Syllabus

Department: Computer Science & Information Systems
Course Title: CSC 515 Computer Graphics Programming
Credit Hours: 3

Instructor's Name: R. A. Pilgrim
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Catalog Description: Techniques in two-dimensional and three dimensional computer graphics image generation and animation. Course includes a study of image rendering with both radiosity and ray-tracing techniques using high-level graphics tools. Covers the mathematical foundations for computer graphics including vector and matrix theory for affine and projective transformations.

Purpose: To introduce the concepts and techniques of computer graphics and computer generated animation

Student Learning Objectives: upon completion of this course the student should,

• be able to write computer graphics programs in a high-level language
• have an understanding of the use of openGL commands and the openGL Graphics Utility Tools (GLUT) Library
• familiar with the POV-Ray graphics rendering tools
• be able to create photo-realistic images using POV-Ray
• have a working knowledge of matrix theory as it relates to computer graphics
• be familiar with graphical file formats (e.g. gif, jpg, targa, dib, bmp, and png)

Course Outline:

• Intro to Computer Graphics
• Intro to openGL and GLUT
• Interactive GLUT Programming
• openGL Rendering Basics
• Three-Dimensional Modeling
• Texture Mapping
• Display Lists
• Game Mode
• Student Project Presentations

Instructional Activities - Instructional activities include, lectures, instructor-directed laboratory exercises, and student directed projects.

Resources - Web Page, online lectures, project/homework/reading assignments, closed-laboratory with computer and supporting software tools.

Grading Procedures - Course grades will be based on the content and quality of submitted laboratory exercises, homework, projects, and class participation. Letter grades are assigned on a 10-point scale. Students taking this course for graduate credit will be required to complete additional work, which must be reviewed and approved by the instructor.

Laboratory Exercises....................... 30%
Class Participation ......................... 10%
Team Project.............................. 30%
Final Project/Presentation............. 30%

Attendance Policy - The class role will be taken periodically. Students are expected to attend class regularly. Frequent absences could affect your grade. Attendance and participation during team project activities is required.

Prerequisites: knowledge of a high-level language and consent of instructor.

Academic Honesty Policy: Cheating, plagiarism (submitting another person’s material as one’s own), or doing work for another person which will receive academic credit are all impermissible. This includes the use of unauthorized books, notebooks, or other sources in order to secure or give help during an examination, the unauthorized copying of examinations, assignments, reports, term papers, or the presentation on unacknowledged material as if it were the student’s own work. Disciplinary action may be taken beyond the academic discipline administered by the faculty member who teaches the course in which the cheating took place. Refer also to the current Undergraduate Bulletin for recent updates or changes in this policy.

It is the policy of the College of Business and Public Affairs that, (1) all instances of academic dishonesty will receive appropriate punitive action from the faculty member in whose class such dishonesty occurs and (2) the names of students involved in acts of academic dishonesty will be reported to the Dean.

Statement of Affirmative Action and Equal Opportunity - Murray State University does not discriminate on the basis of race, color, national origin, sex, religion, marital status, age, or disability in employment, admission, or the provision of services, educational programs and activities, and provides, upon request, reasonable accommodation including auxiliary aids and services necessary to afford individuals with disabilities an equal opportunity to participate in all programs and activities. For information regarding nondiscrimination policies contact the Office of Equal Opportunity, 270-809-3155.

Notice: Any student requiring additional assistance due to a disability should inform the instructor as soon as possible.