

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.

DEGREE OPTIONS

• Associate in Science Degree in Computer Information Management

Emphases:

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

Students must complete a minimum of 60 units of credit, including the courses in the major ("Major Requirements") and general education requirements (pages 56-61), with an overall GPA of 2.0 or better. A minimum of 12 units must be completed at Irvine Valley College. See pages 52-54 for further information.

CERTIFICATE OPTIONS

• Certificate of Achievement in Computer Information Management

Emphases:

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

- **Certificate of Competency in Digital Graphics Applications**
- **Certificate of Competency in Digital Publishing**
- **Certificate of Competency in Spreadsheets**
- **Certificate of Competency in Web Page Authoring**

Students must complete all courses in the certificate program ("Major Requirements") 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 55 for further information.

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 University Studies major (page 185) and "Transfer Planning" (page 64); (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.

MAJOR REQUIREMENTS: COMPUTER INFORMATION MANAGEMENT

ASSOCIATE IN SCIENCE DEGREE OR CERTIFICATE OF ACHIEVEMENT

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	2
CIM 101B Document Processing II	2
CIM 107.1 Introduction to Personal Computer Applications	3.5
CIM 210.1 Word Processing I	2
CIM 210.2 Word Processing II	2
CIM 210.3 Word Processing III—Certification	3.5
MGT 103 Business English	3
MGT 104 Business Communication	3
TOTAL UNITS:	21

Recommended electives: CIM 203.1.

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 104.1 DOS for Technical Support Professionals	2.5
CIM 107.1 Introduction to Personal Computer Applications	3.5
CIM 210.1 Word Processing I	2
CIM 210.2 Word Processing II	2
CIM 221.1 Image Editing I	2
CIM 223.1 Integrating Vector and Bitmap Images	3.5
CIM 230.1 Digital Publishing I	2
CIM 230.2 Digital Publishing II	2
MGT 103 Business English	3
TOTAL UNITS:	22.5

MAJOR REQUIREMENTS: COMPUTER INFORMATION MANAGEMENT

ASSOCIATE IN SCIENCE DEGREE OR CERTIFICATE OF ACHIEVEMENT

DIGITAL MEDIA TECHNOLOGIES EMPHASIS

The program in digital media prepares students for employment as entry-level 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.

Complete the following courses:		Units
CIM 220.1	Digital Scanning and Capture	2
CIM 221.1	Image Editing I	2
CIM 221.2	Image Editing II	2
CIM 222.1	Digital Illustration I	2
CIM 223.1	Integrating Vector and Bitmap Images	2
CIM 224.1	Motion Graphics I	2
CIM 242.1	2D Animation I	3.5
CIM 243.1	Web Authoring I	2
CIM 247.1	Authoring Tools for New Media I	3.5
DMA 55	Graphic Design I	3
DMA 140	2D Design and Color Theory 3	

Complete 4 units the following courses:

CIM 230.1	Digital Publishing I	2
CIM 230.2	Digital Publishing II	2
CIM 243.2	Web Authoring II	2
CIM 245.1	Digital Sound and Video	3.5
TOTAL UNITS:		32

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.

Complete the following courses:		Units
CIM 104.1	DOS for Technical Support Professionals	2.5
CIM 106.1	Hardware Concepts	3.5
CIM 203.2	Windows for Technical Support Professionals	3.5
CIM 260.1	Networking I	2
CIM 260.2	Networking II	3.5
CIM 263.1	Internetworking Technologies I	3.5
CIM 263.2	Internetworking Technologies II	3.5
CIM 263.3	Internetworking Technologies III	3.5
CIM 263.4	Internetworking Technologies IV	3.5
TOTAL UNITS:		29

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 courses:		Units
CIM 107.1	Introduction to Personal Computer Applications	3.5
CIM 203.1	Introduction to Windows	2
CIM 210.1	Word Processing I	2
CIM 212.1	Spreadsheets I	2
CIM 214.1	Database I	2
CIM 221.1	Image Editing I	2
CIM 230.1	Digital Publishing I	2

(Continued, next column)

Complete a minimum of 6 units from the following courses:

CIM 210.2	Word Processing II	2
CIM 212.2	Spreadsheets II	2
CIM 214.2	Database II	2
CIM 223.1	Integrating Vector and Bitmap Images	3.5
CIM 230.2	Digital Publishing II	2
CIM 240.1	Introduction to the Internet	2
TOTAL UNITS:		21.5

