

MEMORANDUM

To: Senate

From: Allan MacKinnon, Chair
Senate Committee on Undergraduate Studies

Subject: Curriculum Revisions
Faculty of Applied Sciences
(SCUS Reference 03-1)
(SCUS Reference 03-6)

Date: February 12, 2003



Action undertaken at the February 11, 2003 meeting of the Senate Committee on Undergraduate Studies gives rise to the following motion:

“That Senate approve the revised admission requirements for the Tech One Program as set forth in S.03- 33 .”

Note: Requirements effective Fall 2004 are proposed for publication in the calendar, while interim requirements for 2003-3 are proposed for consistency with the Summit publication and current admissions cycle.

For Information

Acting under delegated authority, at the February 11, 2003 meeting, SCUS approved the following curriculum revisions in the Faculty of Applied Sciences:

1. a) Tech One – Surrey Program Curriculum Revisions
 - i) Tech One Restructuring Calendar Description
 - * ii) New Courses: TECH 117 – Systems of Media Representation
TECH 124 – New Media Images
TECH 114 – History and Theory of Technology and Culture
BUS 130 – Business in the Networked Economy I
BUS 131 – Business in the Networked Economy II
TECH 100 – Fundamentals of Teamwork and Communication I
TECH 101 – Fundamentals of Teamwork and Communication II
CMPT 149/TECH 149 – Introduction to Computer Systems
- b) School of Computing Science*
 - i) New Course: CMPT 341 – Introduction to Computational Biology

*Any Senator wishing to consult the full report of curriculum revisions should contact Bobbie Grant, Senate Assistant at 291-3168 or email bgrant@sfu.ca

Tech One Restructuring: 2003/4 Calendar

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Revision D - February 11, 2003

As approved at Senate Committee on Undergraduate Studies on February 11, 2003.

1. Introduction

The Tech One curriculum of the former Technical University of British Columbia provides an integrated, cohort-based foundation year bringing together students with interests in interactive arts, information technology and, to some extent, management of technology. Emphasizing collaborative learning and appropriate use of on-line technologies, it has the potential to make a distinctive addition to the array of first-year options available to SFU students.

This document proposes a revision of the Tech One curriculum that maintains the integrated, collaborative and cohort-based nature of the program, while restructuring and refocussing the program to better mesh with other SFU offerings. Restructuring includes the creation of traditional 3-credit 13-week courses through merging of appropriate module sequences, as well as redefinition of course content to match existing SFU courses where possible. Refocussing shifts the orientation of the program away from one that is centred on the original program mix at Tech BC, towards one that provides broad support to existing SFU programs as well as particular support to a transformed interactive arts and information technology program.

Suggested renamings of Tech One for future consideration include "Media One" or "Design One". The latter may reflect the applied orientation of the program as well as an appropriate name for a first year program of a potential School of Design Sciences. The former is perhaps a more broadly based term, focussing on the importance of new communication media in all aspects of an information society.

From a planning perspective, the following simplified model of student flows may be useful. Upon completion of Tech One, students may proceed in three general directions. Approximately one half of the students may proceed through transformed interactive arts and information technology offerings by the proposed new School. One quarter of the students may proceed to existing SFU programs in information technology such as the Computing Science major program or the Joint Major in Information Systems in Business Administration and Computing Science. The remaining one quarter may proceed to program offerings that emphasize a social or artistic context for technology application such as offerings involving Communication or Fine and Performing Arts.

The division into these approximately sized streams is an idealization whose primary purpose is to guide the design of the first year program: curriculum decisions should be made based on approximately equal weightings of the needs of the each student group, as well as foundational needs in concert with the recommendations of the university curriculum task force.

2. Course Replacements

The following table lists the 1-credit module courses to be deleted and their corresponding replacements with 3-credit semester-based courses. New course proposals are submitted separately.

