

# COMPUTER INFORMATION TECHNOLOGY

The Computer Information Technology (CIT) Department provides a program of study for students who are preparing for employment in Information Technology or are preparing to transfer to a 4-year institution in Information Technology/Information Systems. The CIT Department offers a complete introduction to computers and software, specific training in selected software packages, and advanced courses dealing with networks, specialized programming techniques, and management of Information Technology.

## Contact Information

Division: Mathematics, Business, and Computer Technology (B - 127)

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- Administrative Assistant Certificate of Achievement (<http://catalog.valleycollege.edu/degree-certificate-program-index/computer-information-technology/administrative-assistant-certificate-achievement/>)
- Android Application Security Support Specialist Certificate of Achievement (<http://catalog.valleycollege.edu/degree-certificate-program-index/computer-information-technology/android-application-security-support-specialist-certificate-achievement/>)
- Cisco Certified Network Associate Certificate of Career Preparation (<http://catalog.valleycollege.edu/degree-certificate-program-index/computer-information-technology/cisco-certified-network-associate-certificate-achievement/>)
- CIT - Management Information Systems Associate of Science Degree (<http://catalog.valleycollege.edu/degree-certificate-program-index/computer-information-technology/cit-management-information-systems-as-degree/>)
- CIT - Management Information Systems Certificate of Achievement (<http://catalog.valleycollege.edu/degree-certificate-program-index/computer-information-technology/cit-management-information-systems-certificate-achievement/>)
- CIT - Office Technology Associate of Arts Degree (<http://catalog.valleycollege.edu/degree-certificate-program-index/computer-information-technology/cit-office-technology-aa-degree/>)
- Computer Network Support Specialist Certificate of Achievement (<http://catalog.valleycollege.edu/degree-certificate-program-index/computer-information-technology/computer-network-support-specialist-certificate-achievement/>)
- Computer Support Specialist Certificate of Achievement (<http://catalog.valleycollege.edu/degree-certificate-program-index/computer-information-technology/computer-support-specialist-certificate-achievement/>)

- Digital Forensics Certificate of Achievement (<http://catalog.valleycollege.edu/degree-certificate-program-index/computer-information-technology/digital-forensics-certificate-achievement/>)
- Information Security and Cyber Defense Certificate of Achievement (<http://catalog.valleycollege.edu/degree-certificate-program-index/computer-information-technology/information-security-cyber-defense-certificate-achievement/>)
- Information Systems and Technology Associate of Science Degree (<http://catalog.valleycollege.edu/degree-certificate-program-index/computer-information-technology/information-systems-technology-as-degree/>)
- iOS Application Security Support Specialist Certificate of Achievement (<http://catalog.valleycollege.edu/degree-certificate-program-index/computer-information-technology/ios-application-security-support-specialist-certificate-achievement/>)
- Medical Coding and Billing Certificate of Achievement (<http://catalog.valleycollege.edu/degree-certificate-program-index/computer-information-technology/medical-coding-billing-certificate-achievement/>)
- Office Technology Fundamentals Certificate of Completion (<http://catalog.valleycollege.edu/degree-certificate-program-index/computer-information-technology/office-technology-fundamentals-certificate-completion/>)
- Web Application Security Support Specialist Certificate of Achievement (<http://catalog.valleycollege.edu/degree-certificate-program-index/computer-information-technology/web-application-security-support-specialist-certificate-achievement/>)

### CIT 010 3 Units

#### Beginning Keyboarding and Word Processing

**Lecture:** 36 contact hours

**Lab:** 54 contact hours

This course covers the fundamentals of keyboarding including operation of a standard keyboard by touch. It includes instruction and practice in formatting a variety of personal and business documents, such as letters, reports, and tables. The use of speed and accuracy drills designed to develop a keyboarding speed of 30 words per minute for five minutes will be utilized. This is a combined Part I and Part II course students can complete in one semester.

