



# COMPUTER AND INFORMATION TECHNOLOGY (CIT)

## COMPUTER AND INFORMATION TECHNOLOGY

These days it is almost impossible to find any area of life not impacted by technology. As existing and emerging technologies become more ubiquitous, and industries become more and more dependent on technology, there continues to be a growing need for qualified professionals to engineer, implement, maintain, troubleshoot, repair and secure computers, mobile devices, information being transmitted, and the networks carrying the information.

Job growth in computer, networking and security-related careers is expected to continue in the foreseeable future. Therefore, education, certifications and technical skills related to computers, networking and security are essential to a wide variety of careers. These technical career opportunities include desktop support technician, server administrator, network engineer, security analyst, information technology specialist, security specialist, network administrator, information technology project manager, cloud software/network engineer, and cyber security specialist, among others.

The Computer and Information Technology (CIT) program at College of DuPage offers a variety of courses, degrees and certificates that prepare students to transfer or pursue careers in a wide range of Information Technology (IT) fields. The CIT courses, degrees and certificates are unique in that they are closely aligned with leading technical industry certifications. This alignment allows students to earn a technical degree while simultaneously preparing for relevant stackable technical credentials. The CIT program is approved as a Cisco Networking Academy, CompTIA Academy, VMware Academy, Microsoft Academy and Center for Cyber Defense Education.

**For a complete list of courses in this program, visit [cod.edu/catalog](http://cod.edu/catalog).**





## **WHY COLLEGE OF DuPAGE IS RIGHT FOR YOU**

Whether you are preparing for a career in the IT industry, planning to transfer to a four-year baccalaureate-granting institution or updating your skills, College of DuPage has the right program for you. The CIT program offers:

- Dedicated professors and instructors with a combination of technical industry experience, technical degrees, technical certifications and teaching experience.
- Instruction at excellent facilities with use of cutting-edge technology.
- Flexible schedules with morning, afternoon, evening and occasional weekend classes.
- Hands-on experience using production type equipment.
- Affordable and accredited classes.
- Industry approved, relevant, up-to-date curriculum.
- Industry aligned technical certifications.
- Articulated partnerships with accredited baccalaureate-granting institutions.



## **ASSOCIATE IN APPLIED SCIENCE (A.A.S.) IN COMPUTER AND INFORMATION TECHNOLOGY (CIT)**

The Computer and Information Technology program offers two A.A.S. degrees. These degrees provide students with education and skills necessary to transfer to a university or to obtain entry-level positions in the field of Information Technology (IT). Students will become adept at designing, implementing, maintaining, troubleshooting and securing networks and associated devices.

The Computer and Information Technology degrees transfer to various universities under 2+2 or 3+1 articulation agreements. For more information visit [cod.edu/academics/transfer\\_programs](http://cod.edu/academics/transfer_programs).

### **Computer and Information Technology**

The Computer and Information Technology Associate in Applied Science degree is designed to provide a broad exposure to computers, operating systems, networking, forensics and security. Computer support, network design, network security, voice and wireless deployment are emphasized, along with maintenance and troubleshooting. Students are required to complete 64 credits of coursework, including 38 credits in core requirements. Throughout the program, students have the opportunity to earn up to eight stackable professional certifications in addition to the A.A.S. degree.

### **Cyber Security and Defense**

The Cybersecurity and Defense degree provides a foundation in the principles of cybersecurity. Content focuses on network security, device hardening and operating systems. This degree requires 42 credits in program requirements. Throughout the program, students have opportunity to earn up to eight stackable professional industry certifications in addition to the A.A.S. degree.

## **CERTIFICATES IN COMPUTER AND INFORMATION TECHNOLOGY (CIT)**

The Computer and Information Technology program offers certificates awarded by College of DuPage in a variety of disciplines. CIT certificates strategically provide students with various class combinations ranging in various lengths from 10 to 35 credit hours. CIT certificates provide students with an opportunity to complete milestone classes on the pathway to degree completion. Additionally, CIT certificates allow students to focus on technical classes and skills in preparation for gainful employment or career advancement. Typical certificate pursuant students include those looking to gain technical credentials, retraining for technical careers, upgrading skills for a competitive edge in the job market and exposure to new technologies.

### **Computer and Information Technology Certificate**

The Computer and Information Technology certificate program provides students with broad exposure to computer systems and networks. This certificate requires completion of 35 credits in 12 courses covering computer maintenance, network routing, network switching, network security, routing and switching, voice over IP (VoIP) and computer forensics.

### **CompTIA A+ and Network+ PC Technician Certificate**

The CompTIA A+ and Network+ PC Technician certificate prepares students to work as computer support specialists. Students are required to complete 11 credits in four classes related to computer software, hardware maintenance, system upgrade and networking introduction. Upon completion of the program, students are prepared for the CompTIA A+ and CompTIA Network+ exams.

