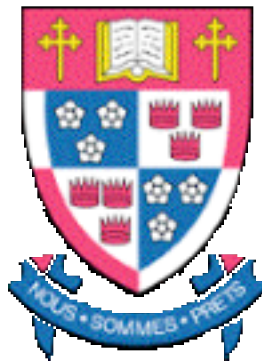


**New Directions for the Undergraduate Curriculum:
A Discussion Paper on the Implementation of
University-Wide Writing, Quantitative, and Breadth
Requirements**

Revised Recommendations



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**By the Undergraduate Curriculum Implementation Task Force
With the Writing, Quantitative and Breadth Support Groups**

(This document also is available on the Internet at <http://www.sfu.ca/ugcr>)

I: INTRODUCTION AND OVERVIEW

1.1 A Commitment to General Education

Since its inception, Simon Fraser University has been known for its commitment to undergraduate education. Like other institutions, we are finding it ever more challenging to fulfill this commitment. Technological and cultural changes, the rapid creation of new information, a larger and more diverse student body, conflicting sets of expectations on the part of social and political institutions; these are among the many factors that increase the difficulty of offering students a relevant, effective and coherent education.

In October 2002, the SFU Senate approved in principle several recommendations aimed at complementing the depth of knowledge students acquire from specialized programs with a set of general education requirements for all Bachelor's degrees. The recommendations were designed to enhance students' foundational writing and quantitative abilities and to expose them to the basic concepts and modes of inquiry in the humanities, sciences and social sciences.

Recognizing that the task of implementing these requirements would be complex, Senate established a Task Force, which was supplemented by three Support Groups (hereafter collectively referred to as the "Implementation Committees"), to recommend how the proposed changes could be implemented most effectively.¹ In November 2003, the Implementation Committees released a Discussion Paper that contained a set of preliminary recommendations and outlined what they believed to be a workable plan for the advancement of undergraduate education at SFU. Following the release of this document, the Implementation Committees consulted widely within SFU and with other institutions.

Most of our recommendations remain unchanged or have changed in relatively minor ways. However, we have withdrawn our recommendation for a course-specific test of quantitative proficiency. In its place, we propose to set a minimum quantitative standard for admission to SFU similar to the English language standard we proposed in the November paper, and to require students with relatively low high school math grades to take a test to assess their level of quantitative proficiency and/or take a Foundational Quantitative Skills course before being permitted to register in a Quantitative (Q) course.

Note: Revisions to the recommendations are summarized in Appendix A.

¹ http://www.reg.sfu.ca/Senate/SenateMinutes02/Sum_1002.html)

The revised recommendations are outlined and discussed below.

1.2 Weighing Costs and Benefits

In revising our recommendations, we were guided by three principles. First, the changes must work for students. To ensure that students are prepared to benefit from the new requirements, we recommend changes to admission and transfer policies, and the establishment of a Student Learning Centre (Section 2). Second, the changes must work for faculty and programs. We have given much thought to the definition of the new courses and to issues of development, certification and faculty support (Section 3). Resource issues are always crucial, and we have addressed them (Section 4). Finally, we discuss how the changes can be integrated into existing administrative and decision-making structures (Section 5).

We believe that Senate's decision to support this initiative was well founded. Although the proposed changes will be challenging to implement, they possess the potential for substantial benefits. If implemented successfully, our undergraduate students will be better prepared to live productive lives and to make significant contributions to society – qualities that the parents and the taxpayers who fund Simon Fraser University expect. Better writing and quantitative abilities will enable students and faculty to spend more course time on substantive issues, and to address such issues at an appropriate level. Implementing the new requirements will present interested faculty with an opportunity to reconsider their course offerings and to revitalize their methods of instruction. Not least, in graduating students who are more literate, numerate and broadly knowledgeable, we will improve the employment prospects of our degree-holders and enhance the reputation of our University, enabling us to attract an increasing number of well-qualified students.

1.3 Recommendations in Brief

The following summary highlights the principal changes that we propose to come into effect for students admitted to SFU in September 2006.

Recommendation: New Admissions and Continuation Requirements Pertaining to English Competencies and Writing Skills

We recommend that all applicants be required to demonstrate their competence in English as a part of the admissions process in one of four ways: **(a)** by obtaining an A (86%) in a course equivalent to (or more advanced than) English 12; or **(b)** by obtaining a score equivalent to a 6 on the LPI on an another accepted English language proficiency test; or **(c)** by obtaining at least a C (60%) in a course equivalent to (or more advanced than) English 12 and an acceptable score on an accepted language proficiency test; or **(d)** by obtaining at least a C grade in a certified writing-intensive (W) course that is transferable to SFU. We also recommend that students streamed into the Foundational Writing Skills

courses may make up to two attempts to achieve a grade of at least C in an FWS course or be required to withdraw from SFU and encouraged to reapply when they can demonstrate the requisite competence.

