



Course Name: Web Graphics

Course Number: CSA* E220

Credits: 3

Catalog description: A comprehensive introduction to the principles of computer science that form the basis of Internet graphics and multimedia. Topics include bitmap graphics, vector graphics, graphical file formats, compression techniques, interactive graphics, multimedia, and animation. The course requires substantial hands-on use of computer software packages such as Adobe Photoshop and Adobe Flash in the computer lab to illustrate these topics.

Prerequisite: None

Corequisite or Parallel:

General Education Competencies Satisfied:

HCC General Education Requirement Designated Competency Attribute Code(s):

None

Additional CSCU General Education Requirements for CSCU Transfer Degree Programs:

None

Embedded Competency(ies):

None

Discipline-Specific Attribute Code(s):

COMP Computer Science Elective

Course objectives:

General Education Goals and Outcomes:

None



Course Specific Objectives:

1. Understand the fundamental techniques used to create and manipulate bitmap graphics
2. Understand the fundamental techniques used to create and manipulate vector graphics
3. Apply graphical effects to web images
4. Understand the standard graphical file formats (JPEG, GIF, PNG) used on the web and the strengths and weaknesses of each format
5. Use proper compression techniques to convert images into standard web graphical file formats
6. Understand the basic techniques for creating bitmap animations and vector animations
7. Understand the basic techniques for creating interactive graphics and animations
8. Prepare images and animations for the web
9. Understand the basic principles relating to the use of multimedia on the web

Course Content:

- Overview of bitmap and vector graphics
- Selection in Photoshop
- Photoshop layers
- Modifying and filtering bitmap images in Photoshop
- Photoshop painting tools
- Working with text and vector objects in Photoshop
- Understanding the standard web graphical file formats (GIF, JPEG, PNG) and the basic principles and compression techniques upon which these file formats are based
- Using Photoshop to create animated GIFs and to convert image files into properly compressed standard web graphical file formats
- Understanding Flash vector drawing tools and techniques
- Creating non-interactive object-based vector animations using Flash
- Introduction to Flash ActionScript
- Creating interactive vector animations using Flash ActionScript
- Incorporating Flash elements and multimedia into web pages.

Date Course Created:

Date of Last Revision: 04/03/2017