Computer Game Design and Programming

Computer Game Focus

The computer game industry is booming and its revenue is expected to double from 2005's $32 billion to $65 billion in 2011. As a result, thousands of jobs will be created every year in the US alone. To meet this demand, the Department of Computer Science and Engineering offers a focus in computer game design and programming. As a first step, we offered an elective course in Spring 2007, with more than 30 students enrolled. In this class, students formed six groups to design, develop and test fully functional 3D games using commercial or open source game engines. We will continue to extend our education regarding computer games so that students will learn enough skills to pursue careers related to computer games.

Course Requirements

We have a strong group of faculty who are experts in computer vision, graphics, multi-media and algorithm design, and we will offer several courses related to game design and implementation. The computer game focus will also encourage students to take several key courses from other departments, including media arts and mathematics. The recommended courses are:

Computer Science Electives:
   CSCE 552 Computer Game Design and Implementation
   CSCE 565 Computer Graphics
   CSCE 580 Artificial Intelligence
   CSCE 520 Database System Design

Mathematics:
   Math 527 Numerical Analysis
   Math 576 Combinatorial Game Theory

Media Arts:
   MART 210 Digital Media Arts
   MART 371 The Moving Image
   MART 583 Animation

Static pictures from student game projects. Online examples will be posted soon.