

Computer Information Management

School of Business Sciences

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Curriculum

The Computer Information Management (CIM) Department in the School of Business Sciences conducts a program designed to offer training in hardware and software applications used in a variety of environments and enterprises. The program encompasses a broad area of study, including computer operating systems, software applications, and networking and internetworking technologies. Courses are designed to prepare students at various levels of competence—from the novice to the expert—for immediate employment, professional careers, and/or transfer. The program combines classroom lecture/demonstration and individual hands-on training in a laboratory setting. Faculty members work closely with local businesses and industries to ensure relevant and state-of-the-art training.

Associate in Science Degree Major or Certificate in Computer Information Management

Emphases:

- **Administrative Assistant/Word Processing**
- **Desktop Publishing**
- **Digital Media Technologies**
- **Local Area Networks: Cisco Emphasis**
- **Local Area Networks: Microsoft Emphasis**
- **Microcomputer Applications**
- **Web Authoring**

Certificates of Competency:

- **Digital Graphics Applications**
- **Digital Publishing**
- **Spreadsheet**
- **Web Page Authoring**

Certificates

Students must complete all courses in the certificate program with a grade of "C" or better. A minimum of 12 units in the certificate program must be completed at Irvine Valley College. See page 60 for further information.

"**Certificates of Competency**" are granted for the completion of a specified program, or specified courses, whose total unit requirement is less than 18. These locally approved certificates are designed to acknowledge basic workplace competencies and job readiness for students who are entering the workforce or upgrading their job skills.

Associate in Science Degrees

Students must complete a minimum of 60 units of credit, including the courses in the major and general education requirements (page 57), with an overall GPA of 2.0 or better. A minimum of 12 units must be completed at Irvine Valley College. See pages 54–55 for further information, including other options for fulfilling the major requirement.

Transfer Preparation

Courses that fulfill major requirements for an associate degree at Irvine Valley College may not be the same as those required for completing the major at a transfer institution offering a baccalaureate degree. Students who plan to transfer to a four-year college or university should (1) refer to the transfer section of this catalog, (2) consult the catalog of their prospective transfer institution (see the IVC Transfer Center for assistance), and (3) schedule an appointment with an IVC counselor to develop a plan of study before beginning their program. It may be helpful to meet with the department faculty at IVC.

Associate in Science Degree Major or Certificate in Computer Information Management

ADMINISTRATIVE ASSISTANT/ WORD PROCESSING EMPHASIS

This program is designed for those wishing to develop office occupation skills that may be applied in a variety of business settings.

Complete the following courses:

		Units
CIM 101A	Document Processing I	1.5
CIM 101B	Document Processing II	1.5
CIM 107.1A	Introduction to Personal Computer Applications	3
CIM 203.1A	Introduction to Windows	1.5
CIM 210.1A	Word Processing I	1.5
CIM 210.2A	Word Processing II	1.5
CIM 210.3A	Word Processing III—Certification	3
MGT 103	Business English	3
MGT 104	Business Communication	3

TOTAL UNITS: 19.5

(Majors and certificates continue on the next page)

DESKTOP PUBLISHING EMPHASIS

This program is designed for those wishing to develop expertise in applications used in the design and layout of print publications.

Complete the following courses:		Units
CIM 104.1A	DOS for Technical Support Professionals	2
CIM 107.1A	Introduction to Personal Computer Applications	3
CIM 208.1A	Telecommunications	1.5
CIM 210.1A	Word Processing I	1.5
CIM 210.2A	Word Processing II	1.5
CIM 221.1A	Image Editing I	1.5
CIM 223.1A	Integrating Vector and Bitmap Images	3
CIM 230.1A	Digital Publishing I	1.5
CIM 230.2A	Digital Publishing II	1.5
MGT 103	Business English	3
TOTAL UNITS: 18.5		

DIGITAL MEDIA TECHNOLOGIES EMPHASIS

The program in Digital Media prepares individuals for employment as entry-level media specialists and/or media specialists in advertising, website production, prepress publication, and various areas of the entertainment industry. The program offers an integrated/interdisciplinary approach to meet current and future job market demand, emphasizing critical thinking, design techniques and state-of-the-art computer skills.

This program is pending state approval at the time of catalog publication.

