I. **OVERVIEW**
The following information will appear in the 2009 - 2010 catalog

**CMPGR 265 Multimedia on the World Wide Web** 3 Units

*Recommended for Success:* Before enrolling in this course, students are strongly advised to have satisfactorily completed CMPGR 264.


Field trips might be required.  (A-F or P/NP - Student choice) Lecture /Lab

**Transfer:** (CSU) **General Education:** (MJC-GE: D2 )

II. **LEARNING CONTEXT**
Given the following learning context, the student who satisfactorily completes this course should be able to achieve the goals specified in Section III, Desired Learning:

A. **COURSE CONTENT**

1. **Required Content:**

   A. The World Wide Web (WWW or the Web) and multimedia
      1. History of the Internet/Web
      2. Features of the Internet/Web
         a. Device independence
         b. Addressing conventions and protocols
         c. Decentralization
         d. Hypermedia and hyper linking
      3. How Web multimedia works
      4. Types and categories of web multimedia
   B. Web information
      1. Internet versus web access requirements
      2. Browsers of web pages
         a. Netscape
         b. Internet explorer
         c. Others
      3. Establishing and maintaining bookmarks
   C. Language of the Web
      1. Advanced Hypertext Mark Up Language – HTML
         a. Forms
         b. CGI (Common Gateway Interface)
         c. Frames
      2. HTML capabilities versus other browsers
      3. QuickTime
      4. JAVA
      5. Shockwave
      6. Authoring tools
      7. Multimedia plug-ins
   D. Images
      1. Graphics and video file formats
         a. Types: bitmapped versus vector-based
         b. Compression
         c. Transparency and interleaving
      2. GIFs and animation
2. **Required Lab Content:**

A. The World Wide Web (WWW or the Web) and multimedia
   1. History of the Internet/Web
   2. Features of the Internet/Web
      a. Device independence
      b. Addressing conventions and protocols
      c. Decentralization
      d. Hypermedia and hyper linking
   3. How Web multimedia works
   4. Types and categories of web multimedia
B. Accessing and viewing information of the web
   1. Internet versus web access requirements
   2. Browsers of web pages
      a. Netscape
      b. Internet explorer
      c. Others
   3. Establishing and maintaining bookmarks
C. Language of the Web
   1. Advanced Hypertext Mark Up Language – HTML
      a. Forms
      b. CGI (Common Gateway Interface)
      c. Frames
   2. HTML capabilities versus other browsers
   3. QuickTime
   4. JAVA
   5. Shockwave
   6. Authoring tools
   7. Multimedia plug-ins
D. Working with images
   1. Graphics and video file formats
      a. Types: bitmapped versus vector-based
      b. Compression
c. Transparency and interleaving
2. GIFs and animation
3. Image maps
4. Photographs
5. Presentation software linking
6. Design/loading and cross platform considerations

E. Working with sound
1. Fundamentals of digital sound
2. Sound formats
3. MIDI (Musical Instrument Device Interface) formats
4. Sound editing
5. Sound mixing
6. Sound formats and compression for the web

F. Working with video
1. Fundamentals of digital video
2. Video formats
3. Video capture
4. Video editing
5. Video formats and compression for the web

G. Advanced media for the web
1. 3D images
2. VRML (Virtual Reality Multimedia Language)

H. Advanced interactive systems and design

I. Document development and maintenance cycle

J. Design of the web documents (pages)
1. The design cycle
2. Ethical and copy right considerations
3. Cultural and international issues in graphics design

K. Server and service providers
1. Various types and levels
2. How to select a provider

L. Merging web technologies

B. ENROLLMENT RESTRICTIONS

1. Advisories

Before enrolling in this course, students are strongly advised to have satisfactorily completed CMPGR 264.

C. HOURS AND UNITS

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<tr>
<th>INST METHOD</th>
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D. METHODS OF INSTRUCTION (TYPICAL)

Instructors of the course might conduct the course using the following method:

1. Course material will be presented through combined lecture and video projection computer demonstrations
2. Hands-on laboratory assignments
3. Tutorials accessed by the students over the WWW
4. Guest lecturers/demonstrators
5. Use of BBS system for additional dialog between instructor and students, and among the students
themselves

6. Use of reference books, manuals, and on-line resources.

E. ASSIGNMENTS (TYPICAL)

1. EVIDENCE OF APPROPRIATE WORKLOAD FOR COURSE UNITS
   Time spent on coursework in addition to hours of instruction (lecture hours)
   1. Weekly graded projects based upon lectures, demonstrations and course material.
   2. Practical final project demonstrating facility with the software and with concepts presented in the course.
   3. Completion of a project for an individual outside the class, jointly defining objectives, timeline, design use of graphics, and the best coding implementation.

2. EVIDENCE OF CRITICAL THINKING
   Assignments require the appropriate level of critical thinking
   Project 3: Navigation
   First, document, by a diagram, the navigational flow of a Web site.
   Second, compose a web document using basic HTML tags, including:
   1. Titles, comments, special characters, alignment and backgrounds.
   2. Text – headings, paragraph, preformatted, lists and text formatting.
   3. Tables – construct both text and graphical tables.
   4. Graphics – select or generate appropriate icons, rules, and images.
   5. Links – internal and external, text, and graphical.

   Project 6: Analyze website components
   Analyze potential multimedia components of a Web site based on client (developers) criteria.
   An outside client will be brought into the classroom to set up this project. Listen carefully to the client's concept and requirements. Take detailed notes. Create a clearly written concept to pitch to the client. Develop a set of graphics to simulate the style of the home page and main links within the site. Create a navigational flow chart based on what you learned in project 3. Be prepared to present your concept and analysis to the client at the next class meeting

F. TEXTS AND OTHER READINGS (TYPICAL)


III. DESIRED LEARNING

A. COURSE GOAL
   As a result of satisfactory completion of this course, the student should be prepared to:
   develop web-based multimedia projects with animation, sound, and video with emphasis on further development of programming techniques and skills for advanced features for web pages.

B. STUDENT LEARNING GOALS
   Mastery of the following learning goals will enable the student to achieve the overall course goal.

1. Required Learning Goals
   Upon satisfactory completion of this course, the student will be able to:
   a. Categorize the hardware components used in a multimedia system and analyze equipment needs to produce various forms within specified physical and economical constraints.
   b. Identify appropriate software to use in the creation, formatting and delivery of multimedia on the
c. Identify multimedia files, including audio, video and animated graphics capable of delivery and playing on the Internet.

d. Compare the effect of various file formats and compression techniques in relation to developed site criteria.

e. Understand logic flow and language constructs and their syntax for accessing and controlling multimedia on the Web.

f. Analyze and criticize various multimedia components of a Web site based on client (developers) criteria.

2. **Lab Learning Goals**

   Upon satisfactory completion of the lab portion of this course, the student will be able to:

   a. Categorize the hardware components used in a multimedia system and analyze equipment needs to produce various forms within specified physical and economical constraints.

   b. Compare the effect of various file formats and compression techniques in relation to developed site criteria.

   c. Diagram logic flow and create language constructs and their syntax for accessing and controlling multimedia on the Web.

   d. Select or generate multimedia files, including audio, video and animated graphics capable of delivery and playing on the Internet.

### IV. METHODS OF ASSESSMENT (TYPICAL)

#### A. FORMATIVE ASSESSMENT

1. Checking of coding by on-line coding checkers.

2. Instructor evaluation of demonstration of actual application skills.

3. Periodic review of student’s cumulative work.


#### B. SUMMATIVE ASSESSMENT

1. Practical final project.

2. Written final exam.