

**GCIP 295 Directed Study in Graphic Communications (1, 2, 3)**

3, 6, or 9 hours laboratory

**Prerequisite:** Approval of project or research by department chairperson/ director**Note:** Cross listed as GCMW 295, may be taken 4 times**Transfer acceptability:** CSU

Independent study for students who have demonstrated skills and/or proficiencies in Graphic Communications subjects and have the initiative to work independently on projects or research outside the context of regularly scheduled classes. Students will work under the personal supervision of an instructor.

**GCIP 296 Special Projects (1, 2, 3)**

3, 6, or 9 hours laboratory

**Recommended preparation:** Advanced coursework or job-related experience**Note:** Cross listed as GCMW 296, may be taken 4 times**Transfer acceptability:** CSU

Independent work on a specified sustained project which does not fit into the context of regularly scheduled classes. Students work from a contract agreed upon by the student and the instructor.

## Graphic Communications - Multimedia & Web (GCMW)

See also Graphic Communications and  
Graphic Communications - Imaging & Publishing

Contact the Graphic Communications Department for further information.  
(760) 744-1150, ext. 2452

Office: GJ-6

For transfer information, consult a Palomar College Counselor.

**Associate in Arts Degrees -**

AA Degree requirements are listed in Section 6 (green pages).

- Digital Video
- Interactive Media Design - Emphasis in 3D Modeling and Animation
- Interactive Media Design - Emphasis in Multimedia Design
- Interactive Web Multimedia and Audio
- Internet - Emphasis in Graphic Communication
- New Media Compositing, Authoring, and Distribution

**Certificates of Achievement -**

Certificate of Achievement requirements are listed in Section 6 (green pages).

- Digital Video
- Interactive Media Design - Emphasis in 3D Modeling and Animation
- Interactive Media Design - Emphasis in Multimedia Design
- Interactive Web Multimedia and Audio
- Internet - Emphasis in Graphic Communication
- New Media Compositing, Authoring, and Distribution

**Certificates of Proficiency -**

Certificate of Proficiency requirements are listed in Section 6 (green pages).

- Digital Animation, Compositing, and Music
- Digital Media
- E - Commerce Design
- Internet Publisher
- Video Game Artist
- Web Data Base Design
- Web Graphics
- Web Motion Graphics

**PROGRAMS OF STUDY****Digital Animation, Compositing, and Music**

This program is directed at the digital design and implementation of 3D animations, graphic compositing and music.

**CERTIFICATE OF PROFICIENCY****Program Requirements  
(5 courses minimum required)**

	Units
ARTI 246 Digital 3D Design and Modeling	3

ARTI 247	Digital 3D Design and Animation	3
GCMW 204	Motion Graphics for Multimedia	4
GCMW 206	Motion Graphics Production and Compositing	4
MUS 180	Computer Music I	3
MUS 184	Electronic Ensemble	3

<b>TOTAL UNITS</b>	<b>16 - 17</b>
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Digital Animation, Compositing, and Music Certificate of Proficiency is also listed in Art and in Music.

**Digital Media**

Digital Media encompasses digital video editing in both analog and digital media. The certificate prepares students for employment in the film, video, Internet, and television industries. Major growth in this industry is anticipated as Internet and television merge into one medium.

**CERTIFICATE OF PROFICIENCY**

Program Requirements	Units
CINE/RTV 125 Beg Film/Video Field Production	3
GCMW 204 Motion Graphics for Multimedia	4
GCMW 205 Digital Video for Multimedia	4
RTV 270 Digital Video Editing	3
RTV 275 Avid Editing for Television & Film	3

<b>TOTAL UNITS</b>	<b>17</b>
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Digital Media Certificate of Proficiency is also listed under Radio and Television.

**Digital Video**

Digital Video encompasses editing and design in using both digital and analog media. This degree prepares students for employment in the film, video, Internet, and television industries.

**A.A. DEGREE MAJOR OR  
CERTIFICATE OF ACHIEVEMENT**

Program Requirements	Units
GCIP/	
R GCIP 140 Digital Imaging/PhotoShop I	4
GCMW 165 Digital Video Design	4
GCMW 204 Motion Graphics for Multimedia	4
GCMW 205 Digital Video for Multimedia	4
RTV/CINE 125 Beg Film/Video Field Production	3
RTV 230 Digital Audio with Pro Tools	3
RTV 270 Digital Video Editing	3
RTV 275 Avid Editing for Television and Film	3

**Electives (2 courses required, 6 units minimum)**

ARTI 246	Digital 3D Design and Modeling	3
ARTI 247	Digital 3D Design and Animation	3
DT 180	3D Studio Max-Intro to 3D Modeling/Animation	3
GCIP/		
R GCIP 152	Desktop Publishing/Illustrator I	4
GCIP 240	Digital Imaging/PhotoShop III	4
GCMW/		
R GCMW 101	Multimedia I	4
GCMW 201	Multimedia II	4
GCMW 203	Web Multimedia	4
GCMW 108	Web Motion Graphics I	4
GCMW 208	Web Motion Graphics II	4
RTV 50	Basic Television Acting	1
RTV 110	Broadcast Writing and Producing	3
RTV/ENTT 120	Digital Television Production	3
RTV 150	Performance and Acting for Broadcast and Film	3
RTV 170	Introduction to Video Editing	3
RTV/CINE 225	Intermediate Film and Video Field Production	3

<b>TOTAL UNITS</b>	<b>34</b>
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Digital Video A.A. Degree Major or Certificate of Achievement is also listed under Radio and Television.