Complete the following courses:		Units
CIM 220.1A	Digital Scanning and Capture	1.5
CIM 221.1A	Image Editing 1	1.5
CIM 221.2A	Image Editing Techniques	1.5
CIM 222.1A	Digital Illustration I	1.5
CIM 223.1A	Integrating Vector and Bitmap Images	3
CIM 224.1A	Motion Graphics I	1.5
CIM 230.1A	Digital Publishing I	1.5
CIM 230.2A	Digital Publishing II	1.5
CIM 242.1A	2D Animation I	3
CIM 243.1A	Web Authoring I	1.5
CIM 243.2A	Web Authoring II	1.5
CIM 247.1A	Authoring Tools for New Media I	3

Select 7.5 units from the following courses:		Units
CIM 224.2A	Motion Graphics II	3
CIM 230.3A	Digital Publishing III	1.5
CIM 230.4A	Digital Publishing IV	1.5
CIM 245.1A	Digital Sound and Video	3
CIM 245.2A	Streaming Sound and Video	3
CIM 247.2A	Authoring Tools for New Media II	1.5

TOTAL UNITS: 30

LOCAL AREA NETWORKS: CISCO EMPHASIS

The Cisco CCNA (Cisco Certified Network Associate) is one of the most demanded certifications in networking. Cisco has designed a four-semester program which leads to this certification. Students may cover the entire track at IVC over four semesters; or they may take the college's accelerated program, completing two semesters' worth of material in one semester, in order to acquire the CCNA in one academic year.

This program is pending state approval at the time of catalog publication.

Complete the following courses:		Units
CIM 104.1A	DOS for Technical Support Professionals	2
CIM 106.1A	Hardware Concepts	3
CIM 203.2A	Windows for Technical Support Professionals	3
CIM 260.1A	Networking I	1.5
CIM 260.2A	Networking II	3
CIM 263.1A	Internetworking Technologies I	3
CIM 263.2A	Internetworking Technologies II	3
CIM 263.3A	Internetworking Technologies III	3
CIM 263.4A	Internetworking Technologies IV	3
TOTAL UNITS: 24.5		

LOCAL AREA NETWORKS: MICROSOFT EMPHASIS

Technicians who possess the Microsoft Certified Systems Engineer (MCSE) certification have demonstrated their comprehensive knowledge of the major Microsoft operating systems and are in demand in almost every field of endeavor. Microsoft requires candidates to pass seven difficult exams to receive the MCSE. IVC conducts classes to qualify the student to pass six of the seven exams (the seventh is an elective, and the student has choices to make in how to satisfy this requirement). If a student were to take two MCSE classes per semester, he/she could receive the MCSE in roughly one-and-a-half academic years.

This program is pending state approval at the time of catalog publication.

Complete the following courses:		Units
CIM 104.1A	DOS for Technical Support Professionals	2
CIM 106.1A	Hardware Concepts	3
CIM 203.2A	Windows for Technical Support Professionals	3
CIM 260.1A	Networking I	1.5
CIM 260.2A	Networking II	3
CIM 262.1A	Networking Technologies I	2
CIM 262.2A	Networking Technologies II	3
CIM 262.3A	Networking Technologies III	3
CIM 262.4A	Networking Technologies IV	3
CIM 262.5A	Networking Technologies V	3
CIM 262.6A	Networking Technologies VI	3
TOTAL UNITS: 28.5		

MICROCOMPUTER APPLICATIONS EMPHASIS

This program is designed for those wishing to develop expertise in a variety of applications that may be required in a number of business settings.

Complete the following core courses:		Units
CIM 104.1A	DOS for Technical Support Professionals	2
CIM 107.1A	Introduction to Personal Computer Applications	3
CIM 208.1A	Telecommunications	1.5
CIM 210.1A	Word Processing I	1.5
CIM 212.1A	Spreadsheets I	1.5
CIM 214.1A	Database I	1.5
CIM 221.1A	Image Editing I	1.5
CIM 230.1A	Digital Publishing I	1.5
Select a minimum of 6 units from the following:		
CIM 210.2A	Word Processing II	1.5
CIM 212.2A	Spreadsheets II	1.5
CIM 214.2A	Database II	1.5
CIM 223.1A	Integrating Vector and Bitmap Images	3
CIM 230.2A	Digital Publishing II	1.5
CIM 203.1A	Introduction to Windows	1.5
CIM 240.1A	Introduction to the Internet	1.5
TOTAL UNITS: 20		

WEB AUTHORIZING EMPHASIS

The primary purpose of the Web Authoring certificate and degree program is to prepare students for employment—and to maintain state-of-the-art skills of workers already employed—in California's rapidly expanding web authoring industry. This comprehensive program offers an integrated approach to meet current and expanding job market demand.

