design practices adaptable for physical interaction, daily-life applications, and contemporary art works. Course content also introduces artistic strategies, structures, and methodologies for the creation of interactive installations and physical media-image-sound interaction projects.

(Pre-requisites: DSGN 341)

Course Learning Outcomes:

By the end of the course, students will be able to:

1. To obtain critical, knowledge and understanding of virtual reality principles and main components.
2. To apply practical professional knowledge of values, methods, techniques, and standards, for 3D interactive environments.
3. To identify and solve the challenges faced during the completion of this full-scale mixed media project.
4. To select and utilize the appropriate software to complete this full-scale mixed media project.
5. To obtain the ability to take initiative and independently develop themes, unique 3D space ideas.

Textbook & Course Materials:

- N/A

Course Content:

1. Overview of the new UE5
2. Creating First Level
3. 2D to 3D
4. FBX Imports
5. Advance material node editor
6. Instance Materials VS Prefabs
7. Epic Games Marketplace
8. Export Media
9. Terrain and Vegetation
10. Exterior Details
11. Nanite Virtualized Geometry
12. Adjust Meshes
13. 3D Assets
14. Animated shaders
15. Import Media to VR
16. Blueprint & Visual Scripting
17. Walk Scene Composition