**Associate Degree Applicable**

### CIT 013 3 Units

#### Intermediate Keyboarding

**Lecture:** 36 contact hours

**Lab:** 54 contact hours

**Prerequisite:** CIT 010

This course provides instruction in touch control of the computer keyboard, and is designed to develop a keyboarding speed of 45 net words per minute for five minutes. In addition, students receive instruction in the preparation of basic business documents using word processing software.

**Associate Degree Applicable**

**CIT 021 4 Units****Word Processing: Comprehensive Microsoft Word****Lecture:** 72 contact hours**Advisory:** CIT 010 or CIT 100

This course focuses on the production of professional quality documents using Microsoft Word comprehensive features: creating office documents, set up tabs and margins, set text in columns or tables, apply graphic elements, perform mail merge, sorting, numbering, bullets, symbols, prepare multiple page documents, using headers and footers, quick parts, themes and styles, references, forms, table of content, indexing, macros, and preparing students for Microsoft Certified Application Specialist exam.

**Associate Degree Applicable****CIT 031 3 Units****Business English****Lecture:** 54 contact hours

This course is a review of basic grammar, punctuation, capitalization, vocabulary, and spelling. Emphasis is placed on grammar and vocabulary building for effective business communications.

**Associate Degree Applicable****CIT 045 3 Units****Medical Insurance Billing and Coding****Lecture:** 54 contact hours**Prerequisite:** CIT 010 and CIT 144

This course covers ICD/CPT coding, insurance terminology, computerized billing, claims management, and the Health Insurance Portability and Accountability Act (HIPAA).

**Associate Degree Applicable****CIT 048 3 Units****Medical Office Procedures****Lecture:** 54 contact hours**Prerequisite:** CIT 010 and CIT 144

The course covers law and ethics, data entry, appointment scheduling, and billing procedures using computer software to provide real life medical office scenarios.

**Associate Degree Applicable****CIT 050 3 Units****Medical Records and Health Information****Lecture:** 54 contact hours**Prerequisite:** CIT 010 and CIT 144

This course prepares students for entry-level positions in medical records. Topics covered include the unique aspects of file management including transfer, release, storage, retrieval, and destruction of records and files. Information includes the latest computer technologies, electronic medical records and electronic health records to access, manage and share protected health information. An introduction to electronic billing, coding, medical ethics, confidentiality, and the laws that govern privacy are also a part of this course.

**Associate Degree Applicable****CIT 051 3 Units****Introduction to Electronic Health Records****Lecture:** 54 contact hours**Prerequisite:** CIT 048

This course introduces the health information technology (HIT) utilized in electronic health records (EHR) systems and fiscal management. Students will obtain hands-on experience through integrated practice management software to obtain a comprehensive picture of health information technology. There is an emphasis on quality assurance, legal, and ethical practices of documenting the clinical and administrative tasks that take place for a total patient encounter.

**Associate Degree Applicable****CIT 088 3 Units****Introduction to Android Security****Lecture:** 36 contact hours**Lab:** 54 contact hours

This is an introductory course in Android security. The course covers why it is critical to build security into Android apps in all phases of the system design lifecycle. The course will also cover improved programming processes to promote safety, as well as how to provide countermeasures for the numerous threats to which Android application and its users are exposed using software and hardware tools available in the industry.

**Associate Degree Applicable****CIT 089 3 Units****Introduction to iOS Application Security****Lecture:** 36 contact hours**Lab:** 54 contact hours

This course focuses on the iOS (Internetwork Operating System) platform and application security. This course is for beginners interested in understanding the iOS Security. How to analyze applications on this platform using a variety of cutting-edge tools and techniques will be covered.

**Associate Degree Applicable****CIT 090 3 Units****Introduction to Web Security****Lecture:** 36 contact hours**Lab:** 54 contact hours

This introductory course in web security targets students and other computer professionals who have some networking and administrative skills in Windows-based networks. Students will become familiar with other operating systems, such as OS X, Unix, or Linux. This course will help participants who want to further a career in Information Technology by acquiring an elementary knowledge of security topics. The course further helps students as they prepare for the CompTIA Security+ Certification examination.