## E - Commerce Design

Provides students with a basis for understanding and participating in the design and production of e-business and e-commerce. Specific skills for the E-Commerce Design certificate include Web production, site accessibility, shopping carts, site and data management, security, privacy, and commercial site promotion. Teamwork, problem solving, production process, communication and creativity are core competencies. Upon completion of the certificate, the student may find a job as a graphic designer, Web author, or graphical user interface designer.

### CERTIFICATE OF PROFICIENCY

Program Requirements	Units
BUS 157 E-Commerce	3
GCI/	
GCMW 290 or Copyright for Graphic Design and Web Developers	
GCI/	
GCMW 291 or Contracts for Graphic Design and Web Developers	
GCMW 232 Web Accessibility Design	1
GCMW 202 Web Page Layout II	4
GCMW 216 or Web Data Base Design I	
GCMW 220 Designing for Web Standards I	4
GCMW 217 or Online Store Design I	
GCMW 218 Online Store Design II	4
<b>TOTAL UNITS</b>	<b>16</b>

## Interactive Media Design

Prepares students with specific skills necessary for employment in the field of multimedia design and production. Students may choose an emphasis in either 3D modeling and animation, which emphasizes production skills and authoring systems, or multimedia design, which emphasizes content development and visual design of multimedia productions. Both areas of emphasis collaborate on an actual multimedia production.

## Emphasis in 3D Modeling and Animation

### A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements	Units
ARTI 100 Introduction to Illustration	3
ARTI 246 Digital 3D Design and Modeling	3
ARTI 247 Digital 3D Design and Animation	3
DT 180 3D Studio Max-Intro to 3D Modeling/Animation	3
DT 182 3D Studio Max-Adv 3D Modeling/Animation	3
GCI/	
R GCI/ 140 Digital Imaging/Photoshop I	4
GCMW 204 Motion Graphics for Multimedia	4
<b>Electives (Select two courses)</b>	
ARTD 150 Digital Concepts/Techniques in Art	3
ARTD 220 Motion Design	3
DT 128 SolidWorks Intro 3D Design and Presentation	3
DT 184 Real Time 3D Technical/Game Animation	2
GCI/ 240 Digital Imaging/Photoshop III	4
GCMW 100 History of Multimedia	3
GCMW 201 Multimedia II	4
ENTT/RTV 120 Digital Television Production	3
<b>TOTAL UNITS</b>	<b>28 - 29</b>

## Emphasis in Multimedia Design

### A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements	Units
ARTD 100 Graphic Design I	3
ARTD 220 Motion Design	3
ARTI 247 Digital 3D Design and Animation	3
GCI/ 240 Digital Imaging/Photoshop III	4
GCMW/	
R GCMW 101 Multimedia I	4
GCMW 201 Multimedia II	4
GCMW 204 Motion Graphics/Multimedia	4
<b>Electives (Select two courses)</b>	
ART 197G Topics in Art - Computer Art	3
ARTD 150 Digital Concepts and Techniques in Art	3
ARTI 246 Digital 3D Design/Modeling	3
DT 180 3D Studio Max-Intro to 3D Modeling/Animation	3
DT 182 3D Studio Max-Adv 3D Modeling/Animation	3
GC 100 Graphic Communications	3
GCI/	
R GCI/ 140 Digital Imaging/Photoshop I	4
GCI/	
R GCI/ 152 Desktop Publishing/Illustrator I	4
GCMW 100 History of Multimedia	3
GCMW/	
R GCMW 102 Web Page Layout I	4
GCMW 197B Topics in Multimedia	3
GCMW 203 Web Multimedia	4
MUS 180 Computer Music I	3
RTV 170 Introduction to Video Editing	3
<b>TOTAL UNITS</b>	<b>31-33</b>

Interactive Media Design A.A. Degree or Certificate of Achievement is also listed in Art and in Drafting Technology.

## Interactive Web Multimedia and Audio

This program is directed at interactive methods of Web production that include creation of audio for the Internet. Students will learn techniques and software to create animated and interactive Web sites and audio production for the Internet.

### A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements	Units
GCMW/	
R GCMW 101 Multimedia I	4
GCMW/	
R GCMW 102 Web Page Layout I	4
GCMW 108 Web Motion Graphics I	4
GCMW 123 Audio for the Internet	4
GCMW 140 Web Graphics	4
GCMW 203 Web Multimedia	4
GCMW 208 Web Motion Graphics II	4
GCMW 229 Interactive Streaming Media	4
<b>Electives (select one course)</b>	
GCI/	
R GCI/ 140 Digital Imaging/PhotoShop I	4
GCI/ 141 Digital Imaging/PhotoShop II	4
GCI/ 240 Digital Imaging/Photoshop III	4
GCMW 100 History of Multimedia	3
GCMW 104 Motion and Sound	4
GCMW 165 Digital Video Design	4
GCMW 202 Web Page Layout II	4
GCMW 204 Motion Graphics for Multimedia	4

GCMW 205	Digital Video for Multimedia	4
GCMW 220	Designing for Web Standards I	4
GCMW 221	Designing for Web Standards II	4
GCMW 228	Web Motion Graphics III	4
GCMW 236	Flash Game Design	4
MUS 180	Computer Music I	3
RTV 230	Digital Audio with Pro Tools	3

**TOTAL UNITS** 35 - 36

### Internet

As the vast web of global and local information networks grow, several skills and forms of literacy are becoming essential for anyone who wants to obtain the full benefits of the Communications Age.

An individual's ability to capitalize on the opportunities offered by interactive communications requires mastery of these information and communication proveniences:

- **Navigational skills** - The ability to move smoothly among arrays of autonomous and globally interconnected information, contacts, forums, and discussion groups in order to locate and connect to information and expertise from relevant sources.
- **Information literacy** - An understanding of which information is most useful, relevant, and reliable, as well as the ability to analyze, distill, integrate, compose, and classify information to create knowledge.
- **Distribution skills** - Frameworks for rethinking methods of packaging, presenting, providing access, and disseminating information and knowledge in this new medium.
- **Communications literacy** - Integrating new forms of information, knowledge, and message development into evolving patterns of organizational and interpersonal communication.