Deletion	Replacement
TECH 104-1 Process Elements: Effective Communication I TECH 105-1 Process Elements: Team Dynamics I TECH 106-1 Process Elements: Learning & Information I	TECH 100-3 Fundamentals of Teamwork and Communication I
TECH 107-1 Process Elements: Effective Communication II TECH 108-1 Process Elements: Team Dynamics II TECH 109-1 Process Elements: Learning & Information II	TECH 101-3 Fundamentals of Teamwork and Communication II
TECH 110-1 Technologies of Writing TECH 111-1 Technologies of Visualizing TECH 112-1 Technologies of Computing	TECH 114-3 History and Theory of Technology and Culture
TECH 118-1 2D Visual Representation TECH 119-1 3D Visual Representation TECH 120-1 Interactive Visual Representation	TECH 117-3 Systems of Media Representation
TECH 121-1 New Media: The Computer Image TECH 122-1 New Media: Non-Linearity and the Procedural Image TECH 123-1 New Media: Designing a Network	TECH 124-3 New Media Images
TECH 128-1 Contemporary Business Environment TECH 129-1 Social Behavior in Real and Virtual Contexts TECH 130-1 Business Trends and Challenges	BUS 130-3 Business in the Networked Economy I
TECH 131-1 Entrepreneurship and Business Planning TECH 132-1 Marketing and Financial Planning TECH 133-1 Executing a Business Plan	BUS 131-3 Business in the Networked Economy II
TECH 137-1 Fundamentals of Mathematics: Algebra TECH 138-1 Fundamentals of Mathematics: Trigonometry TECH 139-1 Fundamentals of Mathematics: Discrete Mathematics TECH 145-1 Linear Algebra & Calculus: Vectors and Matrices TECH 146-1 Linear Algebra & Calculus: Derivatives TECH 147-1 Linear Algebra & Calculus: Integrals TECH 157-1 Probability TECH 158-1 Descriptive Statistics and Estimation TECH 159-1 Inferential Statistics	MACM 101-3 Discrete Mathematics I MATH 151-3 Calculus I MATH 232-3 Elementary Linear Algebra (existing courses)
TECH 154-1 Fundamentals of Information Technology TECH 155-1 Microcomputer Systems TECH 156-1 Information Systems	CMPT/TECH 149-3 Introduction to Computer Systems
TECH 151-1 Fundamentals of Programming with Objects TECH 152-1 The Nuts and Bolts of Programming TECH 153-1 Advanced Programming Topics	CMPT 101-3 Introduction to Computer Programming (existing)

3. Proposed Calendar Description: Tech One

Tech One is proposed as an autonomous program under the Faculty of Applied Sciences, with the following calendar entry.

Tech One Program

Program Director: *to be determined.*

Program Advisor: *to be determined.*

Tech One is an integrated, cohort-based first year that provides students with a broad program of studies centred around the interplay of creative arts and information technology in an entrepreneurial world. Tech One is intended both as a general year of study for students who wish to explore this interplay as a component of any SFU degree program as well as the foundation year for degree programs specializing in computing and design. These programs include traditional programs in computing science as well as new programs in design science based on the interactive arts and information technology curriculum developed at the former Technical University of British Columbia.

The Tech One program is offered at Simon Fraser University's Surrey campus.

First Semester

The first semester of Tech One consists 18 credits of course work, required of all students.

BUS 130-3 Business in the Networked Economy I
CMPT/TECH 149-3 Introduction to Computer Systems
MATH 151-3 Calculus I
TECH 100-3 Fundamentals of Teamwork and Communication I
TECH 114-3 History and Theory of Technology and Culture
TECH 117-3 Systems of Media Representation

Second Semester

The second semester of Tech One consists of 18 credits of course work, including the following 15 credits that must be completed by all students.

CMPT 101-3 Introduction to Computer Programming
MACM 101-3 Discrete Mathematics I
MATH 232-3 Elementary Linear Algebra
TECH 101-3 Fundamentals of Teamwork and Communication II
TECH 124-3 New Media Images

In addition one of the following courses must be taken.

BISC 100-4 Introduction to Biology
BUS 131-3 Business in the Networked Economy II
KIN 142-3 Introduction to Kinesiology
PHYS 101-3 General Physics I

Upon completion of Tech One, students may apply for admission to programs in interactive arts and information technology, computing science or related offerings. These programs may be subject to

enrolment limitations, with competitive entry standards based on performance in first year courses. Students who are unable to gain admission to these programs should consult the program advisor with respect to other options, such as the general studies program within Applied Sciences.

4. Admission Requirements

Tech One is designed as a cohort-based first year with admission directly from BC Grade 12. Admission is proposed to be based on normal SFU admission standards including the Faculty of Applied Sciences breadth model for Grade 12 requirements, as specified in FAS UCC Paper 2002-4G. Specifically, the following table lists the proposed Grade 12 requirements in terms of SFU's standard List 1/List 2/List 3 requirements. Requirements effective Fall 2004 are proposed for publication in the calendar, while interim requirements for 2003-3 are proposed for consistency with the Summit publication for the 2003 cycle.

<i>Grade 12 requirements for Applied Sciences - admission average calculated on five best courses, chosen one from each row, as follows</i>		
	Tech One - 2003-3 Requirements	Tech One - Requirements effective 2004-3
List 1	English 12 ¹	English 12 ¹
List 2	principles of mathematics 12 ²	principles of mathematics 12 ²
	one other course (a science course is recommended)	one science course
List 2 or 3	any course (a fine and performing arts course is recommended)	one fine and performing arts course (recommended) or one social science course
	any course (a social science course is recommended)	one additional course
¹ or Français première langue 12 ² or AP/IB Math group course.		