**Associate Degree Applicable****CIT 091 3 Units****Introduction to Networks (CCNA - Cisco Networking Academy)****Lecture:** 36 contact hours**Lab:** 54 contact hours

This first course in a three-course CCNA series introduces architectures, models, protocols, and networking elements – functions needed to support the operations and priorities of Fortune 500 companies to small innovative retailers. Students will have the chance to build simple local area networks (LANs). Developing a working knowledge of IP addressing schemes, foundational network security, students will be able to perform basic configurations for routers and switches. After completing all three CCNA courses, students are ready to take the CCNA Certification.

**Associate Degree Applicable**

**CIT 092 3 Units****Switching, Routing, and Wireless Essentials CCNA (Cisco Networking Academy)****Lecture:** 36 contact hours**Lab:** 54 contact hours**Prerequisite:** CIT 091

This course is the second course in a three-course sequence preparing students to take the Cisco Certified Network Associate certification examination and prepares students to take the Cisco Certified Entry Networking Technician certification exam. This course teaches comprehensive networking concepts and skills from network applications to the protocols and services provided to those applications by the lower layers of the network.

**Associate Degree Applicable****CIT 093 3 Units****Enterprise Networking, Security, and Automation CCNA (Cisco Networking Academy)****Lecture:** 36 contact hours**Lab:** 54 contact hours**Prerequisite:** CIT 092

This course provides students with classroom and laboratory experience in configuring, managing, and troubleshooting routers and switches in large and complex IPv4 and IPv6 networks. In depth experience configuring, managing, and troubleshooting complex protocols such as OSPF, EIGRP, STP, and VTP.

**Associate Degree Applicable****CIT 098 1-4 Units****Computer Information Technology Work Experience****WRKEX:** 300 contact hours

Supervised training, in the form of on the job employment that will enhance the student's knowledge in the selected field of study. The student's major and job must match. For paid work, 75 hours = 1 unit; for volunteer work, 60 hours = 1 unit. Students may earn a total of 16 units toward graduation in Work Experience 098 courses. See department for specific guidelines.

**Associate Degree Applicable****CIT 099 3 Units****Cisco Certified Network Associate Security****Lecture:** 36 contact hours**Lab:** 54 contact hours**Prerequisite:** CIT 091 and CIT 092

This course prepares students for entry-level security specialist careers by developing in-depth understanding of network security principles and the tools and device configurations necessary to create and maintain a secure network. The course includes hands-on activities with networking equipment.

**Associate Degree Applicable****CIT 100 3 Units****Introduction to Personal Computers****Lecture:** 54 contact hours

A survey course for the use of software tools such as word processing, spreadsheets, graphics, presentation and database using Microsoft Office.

**Associate Degree Applicable****Transfers to CSU only****CIT 101 3 Units****Introduction to Computer Literacy****Lecture:** 36 contact hours**Lab:** 54 contact hours**Advisory:** CIT 010 or CIT 031

This course is an introduction to fundamental Information Technology / Information Systems concepts and Information Security. The course includes practical exercises with spreadsheet, database, and Internet applications.

**Associate Degree Applicable****Transfers to both UC/CSU****C-ID:** BUS 140/ITIS120**CIT 102 3 Units****Advanced Computer Literacy****Lecture:** 36 contact hours**Lab:** 54 contact hours**Prerequisite:** CIT 101

This course covers the complex fundamentals of hardware computer concepts and software applications. It provides the skills needed to create advanced word processing documents, spreadsheets, databases, and presentations.

**Associate Degree Applicable****Transfers to CSU only****CIT 110 4 Units****Information and Communications Technology Essentials****Lecture:** 54 contact hours**Lab:** 54 contact hours

This course provides an introduction to the computer hardware and software skills needed to help meet the growing demand for entry-level ICT professionals. The fundamentals of computer hardware and software as well as advanced concepts such as security, networking, and the responsibilities of an ICT professional will be introduced. Preparation for CompTIA's A+ certification exam.