This certificate offers preparation skills for the above areas of emphasis involving the Internet.

### Emphasis in Graphic Communication

#### A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements		Units
BUS 157	E-Commerce	3
or		
GCMW 120	Designing for the Social Web	4
CSWB 110/		
R CSIS 110	Web Site Development with XHTML	3
GCMW/		
R GCMW 102 or	Web Page Layout I	
GCMW 103	Interactive Publishing with PDFs	4
GCMW 108	Web Motion Graphics I	4
GCMW 140	Web Graphics	4
GCMW 202	Web Page Layout II	4
GCMW 217 or	Online Store Design I	
GCMW 229	Interactive Streaming Media	4
GCMW 220	Designing for Web Standards I	4
<b>TOTAL UNITS</b>		<b>30 - 31</b>

### Internet - Emphasis in Business Education

See Business

### Internet Publisher

Prepares students with specific skills necessary for entry-level employment in the field of Web design and production. Students will be able to design and produce simple Websites that have text, graphics, and multimedia.

#### CERTIFICATE OF PROFICIENCY

Program Requirements		Units
GCMW/		
R GCMW 102	Web Page Layout I	4
GCMW 140	Web Graphics	4
GCMW 203	Web Multimedia	4
GCMW 220	Designing for Web Standards I	4
<b>TOTAL UNITS</b>		<b>16</b>

### New Media Compositing, Authoring and Distribution

This program is directed at alternative methods of digital video compilation and release. Students will learn techniques and software to compile and composite digital video for release on CD ROM, DVD, and the Internet.

#### A.A. DEGREE MAJOR OR CERTIFICATE OF ACHIEVEMENT

Program Requirements		Units
GCIP 240	Digital Imaging/PhotoShop III	4
GCMW/		
R GCMW 101	Multimedia I	4
GCMW 201	Multimedia II	4
GCMW 165	Digital Video Design	4
GCMW 204	Motion Graphics for Multimedia	4
GCMW 205	Digital Video for Multimedia	4
GCMW 206	Motion Graphics Production and Compositing	4
GCMW 229	Interactive Streaming Media	4
<b>Electives (select one course)</b>		
ARTD 220	Motion Design	3
ARTI 246	Digital 3D Design and Modeling	3
ARTI 247	Digital 3D Design and Animation	3
GC 101	History of Graphic Communications	3
GCIP/		
R GCIP 140	Digital Imaging/PhotoShop I	4
GCIP 141	Digital Imaging/PhotoShop II	4
GCIP/		
R GCIP 152	Desktop Publishing/Illustrator I	4
GCMW/		
R GCMW 102	Web Page Layout I	4
GCMW 105	Web Page Layout with CMS	4
GCMW 108	Web Motion Graphics I	4
GCMW 123	Audio for the Internet	4
GCMW 202	Web page Layout II	4
GCMW 203	Web Multimedia	4
GCMW 208	Web Motion Graphics II	4
GCMW 220	Designing for Web Standards I	4
GCMW 221	Designing for Web Standards II	4
GCMW 228	Web Motion Graphics III	4
GCMW 236	Flash Game Design	4
GCIP 295	Directed Study in Graphic Communications	3
GCIP 296	Special Projects	3
RTV 170	Introduction to Video Editing	3
RTV 230	Digital Audio with Pro Tools	3
RTV 270	Digital Video Editing	3
RTV 275	Avid Editing for Television and Film	3
<b>TOTAL UNITS</b>		<b>35 - 36</b>

## Video Game Artist

This certificate program introduces students to the video game industry, video game design, and the creation of both 2D and 3D artwork for video games.

### CERTIFICATE OF PROFICIENCY

Program Requirements	Units
CSCI 160 Overview of the Video Game Industry	4
CSCI 161 Game Design	4
ARTI 246 or DT 180 or DT 182 3D Studio Max – Intro 3D Modeling/Animation	3
ARTD 220 or ARTI 247 or DT 184 or GCMW 204 3D Studio Max – Adv 3D Modeling/Animation	3
Motion Design	
Digital 3D Design and Animation	
Real Time 3D Technical/Game Animation	
Motion Graphics for Multimedia	2,4
<b>TOTAL UNITS</b>	<b>13 - 15</b>

Video Game Artist Certificate of Proficiency is also listed under Computer Science and Information Systems - Computer Science.

## Web Data Base Design

The Web site developer must present the complexity and volume of information so that the site's visitor may make decisions quickly and accurately. Data-driven dynamic pages are also interactive, allowing the visitor to choose the information that they would like to see. The increasingly sophisticated site development for online stores and multimedia, for example, requires a range of diverse and multifaceted skills from database design, computer graphics, Web design, site design and architecture, graphical user interface design, to cross-platform competence. The World Wide Web, as a graphical user interface, offers new career opportunities to graphic designers who have the skills to maintain sites that contain large amounts of data that changes frequently. The ability to package, share, and manage data to consumers across the Internet is in high demand. The Web Data Base Design certificate prepares for employment in dynamic business environments that need large-scale as well as smaller sites.

