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

1.1 Major (Legacy = Subject) (30-char. max.)
Core Science Component in Computer Science

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

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

2.0 Administering Faculty/Unit

2.1 Offering Faculty/Department
Science/School of Computer Science

3.0 Effective Term of Implementation
(Ex. Sept. 2004 = 200409)
Term
200709

4.0 Rationale for new proposal

During the discussions in the program review of the Faculty, Major and Honours programs, two important themes are emerging:
- replacing (improving) the Faculty program with a more general-purpose and more clearly defined B.Sc. Liberal degree
- ensuring that all B.Sc. degrees have appropriate programs which have a core plus depth or a core plus breadth

Our Majors and Honours programs already provide excellent programs with core plus depth, but we do not have an adequate program for core plus breadth. By replacing the Faculty programs with a new B.Sc. Liberal program, we can provide a very flexible system that provides core plus breadth in a systematic and modular way. Full description of the B.Sc. Liberal, please see Document AC-06-19.

5.0 Program Information
Please check appropriate box(es)

5.1 Program Type
- 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)
- 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

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

5.4 Core Science Component

6.0 Total Credits
45

7.0 Consultation with Related Units
Financial Consult
Yes ☐ No ☐
Attach list of consultations.
8.0 Program Description (Maximum 150 words)

The program described below is the Core Science Component in Computer Science for the B.Sc. Liberal.

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)

### Core Science Component in Computer Science (45 credits)

**Required Courses (21 credits):**

*COMP 202 (3) Introduction to Computing 1  
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  
MATH 222 (3) Calculus 3  
MATH 240 (3) Discrete Structures 1

**Complementary Courses (24 credits):**

- 3-6 credits selected from:
  - MATH 223 (3) Linear Algebra  
  - MATH 318 (3) Mathematical Logic  
  - MATH 323 (3) Probability  
  - MATH 324 (3) Statistics  
  - MATH 340 (3) Discrete Structures 2

- At least 3 credits selected from:
  - COMP 330 (3) Theoretical Aspects: Computer Science  
  - COMP 350 (3) Numerical Computing  
  - COMP 360 (3) Algorithm Design Techniques

- At least 3 credits selected from:
  - COMP 302 (3) Programming Languages and Paradigms  
  - COMP 303 (3) Software Development

The remaining complementary courses should be selected from any COMP courses at the 300-level or above (except COMP 364, COMP 396, COMP 400 and COMP 431).

* Students who have sufficient knowledge in a programming language do not need to take COMP 202 but can replace it with a COMP course at the 300-level or above.

Note that advanced COMP courses have more pre-requisite courses than the required courses for this program. Students have to make sure that they have the appropriate pre-requisites when choosing upper level courses.
### 10.0 Approvals

**Routing Sequence**

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**Submitted by**

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<td>Judy Kenigsberg</td>
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<tbody>
<tr>
<td><a href="mailto:judy@cs.mcgill.ca">judy@cs.mcgill.ca</a></td>
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