Complete the following courses:		Units
CIM 221.1A	Image Editing I	1.5
CIM 221.2A	Image Editing Techniques	1.5
CIM 222.1A	Digital Illustration I	1.5
CIM 224.1A	Motion Graphics I	1.5
CIM 240.1A	Introduction to the Internet	1.5
CIM 241.1A	Creating a Web Page I	1.5
CIM 242.1A	2D Animation I	3
CIM 242.2A	2D Animation II	3
CIM 242.3A	2D Animation III	3
CIM 243.1A	Web Authoring I	1.5
CIM 243.2A	Web Authoring II	1.5
CIM 244.1A	Web Page Usability and Structure	1.5
Select 6 units from the following courses:		
CIM 224.2A	Motion Graphics II	3
CIM 245.1A	Digital Sound and Video	3
CIM 245.2A	Streaming Sound and Video	3
CIM 246.1A	3D Animation I	1.5
CIM 246.2A	3D Animation II	3
CIM 247.1A	Authoring Tools for New Media I	3
CIM 247.2A	Authoring Tools for New Media II	1.5
CIS 38	Java Programming	3
CIS 50A	HTML Programming	3
CIS 142	UNIX Operating System	3
TOTAL UNITS: 28.5		

Certificate of Competency in Digital Graphics Applications

This certificate is intended for the student who wants a foundation in and exposure to a variety of digital graphic applications before specializing in a particular area. Students take introductory classes in digital scanning, image editing and illustration, followed by courses that integrate these applications or extend them into other areas of exploration such as 2D animation, motion graphics, 3D animation, digital sound and video, and authoring tools for multimedia.

Complete the following courses:		Units
CIM 203.1A	Introduction to Windows	1.5
CIM 220.1A	Digital Scanning and Capture	1.5
CIM 221.1A	Image Editing I	1.5
CIM 222.1A	Digital Illustration I	1.5
CIM 223.1A	Integrating Vector and Bitmap Images	3
Select a minimum of 7.5 units from the following courses:		
CIM 221.2A	Image Editing Techniques	1.5
CIM 224.1A	Motion Graphics I	1.5
CIM 224.2A	Motion Graphics II	3
CIM 242.1A	2 D Animation I	3
CIM 245.1A	Digital Sound and Video	3
CIM 245.2A	Streaming Sound and Video	3
CIM 246.1A	3D Animation I	1.5
CIM 246.2A	3D Animation II	3
CIM 247.1A	Authoring Tools for New Media I	3
CIM 247.2A	Authoring Tools for New Media II	1.5
TOTAL UNITS: 16.5		

Certificate of Competency in Digital Publishing

This certificate introduces students to the business and graphic applications necessary to publish in a changing print world. It prepares the student in three areas: page layout for print publishing, creating and distributing portable documents (PDFs), and web publishing using visual layout tools. The student will take introductory classes in digital scanning, image editing and illustration, followed by digital publishing classes.

Complete the following courses:		Units
CIM 203.1A	Introduction to Windows	1.5
CIM 210.1A	Word Processing I	1.5
CIM 220.1A	Digital Scanning and Capture	1.5
CIM 221.1A	Image Editing I	1.5
CIM 222.1A	Digital Illustration I	1.5
CIM 230.1A	Digital Publishing I	1.5
CIM 230.2A	Digital Publishing II	1.5
CIM 230.3A	Digital Publishing III	1.5
CIM 230.4A	Digital Publishing IV	2
CIM 243.1A	Web Authoring I	1.5
Select one of the following:		
CIM 210.2A	Word Processing II	1.5
CIM 243.2A	Web Authoring II	1.5
TOTAL UNITS: 17		

Certificate of Competency in Spreadsheets

This program is designed for those wishing to develop spreadsheet and accounting skills that may be applied in a variety of business settings.

Complete the following courses:		Units
CIM 107.1A	Introduction to Personal Computer Applications	3
CIM 203.1A	Introduction to Windows	1.5
CIM 212.1A	Spreadsheets I	1.5
CIM 212.2A	Spreadsheets II	1.5
CIM 212.3A	Spreadsheets III—Certification	3
Select a minimum of 7 units from the following:		
ACCT 1A	Financial Accounting	4
ACCT 114	Business Mathematics	3
ACCT 215	General Accounting	3
ACCT 204	Accounting Applications	3
CIM 100	Introduction to Computers, Keyboarding and Document Processing	3
CIM 100A	Computer Keyboarding and Document Processing I	1.5
CIM 100B	Computer Keyboarding and Document Processing II	1.5
TOTAL UNITS:		17.5

Certificate of Competency in Web Page Authoring

This certificate prepares the student in the techniques necessary to create animation, graphics, and interactivity for web page development. The student will take introductory classes in web page authoring, followed by courses that show how to create 2D animated graphics and interactivity for web pages; how to extend animation and interactivity through scripting; and how to analyze web page case studies for their techniques and implementation.