### CERTIFICATE OF PROFICIENCY

Program Requirements	Units
GCMW 202 Web Page Layout II	4
GCMW 217 or GCMW 218 Online Store Design I	4
GCMW 218 Online Store Design II	4
GCMW 226 Web Data Base Design II	4

#### Electives (Select at least one course, minimum 4 units total)

BUS 180 Access for Business	1
CSDB 220 SQL Server Programming	3
CSWB 210 Active Server Pages	3
GCIP/ GCMW 290 Copyright for Graphic Designers/Web Developers	1
GCIP/ GCMW 291 Contracts for Graphic Designers/Web Developers	1
GCIP/ GCMW 292 Legal Issues for Graphic Designers and Web Developers	3
GCMW 105 Web Page Layout with CMS	4
GCMW 120 Designing for the Social Web	4
GCMW 154 Preparing Web Graphics	1
GCMW 164 Interactive Web Graphics	1
GCMW 216 Web Data Base Design I	4
GCMW 220 Designing for Web Standards I	4
<b>TOTAL UNITS</b>	<b>19</b>

## Web Graphics

Designed to meet the increasing needs of organizations and businesses that publish on the World Wide Web. Specific skills for the Web Graphics certificate include typography, visual acuity, graphic design, Web color, and file formats. The

certificate prepares students to gain competence with the basic applications used in industry for digital graphics and Web publishing. Teamwork, problem solving, workflow and production process, communication and creativity are core competencies. Upon completion of the certificate, the student may find a job as a Web production artist, graphic production assistant, or graphic designer.

### CERTIFICATE OF PROFICIENCY

Program Requirements	Units
GCMW/ R GCMW 102 Web Page Layout I	4
or GCMW 108 Web Motion Graphics I	4
GCMW 140 Web Graphics	4
GCMW 202 Web Page Layout II	4
GCMW 203 Web Multimedia	4
GCMW 232 Web Accessibility Design	1
<b>TOTAL UNITS</b>	<b>17</b>

## Web Motion Graphics

Prepares students with specific skills necessary for employment in the field of Interactive Web multimedia design and production. A high level of skill and time are needed to create professional motion graphics. Specific skills include an attention to detail, knowledge of various illustration and animation software, technical and analytical problem solving, and visual acuity. Teamwork, creativity, communication, understanding of the production process and interactivity are core competencies. Typical job opportunities are in entertainment, business, corporate, and educational industries.

### CERTIFICATE OF PROFICIENCY

Program Requirements	Units
GCMW/ R GCMW 102 Web Page Layout I	4
GCMW 203 Web Multimedia	4
GCMW 208 Web Motion Graphics II	4
GCMW 229 Interactive Streaming Media	4
<b>TOTAL UNITS</b>	<b>16</b>

### COURSE OFFERINGS

**GCMW 100 History of Multimedia (3)**  
3 hours lecture

**Transfer acceptability:** CSU; UC

Multimedia embodies the convergence of technology with content to combine text, audio, photos, art, graphics, animation, and branching and linear video. It facilitates new ways of communicating, learning, entertaining, and self-expression; multimedia is reshaping the way we do business, practice medicine, and conduct scientific research. This course traces the emergence and development of "multimedia" as a digital technology medium within historical, global, social, cultural and aesthetic contexts.

**GCMW 101 Multimedia I (4)**  
3 hours lecture - 3 hours laboratory

**Note:** Cross listed as R GCMW 101; may be taken 4 times; maximum of 4 completions in any combination of GCMW/R GCMW 101, GCMW 201

**Transfer acceptability:** CSU

Introduction to multimedia authoring software combining text, graphics, sound, animation, video clips and user interface to produce effective visual presentations.

**GCMW 102 Web Page Layout I (4)**  
3 hours lecture - 3 hours laboratory

**Note:** Cross listed as R GCMW 102; may be taken 4 times; maximum of 4 completions in any combination of GCMW/R GCMW 102, GCMW 102A, 102B, 202

**Transfer acceptability:** CSU

A hands-on introduction to page layout for the Internet. Typographic considerations, screen layout, graphical interfaces, and structured page design for effective Internet communications.



**GCMW 102A Web Page Layout IA (2)***1 hour lecture - 3 hours laboratory***Note:** May be taken 4 times; maximum of 4 completions in any combination of GCMW 102, 102A, 102B, 202**Transfer acceptability:** CSU

A hands-on introduction to page layout for the Internet. Typographic considerations, screen layout, graphical interfaces, graphics preparation and structured page design for effective Internet communications. The course is designed to introduce students to Web production and site maintenance; special projects facilitate the needs of more advanced students. (For beginning and intermediate levels).

**GCMW 102B Web Page Layout IB (2)***1 hour lecture - 3 hours laboratory***Note:** May be taken 4 times; maximum of 4 completions in any combination of GCMW 102, 102A, 102B, 202**Transfer acceptability:** CSU

A hands-on introduction to page layout for the Internet. Typographic considerations, screen layout, graphical interfaces, graphics preparation and structured page design for effective Internet communications. The course is designed to introduce students to Web production and site maintenance; special projects facilitate the needs of more advanced students. (For beginning and intermediate levels).

**GCMW 103 Interactive Publishing with PDF's (4)***3 hours lecture - 3 hours laboratory***Note:** May be taken 4 times**Transfer acceptability:** CSU

This hands-on course looks at a comprehensive range of print, Web, and multimedia features in Adobe Acrobat for creating and distributing electronic documents reliably and securely. Topics and projects include e-books, forms, editing, prepress, accessibility, capture, and a variety of methods to convert and repurpose documents.

**GCMW 104 Motion and Sound (4)***3 hours lecture - 3 hours laboratory***Note:** May be taken 4 times

Introduction to combining motion with sound for multimedia. Includes an overview of motion graphics and sound design for the multimedia industry. Course will consider current trends in motion graphics and soundtracks for film titles, television programs and advertising, interactive media and experimental works. This is a hands-on course using digital tools for creating and editing audio and motion graphics.