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 221.1	Image Editing I	2
CIM 221.2	Image Editing II	2
CIM 222.1	Digital Illustration I	2
CIM 224.1	Motion Graphics I	2
CIM 240.1	Introduction to the Internet	2
CIM 241.1	Creating a Web Page I	2
CIM 242.1	2D Animation I	3.5
CIM 242.2	2D Animation II	3.5
CIM 242.3	2D Animation III	3.5
CIM 243.1	Web Authoring I	2
CIM 243.2	Web Authoring II	2
CIM 244.1	Web Page Usability and Structure	2

Complete 6 units

from the following courses:

CIM 245.1	Digital Sound and Video	3.5
CIM 246.1	3D Animation I	2
CIM 247.1	Authoring Tools for New Media I	3.5
CIM 247.2	Authoring Tools for New Media II	2
CS 38	World Wide Web/Internet Using Java Programming	4
CS 50A	HTML Programming	4
CS 142	UNIX Operating System	4
TOTAL UNITS:		34.5

CERTIFICATE OF COMPETENCY: DIGITAL GRAPHIC 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 and authoring tools for multimedia.

Complete the following courses:		Units
CIM 220.1	Digital Scanning and Capture	2
CIM 221.1	Image Editing I	2
CIM 221.2	Image Editing II	2
CIM 222.1	Digital Illustration I	2
CIM 224.1	Motion Graphics I	2
CIM 242.1	2 D Animation I	3.5
CIM 247.1	Authoring Tools for New Media I	3.5
TOTAL UNITS:		17

Recommended electives: CIM 203.1, 223.1, 245.1, 246.1, 247.2.

CERTIFICATE OF COMPETENCY: 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 210.1	Word Processing I	2
CIM 220.1	Digital Scanning and Capture	2
CIM 221.1	Image Editing I	2
CIM 222.1	Digital Illustration I	2
CIM 230.1	Digital Publishing I	2
CIM 230.2	Digital Publishing II	2
Complete two of the following courses:		
CIM 210.2	Word Processing II	2
CIM 243.1	Web Authoring I	2
CIM 243.2	Web Authoring II	2
TOTAL UNITS:		16

Recommended electives: CIM 203.1.

CERTIFICATE OF COMPETENCY: 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 107.1	Introduction to Personal Computer Applications	3.5
CIM 212.1	Spreadsheets I	2
CIM 212.2	Spreadsheets II	2
CIM 212.3	Spreadsheets III— Certification	3.5

Complete a minimum of 6 units from the following courses:		
ACCT 1A	Financial Accounting	4
ACCT 114	Business Mathematics	3
ACCT 204	Accounting Applications: QuickBooks	3
ACCT 215	General Accounting	3
CIM 100A	Computer Keyboarding and Document Processing I	2
CIM 100B	Computer Keyboarding and Document Processing II	2
TOTAL UNITS:		17

Recommended elective: CIM 203.1.

CERTIFICATE OF COMPETENCY: WEB PAGE AUTHORIZING

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 241.1	Creating a Web Page I	2
CIM 242.1	2D Animation I	3.5
CIM 242.2	2D Animation II	3.5
CIM 242.3	2D Animation III	3.5
CIM 243.1	Web Authoring I	2
Complete one of the following courses:		
CIM 224.1	Motion Graphics I	2
CIM 243.2	Web Authoring II	2
CIM 244.1	Web Page Usability and Structure	2
TOTAL UNITS:		16.5

Recommended electives: CIM 203.1, 240.1, 245.1.

COURSES

CIM (KEYBOARDING)

CIM 100: Introduction to Computers, Keyboarding and Document Processing 3.5 Units

3 hours lecture, 1.5 hours lab
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 2 Units

1.5 hours lecture, 1.5 hours lab
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. NR

CIM 100B: Computer Keyboarding and Document Processing II 2 Units

1.5 hours lecture, 1.5 hours lab
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. NR

CIM 101A: Document Processing I 2 Units

1.5 hours lecture, 1.5 hours lab
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

2 Units

1.5 hours lecture, 1.5 hours lab

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 (PC APPLICATIONS)

CIM 107.1: Introduction to Personal Computer Applications

3.5 Units

3 hours lecture, 1.5 hours lab

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. The course includes a discussion of legal and ethical considerations involved in Internet use. NR

CIM (WORD PROCESSING)

CIM 210.1: Word Processing I

2 Units

1.5 hours lecture, 1.5 hours lab

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 210.2: Word Processing II

2 Units

1.5 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 210.1

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 210.3: Word Processing III—Certification

