CANADIAN COLLEGE OF TECHNOLOGY AND BUSINESS



Data Engineering and Analytics with Co-op

Acquire the skills of data analysis, data architecture, big data, and machine learning and become employed in one of the most popular careers in information technology today.

Key Facts

Campus
Vancouver

Qualification
Post-Secondary Diploma

Start Dates
Jan, May, Sep

Program Highlights

This multi-disciplinary program will equip you with the knowledge and expertise to enter the field as an entry to mid-level Data Engineer.

A glimpse into what you will learn...

- Relational Database Systems and SQL
- Data Structures and Algorithms with Java
- Database Design and Entity Relationship Modelling
- Linux systems administration and automation scripting
- Database security, transaction management, triggers and stored procedures, replication, data warehousing and OLAP
- Agile Methodology and the SCRUM framework
- Object Oriented Analysis and Design using Unified Modeling Language (UML)
- Artificial Intelligence, Machine Learning, Deep Learning, and Machine Learning Applications
- Extract, Transform, Load (ETL)
- Data Visualization with Tableau
- NoSQL Database Technologies
- Employ cloud computing technologies: cloud architecture, infrastructure, services, management, and data storage
- SQL Server Integration Services (SISS), SQL Server Analysis Services (SSAS), and SQL Server Reporting Services (SSRS)

Why study this program?

Leverage the power of modern data technologies...

Learn the latest in data technologies, from database design and SQL to cloud data services and data visualization, empowering you to become a qualified Data Engineer.

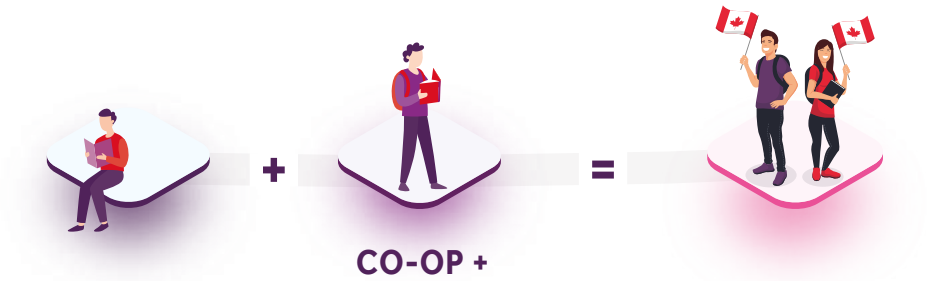
Become a job-ready Data Engineer...

You will learn everything you need to become a job-ready Data Engineer upon program completion. You will become proficient in database design, database programming, cloud data solutions, object-oriented programming, data structures and algorithms, artificial intelligence, machine learning and more.

Take advantage of an in demand high-paying career...

Data Engineers and Data Analyst Professionals are highly sought-after in the modern technology space. Take advantage of the skills shortages with in the industry by acquiring the modern development skills offered within this program.

Student Journey



This program consists of **47 weeks of scheduled program breaks.** The CCTB Career Development Centre will assist **international students** in securing a paid employment position related to their program field of study for students to work during the scheduled break periods. This will enable international students to accumulate the required technical work experience hours required to be eligible to apply for the **BCPNP Tech** program. Students are eligible to work full time during scheduled breaks.

	Academic	CO-OP + Scheduled Breaks	Graduation
International	45 Weeks	92 Weeks	137 Weeks
Domestic	45 Weeks	51 Weeks	96 Weeks

*Scheduled breaks for domestic students may be optional.

Please see proposed schedule **here**.

Courses

1. Information Systems Management
2. Linux/Unix System Administration
3. Relational Database Systems and SQL
4. Introduction to Data Structures, Design and Analysis
5. Business Analysis and System Design
6. Probability and Statistics Fundamentals
7. Statistics for Data Analysis
8. Applied Multivariate Statistical Analysis
9. Machine Learning
10. Data Warehouse (EDW) Concepts
11. Visual Analytics for Business Intelligence (BI) with Tableau
12. Business Intelligence (BI) with SSIS, SSAS, and SSRS
13. Advanced Topics in Data Analytics, Big Data, Data Mining, Cloud Computing
14. Security and Privacy Issues in Data Analytics
15. Employment Preparation Training

Co-op Experience

Gain the practical industry experience through our Career Development Centre's professional network, enabling you to become a sought-after industry candidate. Our CO-OP work experience placement is a **guaranteed paid position** representing 50% of the total program duration. Students will get the opportunity to apply their newly acquired skills within the industry through a guaranteed paid work experience placement opportunity.

Career Opportunities

- Data Administrator
- Database Administrator
- Database Analyst
- Electronic Data Processing Systems Analyst
- Database Architect
- Data Miner
- Data Mining Analyst
- Data Processing Specialist
- Database Designer
- Database Management Supervisor
- Information Resource Analyst
- Technical Architect

Learning Outcomes

Upon the completion of this program, graduates will be able to manage, design and administer different database implementations, perform data analysis and data visualization, conduct complex Extract Transform Load (ETL) operations, use cloud-based data technologies, utilize AI and machine learning concepts and methodologies, and understand Agile management models such as SCRUM framework to become a valuable Data Engineer within technical organizations.

"During this program students may get up to 21 months of work experience which helps meet the criteria to be eligible for BC PNP tech and Federal Skilled Worker."

- Subbalakhmi A. Pillai (RCIC)
Registered Canadian Immigration Consultant. Helios Immigration Services.

For more information about BC PNP tech or Federal Skilled Worker immigration streams, visit:

T & C's Apply

Admissions Requirements

- Good command of English language*.
- High school diploma or equivalent from an approved government institution of applicant's home country, or applicant is minimum 19 years of age.

For non-native speakers:

- Successful completion of CCTB EAP (English for Academic Purposes) Level 4 or
- Have the required IELTS 5.5 score or equivalent or
- Pass the CCTB English Assessment (Written onsite or online with exam proctor)

*For more information on English language requirements, please see our Language Proficiency Assessment Policy.

Apply now!

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