1.0 Degree Title
Specify the two degrees for concurrent degree programs

Master of Science (M.Sc.)

2.0 Administering Faculty/Unit
Graduate Studies

Offering Faculty/Department

Faculty of Science / Computer Science

3.0 Effective Term of revision or retirement
Please give reasons in 5.0 “Rationale” in the case of retirement

(Ex. Sept. 2004 = 200409) Retirement

Term: 201409

4.0 Existing Credit Weight
Proposed Credit Weight

46
45

5.0 Rationale for revised program

In order that students conduct a broad research review instead of focusing simply on their specific M.Sc. topic, COMP 601, Thesis Literature Review, 2 credits is being reinstated into the M.Sc. program.

The addition of COMP 601, required the adjustment of COMP 691, Thesis Research 1, from 2 credits to 3 credits to fulfill the requirements of 24 credits of thesis courses.

This Program Revision Form takes account of the above changes, and as well the recently approved changes in credit weight of COMP 691, COMP 698 and COMP 699 (which were also performed to keep with the 24 credit requirement for thesis courses)

6.0 Revised Program Description (Maximum 150 words)
No change from what is currently written in the graduate calendar.

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<td>1.5</td>
<td>Master of Science (M.Sc.); Computer Science (Thesis) — Computational Science and Engineering (45 credits)</td>
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<td>6.0</td>
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### M.Sc. in Computer Science - Computational Science and Engineering Option

#### Program Requirements

**Thesis Courses (24 credits)**

24 credits selected from

- COMP 691 Thesis Research 1 (2 credits)
- COMP 696 Thesis Research 2 (3 credits)
- COMP 697 Thesis Research 3 (4 credits)
- COMP 698 Thesis Research 4 (9 credits)
- COMP 699 Thesis Research 5 (15 credits)

**Required Courses**

One credit selected as follow:

- COMP 669D1 Computational Science Engineering Seminar (0.5 credits)
- COMP 669D2 Computational Science Engineering Seminar (0.5 credits)

**Complementary Courses**

(minimum 24 credits)

Two courses from List A, two courses from List B, and the remaining credits to be chosen from graduate (500-, 600-, or 700-level) courses in the School of Computer Science. Two complementary courses must be taken outside the School of Computer Science.

Note: Students with an appropriate background can substitute 3 credits by COMP 696 and 4 credits by COMP 697, but still need to take 6-8 credits from List A and 6-8 credits from List B.

**List A: Scientific Computing Courses:**

- CIVE 602 Finite Element Analysis (4 credits)
- COMP 522 Modelling and Simulation (4 credits)
  
  ... long list that remains unchanged

**List B: Application and Specialized Methods Courses:**

- ATOC 512 Atmospheric and Oceanic Dynamics (3 credits)
- ATOC 513 Waves and Stability (3 credits)
- ATOC 515 Turbulence in Atmosphere and Oceans (3 credits)
  
  ... long list that remains unchanged

#### M.Sc. in Computer Science - Computational Science and Engineering Option

**Program Requirements**

**Required** Thesis Courses (24 credits)

- COMP 601 Thesis Literature Review (2 credits)

The remaining 22 credits selected from:

- COMP 691 Thesis Research 1 (3 credits)
- COMP 696 Thesis Research 2 (3 credits)
- COMP 697 Thesis Research 3 (4 credits)
- COMP 698 Thesis Research 4 (10 credits)
- COMP 699 Thesis Research 5 (12 credits)

**Required Courses (1 credit)**

One credit selected as follow:

- COMP 669D1 Computational Science Engineering Seminar (0.5 credits)
- COMP 669D2 Computational Science Engineering Seminar (0.5 credits)

**Complementary Courses**

(minimum 20 credits)

At least 6 courses whereby at least two courses must be from List A, at least two courses must be from List B, and the remaining credits can be chosen from graduate (500-, 600-, or 700-level) courses in the School of Computer Science. Two complementary courses must be taken outside the School of Computer Science.

Note: Students with an appropriate background can substitute 3 credits by COMP 696 and 4 credits by COMP 697, but still need to take 6-8 credits from List A and 6-8 credits from List B.

**List A: Scientific Computing Courses:**

- CIVE 602 Finite Element Analysis (4 credits)
- COMP 522 Modelling and Simulation (4 credits)
  
  ... long list that remains unchanged

**List B: Application and Specialized Methods Courses:**

- ATOC 512 Atmospheric and Oceanic Dynamics (3 credits)
- ATOC 513 Waves and Stability (3 credits)
- ATOC 515 Turbulence in Atmosphere and Oceans (3 credits)
  
  ... long list that remains unchanged
8.0 Consultation with Related Units

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Submitted by

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To be completed by ARR:

Financial Consult

Attach list of consultations