**GCMW 105 Web Page Layout with CMS (4)***3 hours lecture - 3 hours laboratory***Note:** May be taken 4 times**Transfer acceptability:** CSU

Web page layout and design with a content management system (CMS) and "what you see is what you get" (wysiwyg) software. The CMS keeps track of the content such as text, photos, music, video, and documents. Learners will design sites with articles, blogs, links, news feeds, search components, and breadcrumbs. Designed for the non-technical user, and knowledge of programming and/or coding is not needed.

**GCMW 108 Web Motion Graphics I (4)***3 hours lecture - 3 hours laboratory***Note:** May be taken 4 times; maximum of 4 completions in any combination of GCMW 108, 208, 228**Transfer acceptability:** CSU

Introduction of core concepts: vectors, the Stage, Scenes, Timelines, Layers, Keyframes, Shapes, Symbols (Graphic, Button, Movie Clip), Tweening, native drawing tools and external editors, frame-by-frame animation, Actions and Actionscript. Development of basic skills in web motion graphics. Exporting and embedding SWF files in Web pages. Adobe Flash will be used to create dynamic visual presentations with auditory components to communicate more effectively on the Web.

**GCMW 120 Designing for the Social Web (4)***3 hours lecture - 3 hours laboratory***Recommended preparation:** GCIP/R GCIP 152 and/or GCIP/R GCIP 140**Transfer acceptability:** CSU

Focuses on the understanding of graphical user interface design for the social Web environment (Web 2.0), such as wikis, blogs, and social networks. Covers fundamental 'Social Web' principles in order to develop designs from a user perspective. Covers Web technologies, market research, usability and human factors, wireframe and sitemap documentation, Web design, cross browser functionality, Web typography, and search engine marketability. The development of marketable, original, and creative problem solving solutions will also be examined with an emphasis on Web branding. In this hands-on class, students will participate in social networks such as wikis and blogs.

**GCMW 123 Audio for the Internet (4)***3 hours lecture - 3 hours laboratory***Note:** May be taken 4 times**Transfer acceptability:** CSU

Introduction to sound and audio on the World Wide Web. Topics covered include digitizing audio for the internet, audio formats, optimization techniques and bandwidth considerations. This is a hands-on class using audio editing, html, and graphics editing software. Upon completion of course, student will create and publish a website incorporating audio on the internet.

**GCMW 140 Web Graphics (4)***3 hours lecture - 3 hours laboratory***Note:** May be taken 4 times**Transfer acceptability:** CSU

The Graphical User Interface is a major component of Web design and production; human factors and usability are major factors in designing for the Web. This course includes industry standard techniques for Web graphics and other display media. It covers the mechanics for image production as well as methodologies for asset management, file compression, scanning, animation, image maps, slices, interactive rollovers, navigation, integration with multiple applications, layouts for screens, GIF and JPEG file formats, image resolution, and color depth. The implementation of planning models to design comprehensives for Website development is a major component in this hands-on course.

**GCMW 154 Preparing Web Graphics (1)***3 hours laboratory***Note:** May be taken 4 times; maximum of 4 completions in any combination of GCMW 154, 164**Transfer acceptability:** CSU

Hands-on course to produce optimized graphics for the Web with applications such as Adobe's Fireworks, cross-platform production environments: edit bitmap and vector graphics; format text; select Web-safe color; simple animation; generate HTML and JavaScript automatically; integrate with other Web production applications.

**GCMW 164 Interactive Web Graphics (1)***3 hours laboratory***Note:** May be taken 4 times; maximum of 4 completions in any combination of GCMW 154, 164**Transfer acceptability:** CSU

Hands-on course to produce optimized graphics for the Web with applications such as Adobe's Fireworks, cross-platform production environments: design complex buttons and navigation bars, image maps, slicing complex graphics, animation, batch processing, and scripting; generate HTML and JavaScript automatically; integrate with other Web Production applications.

**GCMW 165 Digital Video Design (4)***3 hours lecture - 3 hours laboratory***Note:** May be taken 4 times**Transfer acceptability:** CSU

Explores project planning, setup, editing and output of Digital Video. Incorporates sound, graphics, 2D animation and text for full-screen, web, CD-ROM, or DVD playback. Projects and assignments utilize transitions, superimposing, transparency and keying along with video, audio and other special effects.

**GCMW 197A Topics in Internet (1-5)**  
*Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture or laboratory may be scheduled by the department. Refer to Class Schedule.*  
**Note:** May be taken 4 times  
**Transfer acceptability:** CSU  
 Graphic Communications topics in Internet. See Class Schedule for specific topic offered. Course title will designate subject covered.

**GCMW 197B Topics in Multimedia (1-5)**  
*Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture or laboratory may be scheduled by the department. Refer to Class Schedule.*  
**Note:** May be taken 4 times  
**Transfer acceptability:** CSU  
 Graphic Communications topics in multimedia. See Class Schedule for specific topic offered. Course title will designate subject covered.

**GCMW 201 Multimedia II (4)**  
 3 hours lecture - 3 hours laboratory  
**Prerequisite:** A minimum grade of 'C' in GCMWIR GCMW 101  
**Recommended preparation:** GCMW 165 or GCMW 205  
**Note:** May be taken 4 times; maximum of 4 completions in any combination of GCMWIR GCMW 101, GCMW 201  
**Transfer acceptability:** CSU  
 Strategies and techniques for designing successful user multimedia interface. There will be emphasis on usability and design issues, incorporation of underlying metaphors, screen design, and navigational styles. Authoring systems, video composing, digital imaging and audio editing applications will be explored.

