

COMPUTER PROGRAMMING AND ANALYSIS PROGRAM (T177) (PREVIOUSLY T127)

PROGRAM NAME	Computer Programming and Analysis	TUITION	\$3,977.00 *
COURSE CODE	T177	ADDITIONAL COST	
SCHOOL	School of Computer Technology		
CENTRE	Arts, Design and Information Technology		
LOCATION	Casa Loma Campus		
DURATION	3 years (6 semesters)		
STARTING MONTH	September, January		
CREDENTIAL	Ontario College Advanced Diploma		
YEAR OF STUDY	2020-2021		
METHOD OF STUDY	FT		
APPLY TO	Ontario Colleges ¹		

*Amounts listed are the total of tuition, materials, student service and ancillary fees for the first two semesters of programs starting in Fall 2019. Fees are subject to change for programs starting in Fall 2020 and at later dates.

International students: Visit the International Fees and Related Costs² page for more information.

FINANCIAL ASSISTANCE

This program is approved for OSAP funding, provided the applicant meets OSAP eligibility criteria.

Today, few organizations make any significant plans without thoroughly understanding the Information Technology (IT) implications. IT professionals are a vital part of decision-making business teams. George Brown College answers this need with its three-year (six-semester) **Computer Programmer Analyst** program. The broad education in programming and IT analysis that it offers can provide you with a stable platform for career growth in the rapidly expanding and ever-changing world of information technology.

During the first two years of the program, you will develop the skills and techniques required for software application development and testing. The industry tells us they are looking for Computer Programmer Analysts with “the total package.” So the third year includes advanced technical skills in areas such as systems analysis and design techniques – and continues to develop communications, teamwork and other client service skills such as needs assessment, sales, and presentation methods.

George Brown offers other distinct advantages:

- Students are involved in project-based and experiential learning.
- In the third year, students are exposed to the fast-growing game development sector.
- Students are also exposed to mobile application development using the latest mobile devices.

*If you enrol in January, you must complete semester 2 in the summer, May to August, in the same year.

Note: In this rapidly changing industry, program improvements are being made on an ongoing basis, which may result in course changes. Changes are made in consultation with our Program Advisory Committee, which is composed of academic staff and industry representatives from small, medium-sized and large corporations.

PROGRAM STANDARDS AND LEARNING OUTCOMES

The graduate has reliably demonstrated the ability to:

1. Identify, analyze, design, develop, implement, verify and document the requirements for a computing environment.
2. Diagnose, troubleshoot, document and monitor technical problems using appropriate methodologies and tools.
3. Analyze, design, implement and maintain secure computing environments.
4. Analyze, develop and maintain robust computing system solutions through validation testing and industry best practices.
5. Communicate and collaborate with team members and stakeholders to ensure effective working relationships.
6. Select and apply strategies for personal and professional development to enhance work performance.
7. Apply project management principles and tools when responding to requirements and monitoring projects within a computing environment.
8. Adhere to ethical, social media, legal, regulatory and economic requirements and/or principles in the development and management of the computing solutions and systems.
9. Investigate emerging trends to respond to technical challenges.
10. Gather, analyze and define software system specifications based on functional and non-functional requirements.
11. Design, develop, document, implement, maintain and test software systems by using industry standard software development methodologies based on defined specifications and existing technologies/frameworks.
12. Select and apply object-oriented and other design concepts and principles, as well as business requirements, to the software development process.
13. Gather requirements and model, design, implement, optimize, and maintain data storage solutions.

14. Integrate network communications into software solutions by adhering to protocol standards.

REQUIRED COURSES

SEMESTER 1

Code	Course name
COMP1151	IT Essentials
COMP1176	Introduction to Networks - CCNA I
COMP1223	Web Development Fundamentals
GSSC1045	Business Applications for Information Technology
MATH1162	Mathematics for Computer Technology I
COMM1007	College English**

SEMESTER 2

Code	Course name
COMP1168	Database Management
COMP1202	Object-Oriented Programming
COMP1231	Web Programming
COMP3044	UNIX Essentials
MATH1172	Mathematics for Computer Technology II
GSSC1027	Personal Finance
COMM1007	College English

SEMESTER 3

Code	Course name
COMP1230	Advanced Web Programming
COMP2129	Advanced Object-Oriented Programming
COMP2130	Application Development using Java
COMP2138	Advanced Database Development
COMP2147	System Analysis, Design And Testing
GNED	General Education Elective

SEMESTER 4

Code	Course name
COMP2080	Data Structures and Algorithms
COMP2139	Web Application Development
COMP2148	Professional Workplace Competencies
COMP2151	Agile Software Development
COMP2152	Open Source Development
GNED	General Education Elective

SEMESTER 5

Code	Course name
COMP3059	Capstone Project I
COMP3074	Mobile Application Development I
COMP3095	Web Application Development Using Java
COMP3104	DevOps
COMP3122	AI with Python
COMP3123	Full Stack Development I
GNED	General Education Elective

SEMESTER 6

Code	Course name
COMP3078	Capstone Project II
COMP3080	Emerging Technologies
COMP3097	Mobile Application Development II
COMP3132	Machine Learning with Python
COMP3133	Full Stack Development II

**Based on the results of your placement test, you may be required to take COMM1003 (English Skills) or CESL1003 (English Skills – ESL) before progressing to COMM1007. COMM1003/CESL1003 does not count as a course required for graduation, and you will be charged for this extra course. Please visit georgebrown.ca/assessment for more information.

