CATALOGUE DESCRIPTION
This is the first of the two Electronic Game & Simulation Design capstone courses. Students will work in teams to design a game using industry standard tools and procedures. The design of levels, characters, stories, game mechanics, user interfaces, and puzzles will be explored in depth along with techniques for usability and quality assurance testing. Students will be required to prototype and test small segments of their game to prove the viability of their design. All materials produced in this class will be used as the basis for developing a complete and functional game in Electronic Game & Simulation Design 5: Production Studio.

PREREQUISITES
CIS 111B, CIS 177 and Physics 121 with a grade of C or better. CIS 276 is also required, but may be taken as a co-requisite.

LEARNING OUTCOMES/COMPETENCIES
Upon completion of this course, a student will be able to:
1. Demonstrate a working knowledge of basic project management concepts.
2. Display an understanding of level, character, story, puzzle, and game play design.
3. Explain the roles of each member of a game development team.
4. Demonstrate a working knowledge of usability testing, quality assurance testing, and prototyping by developing a game prototype and performing the aforementioned tests.
5. Demonstrate a working knowledge of game design/simulation and the modern game development process by designing an electronic game/simulation.

LEARNING ACTIVITIES
Lecture, discussion, hands-on lab exercises, homework assignments, group projects, quizzes and exams, manuscript writing.

SEQUENCE OF TOPICS
1. Overview of the game design process and team.
2. Introduction to basic project management concepts and tools.
3. Story design
4. Character design
5. Level and puzzle design – tools & theory
6. Sound and visual design
7. Storyboarding
8. Prototyping – tools and theory
9. User interface design and game mechanics
10. Discount usability testing
11. Quality Assurance Testing (a.k.a. Game Testing)
LEARNING MATERIALS


**Required Projects**

1. Over the semester students will develop, in teams, all necessary game design documentation that will then be carried forth to the final capstone course as the basis for the development of a complete electronic game
2. Students will build simple prototypes for the purpose of testing unique aspects of gameplay.

This course is consistent with Montgomery County Community College’s mission and educational goals.

PREPARED BY: Jason Wertz, 8/04, Revised, 3/05