Complete the following courses:		Units
CIM 203.1A	Introduction to Windows	1.5
CIM 240.1A	Introduction to the Internet	1.5
CIM 241.1A	Creating a Web Page I	1.5
CIM 242.1A	2D Animation I	3
CIM 242.2A	2D Animation II	3
CIM 242.3A	2D Animation III	3
CIM 243.1A	Web Authoring I	1.5
Select a minimum of 1.5 units from the following:		
CIM 224.1A	Motion Graphics I	1.5
CIM 243.2A	Web Authoring II	1.5
CIM 244.1A	Web Page Usability and Structure	1.5
CIM 245.1A	Digital Sound and Video	3
TOTAL UNITS:		16.5

Courses

Office Management (Keyboarding)

CIM 100: Introduction to Computers, Keyboarding and Document Processing **3 Units**

3 hours lecture

Corequisite: CIM 255L.

This course is designed for individuals seeking basic computer, keyboarding and document processing skills for personal and business applications. The course introduces the Windows environment; word processing software; and touch keyboarding of letter, number and symbol keys on the computer. Topics include sending and retrieving email, creating and formatting personal and business correspondence, and formatting academic and business reports. Students concentrate on improving keyboarding speed and accuracy. No prior computer experience is required. NR

CIM 100A: Computer Keyboarding and Document Processing I **1.5 Units**

1.5 hours lecture

Corequisite: CIM 255L.

This course is designed for individuals seeking basic computer, keyboarding and document processing skills for personal and business applications. The course introduces the Windows environment, word processing software, touch control of the keyboard, email, and the formatting of simple academic reports. Students concentrate on improving keyboarding speed and accuracy. No prior computer experience is required. CIM 100A parallels the first half of CIM 100. CIM 100A and 100B, when taken together, are equivalent in units and content to CIM 100. NR

CIM 100B: Computer Keyboarding and Document Processing II **1.5 Units**

1.5 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 100A.

This course is designed for individuals seeking to further develop computer, keyboarding and document processing skills for personal and business applications. The course introduces personal and business correspondence and multiple-page reports and the word processing software that supports the creation of these documents. Students concentrate on improving keyboarding speed and accuracy. CIM 100B parallels the second half of CIM 100. CIM 100A and 100B, when taken together, are equivalent in units and content to CIM 100. NR

CIM 101A: Document Processing I **1.5 Units**

1.5 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 100B.

This course is designed for individuals seeking to develop skills in formatting various kinds of business correspondence, reports, tables, and desktop publishing projects from unarranged and rough-draft sources. Students concentrate on improving keyboarding speed and accuracy on production assignments. NR

CIM 101B: Document Processing II **1.5 Units**

1.5 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 101A.

This course is designed to refine the skills required to create increasingly complex document-processing jobs, including correspondence using mail merge, a variety of reports, and complex tables. The course covers preparing employment documents, office publications, office forms, and international correspondence. Students prepare documents patterned after those commonly used in legal, medical, insurance, retail, and government offices. NR

CIM (Operating Systems)

CIM 104.1A: DOS for Technical Support Professionals 2 Units

2 hours lecture

Corequisite: CIM 255L.

This course, designed for the novice, provides an overview of microcomputer operating systems. Students will learn operating system functions and commands, disk and file management, and utilities used in various applications of routine computer functions, working with either the PC DOS or Macintosh systems. NR

CIM 203.1A: Introduction to Windows 1.5 Units

1.5 hours lecture

Corequisite: CIM 255L.

This course explores the use of Microsoft's Windows software system for the personal computer. Topics include an introduction to the Windows environment, the program manager, the file manager, tools, accessories, and printing. NR

CIM 203.2A: Windows for Technical Support Professionals 3 Units

3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 203.1A.

This advanced course is designed for technical support professionals. It provides a comprehensive review of the technical aspects of the Windows operating system, including user profiles, system policies, the registry, customization, system maintenance, networking, file systems and troubleshooting. NR

CIM 208.3A: Advanced Windows 1.5 Units

1.5 hours lecture

Corequisite: CIS 255L. Recommended Preparation: CIM 203.1A.

This course is designed for those who want to master the advanced features of Windows and take advantage of the full capabilities of this application. Topics include managing memory, installing and optimizing Windows, initializing files, linking and embedding objects, and troubleshooting. NR

CIM (Hardware)

CIM 106.1A: Hardware Concepts 3 Units

3 hours lecture

Corequisite: CIM 255L.

This course prepares the technical professional to install, configure, and troubleshoot PC hardware including system boards, bus structures, memory, and power supplies. Topics such as system optimization using MS-DOS, Windows 3.1, and Windows 95 will be discussed. Emphasis will be on printers and local area networks, and diagnosing and troubleshooting them. NR

CIM (PC Applications)

CIM 107.1A: Introduction to Personal Computer Applications 3 Units

3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 100A.

