CIST – Computer Information Systems Technology

Technology

Effective Term & Year: Fall 2024
Program Outline Review Date: 2029-03-01

Program Area: Information Technology

Description:

The goal of this program is to prepare students for a career as a computer systems technologist. Computer systems technologists solve computer-related issues for businesses, government agencies, utilities, law enforcement agencies, health services providers, educational institutions and more. Graduates from this program can choose to specialize in areas including programming, software design, data communications, security and web design.

Program Information:

This 2-year full-time program provides the knowledge, skills, and training required to prepare students for a career as a Computer Systems Technologist.

Credentials Granted:

Computer Information Systems Technology Diploma

Delivery Methods: Blended (Hybrid)

Credits: 60

Admission Requirements:

- Complete all of the following
  - Earned a minimum grade of C (60%) in at least 1 of the following:
    - ENST 12 – English Studies 12
    - ENFP 12 – English First Peoples 12
    - ENGL090 – English – Provincial Level
  - For students for whom English is a second language, students must meet the College's English Language proficiency requirements.
  - Earned a minimum grade of C (60%) in at least 1 of the following:
    - FOM 11 – Foundations of Mathematics 11
    - PREC 11 – Pre-Calculus 11
    - CS 11 – Computer Science 11
    - MATH080 – Mathematics – Advanced Level

Recommended Admission Requirements:

Basic computer literacy skills are expected, including Windows operating system and file management skills, the ability to use word processing software, and the ability to communicate, research, exchange and download files using web browsing and email software.

Program Completion Requirements:

Year 1
30 Total Credits

- Complete all of the following
  Fall Semester – Term 1
  - Completed the following:
    - CIST101 – Computer Systems Administration (4)
    - CIST102 – Introduction to Programming (4)
    - CIST103 – Website Development (3)
    - CIST104 – Introduction to Database Management Systems (DBMS) (4)

  Winter Semester – Term 2
  - Completed the following:
    - CIST105 – Introduction to Data Communication and Networking (3)
    - CIST106 – Programming in C++ (3)
    - CIST107 – Introduction to Internet Programming and Web Applications (3)
    - CIST108 – Software Analysis and Design (3)
    - CIST109 – Windows Administration 1 (3)

Year 2
30 Total Credits

- Complete all of the following
  Fall Semester – Term 3
  - Completed the following:

- CIST201 – Windows Administration 2 (3)
- CIST202 – User Interface Design (2)
- CIST203 – Algorithms Analysis and Data Structures (3)
- CIST204 – Switching, Routing and Wireless Essentials (3)
- CIST205 – Introduction to Cloud Computing (3)

Winter Semester – Term 4

- Completed the following:
  - CIST206 – Introduction to Computer Security (3)
  - CIST207 – Windows Administration 3 (3)
  - CIST208 – Enterprise Networking, Security and Automation (3)
  - CIST209 – IT Development Project (4)
  - CIST210 – Emerging Technologies (3)

Grand Total Credits: 60

Program Learning Outcomes:

Upon successful completion of this program, graduates will be able to

- design, analyze, and develop complex software application systems for PC, Web, and Mobile devices;
- design, analyze, develop, debug, and optimize web and mobile applications written in popular programming languages such as Python, JavaScript, Java, C++ and C#;
- build LANs and perform basic configurations for routers and switches, implementing IPv4 and IPv6 addressing schemes;
- gain knowledge of advanced network services such as load balancing and file services, along with certificate services, federation services, and dynamic access control;
- understand the fundamentals of computer networking, including protocols, components, and major technologies of modern networks;
- install and configure basic computer hardware and software;
- improve skills in Windows Administration by configuring and troubleshooting DNS, implementing Group Policy Objects (GPOs), and managing file services;
- collaborate efficiently in a typical software project team working with popular project development tools and current development frameworks;
- recognize cybersecurity principles and practices, including cryptography, authentication, access control, and software security, and evaluate techniques to enhance network security and mitigate security threats in enterprise environments.
- work in large and small teams as an effective team member; and
- learn new tools and technologies independently following the latest trends in software and hardware.

Prior Learning and Recognition: Yes

Students are able to request formal recognition of their prior learning or experience outside the classroom. Challenge examination, portfolio-assisted assessment, work-based assessment or a combination of assessments that is appropriate to identify, assess, and recognize prior skills, competencies, and knowledge to achieve course credit. Tuition fees apply, refer to Policy 2.5.5 Prior Learning Assessment and Recognition (PLAR) or contact an education advisor for more information.

Program Transfer Credit:

For information about block transfer agreements between programs in British Columbia, Alberta, and elsewhere, please visit http://www.cotr.bc.ca/transfer.

To minimize transfer issues, check with an academic advisor at the institution that will receive the transfer credits.

Academic Policies:

College of the Rockies policies related to courses can be found at https://cotr.bc.ca/about-us/college-policies/ and include the following:

- Policy 2.1.4 Course Audit
- Policy 2.4.1 Credential Framework
- Policy 2.4.3 Students with Documented Disabilities
- Policy 2.4.4 Student Rights, Responsibilities and Conduct
- Policy 2.4.8 Academic Performance
- Policy 2.4.9 Student Feedback and Concerns
- Policy 2.4.11 Storage of Academic Works
- Policy 2.5.3 Student Appeal
- Policy 2.5.5 Prior Learning Assessment and Recognition (PLAR)

Program Changes:

Information contained in this program outline is correct at the time of publication. Courses and course content may be revised from time to time based on changing educational, employment and marketing needs. The timetable may also be revised.

Course Descriptions: Refer to Course Outlines – https://outlines.cotr.bc.ca/course/