3.5 Units

3 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 210.2

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 212.1: Spreadsheets I

2 Units

1.5 hours lecture, 1.5 hours lab

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 212.1; credit will be given in either area, not both. NR

CIM 212.2: Spreadsheets II

2 Units

1.5 hours lecture, 1.5 hours lab

Recommended Preparation: Acct./CIM 212.1

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 212.2; credit will be given in either area, not both. NR

CIM 212.3: Spreadsheets III—Certification

3.5 Units

3 hours lecture, 1.5 hours lab

Recommended Preparation: Acct./CIM 212.2

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 212.3; credit will be given in either area, not both. NR

CIM (DATABASE)

CIM 214.1: Database I

2 Units

1.5 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 203.1

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 214.2: Database II

2 Units

1.5 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 214.1

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

(OPERATING SYSTEMS)

CIM 104.1: DOS for Technical Support Professionals

2.5 Units

2 hours lecture, 1.5 hours lab

This course provides an overview of personal computer hardware and operating systems. The course covers the fundamentals of computer command syntax, focusing on the Disk Operating System (DOS) commands in the Windows environment. Topics include hardware; operating systems; command syntax; management and organization of disks, files and directories with DOS commands; and simple batch files. NR

CIM 203.1: Introduction to Windows

2 Units

1.5 hours lecture, 1.5 hours lab

This course provides an overview of the operating systems used with personal computers, including the fundamentals of the Windows user interface. Topics include: manipulating windows, using Help, launching applications, managing files and folders, maintaining disks, using accessories, and customizing the system. NR

CIM 203.2: Windows for Technical Support Professionals

3.5 Units

3 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 203.1

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 261.1: Fundamentals of Linux

3.5 Units

3 hours lecture, 1.5 hours lab

This course is designed to prepare students to pass the CompTIA Linux+ exam. The course introduces the major components of Linux including installation, configuration, user accounts, file system management, printing, system monitoring and optimization, networking and troubleshooting. There is a strong hands-on component for improved learning. Course materials include the Linux operating system. NR

CIM (GRAPHICS)

CIM 220.1: Digital Scanning and Capture

2 Units

1.5 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 203.1

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 221.1: Image Editing I

2 Units

1.5 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 104.1

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 221.2: Image Editing II

2 Units

1.5 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 221.1

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 222.1: Digital Illustration I

2 Units

1.5 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 220.1

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 223.1: Integrating Vector and Bitmap Images

3.5 Units

3 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 221.1 and CIM 222.1

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 224.1: Motion Graphics I

2 Units

1.5 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 221.1

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)

DIGITAL PUBLISHING

CIM 230.1: Digital Publishing I

2 Units

1.5 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 104.1

Computer Information Management 230.1 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 230.2: Digital Publishing II

2 Units

1.5 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 230.1

Computer Information Management 230.2 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 (ANIMATION)

CIM 242.1: 2D Animation I

3.5 Units

3 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 241.1

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 242.2: 2D Animation II

3.5 Units

3 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 242.1

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 242.3: 2D Animation III

3.5 Units

3 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 242.1 and CIM 242.2

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 246.1: 3D Animation I

2 Units

1.5 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 221.1

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 (MULTIMEDIA)

CIM 245.1: Digital Sound and Video

3.5 Units

3 hours lecture, 1.5 hours lab

Recommended Preparation: CIM 104.1 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 245.1 is also listed as Photography 245.1; credit will be given in either area, not both. NR

CIM 247.1: Authoring Tools for New Media I

3.5 Units

*3 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 221.1 and CIM 245.1*

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. NR

CIM 247.2: Authoring Tools for New Media II

2 Units

*1.5 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 247.1*

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. NR

CIM (WEBSITE DESIGN)**CIM 240.1: Introduction to the Internet**

2 Units

1.5 hours lecture, 1.5 hours lab

This course prepares students to use the Internet to access information. Emphasis is on introducing the features of the Internet. Students practice using various browser programs to access the Internet; configuring and using email client programs to send, receive, and maintain email messages and attachments; using FTP (File Transfer Protocol) software to exchange files over the Web; using search engines and keyword searches to find information and services; and working with Internet service providers. NR

CIM 241.1: Creating a Web Page I

2 Units

*1.5 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 203.1*

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 243.1: Web Authoring I

2 Units

*1.5 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 241.1 and CIM 221.1*

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 243.2: Web Authoring II

2 Units

*1.5 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 243.1*

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 244.1: Web Page Usability and Structure

