

# Computer Science Technology - Programming (profile 420.BP)



The Computer Science Technology DEC, with a Programming profile, was developed with support from the information technology business community and will propel you straight towards a promising career with excellent job prospects.

You will develop programming skills following strict product development methodology. You'll learn to work with various IT project management approaches, like Scrum, to design and develop various types of applications and support/maintain the integrity of organization applications while taking into account technological advancements in the industry. Finally, you'll be able to use an object-oriented approach to analyze and develop.

You will also be able to develop various types of applications ready for installation and operation. You will have the chance to work as part of a team (industry) that integrates current project management best practices (e.g. Agile, Scrum) and uses the industry's leading tools and software (GitLab, GitHub, etc.).

## Diploma

This program leads to a Diploma of College Studies (DEC) in Computer Science Technology (420.80), recognized by the ministère de l'Éducation et de l'Enseignement supérieur (MEES).

Holders of this diploma can either begin to work in their field or pursue university studies.

#### Methods of Instruction

On-campus

• At the Montréal and Laval campuses

Real-time remote learning

- Training provided entirely in distance mode, with a teacher and in real time (synchronous)
  - The internship (semester 6) could be done in a company with the virtual supervision of a teacher

## **Admission Criteria**

Have obtained a Secondary School Diploma (DES) and completed the following program prerequisite:

 Mathematics: TS, SN Secondary IV or CST 5 (Math 436 under the old plan)

or

Have obtained a Professional Studies Diploma (DEP) and completed the following courses:

- Language of Instruction from Secondary V
- Second Language from Secondary V
- Mathematics: TS, SN Secondary IV or CST 5 (Math 436 under the old plan)

or

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Have obtained an equivalent education or an instruction deemed sufficient. Every case will be analysed by the College.





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6 SEMESTERS | Day or evening and weekend 2670 hours

DEC 420.B0

## **Training Objective**

You will graduate with a portfolio of achievements including complete and concrete applications. You will also gain professional experience in the industry.

#### **Concentration Courses**

- Applied Mathematics (60 h)
- Computer Tools (45 h)
- Introduction to Web Development (45 h)
- Algorithms and Programming (90 h)
- Computer Architecture (75 h)
- Object Oriented Programming concepts (90 h)
- Operating Systems and Networking (60 h)
- Web Client Development (90 h)
- Databases I (90 h)
- Information System Analysis and Modeling (90 h)
- Multi-tiers applications development (90 h)
- Databases II (60 h)
- Scripting Lanugage (60 h)
- Web Server Applications Development I (90 h)
- Data Structures (60 h)
- Object Oriented Programming (75 h)
- Web Server Applications Development II (75 h)
- Android Mobile Development (75 h)
- iOS Mobile Development I (75 h)
- Professional Integration (60 h)
- Information Systems Implementation (75 h)
- Multiplatform Mobile Development (75 h)
- Trends in Technology (60 h)
- iOS Mobile Development II (90 h)
- Internship (255 h)
- \* The College reserves the right to substitute certain courses.

#### **General Education Courses**

- 3 Physical Education Courses (90 h)
- 3 Humanities Courses (150 h)
- 4 Literature Courses (240 h)
- 2 Second Language Courses (90 h)
- 2 Complementary Courses (90 h)

## **Target Clientele**

Do you have a logical, curious and resourceful streak in your personality? Use your strengths to become a leader in the information technology industry.

### **Bring Your Own Device**

The use of a laptop computer is mandatory. This laptop must be equipped with the Windows operating system to work with all software. Standard or student license software must be installed when requested by teachers.

The following features are required for PCs:

- Processor: Intel I5 or AMD A8 compatible with VT-X virtualization
- Memory: 8 GB minimum
- Hard drive: 500 GB minimum
- Screen: 14 inches minimum
- · Connectivity: USB 3.0, Wi-Fi and NIC LAN

You will need a USB-RJ45 adaptor if your laptop doesn't have a network iack.

Required software: Office suite.

### Career Prospects

- Android application developer
- IOS application developer
- Mobile application developer
- Application quality assurance
- Web application developer
- Website developer (Front-end, Back-end and Full Stack)
- Web services developer
- $\bullet \quad \hbox{Object-oriented application development (.Net, Java, C++)}$
- Application quality assurance
- IT advisor
- User interface design
- Application tester
- IT trainer

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You can also further your software engineering education at the university level. Certain courses may even be credited.

