Students who enroll in the course take the role of a writer, a programmer, a graphic designer/animator, a music/sound-effect technician, a game tester and an overall manager, and
completed their individual game project. Regardless of the size of the game, the game development process requires great amount of time and resources due to many necessary components that are vital to the game. We chose to develop the game with Microsoft XNA Game Studio and C# Expression Edition. Although there are many other game development environments to produce games, the Microsoft XNA was the only environment that allowed anyone to develop and run the games in Xbox 360 console. Regardless of the size of the game, the game development process requires great amount of time and resources due to many necessary components that are vital to the game. To design a game, a group of specialists is required: game writer (scenario design/storyboarding/documentation), programmers, graphics designers/animators, music/sound-effect technicians, game testers, Core Mechanics, AI and more… And all must work simultaneously in order to integrate each component into the whole game. In our case, we asked the students who enrolled in the interactive game development course to take all the roles mentioned above and complete their individual game projects within 2 months since the beginning of the semester. After their individual project students will join teams to develop more games. Doing so, we expect the students to gain general insights and experiences in the game development process.

**Introduction Game Art & Animation**

COSC 4348-01 LEC and COSC 6348-01 LEC

**Professors**
- Dr. Olin Johnson
- Chang Yun
- Jose A Baez Franceschi

Cr. 3 (3.0). Introduction to video game concept arts and computer animation. This course covers fundamentals of modeling game assets and animation, using the latest game software and hardware.

Course Description: Fundamentals of game concept art and animation design. Develop a game environment from scratch. Students will develop skills in modeling, lighting, motion, and sound while learning how to tell a game story. Students learn the process through the practice of research, critical analysis, brainstorming and improvisational techniques to create ideas for an
entertaining game. Students will conceptualize and create game-specific environments – including landscapes, terrains, objects, characters and structures. Students will also be able to upload and test their finished game using a specific game engine. This course explores advanced concepts in designing and producing computer-generated art and animation for the gaming environment. As part of a group project, students will work on developing and implementing an original game idea.

Spring

Intermediate Interactive Game Development
COSC 4359-01 LEC and COSC 6359-01 LEC

Professors

Dr. Olin Johnson
Dr. Zhigang Deng
Chang Yun
Jose A Baez Franceschi

Students who enroll in the course take the role of a writer, a programmer, a graphic designer/ animator, a music/sound-effect technician, a game tester and an overall manager, and completed their group game project. Teams consist of groups 3 to 6 members. Advance Interactive Game Development is the continuation of the Interactive Game Development. It adds advanced topics like AI, physics, network, shaders, skinned animation, teamwork and much more … Regardless of the size of the game, the game development process requires great amount of time and resources due to many necessary components that are vital to the game. We chose to develop the game with Microsoft XNA Game Studio and C# Expression Edition. Although there are many other game development environments to produce games, the Microsoft XNA was the only environment that allowed anyone to develop and run the games in Xbox 360 console. Regardless of the size of the game, the game development process requires great amount of time and resources due to many necessary components that are vital to the game. To design a game, a group of specialists is required: game writer (scenario design/storyboarding/documentation), programmers, graphics designers/animators,
music/sound-effect technicians, game testers, Core Mechanics, AI and more… And all must work simultaneously in order to integrate each component into the whole game. In our case, we asked the students who enrolled in the advance interactive game development course to take all the roles mentioned above and complete their group game projects within 4 months, since the beginning of the semester. Doing so, we expect the students to gain general insights and experiences in the game development process.

Intermediate Game Art & Animation
COSC 4349-01 LEC or COSC 6349-01 LEC

Professors
Dr. Olin Johnson
Chang Yun
Jose A Baez Franceschi

Cr. 3 (3.0). Continuation of video game concept arts and computer animation. This course covers advanced topics of modeling game assets and animation, using the latest game software and hardware.

Course Description: Advance game concept art and animation design. The students will learn the skills to make successful new games using game industry techniques. They will also learn different roles such as artist, animator, actor, storyteller, modeler, lighting director, level designer, sound designer and more. Students will learn story development, character development, and how to make a successful game. Stages include initial concept creation, game play testing, event mapping, character, environment, asset design, staging design, lighting studies and sound design. They will also learn how to write their own shaders, create procedural textures, and particle effects. Students will upload their game assets and test them in a real game engine environment. This course is a continuation of the project that the student began in COSC 4397. Students complete production of a game prototype as part of a group project that demonstrates creativity, ability to work collaboratively, and knowledge of sophisticated production techniques.