This course introduces Windows-based word processing, spreadsheet, database, presentation, and World Wide Web navigation software. Students will use computer hardware, peripherals, and software as problem-solving tools. NR

CIM (Word Processing)

CIM 210.1A: Word Processing I 1.5 Units

1.5 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 100 or CIM 100B.

This course is designed for those seeking to master introductory skills in using word processing software. Students will use a word processing program to create, edit, and manipulate documents of varying sophistication, including personal and business letters, reports, and tables. NR

CIM 210.2A: Word Processing II 1.5 Units

1.5 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 210.1A.

This course is designed for those seeking to master advanced skills in using word processing software. Students will learn to work with shared documents; create specialized tables and indexes; use merge, sort, and select features; use macros and styles; and integrate clip art, graphics, and charts for school, work, or home. NR

CIM 210.3A: Word Processing III—Certification 3 Units

3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 210.2A.

This course is designed for those wanting to review the commands and features of the word processing program and/or prepare for the MOUS (Microsoft Office User Specialist) Core and/or Expert Certification exams for word processing. The MOUS program is used to test and validate skills and supply objective proof to an employer that an individual knows how to use the word processing program efficiently and productively. NR

CIM (Spreadsheets)

CIM 212.1A: Spreadsheets I 1.5 Units

1.5 hours lecture

Corequisite: CIM 255L.

This course is designed for individuals seeking to master introductory skills in using spreadsheet software. Students will use a spreadsheet program to organize and manage financial data. Topics include formulas and functions, charts and graphs, and developing a professional-looking worksheet. The course is also listed as Accounting 212.1A; credit will be given in either area, not both. NR

CIM 212.2A: Spreadsheets II 1.5 Units

1.5 hours lecture

Corequisite: CIM 255L. Recommended Preparation: Acct./CIM 212.1A.

This course provides instruction and training in the use of spreadsheet software at the intermediate level. Students will produce sophisticated spreadsheet documents for a variety of business applications. Topics include working with lists and pivot tables, consolidated multiple worksheets and workbooks, integrating the spreadsheet software with other software programs and the World Wide Web, and creating macros. The course is also listed as Accounting 212.2A; credit will be given in either area, not both. NR

CIM 212.3A: Spreadsheets III—Certification 3 Units

3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: Acct./CIM 212.2A.

This course provides students with the advanced study and training required to qualify for certification in spreadsheet software. Students will review and learn to integrate all of the features of the spreadsheet program and incorporate data from other software programs and the World Wide Web. The course is designed to prepare students for the MOUS (Microsoft Office User Specialist) Core and/or Expert Certification exams for spreadsheets. This course is also listed as Accounting 212.3A; credit will be given in either area, not both. NR

CIM (Database)

CIM 214.1A: Database I 1.5 Units

1.5 hours lecture

Corequisite: CIM 255L. *Recommended Preparation:* CIM 203.1A.

This course is designed for individuals seeking to develop introductory skills in a personal computer-based relational database management system. Topics include the design of relational databases; creating tables, queries, basic forms and reports; entering data; finding and editing records; and importing from and exporting to other programs. NR

CIM 214.2A: Database II 1.5 Units

1.5 hours lecture

Corequisite: CIM 255L. *Recommended Preparation:* CIM 214.1A.

This course is designed for individuals seeking to develop intermediate skills in a personal computer-based relational database management system. Topics include the design of relational databases; the use of field properties; the creation of sophisticated queries; generating reports that use grouping and sorting techniques; working with joins; Server Query Language; macros; and the planning and design of user interfaces. NR

CIM 214.3A: Database III—Certification 3 Units

3 hours lecture

Corequisite: CIM 255L. *Recommended Preparation:* CIM 214.2A.

This course is designed for students seeking to develop advanced skills in a personal computer-based relational database management system. The course examines the development of an entire database application including the following: planning for issues of design and data integrity; documenting a database; designing a custom user interface (switchboard menu and toolbars); creating custom forms, complex reports, and queries. Students will practice splitting a database into a user interface component and a data component to enhance the capability of updating client queries, forms and reports. The course also addresses error handling through programmatic code and provides an overview of security issues. NR

CIM (Graphics)

CIM 220.1A: Digital Scanning and Capture 1.5 Units

1.5 hours lecture

Corequisite: CIM 255L. *Recommended Preparation:* CIM 203.1A.

