Game Development - Advanced Programming
School of Information Technology
GDP1 - Game Development - Advanced Programming

This program has been permanently suspended.

Program Description
Computer programmers require specialized, industry-standard skills to succeed in the fast-paced, rapidly growing industries of entertainment or educational game development, as well as the emerging industry of training and simulation gaming software. This program will deliver.

This game development program teaches students how to create, configure and integrate a custom game engine and game components on various platforms, including Windows, Linux and PlayStation. Other aspects of gaming, like game models, simulation, performance and configuration of both single-player and multi-player games will also be explored and implemented.

Upon graduation, students will have assembled a portfolio of game fragments and demonstrations to showcase their capabilities to potential employers and game studios. They'll graduate qualified to obtain positions such as Game Programmer, Senior Programmer, C++ Programmer, and Game Developer.

Academic Progression and Completion Requirements
Graduation from college programs requires a student to complete the program curriculum, meeting its academic standards, achieving a minimum cumulative G.P.A. of 2.0. From initial registration, there is a maximum of seven years (full-time or part-time) to complete the program curriculum.

Document of Recognition
Game Development - Advanced Programming Ontario College Graduate Certificate

Program Type
A One-Year Ontario College Graduate Certificate Program

Learning Outcomes
The graduate has reliably demonstrated the ability to

- Design, develop, and present a working game design document for a marketable game or game component.

- Creating games and game fragments through the development and use of various software components, along with the use and integration of existing commercial tools and components.
- Evaluate different types of games and game platforms and select the appropriate ones for a particular game strategy.
- Using innovative techniques - including digital, verbal and written - present the game design documentation and prototype(s).
- Manage the design, production, deployment, and maintenance of game prototypes, fragments, and components.
- Use applicable programming and mathematical skills to appropriately and correctly implement the various mathematical, simulation, artificial intelligence, graphics, sound design, and other aspects of a game or game component.
- Identify, choose, and implement appropriate design and programmatic techniques (algorithmic, threading models, rendering, etc.).

Career Opportunities

Fanshawe's Game Development – Advanced Programming program will provide graduates with highly marketable and transferable skills. In addition to being strong game developers, graduates will possess exceptional programming skills that are a valuable commodity in all areas of the software industry. Career opportunities include:

- senior programmer
- game programmer
- C++ programmer
- software developer
- project management
- game level designer
- digital graphics
- web game developer
- video game developer
- 3D designer
- publisher
- hardware developer
- content/IP owner
- game portal developer and maintenance
- texture artist
- game animator
- game tester
- character modeller
- environment modeller

Admission Requirements
Computer Programmer Ontario College Diploma
OR
Computer Programming and Analysis Ontario College Advanced Diploma
OR
A Degree in Computer Science
OR
An equivalent qualification from another institution as judged by the College
OR
A combination of relevant education and work experience in a related field as judged by the College to be equivalent to the above

Approximate Costs
Fee details are available at www.fanshawec.ca/fees

Contact
School of Information Technology: 519-452-4430

Campus Codes and Intakes

- Program Code: GDP1
- Campus Code: LC (LC - London)
- September Admission
- 15 week terms
- Academic Calendars available at www.fanshawec.ca/academicdates

Applicant Selection Criteria
Where the number of eligible applicants exceeds the available spaces in the program, the Applicant Selection Criteria will be:

1. Preference for Permanent Residents of Ontario
2. Receipt of Application by February 1st (After this date, Fanshawe College will consider applicants on a first-come, first-served basis until the program is full)
3. Achievement in the Admission Requirements

Students who have completed the first five terms of the Computer Programmer Analyst program are able to accelerate directly into the first level of this program. Upon successful completion of Game Development - Advanced Programming, students will be awarded both credentials.

English Language Requirements
Applicants whose first language is not English will be required to demonstrate proficiency in English by one of the following methods:

- A Grade 12 College Stream or University Stream English credit from an Ontario Secondary School, or equivalent, depending on the program's Admission Requirements
- TOEFL iBT - Overall score of 5 with no score less than 4.5 in any band
- IELTS Academic - Overall score of 6.5 with no score less than 6.0 in any of the four bands
- CAEL - Overall score of 70 with no score less than 60 in any of the four bands
- PTE Academic - Minimum score of 58 with no score less than 50 in any of the four bands
- Cambridge English - Overall score of 176 with no language skill less than 169
- ESL4/GAP5 - Minimum grade of 80% in ESL4/GAP5 Level 9, or 75% in ESL4/GAP5 Level 10
- Duolingo - Overall score of 120, with no score lower than 105
- LANGUAGECERT - Overall score of 70 with no score less than 65 in any of the four skills

Program Pathways
For information about Program Pathways visit www.fanshawec.ca/programpathways

Program Curriculum
Level 1
Take all of the following Mandatory Courses:
INFO-6028 Graphics 1 - 4 credits
INFO-6044 Game Engine Frameworks & Patterns - 3 credits
INFO-6016 Network Programming - 3 credits
INFO-6025 Configuration & Deployment - 3 credits
INFO-6046 Media Fundamentals - 2 credits
INFO-6019 Physics & Simulation 1 - 4 credits

Level 2
Take all of the following Mandatory Courses:
INFO-6020 Graphics 2 - 3 credits
INFO-6045 Animation - 3 credits
INFO-6022 Physics & Simulation 2 - 4 credits
INFO-6023 Game Algorithms & Gems - 4 credits
INFO-6017 Artificial Intelligence - 4 credits
INFO-6024 Game Component Integration - 3 credits