**GCMW 202 Web Page Layout II (4)**  
 3 hours lecture - 3 hours laboratory  
**Prerequisite:** A minimum grade of 'C' in GCMWIR GCMW 102 and GCMW 140  
**Note:** May be taken 4 times; maximum of 4 completions in any combination of GCMW 102, 102A, 102B, 202  
**Transfer acceptability:** CSU  
 Multimedia web site design and production using advanced WYSIWYG editor that permits editing hypertext markup language (HTML) as well as designing to current standards of CSS and interactivity. Includes mechanics for site production as well as methodologies for project planning and management.

**GCMW 203 Web Multimedia (4)**  
 3 hours lecture - 3 hours laboratory  
**Prerequisite:** A minimum grade of 'C' in GCMWIR GCMW 102  
**Recommended preparation:** GCIPR GCIP 140  
**Note:** May be taken 4 times  
**Transfer acceptability:** CSU  
 Open discussion of current technologies, social issues, and design theory directly related to multimedia for the Internet and the World Wide Web. Experimental and practical application of multimedia in graphical user interface and user navigation design via assigned class projects.

**GCMW 204 Motion Graphics for Multimedia (4)**  
 3 hours lecture - 3 hours laboratory  
**Prerequisite:** A minimum grade of 'C' in GCMW 165  
**Recommended preparation:** GCIPR GCIP 140  
**Note:** May be taken 4 times  
**Transfer acceptability:** CSU  
 Explores project planning, setup, execution, and output of motion-based graphics. Incorporates exploration and integration of sound, graphics, digital video, 2-D animation, and text for multimedia.

**GCMW 205 Digital Video for Multimedia (4)**  
 3 hours lecture - 3 hours laboratory  
**Prerequisite:** A minimum grade of 'C' in GCMW 165 and 204  
**Note:** May be taken 4 times  
**Transfer acceptability:** CSU  
 Exploration of concepts, design and development of digital video production and editing skills as they relate to CD Rom/DVD, Internet, and Digital Video Tape.

**GCMW 206 Motion Graphics Production and Compositing (4)**  
 3 hours lecture - 3 hours laboratory  
**Prerequisite:** A minimum grade of 'C' in GCMW 204 and 205  
**Note:** May be taken 4 times  
 This course will be a "cap course" in which the student combines skills learned in multiple disciplines. For example the student will combine video skills learned in Graphic Communications and RTV with skills learned in ART or CAD by composing a video that incorporates 3D rendered characters with live video footage. The student will complete the work by preparing it for publication on tape, DVD, digital storage device or web based formats.

**GCMW 208 Web Motion Graphics II (4)**  
 3 hours lecture - 3 hours laboratory  
**Recommended preparation:** GCMW 108  
**Note:** May be taken 4 times; maximum of 4 completions in any combination of GCMW 108, 208, 228  
**Transfer acceptability:** CSU  
 Development of intermediate skills in web motion graphics: introduction of object-oriented design as applied to dynamic animation presentations; communication between graphical elements and instances; use of scripting and variables; creation of sound objects; use of components to improve efficiency; using Dynamic Text and ActionScript. Integrating digital audio and video with Flash presentations. Macromedia's Flash will be used to create dynamic visual presentations with audio and video assets to communicate more effectively on the Web.

**GCMW 214 Designing Data Bases Visually (4)**  
 3 hours lecture - 3 hours laboratory  
**Prerequisite:** A minimum grade of 'C' in GCMWIR GCMW 102 and GCMW 202  
**Recommended preparation:** GCMW 108  
**Note:** May be taken 4 times  
**Transfer acceptability:** CSU  
 Organize and track people, projects, images and information in visually designed cross-platform relational data bases using graphic tools via wizards, templates and custom capabilities. Lay out powerful forms for the end user implementing graphical user interface standards. Publish for print and Web and intranet. Share and integrate secure data with workgroups across networks or other applications. Course is hands-on and will feature such applications as FileMaker Pro.

**GCMW 216 Web Data Base Design I (4)**  
 3 hours lecture - 3 hours laboratory  
**Prerequisite:** A minimum grade of 'C' in GCMWIR GCMW 102  
**Transfer acceptability:** CSU  
 Hands-on course for creating Web pages that draw dynamic content from data-bases. Design and create a simple database for use on the Web. Create Web forms that add, modify or delete records from a database. Plan and implement a Web application using modern Web design tools such as Dreamweaver.

**GCMW 217 Online Store Design I (4)**  
 3 hours lecture - 3 hours laboratory  
**Prerequisite:** A minimum grade of 'C' in GCMWIR GCMW 102 and GCMW 202  
**Note:** May be taken 4 times; maximum of 4 completions in any combination of GCMW 217, 218  
**Transfer acceptability:** CSU  
 Design of interactive commercial web sites with emphasis on online shopping cart and database creation and management. Hands-on production of an online store. Perspective through web store case studies and models. Evaluation of various e-commerce solutions, security/privacy and payment options, site promotion/advertising, analysis tools and trends in appropriate web graphics, multimedia and software. Project management methods for e-commerce site life cycle.

**GCMW 218 Online Store Design II (4)**  
 3 hours lecture - 3 hours laboratory  
**Prerequisite:** A minimum grade of 'C' in GCMWIR GCMW 102 and GCMW 202  
**Note:** May be taken 4 times; maximum of 4 completions in any combination of GCMW 217, 218  
**Transfer acceptability:** CSU  
 Hands-on design and production of interactive commercial Web sites with emphasis on complex data-driven online shopping carts. Perspective through Web store case studies and models. Emphasis on forms production to send and

dynamically display data for catalog, inventory, customers, etc. Produce components such as guest books, counters, e-mail, etc. to enhance an e-commerce site. Project Management methods for e-commerce site life cycle.

