**ICS3U\_Computer Careers**

1. Provide a description of each of the following computer related careers:
2. Software Engineer

Develops information systems by designing, developing, and installing software solutions.

1. Database administrator

Capacity planning, installation, configuration, database design, migration, performance monitoring, security, troubleshooting, as well as backup and data recovery.

1. Systems Analyst

Analysis how systems fits the needs of a business.

1. Network Administrator

Support, configuring maintaining, and updating customer’s networks.

1. Web Developer

Designing coding and modifying website.

1. Computer Programmer

Write, debug test and build programs.

1. What are the admission requirements for computer science at Waterloo University? Make sure to include the admission average as well.

Advanced functions

Calculus and Vectors

Gr 12 English

1 other grade 12 U course

Low 90% average

1. Describe the Co-op feature of the computer science program at Waterloo.

Waterloo offers students the choice to combine in-class learning with real world experience. With help from the world's largest co-op program, students enrolled in this option gain up to two years of work experience before they graduate.

1. List at least three different example co-op positions you may be involved in if you enter into this program.

Full stack developer

Game programmers

Web developer

Software engineer

1. List at least three types of careers, graduates of this program have entered into.

Risk modelling analyst, TD

Business analyst, Canadian Tire

Agile Engineer, Pivo

1. What is CIPS? Canadian Information Processing Society
2. What are the key differences between the admission requirements for entry to the software engineering program at waterloo as opposed to those for computer science?

Chemistry and physics

1. What are the requirements for entry into the Computer Programmer College Diploma program at Seneca?

Math and English.

1. How long is this program?

2 year diploma

1. How long is the Computer Engineering program at Ryerson University?

4 years

1. What are the high school courses you would need to take to apply to this program?

4U English

Advanced functions

One of: 4U Physics, chemistry, biology.

Calculus/vectors or Data management

1. List at least 5 companies hiring computer science graduates.

Ubisoft, Kijiji, Google, NVIDIA, Ciena

1. Find and summarize an article (include URL) describing the future employment opportunities for computer science graduates.

As good as many of our schools are, our education system, training programs and labour market initiatives are inadequately designed and funded to help young people navigate the economy. And many Canadian employers are generally not prepared through hiring, training or retraining to recruit and develop the skills needed to ensure their organizations remain competitive.

<https://www.wellandtribune.ca/opinion-story/9335160-are-we-preparing-new-graduates-to-succeed-in-an-age-of-automation-/>

**More opportunities**

1. Find and summarize an article (include URL) describing the working conditions of most computer programmers.

Computer software engineers typically work in well-lit offices in comfortable surroundings or in computer laboratories. Most work at least 40 hours a week, but due to the project-oriented nature of the work, they may also have to work evenings and weekends to meet deadlines or solve unexpected technical problems. Like other workers who spend large amounts of time in front of a computer terminal typing at a keyboard, they are susceptible to eyestrain, back discomfort and hand and wrist problems. Many computer software engineers interact with coworkers and customers as they attempt to improve software for users.

<https://www.careereducationadvisor.com/Computer-Software-Engineer-Career-Working-Environment.htm>