**Associate Degree Applicable****Transfers to CSU only****C-ID:** ITIS 110**CIT 114 3 Units****Spreadsheets: Excel****Lecture:** 36 contact hours**Lab:** 54 contact hours**Advisory:** CIT 100 or CIT 101

In this course, students will learn how to create workbooks using Microsoft Excel, which integrates spreadsheet analysis, information management, and graphics. Content includes the design and use of worksheets, data entry, formulas, functions, and graph creation. Students will also learn how to professionally format worksheets, use Excel functions in different applications, use Excel financial functions and data tables, and understand the concept of data management in Excel.

**Associate Degree Applicable****Transfers to CSU only**

**CIT 116 3 Units****Database Management: Access****Lecture:** 36 contact hours**Lab:** 54 contact hours**Advisory:** CIT 100 or CIT 101

This is a comprehensive course in the development and maintenance of a database. It provides a working knowledge of designing a database that includes: setting field properties, storing, retrieving, printing, and indexing records, creating informational and technical queries, developing customized forms and reports, establishing different types of relationships, and integrating Access with the Web. The course emphasis is on developing a practical ability to use a database in a Windows environment with full graphical user interface functionality.

**Associate Degree Applicable****Transfers to CSU only****CIT 118 3 Units****Microsoft PowerPoint****Lecture:** 36 contact hours**Lab:** 54 contact hours

This is a comprehensive-level course in Microsoft PowerPoint. This course is designed for students to create effective and compelling presentations. Instructions include developing and customizing presentations by using charts, clip art, pictures, presentation templates, WordArt, and information and graphics from Word, Excel, and Access.

**Associate Degree Applicable****Transfers to CSU only****CIT 127 3 Units****Introduction to Computer Forensics****Lecture:** 36 contact hours**Lab:** 54 contact hours**Prerequisite:** CIT 101

This course will introduce basic tools, techniques, and procedures for collecting, capturing, and preserving digital evidence that can be admitted and used in computer forensics processes. Topics include securing and analyzing a computer system and network system, evaluating suspect data and files, and composing reports based on investigative findings.

**Associate Degree Applicable****Transfers to CSU only****CIT 128 3 Units****Introduction to Linux OS****Lecture:** 36 contact hours**Lab:** 54 contact hours

This is an introductory course to the LINUX Operating System and basic Linux Operating System environment and commands. This course will cover file system navigation, Graphic User Interfaces (GUI) such as GNOME and KDE, file permissions, the Linux text editors, command shells, and basic network commands. This course is mapped to LINUX LPI Level 1 guidelines.

**Associate Degree Applicable****Transfers to CSU only****CIT 140 3 Units****Introduction to Systems Analysis and Design****Lecture:** 36 contact hours**Lab:** 54 contact hours**Prerequisite:** CIT 101

The course presents a systematic methodology for analyzing a business problem or opportunity, determining what role, if any, computer-based technologies can play in addressing the business need, articulating business requirements for the technology solution, specifying alternative approaches to acquiring the technology capabilities needed to address the business requirements, and specifying the requirements for the information systems solution in particular, in-house development, development from third-party providers, or purchased commercial-off-the-shelf packages.

**Associate Degree Applicable****Transfers to both UC/CSU****C-ID:** ITIS 140**CIT 144 3 Units****Medical Terminology****Lecture:** 54 contact hours

The course includes the origin, usage, spelling, pronunciation, and meaning of terminology used to describe the structures of the human body, as well as therapeutic and diagnostic procedures. It is a course for students who are interested in pursuing health occupations such as medical office occupations, nursing, radiological technology, and respiratory care.

**Associate Degree Applicable****Transfers to CSU only****CIT 155 3 Units****Systems and Network Administration****Lecture:** 36 contact hours**Lab:** 54 contact hours**Prerequisite:** CIT 110

This course will provide a student with the knowledge and skills required to build, maintain, troubleshoot and support server hardware and software technologies. The student will be able to identify environmental issues; understand and comply with disaster recovery and physical / software security procedures; become familiar with industry terminology and concepts; understand server roles / specializations and interaction within the overall computing environment.