**GCMW 220 Designing for Web Standards I (4)**

3 hours lecture - 3 hours laboratory

**Prerequisite:** A minimum grade of 'C' in GCMW 202

**Recommended preparation:** GCMW/R GCMW 102

**Note:** May be taken 4 times; maximum of 4 completions in any combination of GCMW 220, 221

**Transfer acceptability:** CSU

Web site design and production using the current standards of the hypertext markup language (HTML) and other advanced tools (multimedia applications and Java Script, Java, etc.). Use of HTML editors for site authoring and mechanics as well as methodologies for project planning and management.

**GCMW 221 Designing for Web Standards II (4)**

3 hours lecture - 3 hours laboratory

**Prerequisite:** A minimum grade of 'C' in GCMW 202 and 220

**Note:** May be taken 4 times; maximum of 4 completions in any combination of GCMW 220, 221

**Transfer acceptability:** CSU

Current standards of Web design set forth by the W3C mandate changes in the way Web designers create their Web pages. This course teaches the use of XHTML and CSS to implement Web typography and advanced Web page layouts that comply with current Web standards. Use of modern Web page layout and design tools such as Dreamweaver to aid your work flow will also be taught.

**GCMW 226 Web Data Base Design II (4)**

3 hours lecture - 3 hours laboratory

**Prerequisite:** A minimum grade of 'C' in GCMW 202 and 216

**Transfer acceptability:** CSU

Modern Web sites frequently need to interact with Web database servers in order to manage content, take orders or reservations, receive information, and interact with their visitors. This is a hands-on course for creating Web pages with a modern Web design tool such as Dreamweaver that draw dynamic content from remote database server such as MySQL. Learners will design and manage a remote database on a remote database server using popular database management tools.

**GCMW 228 Web Motion Graphics III (4)**

3 hours lecture - 3 hours laboratory

**Prerequisite:** A minimum grade of 'C' in GCMW 108

**Recommended preparation:** GCMW 208

**Note:** May be taken 4 times; maximum of 4 completions in any combination of GCMW 108, 208, 228

**Transfer acceptability:** CSU

Dynamic Web content - explore the creation of dynamic Flash presentations. Skinnable components and presentations. Incorporating server-side technologies: Flash as a front-end to a database; using Flash Communications Server and ColdFusion MX to enable rich internet application capabilities. Production of audio and digital video for Flash; integration of non-embedded media.

**GCMW 229 Interactive Streaming Media (4)**

3 hours lecture - 3 hours laboratory

**Prerequisite:** A minimum grade of 'C' in GCMW/R GCMW 102

**Note:** May be taken 4 times

**Transfer acceptability:** CSU

Explores the various aspects of interactive streaming for the web. Combines lecture, hands on lessons, exercises, projects, and group work to build skills in the interactive streaming process. Students evaluate and select streaming methods, develop and author various media, and deliver the content in appropriate formats. Particular attention is given to design, usability, and applicable uses of interactive streaming media on the web.

**GCMW 232 Web Accessibility Design (1)**

3 hours laboratory

**Prerequisite:** A minimum grade of 'C' in GCMW 202 and 220

**Note:** May be taken 4 times

**Transfer acceptability:** CSU

Evaluate screen and Web design techniques to maximize accessibility by people with physical disabilities. Implement tools to convert documents to accessible formats. Produce sites that are accessible. Use various resources from the World Wide Web Consortium and publishers such as checklists, examples of code, conversion tools, test tools, etc. Review legal requirements (Americans with Disabilities Act and the Web Accessibility Initiative) for various sectors to provide fully accessible Web sites.

**GCMW 236 Flash Game Design (4)**

3 hours lecture - 3 hours laboratory

**Prerequisite:** A minimum grade of 'C' in GCMW 108 and 208

**Note:** May be taken 4 times

**Transfer acceptability:** CSU

A hands-on introduction to game design using Flash 5. ActionScript for game development, screen layout, game interfaces, and structured game layout for effective game design. The course is designed to introduce students to Flash game design and concepts. Projects apply ActionScript and game layout principles. (For beginning and intermediate levels).

**GCMW 290 Copyright for Graphic Designers & Web Developers (1)**

1 hour lecture

**Prerequisite:** A minimum grade of 'C' in R GCIP 149/GCIP 149 and/or GCMW 102/R GCMW 102

**Note:** Cross listed as GCIP 290; may be taken 4 times

Copyright is an old and well codified area of law. The statutes and cases, however, have created complexities that are sometimes difficult to understand. This course covers the basics of copyright law, copyright registration, methods of informing viewers of copyright protections and liability, and the ways in which a graphic designer may enforce copyright. The damages and remedies of injunction and compensation are included. This course is not intended to offer legal advice. Consult with competent legal professionals for any questions regarding specific copyright issues.

**GCMW 291 Contracts for Graphic Designers & Web Developers (1)**

1 hour lecture

**Prerequisite:** A minimum grade of 'C' in GCIP/R GCIP 149 and/or GCMW/R GCMW 102

**Note:** Cross listed as GCIP 291; may be taken 4 times

Graphic designers, whether employed by business or freelance, need to understand contract terms, negotiation, conditions, and the statutory and case law uniquely applicable to graphic design. Understanding the terms of a contract is essential to protecting the rights to use of work product and obtaining compensation. Failing to do so usually results in abuse of rights and non-compensation. This course is not intended to offer legal advice. Consult with competent legal professionals for any questions regarding specific contractual issues.

**GCMW 292 Legal Issues for Graphic Designers and Web Developers (3)**

3 hours lecture

**Prerequisite:** A minimum grade of 'C' in GCIP/R GCIP 149 and/or GCMW/R GCMW 102

**Note:** Cross listed as GCIP 292

This course will cover most legal issues that confront graphic designers and web developers in the day-to-day operation of the businesses. Specific legal issues will include business formation, contracts, copyright, licensing, deep linking, click wrap agreements, and the risks and benefits of self employment versus employment by a business. This course is not intended to offer legal advice. Consult with competent legal professionals for any questions regarding specific legal issues.