### **Cybersecurity Specialist Certificate**

The Cybersecurity Specialist certificate provides seven classes whereby 21 credits are earned in alignment with the CIT department's designation as a National Center of Academic Excellence (CAE2Y). This coursework includes fundamental and advanced topics in networking, security administration, server administration, ethical hacking and advanced operating systems.

### **Enterprise System Administrator Certificate**

The Enterprise System Administrator certificate focuses on technical education and skills surrounding computer operating system management and server management. This coursework includes introductory and advanced configuration and troubleshooting. Students are required to complete 15 credits in five classes.

### **Voice Over IP (VoIP) Specialist Certificate**

The Voice Over IP Specialist certificate provides students with a foundation in the design, installation, troubleshooting and use of Voice Over IP related software and hardware. Students are required to complete 15 credits in coursework that includes Cisco Voice Over IP, LANs, routing and WANs.



## **CERTIFICATES AND TECHNICAL INDUSTRY CERTIFICATIONS IN COMPUTER INFORMATION TECHNOLOGY (CIT)**

In addition to the CIT certificates identified previously, the CIT program offers additional certificates directly in alignment with professional technical industry certifications.

Certificates are awarded by College of DuPage as a demonstration of competence and skills, as well as milestones for completion of a combination of CIT accredited classes. Professional industry certifications are non-accredited credentials awarded to individual achieving technical qualifications specified by a certifying agency.

The CIT program has strategically developed accredited curriculum and collaborated with leading technical agencies to offer CIT certificates in preparation for technical certifications. Because of these efforts, the CIT program is designated as a Cisco Networking Academy, CompTIA Academy, VMware Academy, Microsoft Academy and National Center of Academic Excellence (CAE2Y).

Please note: Some CIT certificates have prerequisite requirements. Students should consult with an advisor for more information.

### **CIT – Cisco Networking Academy**

The Cisco Networking Academy provides students with valuable technology skills for the global economy. The Cisco Academy teaches students to design, build and maintain computer networks. The program also prepares students for several industry-standard certifications, including Cisco Certified Network Associate (CCENT), Cisco Certified Network Associate (CCNA), CCNA Security, CCNA Wireless, CCNA Cyber Ops and Cisco Certified Network Professional (CCNP). The Computer and Information Technology (CIT) department has been a designated Cisco Networking Academy for more than 20 years.

### **Cisco Certified Network Associate (CCNA) Certificate/Certification**

The CCNA program consists of four classes that provide students with a foundation in networking fundamentals such as installation, configuration, administration and troubleshooting of route and switched networks and remote connections. These four courses provide students with the opportunity to earn 12 credits while becoming proficient in networking, switching and routing concepts in preparation for CCNA certification.

### **Cisco Certified Network Professional (CCNP) Certificate/Certification**

The CCNP program provides training that enables students to plan, implement, verify and troubleshoot local and wide-area networks and work collaboratively with specialists on advanced network solutions. Students earn nine credits in advanced networking topics including supporting enterprise networks in preparation for CCNP certification.





### **CCNA Security Certificate/Certification**

The CCNA Security program provides specialized training for students looking to enhance technical skills in the area of security. These security skills demonstrate competence in security infrastructure, recognize threats and vulnerabilities to networks and mitigate security threats. Students complete 15 credits in coursework that includes networking, routing, LANs, WANs, and network security in preparation for CCNA Security certification.

### **CCNA Wireless Certificate/Certification**

The CCNA Wireless program introduces the design implementation, and maintenance of wireless networks. Students complete 15 credits in coursework. Topics include: 802.11 standards, wireless radio technology, wireless topologies, access points, bridges, wireless security, site surveys, troubleshooting and antenna systems in preparation for CCNA Wireless certification.

### **CIT Voice Certificate/Certification**

The CIT Voice program provides specialized training for students who want to enhance their CCNA-level skill set or prepare for entry-level positions in basic voice operations. Students complete 15 credits in coursework. This program helps prepare students for the wireless section of the CCNA Collaboration certification.

### **CompTIA A+ Certificate/Certification**

The CompTIA A+ program is comprised of three courses with extensive hands-on and simulation. Students gain knowledge and skills to adequately diagnose, repair, configure, install, maintain, upgrade and troubleshoot hardware and operating systems. Students earn eight credits in coursework in preparation for CompTIA industry certification.



### **CompTIA Network+ Certificate/Certification**

The CompTIA Network+ program is geared to provide technicians with the ability to design, implement and manage network devices, standards, protocols, networks and virtualized environments. Students complete 11 credits in preparation for CompTIA's Network + certification.

### **CompTIA Project+ Certificate/Certification**

The CompTIA Project+ program is a credential designed to provide students with fundamental project management skills. Students complete six credits in coursework that includes networking, project life cycle from initiation through execution, acceptance and closure in preparation for CompTIA Project+ certification.

