New Program/Major or Minor/Concentration Proposal Form

(07/2004)

1.0 Degree Title
Please specify the two degrees for concurrent degree programs

B.Sc.

2.0 Administering Faculty/Unit

Science

1.1 Major (Legacy= Subject)(30-char. max.)

Computer Science: Computer Games Option

Offering Faculty/Department

Science/School of Computer Science

1.2 Concentration (Legacy = Concentration/Option)
If applicable to Majors only (30 char. max.)

3.0 Effective Term of Implementation
(Ex. Sept. 2004 = 200409)
Term

200709

1.3 Minor (with Concentration, if Applicable) (30 char. max.)

4.0 Rationale for new proposal

The gaming industry has an important market share within the Canadian industry, and especially in Montreal. This program is a specialization within Computer Science that focusses on the skills and technology needed for the development of computer games. It fulfills all the basic requirements of the major of computer science, and thus teaches the fundamental concepts behind computer science and provides an overview of its subdisciplines. Additionally the complementary courses focus on a subset of courses offered by the School that are important to understand the technology behind computer games, and to gain the experience in software development and design that is needed for the game industry.

5.0 Program Information
Please check appropriate box(es)

5.1 Program Type

- [x] Bachelor's Program
- [ ] Master's
- [ ] M.Sc. (Applied) Program
- [ ] Dual Degree/Concurrent Program
- [ ] Certificate
- [ ] Diploma
- [ ] Graduate Certificate
- [ ] Graduate Diploma
- [ ] Ph.D. Program
- [ ] Doctorate Program (Other than Ph.D.)
- [ ] Private Program
- [ ] Off-Campus Program
- [ ] Distance Education Program (By Correspondence)
- [ ] Other (Please specify)

5.2 Category

- [ ] Faculty Program (FP)
- [x] Major
- [ ] Joint Major
- [ ] Major Concentration (CON)
- [ ] Minor
- [ ] Minor Concentration (CON)
- [ ] Honours (HON)
- [ ] Joint Honours Component (HC)
- [ ] Internship/Co-op
- [ ] Thesis (T)
- [ ] Non-Thesis (N)
- [ ] Other

Please specify

5.3 Level

- [x] Undergraduate
- [ ] Dentistry/Law/Medicine
- [ ] Continuing Ed (Non-Credit)
- [ ] Collegial
- [ ] Masters & Grad Dips & Certs
- [ ] Doctorate
- [ ] Post-Graduate Medicine/Dentistry
- [ ] Graduate Qualifying
- [ ] Postdoctoral Fellows

6.0 Total Credits

62-69

7.0 Consultation with
Related Units Yes ☐ No ☐
Financial Consult Yes ☐ No ☐
Attach list of consultations.

8.0 Program Description (Maximum 150 words)

This program is a specialization within Computer Science. It fulfills all the basic requirements of the Major of Computer Science. Additional courses of this major focus on topics that are important to understand the technology behind computer games, and to gain the experience in software development and design that is needed for the development of computer games.

9.0 List of proposed program for the New Program/Major or Minor/Concentration.

If new concentration (option) of existing Major/Minor (program), please attach a program layout (list of all courses) of existing Major/Minor.

Proposed program (list courses as follows: Subj Code/Crse Num, Title, Credit weight under the headings of: Required Courses, Complementary Courses, Elective Courses)

Please see page 4.
Major in Computer Science: Computer Games Option

Attach extra page(s) as needed

New Proposed Program:

Major in Computer Science: Computer Games Option

Required Courses (41-44 credits)

COMP 202*(3) Introduction to Computing
COMP 250 (3) Introduction to Computer Science
COMP 251 (3) Data Structures and Algorithms
COMP 206 (3) Introduction to Software Systems
COMP 273 (3) Introduction to Computer Systems
COMP 302 (3) Programming Languages and Paradigms
COMP 308 (1) Computer Systems Lab
COMP 310 (3) Operating Systems
COMP 330 (3) Theoretical Aspects: Computer Science
COMP 322 (1) C++
COMP 361 (3) System Development Project
COMP 557 (3) Fundamentals of Computer Graphics
MATH 222 (3) Calculus 3
MATH 223 (3) Linear Algebra
MATH 240 (3) Discrete Structures 1
MATH 323 (3) Probability

* Students who have sufficient knowledge in a programming language are not required to take COMP 202.

Complementary Courses (21-25 credits)

3 credits selected from;
COMP 350 (3) Numerical Computing
COMP 360 (3) Algorithm Design Techniques

6-8 credits selected from;
COMP 303 (3) Software Development
COMP 304 (4) Object-oriented Design
COMP 335 (3) Software Engineering Methods
COMP 529 (4) Software Architecture
COMP 533 (3) Object-oriented Software Development

6 credits selected from;
COMP 421 (3) Database Systems
COMP 535 (3) Computer Networks 1
 or COMP 435 (3) Basics of Computer Networks
COMP 409 (3) Concurrent Programming

6-8 credits selected from;
COMP 424 (3) Topics: Artificial Intelligence 1
COMP 507 (3) Computational Geometry
COMP 521 (4) Modern Computer Games
COMP 522 (4) Modelling and Simulation

10.0 Approvals

Routing Sequence	Name	Signature	Date
Department	Sue Whitesides		
Curric/Acad Committee			
Faculty 1			
Faculty 2			
Faculty 3			
SCTP			
GS			
APPC			
Senate			

Submitted by

Name	Marisa Lento (for Judy Kenigsberg)
Phone	Ext. 00895
Email	Marisa@cs.mcgill.ca
Submission Date	

To be completed by ARR:

CIP Code