

Course Title: Game Programming and Simulation

Dates: July 19-31, 2009

Instructor Name & Title: Paul Yost, M.A., Owner, Yost Engineering, Inc.

Jason Witherell, M.S. Senior Instructor, Computer Engineering
Technology

Instructor Qualifications:

Mr. Paul Yost started working as a professional programmer when he was 16, and began teaching at the university level at the age of 21. For the past 11 years Paul has taught in the Computer Engineering Technology program at SSU. In 1997, he started the CET Center for Advanced Research & Development as a means of getting students involved in undergraduate research projects and entrepreneurial endeavors. More recently Paul has been instrumental in creating SSU's recently approved B.S. degree, "Gaming & Simulation Engineering Technology," and securing grant funding for the development of a learning community for gaming and simulation. In 1998, he co-founded Yost Engineering, Inc. where he serves as CEO and Chief of Research. The company specializes in hardware, software, and embedded system solutions for an international market. Their current research and development efforts are in robotics and simulation, and they are developing robotic platforms for defense and aerospace applications.

In 2003, Paul was named "Entrepreneur of the Year" by the Portsmouth Area Chamber of Commerce and Yost Engineering, Inc. was awarded the "Outstanding IT Startup Business" award by ITAAO (Information Technology Alliance of Appalachian Ohio). Paul recently resigned his full-time professorship at SSU to devote his full attention to directing research & development efforts at Yost Engineering, Inc.

Jason teaches Digital Gaming and Simulation at Shawnee State University. He received his MS in Computer Science from Ohio State University and his Bachelors in Computer Science and Fine Arts from Marietta College.

Course Description:

This course introduces students to the rigorous and rapidly growing field of interactive simulation and game programming. Students learn about the major components of modern simulations and games from both a design perspective and a technical perspective. Students will work in a brand new and specially designed computer laboratory. Students will end the course with a game programming competition judged by area professional game programmers.

Description of Academic Content:

- Fundamentals of simulation / gaming
- Fundamentals of interactive programming
- User-interface/input/output paradigms
- A overview of the simulation/game development process
- Lab activities will focus upon designing and developing working game and simulation programs

Description of Teaching Strategies:

Instruction/lecture, intense hands-on work in specially designed computer laboratory (one student per computer)

Description of Unique Facilities:

Students will have access to a brand new, state-of-the-art computer lab specially designed and only used for Shawnee State University's unique and innovative game design program. Students will be given access to facility over the weekend with supervision from teaching assistants to work on projects.

Course and Instructor Evaluation Strategies:

Instructor will evaluate each student individually using the Institute developed "Student Evaluation Form". Instructor will attempt to meet with each student individually to discuss evaluation or mail the evaluation directly to the student after the Institute.

Measures of Student Learning and Growth:

Pre and Post tests will be utilized to measure learning. A culminating project (a game programming competition) completed on Friday will showcase growth.

Maximum # of students: 18 for 2-weeks or 36 total