### **CompTIA Security+ Certificate/Certification**

The CompTIA Security+ program validates knowledge of communication security, infrastructure security, cryptography, operational security and general security concepts. Students complete nine credits in coursework that includes data communications, networking fundamentals in preparation for CompTIA Project + certification.

## STATE-OF-THE-ART FACILITIES

Facilities for the CIT program at College of DuPage are housed in the recently updated Seaton Computing Center (SCC) and Berg Instructional Center (BIC), with dedicated rooms specifically prepared for IT environments.

## AVAILABLE SCHOLARSHIPS

Students who are planning to enroll in the CIT program at College of DuPage may be qualified to receive a financial award through a variety of supported scholarships.

Visit [cod.edu/scholarships](http://cod.edu/scholarships) for requirements and a full list of available scholarships.

## TRANSFER OPPORTUNITIES

### 2+2 Transfer Agreement

The College of DuPage CIT program has established several 2+2 transfer agreements with area colleges such as DePaul University, Illinois Institute of Technology and Northern Illinois University. These agreements enable students to complete their associate degree at College of DuPage and then seamlessly transfer to a partner university where they can complete their bachelor's degree in two years. These agreements offer a convenient and affordable option for students who plan to pursue a four-year degree.

### 3+1 Transfer Agreement

The College of DuPage CIT program has established a 3+1 agreement with Lewis University aimed at students who are pursuing a bachelor's degree in computer science. This agreement enables students to complete an associate degree plus additional coursework at College of DuPage and then seamlessly transfer to the partner university where they can complete their bachelor's degree in one year. The last year of coursework is offered by the partner university on site at COD.

The Illinois Articulation Initiative (IAI) facilitates the transfer of students from one Illinois institution to another. Both a general education core curriculum and a lower-division major recommendation course listing have been developed.

For more information on transfer opportunities at College of DuPage, visit [cod.edu/academics/transfer\\_programs](http://cod.edu/academics/transfer_programs).

## EMPLOYMENT OUTLOOK

There is a broad range of possible careers for graduates of the CIT program at College of DuPage, with an equally broad range of wages and projected growth. The U.S. Bureau of Labor Statistics reports that the median annual wage for common careers for graduates in the areas of the CIT programs have continued projected growth in the future beyond 2020.

Driven by growing demand for sophisticated computers, networks, smart devices, mobile technologies, security, voice, wireless, cloud-based solutions and related services, employment and salaries are expected to continue to increase.

For more information and employment statistics in the IT industry, visit **[www.bls.gov](http://www.bls.gov)**.



## COMMON CAREERS FOR GRADUATES OF THE COMPUTER AND INFORMATION TECHNOLOGY PROGRAM

- **Help Desk Technicians:** Provide technical assistance for software, hardware, computer and network related issues.
- **Support Specialists:** Analyze, test, troubleshoot, evaluate and maintain existing network systems.
- **Systems Administrators:** Install, upgrade, maintain, troubleshoot software, hardware, servers and associated applications.
- **Information Security Analysts:** Plan, implement, upgrade or monitor security measures for the protection of computers, networks, data and network information.
- **Network Administrators:** Install, configure and support computer network systems, network segments, intranets, internet, extranet and other data communication systems.
- **Network Engineers:** Troubleshoot network problems; maximize, monitor and optimize network performance.
- **Cyber Security Analyst:** Planning, implementing, security measure to protect computer systems, servers, networks and data.
- **Network Security Architect:** Design secure enterprise requirements. Planning, implementing, security policies, standards and procedures. Present technical information, design networks, implement networks and perform network optimization.





## GETTING STARTED

If you are considering this program as an area of study:

- Visit our website at [cod.edu/programs/cit](http://cod.edu/programs/cit)
- Consult with a program coordinator or specialist:

**Dr. Felix Davis**, Program Coordinator, [davisfe@cod.edu](mailto:davisfe@cod.edu)  
Berg Instructional Center (BIC), Room 1605, (630) 942-2134

**Nazia Naqvi**, Program Advisor, [naqvin@cod.edu](mailto:naqvin@cod.edu)  
Berg Instructional Center (BIC), Room 1530A, (630) 942-2081

**Kim Groesbeck**, Program Support Specialist, [groesbec@cod.edu](mailto:groesbec@cod.edu)  
Berg Instructional Center (BIC), Room 1433, (630) 942-2599

- Contact the Business and Technology Division Office:  
Technical Education Center (TEC), Room 1034  
(630) 942-2592

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**For ADA accommodations**, call (630) 942-2141 (voice) or (630) 858-9692 (TDD).  
Please call two weeks in advance.

For individuals who need language assistance, please contact Campus Central at (630) 942-2380.



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