**GCMW 295 Directed Study in Graphic Communications (1, 2, 3)**

3, 6, or 9 hours laboratory

**Prerequisite:** Approval of project or research by department chairperson/ director

**Note:** Cross listed as GCIP 295; may be taken 4 times

**Transfer acceptability:** CSU



Independent study for students who have demonstrated skills and/or proficiencies in Graphic Communications subjects and have the initiative to work independently on projects or research outside the context of regularly scheduled classes. Students will work under the personal supervision of an instructor.

### **GCMW 296 Special Projects (1, 2, 3)**

3, 6, or 9 hours laboratory

**Recommended preparation:** Advanced coursework or job-related experience

**Note:** Cross listed as GCIP 296; may be taken 4 times

**Transfer acceptability:** CSU

Independent work on a specified sustained project which does not fit into the context of regularly scheduled classes. Students work from a contract agreed upon by the student and the instructor.

## **Health (HE)**

Contact the Physical Education Department for further information.

(760) 744-1150, ext. 2462

Office: O-10

### **COURSE OFFERINGS**

#### **HE 100 Health Education and Fitness Dynamics (3)**

3 hours lecture

**Corequisite:** HE 100L

**Transfer acceptability:** CSU; UC

Individual well being will be developed through the study of the emotional, spiritual, intellectual, social, and physical qualities of health.

#### **HE 100L Health Performance Lab (1,1.5,2)**

3, 4.5, or 6 hours laboratory

**Corequisite:** HE 100

**Transfer acceptability:** CSU; UC

Fitness lab course designed to develop and encourage positive attitude and habits with regards to Health Education and fitness dynamics. Lab activity will primarily utilize exercise equipment as it relates to cardiovascular efficiency, body composition, muscular strength and endurance and flexibility. An individual fitness profile will be established, including pre-post testing, to determine each students' fitness accomplishments.

#### **HE 165 Fundamentals of Nutrition (3)**

3 hours lecture

**Note:** Cross listed as FCS 165

**Transfer acceptability:** CSU; UC – FCS 165, FCS 185, BIOL 185, HE 165 combined: maximum credit, one course

The study of how food nourishes the body. Investigation of diet fads and fallacies. Eating for fitness, and planning meals for optimum health throughout the life cycle.

#### **HE 197 Current Topics in Health (1, 2, 3)**

1, 2, or 3 hours lecture

**Note:** May be taken 4 times with different subject matter

**Transfer acceptability:** CSU

Current issues in health education meeting student and community educational needs dealing with the social, mental, and physical aspects of personal health. Course title will designate subject covered.

## **Health Occupations**

See Emergency Medical Education, Dental Assisting, Medical Assisting, and Nursing Education

## **History (HIST)**

Contact the Economics, History and Political Science Department for further information.

(760) 744-1150, ext. 2412

Office: P-17K

### **COURSE OFFERINGS**

#### **HIST 101 History of the United States Through Reconstruction (3)**

3 hours lecture

**Note:** This course plus History 102 meets the State requirement in American History and Institutions.

**Transfer acceptability:** CSU; UC – HIST 101 and 102 or AS 101 and 102

combined: maximum credit, one pair

Political, economic, social, and cultural development of the American people through Reconstruction with particular emphasis on the colonial period; the Revolution; constitutional development; westward expansion with emphasis on California and frontier influences; emergence of sectionalism; the Civil War and Reconstruction.

#### **HIST 102 History of the United States Since Reconstruction (3)**

3 hours lecture

**Note:** This course plus History 101 meets the State requirement in American History and Institutions.

**Transfer acceptability:** CSU; UC – HIST 101 and 102 or AS 101 and 102

combined: maximum credit, one pair

Political, economic, social, and cultural developments of the American people since Reconstruction. Emphasis will be on the westward and farm movements, industrial development, twentieth century reform movements, the United States as a world power, and civil rights. Special consideration will be given to the development of California state and local government.

#### **HIST 105 History of Western Civilization Through the Reformation (3)**

3 hours lecture

**Transfer acceptability:** CSU; UC

A survey of ancient civilizations, Greece, Rome and medieval Europe, with emphasis on the heritage, ideas, attitudes, and institutions basic to Western Civilization.

#### **HIST 106 History of Western Civilization Since the Reformation (3)**

3 hours lecture

**Transfer acceptability:** CSU; UC

Emergence of modern Europe, expansion of European power and influences; emphasis on cultural and intellectual trends which affect Western civilization in the Twenty-first Century.

#### **HIST 107 World History to 1650 (3)**

3 hours lecture

**Transfer acceptability:** CSU; UC

The growth of civilizations and the interrelationships of the peoples of Europe, Asia, Africa, and America to 1650.

#### **HIST 108 World History Since 1650 (3)**

3 hours lecture

**Transfer acceptability:** CSU; UC

The development of the civilizations and the interrelationships of the peoples of Europe, Asia, Africa, and America since 1650.

#### **HIST 121 History of California (3)**

3 hours lecture

**Transfer acceptability:** CSU; UC

The history of California from the origins of the native peoples to the present. Course focuses on the events and people who shaped the development of California with an emphasis on the many diverse cultural elements (native peoples, Hispanics, Anglo-Americans, Asians, African-Americans, Pacific Islanders, and women) involved.

#### **HIST 130 Women in United States History (3)**

3 hours lecture

**Transfer acceptability:** CSU; UC

A survey of the changing role, status, and contributions of women in the United States from the colonial period to the present. Their social, economic, political, and religious positions in American society are examined.