**Associate Degree Applicable****Transfers to CSU only****C-ID:** ITIS 155**CIT 160 3 Units****Introduction to Information Systems Security****Lecture:** 36 contact hours**Lab:** 54 contact hours**Prerequisite:** CIT 232

An introduction to the fundamental principles and topics of Information Technology Security and Risk Management at the organizational level. It addresses hardware, software, processes, communications, applications, and policies and procedures with respect to organizational Cybersecurity and Risk Management.

**Associate Degree Applicable****Transfers to CSU only****C-ID:** ITIS 160

**CIT 215 3 Units****Database Management Systems****Lecture:** 54 contact hours**Prerequisite:** CIT 116

This course focuses on the concepts of relational databases including database management systems, database design fundamentals and Structured Query Language (SQL).

**Associate Degree Applicable****Transfers to CSU only****C-ID:** ITIS 150**CIT 222 1-3 Units****Independent Study in Computer Information Technology****DIR:** 54 contact hours

**Limitation on Enrollment:** Enrollment is limited to those who meet independent study criteria. Prior to registration a contract must be prepared. See instructor for details.

Assigned projects involving research and analysis of selected topics or directed study for students who are interested in furthering their knowledge of information technology on an independent study basis. For each unit earned, students are required to devote three hours per week throughout the semester.

**Associate Degree Applicable****Transfers to CSU only****CIT 232 3 Units****Computer Network Fundamentals****Lecture:** 36 contact hours**Lab:** 54 contact hours**Prerequisite:** CIT 101

This course introduces the architecture, structure, functions, components, and models of the Internet and other computer networks. The principles and structure of IP (Internet Protocol) addressing and the fundamentals of Ethernet concepts, media, and operations are introduced to provide a foundation for further study of computer networks. It uses the OSI (Open Systems Interconnection) and TCP (Transmission Control Protocol) layered models to examine the nature and roles of protocols and services at the application, network, data link, and physical layers. It provides preparation for the CompTIA Network+ certification exam.

**Associate Degree Applicable****Transfers to CSU only****C-ID:** ITIS 150**CIT 601 Noncredit****Introduction to Basic Computer Skills****Lecture:** 8 contact hours**Lab:** 16 contact hours

This course provides basic computer skills. Topics include basic knowledge of computer hardware, computer software, computer terminology, working with Windows, using the Internet, and creating basic business documents using Microsoft Word. This course is recommended for individuals who have little or no computer skills as well as those who wish to seek an entry-level position as an office clerk.

**CIT 602 Noncredit****Microsoft Word Fundamentals****Lecture:** 8 contact hours**Lab:** 16 contact hours

This course provides a basic working knowledge of Microsoft Word for office workers. Topics include basic document, paragraph, and document formatting, working with clip art, lists, columns and tables. This course is recommended for individuals who wish to seek an entry-level position as an office clerk.

**CIT 603 Noncredit****Microsoft Excel Fundamentals****Lecture:** 8 contact hours**Lab:** 16 contact hours

This course provides a basic working knowledge of Microsoft Excel for office workers. Topics include creating and editing worksheets, formatting worksheets, printing worksheets, using simple tables and graphs, basic formulas and fundamental Excel functions. This course is recommended for individuals who wish to seek an entry-level position as an office clerk.

**CIT 604 Noncredit****Microsoft Powerpoint Fundamentals****Lecture:** 8 contact hours**Lab:** 16 contact hours

This course provides a basic working knowledge of Microsoft PowerPoint for office workers. Topics include creating presentations, managing PowerPoint slides, slide text and graphics, and displaying a presentation. This course is recommended for individuals who wish to seek an entry-level position as an office clerk.

