

# INFORMATION TECHNOLOGY (A.S.) +

CCV's Information Technology program prepares students for the exciting and ever-changing field of information technology (IT). Organizations need skilled technicians to install, manage, and adapt complex information networks. As companies continue to expand their information systems, IT workers keep communications running smoothly and help to resolve complicated problems. Information technology professionals find employment in a wide array of industries. Our curriculum provides students with foundational skills in networking, programming, and operating systems. Students will build depth of knowledge in at least one of four focus area options: cloud computing, networking, programming, or website development. The program also includes additional elective credits that may be used to explore other facets of this broad field and prepare you for important industry certifications. Students in the Information Technology degree program may choose to pursue related CCV certificates while obtaining their degree including Cloud Computing, Cybersecurity Fundamentals, IT Service Desk Specialist, and Web Development.

All associate degrees include completion of general education requirements which, together with program requirements, constitute a minimum of 60 credits. In some cases program requirements also fulfill general education requirements. You may not use a single course to meet two general education requirements.

## General Education

Complete at least one course in each of the following:

- First Semester Seminar  
INT 1050 - Dimensions of Self & Society
- Introductory Written Expression – VSCS  
ENG 1061 - English Composition
- Digital and Computing Literacy – VSCS  
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- Mathematics - VSCS  
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- Natural Science - VSCS  
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- Social Science - VSCS  
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- Arts & Aesthetics - VSCS  
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- Humanistic Perspectives - VSCS  
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- Communication  
Meets graduation standard in oral communication  
CIS 2360 - Computer User Support
- Research & Writing Intensive  
ENG 2135 - Technical Writing & Research
- HUM 2010 - Seminar in Educational Inquiry  
Meets graduation standard in writing and information literacy
- Quantitative Reasoning Assessment  
Meets graduation standard in quantitative reasoning

*\*You may use a course to meet both a program requirement and a general education requirement; however, you may not use a single course to meet two general education requirements.*

+ This program can be completed fully online.

## Program Requirements

Courses are listed in the order in which we recommend you take them.

- CIS 1100 - Introduction to Computer Science\*
- CIS 1350 - Desktop Operating Systems
- CIS 2120 - Concepts of Local Area Networks
- ENG 2135 - Technical Writing & Research\*
- CIS 2360 - Computer User Support\*
- CIS 2230 - System Administration
- CIS 2245 - Concepts of Computer Security

## Select one of four focus areas

### Cloud Computing:

- CIS 1450 - Foundations of Cloud Computing
- CIS 2350 - Cloud Infrastructure and Services
- CIS 2460 - Cloud Computing Capstone

### Networking:

- CIS 2150 - Introduction to Linux
- CIS 2235 - Advanced System Administration

### Programming:

- CIS 2261 - Introduction to Java I *and*
- CIS 2262 - Introduction to Java II
- or
- CIS 2031 - C/C++ Programming I *and*
- CIS 2032 - C/C++ Programming II
- or
- CIS 2210 - Python Programming *and*
- CIS 2212 - Python Programming II

### Website Development:

- CIS 1151 - Website Development
- CIS 1152 - Advanced Website Development

Electives: 4-7 credits \_\_\_\_\_

**Minimum Total Credits in Degree: 60**

## Program Outcomes

### Graduates of the Information Technology program will be able to:

- demonstrate knowledge and skills that meet industry standards;
- use a computer programming language to solve problems and implement appropriate solutions;
- upgrade, maintain, and install software applications with emphasis on problem anticipation and user support;
- prepare a plan for implementing a network solution in a small business setting;
- demonstrate academic skills required of all CCV graduates, including competency in writing, information literacy, oral communication, quantitative reasoning; and
- explore pathways and demonstrate preparedness for educational and career development in the student's field of study.

### The Information Technology program is great for you if:

- you enjoy working with programming and computer systems;
- you are looking for a career in user support, software programming, network administration, cloud computing, computer security, or web development;
- you plan to matriculate to an IT-related bachelor's degree;
- you have good customer service and communication skills; and
- you are prepared to work in a dynamic and changing work environment.

### Key information and advice for students in the Information Technology program:

- The Information Technology degree provides practical experience with networks and information systems.
- This program provides skills necessary to be a computer support specialist in a small business or any environment that uses technology in its daily operations.
- This program can be completed entirely online.
- Students who complete the cloud computing focus area will have an opportunity to earn the Amazon Web Services (AWS) Certified Cloud Practitioner and Certified Solutions Architect Certifications.
- Students may elect to prepare for various CompTIA certification exams such as IT Fundamentals, A+, Net +, Security +, Linux +, and Server +.
- This program fits easily into most IT-related bachelor's degrees and allows for more specialization in IT at the 3rd and 4th year levels.

### The Information Technology program prepares you for careers such as:

- |                                   |                 |                   |
|-----------------------------------|-----------------|-------------------|
| • Computer Support Specialist     | • Programmer    | • Cloud Architect |
| • Assistant Network Administrator | • Web Developer | • IT Analyst      |

For up-to-date Vermont labor market information, including salary information and growth projections, view the Economic and Labor Market Information on the Vermont Department of Labor Website <http://www.vtلمي.info/>.