



# University of Toronto

OFFICE OF THE VICE-PRESIDENT AND PROVOST

TO: Committee on Academic Policy and Programs

SPONSOR: Edith Hillan  
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DATE: January 26, 2005 for the Meeting of February 2, 2005

AGENDA ITEM: 3

## **ITEM IDENTIFICATION:**

**Faculty of Arts & Science, St. George Campus: Calendar Change, 2005-2006 –  
Computer Science: Specialist.**

## **JURISDICTIONAL INFORMATION:**

The Committee has authority for approval of changes to curriculum within established degree programs that can be accomplished with existing resources and are not major, as in specialist, major and minor programs in arts and science.

## **PREVIOUS ACTION TAKEN:**

## **HIGHLIGHTS:**

The Faculty of Arts & Science, St. George Campus, is proposing a new, flexible undergraduate Computer Science: Specialist for the calendar year 2005-06. The Specialist was approved by the Faculty's Humanities, Social Sciences and Sciences Curriculum Committees and the Faculty's Academic Standards Committee at their meetings of January 26, 2005.

The Computer Science department views this new specialist as being at the centre of their programs. It requires students to take a rigorous set of specific courses, but then leaves almost total flexibility for the last six half-courses. The other specialist programs offered by the department are specialized variations that branch off from this one.

In order to help students choose among the programs offered by the department, the 2005-06 calendar will describe all of them in terms of a set of Basic courses (that all Majors and Specialists must take) and a set of Core courses (that all Specialists must take). This reduces the description of each program to just a few lines, and will highlight the differences between the programs.

(Course descriptions for existing courses that are part of the above programs can be found on the Faculty of Arts & Science calendar, located online at <http://www.artsandscience.utoronto.ca/ofr/calendar/crsindex.htm>)

**FINANCIAL AND/OR PLANNING IMPLICATIONS:**

There are no new/additional financial resources required to implement the new program addition.

**RECOMMENDATION:**

It is recommended that the Committee on Academic Policy and Programs approve:

The new Computer Science Specialist program as described in the submission from the Faculty of Arts & Science, St. George Campus, dated January 17, 2005, effective for the academic year 2005-2006.

**FACULTY OF ARTS & SCIENCE  
NEW PROGRAM FORM for 2005-2006 CALENDAR**

**Department or Program: Specialist program in Computer Science**

Provide an EXACT PROGRAM DESCRIPTION as it is to appear in the Calendar. **Pattern your presentation after one of the existing programs in the Calendar. Your entry should particularly indicate which courses are required in first year. Courses you list from another department or program require a letter from that Chair or Program Director stating that students in this new Program are guaranteed places in their courses required for the Program.**

Specialist program (ASSPE1688):

(14 full courses or their equivalent, including at least one 400-series course)

- One full course English Writing Requirement.
- All Basic Courses and Core Courses (9 full courses).
- MAT 237Y1/257Y1.
- Six half courses from the Additional Courses, with at least two 400-level half courses.

Notes:

1. This flexible program allows students to concentrate in one or more areas for which there is currently no other program. Students are strongly encouraged to seek advice from a faculty member in the Department of Computer Science in order to ensure that their course selection meets their academic goals. This is particularly important for students planning to apply to graduate school.

**Note: Basic Courses, Core Courses and Additional Courses will be listed before all program descriptions in the calendar. They are:**

Basic Courses (5.5 full courses)

First Year:

CSC 107H1/108H1/150H1	[Software Engineering sub-area]
CSC 148H1/150H1	[Software Engineering sub-area]
CSC 165H1/240H1	[Logic and Complexity sub-area]
MAT 137Y1/157Y1	[Mathematics sub-area]

First or Second Year:

CSC 207H1	[Software Engineering sub-area]
CSC 236H1/240H1	[Logic and Complexity sub-area]
CSC 258H1	[Core Systems sub-area]
MAT 223H1/240H1	[Mathematics sub-area]

Second Year:

CSC 263H1/265H1	[Logic and Complexity sub-area]
STA 247H1/257H1	[Mathematics sub-area]

Notes:

1. Students with a strong background in Java or C++ may omit CSC 107H1/108H1 and proceed directly with CSC 148H1/150H1.
2. CSC 150H1 is an accelerated alternative to CSC 107H1/108H1 and CSC 148H1, intended for students with previous programming experience in a procedural language.
3. CSC 240H1 is an accelerated alternative to CSC 165H1 and CSC 236H1, intended for students with a strong mathematical background.

Core Courses (3.5 full courses)

CSC 209H1	[Core Systems sub-area]
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CSC 324H1	[Software Engineering sub-area]
CSC 336H1/350H1	[Numerical Analysis sub-area]
CSC 343H1	[Information Systems sub-area]
CSC 363H1/365H1	[Logic and Complexity sub-area]
CSC 369H1	[Core Systems sub-area]
CSC 373H1/375H1	[Logic and Complexity sub-area]

#### Notes

1. CSC 350H1 is required in the Computer Science Specialist Program – Foundations Option; students who take CSC 336H1 and later decide to enrol in the Foundations Option will be required to take extra credits as determined by the Undergraduate Associate Chair.
2. MAT 237Y1/257Y1 is a direct or indirect prerequisite for a number of CSC courses. MAT 237Y1/257Y1 is also required in most Computer Science programs. Students are advised to take MAT 237Y1/257Y1 unless they have planned their program and course selection carefully and they are certain that they will not need it.

#### Additional Courses

##### Systems Area

- I. *Core Systems*  
CSC 354H1, 372H1; ECE 385H1  
CSC 458H1, 469H1, 488H1; ECE 489H1
- II. *Software Engineering*  
CSC 340H1  
CSC 407H1, 408H1, 465H1
- III. *Information Systems*  
CSC 309H1, 310H1  
CSC 443H1

##### Human Factors and Graphics Area

- I. *Human Factors*  
CSC 300H1, 318H1  
CSC 428H1, 454H1
- II. *Graphics*  
CSC 320H1  
CSC 418H1

##### Artificial Intelligence Area

- I. *Reasoning*  
CSC 384H1  
CSC 486H1
- II. *Language*  
CSC 401H1, 485H1
- III. *Vision*  
CSC 420H1, 487H1
- IV. *Learning*  
CSC 321H1  
CSC 411H1, 412H1

##### Foundations Area

- I. *Logic and Complexity*  
CSC 330H1  
CSC 438H1, 448H1
- II. *Numerical Analysis*  
CSC 351H1  
CSC 446H1, 456H1

III. *Mathematics*  
MAT 224H1/240H1, 237Y1/257Y1; STA 248H1

**Academic Relevance:** State the academic reasons for creating the program (this statement will be carefully examined by the Faculty Academic Standards Committee and the University Academic Priorities and Programs Committee, so be clear and detailed)

This flexible program allows students to concentrate in one or more areas for which there is currently no program.

***BE sure to complete the following resource implications section***

**Departmental/College Resource Implications** for this new program: the Dean's Office requires a description of the resource requirements for this new program, and an indication whether you can meet these requirements through your existing resources, or have received additional resources from the Dean. Please give details of the resource areas below.

Estimated Enrolment in this program: 50 per year

New courses necessary to mount for this program: 0

Additional Instructor(s) Requirements: 0

Teaching Assistant(s) Requirements: no additional

Laboratory Equipment Requirements: no additional

Computing Resources Requirements: no additional

Other: none

**DELETE the statement that DOES NOT apply:**

I will provide these resources required for this Program from my existing budget.

DATE :  
October 29, 2004

Name of Chair:  
Craig Boutilier