**CIT 605 Noncredit****Microsoft Outlook Fundamentals****Lecture:** 8 contact hours**Lab:** 16 contact hours

This course provides a basic working knowledge of Microsoft Outlook for office workers. Topics include Outlook contacts, Outlook email, and Outlook calendar. This course is recommended for individuals who wish to seek an entry-level position as an office clerk.

**CIT 606 Noncredit****Computer Proficiency Lab****Lab:** 18 contact hours

This noncredit course provides students who need extra help or extra lab time to develop proficiency with computer technology with an on-campus resource.

**CIT 619 Noncredit****Computer Graphics****Lecture:** 54 contact hours

This noncredit course is an introduction to graphic design using graphic software to create professional-looking documents. (Formerly CIT 026)

**CIT 620 Noncredit****Internet****Lecture:** 18 contact hours**Lab:** 54 contact hours**Advisory:** CIT 105

This noncredit course provides the basics of the Internet using current technology browser software. The course includes the effective use of web search portals, online collaboration software, and implications of security, privacy and ethical usage. (Formerly CIT 120)

**CIT 621 Noncredit****CompTIA A+ Certificate Preparation: Hardware****Lecture:** 72 contact hours

This noncredit course is designed for individuals who have basic computer skills and who are interested in obtaining a job as an entry-level IT technician and require certification. It is an accelerated course that prepares students for the Hardware portion of the CompTIA A+ exam.

**CIT 622 Noncredit****CompTIA A+ Certificate Preparation: Networking****Lecture:** 36 contact hours

This noncredit course is designed for individuals who have basic computer skills and who are interested in obtaining a job as an entry-level IT technician and require certification. It is an accelerated course that allows students to prepare for the Networking portion of the CompTIA A+ Hardware exam.

**CIT 623 Noncredit****CompTIA A+ Certification Preparation: Mobile Devices****Lecture:** 36 contact hours

This noncredit course is designed for individuals who have basic computer skills and who are interested in obtaining a job as an entry-level IT technician and require certification. It is an accelerated course that prepares for the Mobile Devices portion of the CompTIA A+ exam.

**CIT 624 Noncredit****CompTIA A+ Certification Preparation: Troubleshooting****Lecture:** 36 contact hours

This noncredit course is designed for individuals who have basic computer skills and who are interested in obtaining a job as an entry-level IT technician and require certification. It is an accelerated course that prepares for the Troubleshooting portion of the CompTIA A+ exam.

**CIT 625 Noncredit****CompTIA A+ Certification Preparation: Windows Operating Systems****Lecture:** 36 contact hours

This noncredit course is designed for individuals who have basic computer skills and who are interested in obtaining a job as an entry-level IT technician and require certification. It is an accelerated course that prepares students for the Windows Operating System portion of the CompTIA A+ exam.

**CIT 626 Noncredit****CompTIA A+ Certification Preparation: Other Operating Systems****Lecture:** 36 contact hours

This noncredit course is designed for individuals who have basic computer skills and who are interested in obtaining a job as an entry-level IT technician and require certification. It is an accelerated course that prepares students for the Other Operating Systems portion of the CompTIA A+ exam.

**CIT 627 Noncredit****CompTIA A+ Certification Preparation: Security****Lecture:** 36 contact hours

This noncredit course is designed for individuals who have basic computer skills and who are interested in obtaining a job as an entry-level IT technician and require certification. It is an accelerated course that prepares students for the Security portion of the CompTIA A+ exam.

**CIT 628 Noncredit****CompTIA A+ Certification Preparation: Software Troubleshooting****Lecture:** 36 contact hours

This noncredit course is designed for individuals who have basic computer skills and who are interested in obtaining a job as an entry-level IT technician and require certification. It is an accelerated course that prepares students for the Security portion of the CompTIA A+ exam.

**CIT 629 Noncredit****CompTIA A+ Certification Preparation: Operational Procedures****Lecture:** 36 contact hours

This noncredit course is designed for individuals who have basic computer skills and who are interested in obtaining a job as an entry-level IT technician and require certification. It is an accelerated course that prepares students for the Operational Procedures of the CompTIA A+ exam.