

# SIMON FRASER UNIVERSITY

S.03-6

As amended  
by Senate  
6 Jan 03

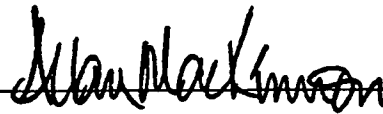
## MEMORANDUM

**To:** Senate

**From:** A. MacKinnon, Chair  
Senate Committee on Undergraduate Studies

**Subject:** Faculty of Applied Sciences – Proposed changes to BC 12 Admission Requirements  
(SCUS Reference 02-30 – rev.)

**Date:** December 12, 2002



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Action undertaken at the December 10, 2002 meeting of the Senate Committee on Undergraduate Studies gives rise to the following motion:

“That Senate approve changes to BC 12 Admission Requirements in the Faculty of Applied Sciences as set forth in S.03-6 .”

# BC12 Admission Requirements - Faculty of Applied Sciences

Robert D. Cameron, Associate Dean of Applied Sciences

Revision F - December 1, 2002

Based on Revision E as approved at Senate Committee on Undergraduate Studies on November 12, 2002, with an amendment deferring consideration of admission requirements for Tech One, as requested by Senate Committee on Agenda and Rules.

## I. Introduction

The Faculty of Applied Sciences (FAS) presently provides five distinct sets of admission requirements for entry into its programs from BC Grade 12. While each of the four Schools of Communication, Computing Science, Engineering Science and Kinesiology do require five Grade 12 courses acceptable for overall SFU admission, the permissible sets of courses vary considerably. Tech One, the first year of the Program in Information Technology and Interactive Arts brings yet another distinct admission model into the picture, as a carryover from the former Technical University of British Columbia.

This document proposes the development of a common framework for direct admission to FAS programs from BC Grade 12. The framework emphasizes breadth and foundational skills in writing and mathematics. Within the framework, programs may have varying requirements with respect to disciplinary preparation.

A common framework for requirements with respect to breadth, writing and mathematics is expected to have several advantages. First and foremost, admitted students should be better prepared to take on and succeed in their intended program of study. Indeed, the subsequent analysis will argue that each FAS program can benefit from improved preparation of students along at least one of the dimensions of breadth, writing, or mathematics. Second, a common framework should provide students with more options to switch to an alternative program of study in the event their initial program choice turns out not to match their interests or aptitudes. Third, multidisciplinary and interdisciplinary opportunities should be enhanced by ensuring that more students have the broad background to consider these options. Fourth, the framework should also ensure that students are well prepared to take on the anticipated university-wide requirements for breadth, writing-intensive and quantitative-intensive courses as proposed by the university curriculum task force. Fifth and finally, the framework should have benefits for advising high school students with respect to Grade 12 course selection, both because it is simpler to communicate and because it encourages breadth while discouraging premature specialization.

Admission requirements for FAS programs must also be consistent with overall SFU requirements. The primary requirements are for five recognized Grade 12 courses including English 12. A large selection of Grade 12 courses is recognized for admission, with a small amount of structure imposed to provide some breadth.

In imposing additional structure beyond the minimum SFU requirements, it is also important to ensure that the additional requirements do not unduly limit the number of admissible applicants. If the applicant pool is limited in size it may be impossible to meet admission targets without lowering the admission average substantially.

## II. Breadth: English 12, Math 12, Arts and Science

The essential concept underlying the notion of breadth in this proposal is that admission to FAS programs should emphasize English 12, Math 12 and at least one course each in arts 12 and science 12 groups.

### List 2 Reorganization

In order to express the breadth constraints, the current lists (in particular, List 2) of the BC12 courses used for admission should be reorganized as follows.