This course is an introduction to scanning and capturing images properly to prepare them for output to print, new media, and the web. Students will explore tonal and color correction, resolution, linescreen, sharpening, and file formats for final output. NR

CIM 221.1A: Image Editing I 1.5 Units

1.5 hours lecture

Corequisite: CIM 255L. *Recommended Preparation:* CIM 104.1A.

This course provides an introduction to a variety of graphics software packages that may be used to display business information in a visual format. Students will learn to use the software tools necessary to access and manipulate basic graphic elements and text and incorporate them into business presentations and products, such as brochures, business cards, newsletters, reports, and multimedia productions. The course includes a discussion of basic hardware requirements. NR

CIM 221.2A: Image Editing Techniques 1.5 Units

1.5 hours lecture

Corequisite: CIM 255L. *Recommended Preparation:* CIM 221.1A.

This course explores image-editing techniques for producing sophisticated graphics for print, multimedia, and the web. The main focus of the course is image production essentials and the proper application of curves, color correction, masking, and channel operations. NR

CIM 222.1A: Digital Illustration I

1.5 Units

1.5 hours lecture

Corequisite: CIM 255L. *Recommended Preparation:* CIM 220.1A.

This course is an introduction to digital illustration using vector-based, object-oriented applications. The primary purpose is to create line art and typography that can be scaled without losing quality or detail. The course explores vector graphics for printing and web applications. NR

CIM 223.1A: Integrating Vector and Bitmap Images 3 Units

3 hours lecture

Corequisite: CIM 255L. *Recommended Preparation:* CIM 221.1A, CIM 222.1A.

This course explores image editing tools and vector tools. Students refine their ability to produce sophisticated graphics for print, multimedia, and the web. The main focus of the course is the integration of bitmap images with vector images. NR

CIM 224.1A: Motion Graphics I 1.5 Units

1.5 hours lecture

Corequisite: CIM 255L. *Recommended Preparation:* CIM 221.1A.

This course is an introduction to compositing and animating layered images and text to create motion graphics. It explores layer essentials; the interaction between layers using blend modes; masking; and compositing techniques. Students integrate animated text, illustrations, images, video, and sound to create motion graphics for video and the web. NR

CIM 224.2A: Motion Graphics II 3 Units

3 hours lecture

Corequisite: CIM 255L. *Recommended Preparation:* CIM 221.1A and CIM 224.1A.

This course is an extended exploration of compositing techniques used to create sophisticated motion graphics for video. It further explores layering, masking, pre-compositions, and nested compositions and how they may be applied to the animation of text, illustration, images, video, and sound. NR

CIM (Digital Publishing)

CIM 230.1A: Digital Publishing I 1.5 Units

1.5 hours lecture

Corequisite: CIM 255L. *Recommended Preparation:* CIM 104.1A.

Computer Information Management 230.1A provides instruction and hands-on training in the use of state-of-the-art microcomputers, laser printers, and various desktop publishing packages. Students will learn to produce camera-ready, near typeset-quality reports, newsletters, business forms, and presentations. NR

CIM 230.2A: Digital Publishing II 1.5 Units

1.5 hours lecture

Corequisite: CIM 255L. *Recommended Preparation:* CIM 230.1A.

Computer Information Management 230.2A provides advanced training in the use of advanced microcomputer software to produce business forms, newsletters, and presentations. Emphasis will be placed on the integration of sophisticated text and graphic elements, and on the use of batch processing layout software. NR

CIM 230.3A: Digital Publishing III 1.5 Units

1.5 hours lecture

Corequisite: CIM 255L. *Recommended Preparation:* CIM 230.1A.

This course explores how to create, modify, and distribute PDF (Portable Document Format) files from paper, the web, and authoring programs for a variety of applications. Topics include the following: creating an online version of a book; annotating and indexing PDFs; creating forms; building a searchable PDF library and catalog; and adding page actions, movies, and sound to PDF files. NR

CIM 230.4A: Digital Publishing IV **2 Units**
2 hours lecture
Corequisite: CIM 255L. Recommended Preparation: CIM 230.1A and CIM 230.2A.
This course explores how to prepare and organize files for print publishing from the initial stages with the client to the final output with the service bureau. Students learn planning and preproduction and how to properly integrate images, illustrations, and page layout techniques for consistency and problem-free output. NR

CIM (Telecommunications)

CIM 208.1A: Telecommunications **1.5 Units**
1.5 hours lecture
Corequisite: CIM 255L.

