# CSE 111 : Game Development I / 2D Game Programming

**Credits** 5
Write software to simulate 2 Dimensional environments and build virtual worlds. Learn techniques to track and interact with game objects in real-time with programming languages and game engines.
**Prerequisites**
CSE 103 and concurrent enrollment in CSE 140
**Course Outcomes**

Identify common tools used to create media for 2 Dimensional graphics.
Describe the process of animation.
Create working 2 Dimensional applications with game elements for player control and artificial intelligence.
Utilize common media formats for storing picture and game data.
Work with graphic design tools to create sprites and textures for game worlds.
Build state machines that can track progress and status of objects.
Utilize pre-built game engines to deliver graphic, audio, and network capabilities to game software.
Identify fundamental differences between pixel and vector graphics.
Demonstrate understanding of math required for 2 Dimensional movement and positioning and translate and optimize equations to programming code.
Create effective and intuitive UI elements to enable complex actions with a minimal learning curve.
Deploy finished software to other computer systems.