**Current Wording**

List 1	English 12, Français premiere langue 12			
List 2	biology 12, chemistry 12, English literature 12, Français communication et littérature 12	geography 12, geology 12, history 12, principles of mathematics 12, principles of physics 12	AP calculus AB/BC 12, AP computer science A/AB 12, AP environmental science 12, AP statistics 12, IB computer science/ studies 12	IB environmental systems 12, IB further mathematics 12, IB mathematics with calculus A/ B
List 3	Fine and Performing Arts Group acting 12, arts 12, dance choreography 12, dance performance 12, directing and scriptwriting 12, drama film and TV 12, music composition 12, music composition and technology 12, stagecraft 12, visual arts 2D 12, visual arts 3D 12, visual arts media arts 12, writing 12	Humanities Group comparative civilizations 12 IB theory of knowledge (philosophy) 12 Languages: Arabic 12, French 12 or 12A, or Français langue seconde 12*, German 12, Italian 12, Japanese 12, Latin 12, Mandarin 12, Okanagan 12, Punjabi 12, Russian 12, Secwepemctsin 12, Spanish 12, Upper St'at'imcets 12	Sciences Group calculus 12, forests 12, information technology 12	Social Sciences Group economics 12, journalism/ media 12, law 12, AP comparative government and politics 12, AP psychology 12, AP US government and politics 12, IB business and organization 12, IB psychology, IB social anthropology 12

**Proposed Wording**

List 1	English 12, Français premiere langue 12			
List 2	Math Group principles of mathematics 12, AP calculus AB/BC 12, AP statistics 12, IB further mathematics 12, IB mathematics with calculus A/ B	Humanities Group English literature 12, Français communication et littérature 12	Sciences Group biology 12, chemistry 12, geology 12, principles of physics 12, AP computer science A/AB 12, AP environmental science 12, IB computer science/ studies 12, IB environmental systems 12	Social Sciences Group geography 12, history 12
List 3	Fine and Performing Arts Group acting 12, arts 12, dance choreography 12, dance performance 12, directing and scriptwriting 12, drama film and TV 12, music composition 12, music composition and technology 12, stagecraft 12, visual arts 2D 12, visual arts 3D 12, visual arts media arts 12, writing 12	Humanities Group comparative civilizations 12 IB theory of knowledge (philosophy) 12 Languages: Arabic 12, French 12 or 12A, or Français langue seconde 12*, German 12, Italian 12, Japanese 12, Latin 12, Mandarin 12, Okanagan 12, Punjabi 12, Russian 12, Secwepemctsin 12, Spanish 12, Upper St'at'imcets 12	Sciences Group calculus 12, forests 12, information technology 12	Social Sciences Group economics 12, journalism/ media 12, law 12, AP comparative government and politics 12, AP psychology 12, AP US government and politics 12, IB business and organization 12, IB psychology, IB social anthropology 12

The reorganization classifies List 2 courses to simplify the expression of Applied Sciences admission requirements. The reorganization does not affect the admission requirements of any other Faculty.

**Revised Admission Requirements**

The following two tables provide current and proposed admission requirements. Admission requirements of the other Faculties are included in the first table for reference only.

**Current Wording**

	<i>Grade 12 requirements - admission average calculated on five best courses as follows</i>						
	Arts	Science	Business	Communication	Computing Science	Engineering Science	Kinesiology
List	one course	one course from	one course	one course from	one course from	one course	one course

1	from list 1	list 1	from list 1	list 1	list 1	from list 1	from list 1
List 2	two courses from list 2	principles of mathematics 12	principles of mathematics 12	two courses from list 2	principles of mathematics 12	principles of mathematics 12	principles of mathematics 12
	two additional courses from list 2 or list 3 (as below)	two of biology 12, chemistry 12, geography 12, geology 12, principles of physics 12	one additional course from list 2	two additional courses from list 2 or list 3 (as below)	one of biology 12, chemistry 12, or principles of physics 12	chemistry 12	chemistry 12
		one additional course from list 2 or list 3	two additional courses from list 2 or list 3 (as below)		one additional science course from list 2 or 3	principles of physics 12	principles of physics 12
one of geography 12 or history 12 or	one additional course from list 2 or list 3	biology 12					
List 3	(if both courses are from list 3 they must be different groups)		(if both courses are from list 3 they must be different groups)	(if both courses are from list 3 they must be different groups)	one of comparative civilizations 12, IB theory of knowledge 12, or any list 3 social science course		

Note: Advanced Placement (APP) and International Baccalaureate (IB) courses are included in this chart only if they are not equivalent to an existing grade 12 course. Approved equivalent Programme Cadre and French Immersion courses are acceptable for admission. Locally developed courses, however, are not acceptable.