YOUR CAREER

Graduates may find career opportunities in areas such as:

- Database administration
- Systems analysis and design
- Consulting
- Application design and development
- Web application design and development
- And many others

Opportunities exist for systems development for both corporate clients and smaller contract companies.

As programmer analysts, graduates will work in project teams responsible for the development of new applications and the maintenance of existing business systems.

FUTURE STUDY OPTIONS

Students who successfully complete this program may qualify for entry into Ontario college graduate certificate programs and university degree programs at institutions such as McMaster University, University of Guelph and Northern Alberta Institute of Technology.

For further information, see georgebrown.ca/transferguide

EDUCATIONAL/DEGREE PATHWAY

Opportunities to receive transfer credits toward further study to attain a degree are available.

ADMISSION REQUIREMENTS

Applicants are selected on the basis of their academic achievement, including the required courses, and any other selection criteria outlined below.

- Ontario Secondary School Diploma or equivalent**
- Grade 12 English (C or U)
- Grade 11 Math (M or U) or Grade 12 (C or U)

** MATURE STUDENT STATUS (19 YEARS OF AGE OR OLDER AND NO OSSD)

Mature Students may take the Admissions Assessment³ for English and Math, OR may consider upgrading to achieve the credit(s) needed in English⁴ and Math⁵.

Please note that George Brown is committed to ensuring that applicants will succeed in their program of choice and meeting the minimum requirements does not guarantee admission to the program. Applicants may be required to have grades higher than the minimum requirements stated.

COURSE EXEMPTIONS

College or university credits may qualify you for course exemptions. Please visit georgebrown.ca/transerguide for more information.

INTERNATIONAL STUDENTS

Visit the International Admissions⁶ page for more information.

CONTACT US

School of Computer Technology⁷

Phone: 416-415-5000, ext. 4287

Email: computertechnology@georgebrown.ca

The office hours are:

Monday – Thursday: 8 a.m. – 7 p.m.

Friday: 8 a.m. – 4 p.m.

Program Co-ordinator: Maziar Masoudi

Phone: 416-415-5000, ext. 3345

Email: mmasoudi@georgebrown.ca

For more information about George Brown College, you may also call the Contact Centre at 416-415-2000 (TTY 1-877-515-5559) or long distance 1-800-265-2002.

VISIT OUR CAMPUS

The Computer Programmer Analyst program is offered through our School of Computer Technology⁸ from our Casa Loma Campus⁹ at 146 Kendal Avenue¹⁰. Sign up for an Information Session¹¹ or Campus Tour¹² to learn more about George Brown College and the program. You can also explore our virtual tour.¹³

LINKS REFERENCE

¹<https://collegeapply.ontariocolleges.ca/?collegeCode=GBTC&programCode=T127&lang=en>

²<http://www.georgebrown.ca/international/futurestudents/tuitionfees/>

³<http://www.georgebrown.ca/assessment/admi-pre/>

⁴<http://www.georgebrown.ca/upgrading-credits/english-diploma/>

⁵<http://www.georgebrown.ca/upgrading-credits/math-diploma/>

⁶<http://www.georgebrown.ca/international/futurestudents/howtoapply/>

⁷<http://www.georgebrown.ca/computertechnology/>

⁸<http://www.georgebrown.ca/computertechnology/>

⁹<http://www.georgebrown.ca/campuses/casa-loma/>

¹⁰<https://www.google.ca/maps/place/146+Kendal+Ave,+Toronto,+ON+M5R+1M3/data=!4m2!3m1!1s0x882b349c7146b3f7:0x6edb6695c6d490f6?sa=X&ved=0ahUKEwjvpuOybDbAhUB7oMKHfsYDNQQ8gEIKDAA>

¹¹http://www.georgebrown.ca/computertechnology_info/

¹²http://www.georgebrown.ca/campus_tours/

¹³<https://vt.georgebrown.ca/>

George Brown College is continually striving to improve its programs and their delivery. The information contained in this calendar is subject to change without notice. It should not be viewed as a representation, offer or warranty. Students are responsible for verifying George Brown College admission, graduation, and fee requirements as well as any requirements of outside institutions, industry associations, or other bodies that may award additional designations concurrently with, or after completion of, a George Brown College program.