This course presents an overview of telecommunications and the Internet/ Intranets using microcomputers. This course covers the basics of the operational and technical aspects of microcomputer communications and provides students with a working knowledge of communications software and hardware. Various types of hardware, formats, protocols, public information utilities, online databases, bulletin board services, and Internet technical information will be discussed. An overview of Internet service providers and connecting are discussed. The basics of World Wide Web (WWW), Telnet, and File Transfer Protocol (FTP) are surveyed. NR

CIM (Web Applications)

CIM 240.1A: Introduction to the Internet **1.5 Units**
1.5 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 203.1A.
This course prepares students to use the Internet. Emphasis is on introducing the features of the Internet, including electronic mail, the World Wide Web, Telnet, FTP (file transfer protocol), Usenet and Gopher, as well as selecting an Internet service provider. Students will explore the vast resources of the Internet using the World Wide Web and learn to access information using a variety of methods. NR

CIM 241.1A: Creating a Web Page I **1.5 Units**
1.5 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 203.1A.
This course prepares the student to create and publish a Web page. Emphasis will be on constructing an effective and appealing page, exploring authoring utilities, and understanding hypertext markup languages (HTML). NR

CIM 242.1A: 2D Animation I **3 Units**
3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 241.1A.
This course introduces software used to create 2D graphics, animation, and interactivity for the web. The course explores drawing and painting tools; key-frame and tweened animation; and the power of reusable elements, libraries, scripting, and multiscene movies. Students will integrate, test, and publish animations for the web. NR

CIM 242.2A: 2D Animation II **3 Units**
3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 242.1A.
This course extends the exploration of animation and interactivity for the web using scripting. The course focuses on action scripting to create dynamic graphics and intermediate to advanced interactivity for web design. NR

CIM 242.3A: 2D Animation III **3 Units**
3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 242.1A, CIM 242.2A.
This course extends the exploration of animation and interactivity for the web by applying animation and scripting techniques to case studies. Students will focus on deconstructing animations, programming techniques to create utilities, and high-end techniques for the web. NR

CIM 243.1A: Web Authoring I **1.5 Units**
1.5 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 241.1A, CIM 221.1A.
This course introduces web authoring tools for building sophisticated web pages and supporting a dynamic workflow between visual and text-based editors. It explores the appropriate use of linking; typography; layout; and various approaches to presenting data, graphics, and dynamic media on the web. NR

CIM 243.2A: Web Authoring II **1.5 Units**
1.5 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 243.1A.
This course extends the potential of web authoring tools for building sophisticated web pages and explores various approaches to presenting data, graphics, and dynamic media on the web. NR

CIM 244.1A: Web Page Usability and Structure **1.5 Units**
1.5 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 243.1A.
This course explores what can be done to enhance the usability of a web page and make the web experience user-friendly. It focuses on the critical issues of content, page structure, site architecture, and intranets. It also addresses international user issues and accessibility for users with disabilities. NR

CIM 245.1A: Digital Sound and Video **3 Units**
3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 104.1A and Phot. 50.
This course introduces the basic theory and practice of developing multimedia projects on microcomputers. This course will examine the most current software packages and computer technologies that allow the user to capture, edit, and combine still and moving video images and audio signals. Students will have an opportunity to work with presentation software, CD-ROM, and Quicktime movie technology. Computer Information Management 245.1A is also listed as Photography 245.1A; credit will be given in either area, not both. NR

CIM 245.2A: Streaming Sound and Video **3 Units**
3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 245.1A.
This course explores the software used to create and edit video and audio for the web and the streaming technology used to deliver the video to various media. The course includes the application of compression guidelines; audio codecs and formats; and video codecs and settings. Students make streaming movies, upload them to a streaming server, embed them on a web page, and mix streaming and non-streaming media. NR

CIM 246.1A: 3D Animation I **1.5 Units**
1.5 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 221.1A.
This course is an introduction to the fundamentals of 3D animation to include modeling and creating 3D elements, applying textures to them, lighting them, building a scene, and animating the 3D elements in that scene. It integrates the process to rendering a final output appropriate for video or for delivery to the web. NR

CIM 246.2A: 3D Animation II **3 Units**
3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 246.1A.
This course is an extended exploration of software used to create high-quality 3D animations. It focuses on intermediate to advanced techniques in modeling, texture-mapping, lighting, animation, and rendering. NR

CIM 247.1A: Authoring Tools for New Media I **3 Units**
3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 221.1A, CIM 245.1A.
This course introduces object-oriented authoring tools for new media and the web. Students explore the potential and behavior of various tools and how to integrate new medias within them. Formerly CIM 243.3A. NR

CIM 247.2A: Authoring Tools for New Media II 1.5 Units
1.5 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 247.1A.

This course explores how scripting techniques can be used to extend the capabilities of authoring tools for new media and the web. The course covers working with lists and behavior properties; shocking a movie for Internet use; and using scripting techniques to create, modify, and control video, sprites, sound, and transitions. Formerly CIM 243.4A. NR

Networking

CIM 260.1A: Networking I 1.5 Units
1.5 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 208.1A.