2 Units

*1.5 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 243.1*

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 (HARDWARE)**CIM 106.1: Hardware Concepts**

3.5 Units

3 hours lecture, 1.5 hours lab

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 (NETWORKING)**CIM 260.1: Networking I**

2 Units

1.5 hours lecture, 1.5 hours lab

This course provides an introduction to the fields of local area networking (LAN) and wide area networking (WAN). The course focuses on terminology, the various functions at work within a LAN/WAN, and the hardware and software associated with the various components of a LAN/WAN. NR

CIM 260.2: Networking II

3.5 Units

3 hours lecture, 1.5 hours lab

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 260.4: Fundamentals of Wireless Networking

3.5 Units

3 hours lecture, 1.5 hours lab

This course discusses the major components and issues of wireless networking including its history and uses, required hardware and software, and advantages and disadvantages (vs. wired networking). The course covers radio frequency communications, wireless communication models and standards (IEEE 802.2), Bluetooth, infrared (IR) technology, WLAN's, security, and business applications. Students will have hands-on experience with wireless equipment in the classroom. NR

CIM 262.1: Networking Technologies I

2.5 Units

2 hours lecture, 1.5 hours lab

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 262.2: Networking Technologies II

3.5 Units

*3 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 262.1*

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 262.3: Networking Technologies III

3.5 Units

*3 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 262.2*

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 262.4: Networking Technologies IV

3.5 Units

*3 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 262.2 and CIM 262.3*

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 262.5: Networking Technologies V

2.5 Units

*2 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 262.4*

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 262.6: Networking Technologies VI

3.5 Units

*3 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 262.3*

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 263.1: Internetworking Technologies I

3.5 Units

*3 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 260.1*

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 263.2: Internetworking Technologies II

3.5 Units

*3 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 263.1*

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 263.3: Internetworking Technologies III

3.5 Units

*3 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 263.2*

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 263.4: Internetworking Technologies IV

3.5 Units

*3 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 263.3*

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 263.5: Fundamentals of the Cisco PIX Firewall

3.5 Units

3 hours lecture, 1.5 hours lab

This course examines the features and technology of the Cisco PIX firewall device. It is recommended preparation for the Cisco Secure PIX Firewall exam. Topics include NAT (network address translation), PAT (port address translation), ACLs (access control lists), URL filtering, attack guards, intrusion detection, VPNs (virtual private networks) and failover. Students will use a PIX firewall device in the class. NR

CIM 264.1: Fundamentals of Network Security

3.5 Units

3 hours lecture, 1.5 hours lab

This course will discuss the many threats to network security and techniques to prevent them, including authentication, email and web security, firewalls, intrusion detection, cryptography and disaster recovery. Class includes both lecture and hands-on exercises. NR

CIM 264.5: Hardening the Infrastructure

3.5 Units

*3 hours lecture, 1.5 hours lab**Recommended Preparation: Security + certification or equivalent knowledge.*

This is the first of two courses leading to the Security Certified Network Professional (SCNP) certification. The course covers advanced TCP/IP; implementation of the IP Security Protocol (IPSec); securing Linux, Windows and Cisco operating systems; securing routers and creating access-control lists (ACLs); contingency planning; and Internet security. The course includes a strong hands-on component. NR

CIM 264.6: Network Defense and Countermeasures

3.5 Units

*3 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 264.5*

This is the second of two courses leading to the Security Certified Network Professional (SCNP) certification. The course covers the fundamentals of network defense, the design and implementation of firewalls, virtual private networks (VPNs), and intrusion detection systems (IDS). The course includes a strong hands-on component. NR

CIM 264.7: Advanced Security Implementation (ASI)

3.5 Units

*3 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 264.6*

This is the first of two courses designed to prepare students to take the Security Certified Network Architect (SCNA) certification exam. The course exams and explains the technologies required to build a trusted network. Topics include cryptography, key exchange, computer forensics, law and legislation, biometrics, strong authentication, and digital certificates/signatures. NR

CIM 264.8: Enterprise Security Solutions

3.5 Units

*3 hours lecture, 1.5 hours lab**Recommended Preparation: CIM 264.7*

This is the second of two courses designed to prepare students to take the Security Certified Network Architect (SCNA) certification exam. The course covers the certificate policies; configuring Microsoft and Linux certificate authorities (CAs); securing local resources, including wireless networks and email; including digital certificates; and smart cards. 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