

CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

NEW COURSE PROPOSAL

PROGRAM AREAS BIOLOGICAL AND PHYSICAL SCIENCES, MATH AND COMPUTER SCIENCE

1. Catalog Description of the Course. *[Include the course prefix, number, full title, and units. Provide a course narrative including prerequisites and corequisites. If any of the following apply, include in the description: Repeatability (May be repeated to a maximum of ___ units); time distribution (Lecture ___ hours, laboratory ___ hours); non-traditional grading system (Graded CR/NC, ABC/NC). Follow accepted catalog format.]*

COMP 464. COMPUTER GRAPHIC SYSTEMS AND DESIGN I (3)

Three hours of lecture in the lab per week.

Prerequisite: COMP 350 and MATH 240.

Topics include fundamental concepts of computer graphics.; graphics devices; graphics languages; interactive systems; applications to art, science, engineering and business; trade-offs between hardware devices and software support.

2. Mode of Instruction.

	Units	Hours per Unit	Benchmark Enrollment
Lecture	3	1	24
Seminar	_____	_____	_____
Laboratory	_____	_____	_____
Activity	_____	_____	_____

3. Justification and Learning Objectives for the Course. (Indicate whether required or elective, and whether it meets University Writing, and/or Language requirements) *[Use as much space as necessary]*

The course is an elective course for Computer Science majors.

Through this course, students will be able to

1. Identify the components of a computer graphics system.
2. Analyze the Perspective Projection.
3. Identify the advantages of a Raster Graphics system.
4. Identify the advantages of a Vector Graphics system.
5. Evaluate the trade offs between different graphic display systems.
6. Compare and evaluate different computational methods in computer graphics.
7. Organize and express ideas clearly and convincingly in oral and written forms.

This course is not designed to satisfy the University Writing or Language requirements.

4. Is this a General Education Course **YES** **NO**
If Yes, indicate GE category:

A (English Language, Communication, Critical Thinking)	
B (Mathematics & Sciences)	
C (Fine Arts, Literature, Languages & Cultures)	
D (Social Perspectives)	
E (Human Psychological and Physiological Perspectives)	

5. Course Content in Outline Form. *[Be as brief as possible, but use as much space as necessary]*

1. Components of a Computer Graphics System.

2. Perspective Projection.
3. Vector Graphics.
4. Raster Graphics
5. Computational Methods.
6. 2D Simulations.
7. 3D Simulations.
8. Virtual Reality.

6. References. *[Provide 3 - 5 references on which this course is based and/or support it.]*

1. Introduction to Computer Graphics, Foley, Addison Wesley 1993

7. List Faculty Qualified to Teach This Course.

All Computer Science faculty.

8. Frequency.

- a. Projected semesters to be offered: Fall Spring Summer

9. New Resources Required.

- a. Computer (data processing), audio visual, broadcasting needs, other equipment

Use of existing computer lab.

- b. Library needs

none

- c. Facility/space needs

none

10. Consultation.

Attach consultation sheet from all program areas, Library, and others (if necessary)

- 11.** If this new course will alter any degree, credential, certificate, or minor in your program, attach a program modification.

Ivona Grzegorzcyk

1/8/03

Proposer of Course

Date