This course provides an introduction to and overview of the field of local area networking, with an emphasis on terminology, hardware, and software associated with the various components of a network. Students perform basic end-user functions and introductory administrative operations on a network. NR

CIM 260.2A: Networking II 3 Units
3 hours lecture

Corequisite: CIM 255L.

This course examines the concepts of data communications, networking, and connectivity. It covers the Open Systems Interconnection (OSI) reference model; communication protocols and standards; data translation and transmission; network structures; and communication protocol implementations, including lower-layer, upper-layer, and IEEE 802 (Institute of Electrical and Electronics Engineers) protocol. NR

CIM 262.1A: Networking Technologies I 2 Units
2 hours lecture

Corequisite: CIM 255L.

This introductory course is designed to acquaint individuals who are new to the Windows 2000 operating system with the tasks involved in supporting Windows 2000 networks. It provides an overview of networking concepts and examines how protocols are implemented in the Windows 2000 system. NR

CIM 262.2A: Networking Technologies II 3 Units
3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 262.1A.

This course studies the major functions of the Windows 2000 Professional and Server. It provides student with the knowledge and skills necessary to install and configure the system on stand-alone and client computers that are part of a workgroup or domain. NR

CIM 262.3A: Networking Technologies III 3 Units
3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 262.2A.

This course is for support professionals who are new to Microsoft Windows 2000 and will be responsible for installing, configuring, managing, and supporting a network infrastructure that uses the Microsoft Windows 2000 Server products. NR

CIM 262.4A: Networking Technologies IV 3 Units
3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 262.2A and CIM 262.3A.

This course is designed to provide students with the knowledge and skills necessary to install, configure, and administer Microsoft Windows 2000 Active Directory services. The course also focuses on implementing Group Policy and performing the Group Policy-related tasks that are required to centrally manage users and computers. NR

CIM 262.5A: Networking Technologies V 2 Units
2 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 262.4A.

This course provides students with the knowledge and skills necessary to design a Microsoft Windows 2000 directory services infrastructure in an enterprise network. Strategies are presented to assist the student in identifying the information technology needs of an organization, and then designing an Active Directory structure that meets those needs. NR

CIM 262.6A: Networking Technologies VI 3 Units
3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 262.3A.

This course provides students with the information and skills needed to create a networking services infrastructure design that supports the required network applications. Each module provides a solution based on the needs of the organization, including DHCP, DNS, and NAT. NR

CIM 263.1A: Internetworking Technologies I 3 Units
3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 260.1A.

This is the first of four semester-long courses which qualify the student to take the Cisco CCNA exam. After passing the certification exam, the student will be a Cisco Certified Network Associate. Topics in this course include the OSI Reference Model; layered communications; the TCP/IP network protocol; network design and documentation; and structured cabling. NR

CIM 263.2A: Internetworking Technologies II 3 Units
3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 263.1A.

This is the second of four semester-long courses which qualify the student to take the Cisco CCNA exam. After passing the certification exam, the student will be a Cisco Certified Network Associate. Topics in this course include WANs and routers; router setup and configuration; IOS images; and routing protocols. NR

CIM 263.3A: Internetworking Technologies III 3 Units
3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 263.2A.

This is the third of four semester-long courses which qualify the student to take the Cisco CCNA exam. After passing the certification exam, the student will be a Cisco Certified Network Associate. Topics in this course include LAN switching; VLAN standards, architecture, and implementation; LAN design considerations and concerns; IP routing; and Access Control Lists (ACLs). NR

CIM 263.4A: Internetworking Technologies IV 3 Units
3 hours lecture

Corequisite: CIM 255L. Recommended Preparation: CIM 263.3A.

This is the last of four semester-long courses which qualify the student to take the Cisco CCNA exam. After passing the certification exam, the student will be a Cisco Certified Network Associate. Topics in this course include Wide Area Network (WAN) theory and design; ISDN and its relations to WAN technology and the OSI Reference Model; Frame Relay and LMI; and network troubleshooting. NR

CIM (Computer Lab)

CIM 200L: Computer Access Laboratory 1 Unit
3 hours learning center

Computer Information Management 200L provides students with the opportunity to use the necessary applications software to support their coursework. This course will be graded on a credit/no-credit basis only. R-E-3

CIM 255L: Computer Information Management Laboratory .5 Unit
1.5 hours learning center

Corequisite: Any CIM applications course.

This course is the laboratory component for Computer Information Management courses. This course will be graded on a credit/no-credit basis only. R-E-99