



THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Project: Design, Development, and Documentation of Interactive Systems

CSE 3902

Credit Hours:

4.00

Course Levels:

Undergraduate (1000-5000 level)

Course Components:

Lecture

Course Description:

Intensive group project involving design, development, and documentation of an interactive software system, a 2D interactive game; communication skills emphasized; builds programming maturity.

Prerequisites and Co-requisites:

Prereq: 2231; and 2321; and 2421 or 3430, or 2451 and ECE 2560; and enrollment in CSE, CIS, ECE, Music (BS), or Data Analytics major.

Course Goals / Objectives:

- Be competent with 2D graphics objects and rendering
 - Be competent with event based programming
 - Be familiar with elements of game engines such as AI, animation, memory management, and user control
 - Be familiar with game content creation and editing tools
 - Be competent with writing, organizational, and presentation skills
 - Be competent with analyzing the intended audience for a written document and writing an audience profile
 - Be familiar with making engineering decisions involving tradeoffs (e.g., space-time tradeoffs in choosing a table implementation)
 - Be familiar with defining the purpose (persuade, inform, etc.) of a written document and select the appropriate rhetorical devices
 - Be familiar with writing several pieces of documentation that have different purposes and to use appropriate organization to tie them together
 - Be familiar with group project organization techniques including conducting group meetings, recording minutes, and tracking project progress
 - Be familiar with using one structured approach to large software design to carry out a large group project
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Course Topics:

- Computer graphics and games overview
 - Event based programming
 - 2D rendering pipeline
 - Image processing
 - Introduction to 3D graphics
 - Student project team meetings
 - Student project team design reviews, presentations, etc.
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Designation:

Required

Elective