**Proposed Wording**

<i>Grade 12 requirements for Applied Sciences - admission average calculated on five best courses, chosen one from each row, as follows</i>					
	Computing Science	Engineering Science	General Studies	Kinesiology	Tech One (tentative)
List 1	English 12 <sup>1</sup>	English 12 <sup>1</sup>	English 12 <sup>1</sup>	English 12 <sup>1</sup>	English 12 <sup>1</sup>
List 2	principles of mathematics 12 <sup>2</sup>	principles of mathematics 12 <sup>2</sup>	principles of mathematics 12 <sup>2</sup>	principles of mathematics 12 <sup>2</sup>	principles of mathematics 12 <sup>2</sup>
	one science course	principles of physics 12	biology 12, chemistry 12 or principles of physics 12	biology 12, chemistry 12 or principles of physics 12	one science course
List 2 or 3	one social science or fine and performing arts course, or one List 2 humanities course	one humanities, Any social science or fine and performing arts course	one social science or fine and performing arts course	any course	one fine and performing arts course (recommended) or one social science course
	one additional math or science course	chemistry 12	one additional course	one additional course from biology 12, chemistry 12 or principles of physics 12	one additional course

Note: Advanced Placement (AP) and International Baccalaureate (IB) courses are included in this chart only if they are not equivalent to an existing grade 12 course. Approved equivalent Programme Cadre and French Immersion courses are acceptable for admission. Locally developed courses, however, are not acceptable.

<sup>1</sup>or Français premiere langue 12

<sup>2</sup>or AP/IB Math group course.

**Rationale**

**Communication**

For the present, admission requirements for the School of Communication are proposed to remain unchanged, continuing to be listed in the existing table for Arts, Business and Science. Changes compatible with the overall FAS admission model may be incorporated at a later date.

### **Computing Science**

The current requirements of the School of Computing Science already include both arts (social science) and science (two science 12 courses). However, with the planned program expansion under DTO, a broader selection of arts and science courses should result in a corresponding broadening of the applicant pool.

### **Engineering Science**

Engineering Science presently requires four specified courses (English 12, Math 12, Physics 12 and Chemistry 12), leaving the fifth grade 12 course free to be chosen from the list of courses generally recognized for SFU admission.

From the perspective of a potential arts 12 requirement, a review of courses taken by 2002 Engineering Science applicants showed that that approximately 40% had a grade 12 course within the social sciences group and an additional 20% or so had a course within the fine and performing arts group. Many of the remainder had a language 12 (humanities group). Ideally, a requirement for a course within the social sciences group would prepare students for appreciation of the social context of engineering technology as well as giving them additional preparation in writing. A fine and performing arts course may select for creativity as well as communication skills. However, limiting the arts 12 requirement to either or both of these categories would likely in an overreduction of the applicant pool. Therefore, an arts 12 from any of the three groups is proposed.

### **General Studies**

Admission requirements for the Bachelor of General Studies (Applied Sciences) have not previously been defined. The proposed requirements ensure that students are in a position to undertake studies in any combination of Applied Sciences programs.

### **Kinesiology**

For 2002 admission, Kinesiology requires all of English 12, Math 12, Biology 12, Chemistry 12, and Physics 12. Although this would appear to set high standards, recent experience has shown that admission quotas cannot be met without unduly lowering the admission average. In essence, the pool of applicants having all five of these courses is too small to allow admission targets to be met with a reasonable admission average.

The changes proposed here require two rather than all three of Biology 12, Chemistry 12, and Physics 12. The fifth course may be chosen from either List 2 or List 3.

### **Tech One**

Tentative changes in admission requirements for the Tech One program are shown here, for information only. Discussions are underway with respect to the evolution of Tech One as an integrated first year in support of a broad array of applied arts and sciences programs as well as continued support of the evolving program in interactive arts and information technology. Although the tentative changes to admission requirements have been accepted in principle, formal approval of the changes by Senate will be sought in conjunction with a full curriculum proposal for Tech One revision.

## **III. Phase-In Provisions**

Applicants meeting the new admission requirements will be considered admissible effective with the Fall 2003 semester. However, applicants working towards the requirements published in the 2002-3 calendar will continue to be considered admissible until and including Fall 2004. The new requirements will become mandatory for all applicants effective Spring 2005.