What can I do with a major in COMPUTER SCIENCE?

SKILLS AND KNOWLEDGE THAT COMPUTER SCIENCE GRADUATES POSSESS:

- excellent understanding of computer technology
- ability to write, develop, test and troubleshoot computer software
- ability to research, design and develop computer systems
- ability to design solutions to everyday problems using computer technology
- ability to collect, organize, analyze, evaluate and interpret information
- ability to understand and communicate complex technical information to others

It is important to enhance and diversify your skills and knowledge with work, volunteer, research and field study experiences while in school.

EXAMPLES OF CAREER PATHS COMPUTER SCIENCE GRADUATES HAVE PURSUED:

Computer Science graduates can pursue a variety of career paths, including those that might not seem to have a direct connection to computer science at first glance. The following is a non-exhaustive list of some examples:

DIRECT career paths: The skills and knowledge acquired in a computer science education are required or considered an asset in the following positions.	LESS DIRECT career paths: The skills and knowledge obtained in a computer science education are pertinent in the following positions.	The following paths may require FURTHER STUDY or SPECIALIZED TRAINING* in addition to a Bachelor of Science in computer science.
Startup Technology Entrepreneurs devise new ways to use computers to solve human problems, and develop and implement a business plan to promote or sell their ideas and products. They may work alone or set up a team, seeking funding and acquiring equipment for their startup.	**Technical Sales Representatives** sell technical goods and services such as computers and software, and analysis and consulting to government, commercial and industrial establishments.	**Health Care IT professionals** design, develop, create, use and maintain information systems for the health care industry. This may involve electronic medical records, embedded monitoring systems and tools for digital imaging. They can work for government organizations, companies or as consultants.
Software engineers design, develop, test, evaluate, operate and maintain software applications, such as computer games, word processing and business applications. They work for business, government and non-profit organizations as employees or contractors.	**E-commerce managers** plan, direct, control and evaluate the online presence and sales activities of retail companies. They are responsible for developing and maintaining a company's online brand image in order to increase sales, and they manage the web and software developers who implement this work.	**Chief Technology Officers** manage the research and development, and technological needs of an organization, and develop its policy and business strategies in compliance with technology standards and regulations.
Mobile Application Developers design, develop, test, document, deploy, support and sustain software for mobile devices such as smartphones and tablets. They can work for companies or as independent consultants and developers.	**Financial Services Representatives** provide financial planning advice and sell financial products to clients of banks, insurance companies and securities brokerage firms.	**Data Scientists** analyze large amounts of data from various sources to arrive at and communicate business solutions to companies. They are often employed by financial institutions, and marketing research and technical companies.
Information Systems Consultants design and implement computer solutions for organizations to help them gain information or improve the way their organizations work. They provide services for companies, governments and non-profit organizations.	**Market Research Analysts** study market conditions in particular geographical areas to determine potential sales of a product or service. They help companies identify what products people want, who will buy them, and at what price.	**Technical Project Managers** apply their knowledge of computing technology by leading teams of developers to implement computing solutions. Their computing knowledge is essential in helping both development teams and management understand the problems at hand.
Web Developers are involved in the design, layout and coding of a website. They work for large corporations, governments, small and medium-sized companies and as freelancers.	**Insurance Underwriters** use computer programs and actuarial data to determine the risk of insuring an individual or asset, and they set pricing and extent of coverage of insurance policies. They work for insurance companies or as agents.	*NOTE: Qualifications for similar jobs might vary depending on the employer. Try checking with the employer(s) you're interested in working for to see what they require and recommend in terms of education and/or experience.*

WANT MORE INFORMATION? CHECK OUT THE FOLLOWING RESOURCES:

Available in MacEwan University Libraries:

- IT Career Jumpstart: an introduction to PC hardware, software, and networking (electronic resource) – *Naomi J. Alpern, Joey Alpern & Randy Muller*
- The WetFeet Insider Guide to Careers in Information Technology (electronic resource) – *WetFeet (Firm)*
- Careers in Information Technology – *Michael Shally-Jensen*
- Spotlight on Careers in Technology (video) – *Films for the Humanities and Sciences (Firm)*

Additional Resources (Available Online)

- CIPS: Canadian Information Processing Society
- ICTC: Information and Communications Technology Council
- ISACA: Information Systems Audit and Control Association
- SANS Institute: System Administration, Networking and Security Institute website

WANT TO DISCUSS YOUR OPTIONS WITH SOMEONE?

- Book an appointment on **MacEwanLife** under "Career Advice and Support."
- Talk to a **computer science discipline advisor**