Recommendation: New Admissions and Continuation Requirements Pertaining to Quantitative Skills

We recommend that all applicants be required to demonstrate their competence in quantitative reasoning as a part of the admissions process by: **(a)** obtaining a grade of C (60%) or higher in a course equivalent to (or more advanced than) Principles of Math 11 (or Applications of Math 12), or a course equivalent to (or more advanced than) Principles of Math 12 (whichever course is required for admission to their specific Faculty and/or Program); or **(b)** by obtaining a grade of C or higher in a certified quantitative/analytical (Q) course transferable to SFU. We also recommend that students streamed into the Foundational Quantitative Skills courses may make up to two attempts to achieve a grade of at least C in an FQS course or be required to withdraw from SFU and encouraged to reapply when they can demonstrate the requisite competence.

Recommendation: New Post-secondary Transfer Admissions Requirements

We recommend that students entering SFU from post-secondary institutions be required to meet the same minimum Writing and Quantitative standards as students entering from high school or obtain at least a C grade in a W or Q course that is transferable to SFU.

Recommendation: A Course-Specific Test of Quantitative Proficiency.

This recommendation has been dropped.

Recommendation: New WQB Graduation Requirements

We recommend that all students seeking a Bachelor's degree be required to complete **(a)** 6 credits in courses that foster writing abilities (W courses), including at least one within the upper-division, preferably within the student's discipline; **(b)** 6 credits in courses that foster quantitative abilities (Q courses); **(c)** 18 credits in designated breadth (DB) courses, including 6 credits in the Humanities, 6 credits in the Sciences and 6 credits in the Social Sciences; and **(d)** 6 credits in undesignated breadth (UB) courses taken outside the student's major program. Programs may permit their students to substitute UB courses for the DB courses in their area.

Students will be strongly encouraged to take at least one W and one Q course within their first 30 credits at SFU, and required to take them within their first 60 credits. Transfer

students who have not received transfer credit for a W and/or Q course will be required to take at least one W and/or one Q course within their first 30 credit units at SFU.

Recommendation: A Student Learning Centre

We have recommended that a Task Force be established to review existing University-wide student academic support services and structures and to make recommendations about the establishment of a Student Learning Centre.

Recommendations: Foundational Writing and Quantitative Courses

We recommend that a limited number of new Foundational Writing and Foundational Quantitative Skills courses be created, and that support services for students who are not sufficiently well prepared to take these courses be expanded to meet the need.

2: ISSUES FOR STUDENTS

2.1 Better Courses, Better Qualifications

In this section, we explain why we believe that changing admissions standards that pertain to language and quantitative skills will improve the probability that the students we admit are prepared to meet the challenges of a university education, including the new WQB requirements. We address issues pertaining to transfer credit and describe the proposed new WQB graduation requirements. Finally, we discuss the need for additional academic support for students whom we decide to admit without the foundational writing and quantitative skills necessary to succeed in the courses we offer.

2.2 Preparing for New Admissions Standards

Principles of fairness and equity prescribe that all applicants to SFU should be evaluated in terms of the same basic standards. As a university whose admissions standards are premised on admitting “the best and the brightest,” we expect those admitted to SFU to be fully prepared to undertake our programs of study. However, experience shows that a significant number of undergraduate students admitted to SFU are poorly equipped to begin the quantitative courses required in their disciplines or to write at the first year level.

Students who are not prepared for the courses they take struggle to keep up. They may slow the progress of fellow students who possess the necessary skills and consume disproportionate time and resources. Among the repercussions of admitting students with deficient writing and quantitative skills are plagiarism, grade inflation and a lowering of the level of lectures and discussions. Many faculty members and students have spoken of the

demoralizing effect of this problem. The *Final Report of the Task Force on Academic Honesty and Integrity* discusses how “developing the abilities necessary to avoid unintentional plagiarism can be particularly challenging for those learning an additional language and/or working from a different set of cultural assumptions, even if they are advanced learners who meet language requirements.”²

At present, all students admitted directly from high school are required to have passed English 12 and at least Principles of Math 11.³ Many programs (e.g., Science, Business Administration, Computing Science, Engineering Science and Kinesiology) require Principles of Math 12. Students admitted from other post-secondary institutions are not required to meet these standards. Unfortunately, SFU instructors encounter a significant number of students who are unable to write at an appropriate level and unprepared to take the quantitative courses required in their programs. Approximately 20% of first-year students who take a high school level Math Skills Assessment Test administered at SFU fail it.

One source of this problem is that standards from high schools are inconsistent. The high school portion of the blended marks (i.e., 60% course grade and 40% provincial exam) on which our direct admissions are based may vary from school to school. Another source is our failure to require students transferring from other post-secondary institutions to obtain acceptable grades in English and math courses.

What should we do? There is little support for the idea of implementing extensive and expensive remedial services to assist students we admit under our current procedures. And there is little support for the idea of inflicting on such students the responsibility to redress their deficiencies within 30 credits or be required to withdraw. A wiser, fairer and more responsible alternative is to make a concentrated effort to identify applicants with seriously deficient writing and quantitative skills during the admission process and insist that they acquire the requisite skills before they are granted admission. Although we might choose to admit some otherwise outstanding students with minor writing or quantitative deficiencies, we should not accept more students than we are willing to help.

Recommendation: New Admissions and Continuation Requirements Pertaining to English Competencies and Writing Skills

In order to “demonstrate a command of English sufficient to meet the demands of classroom instruction, written assignments and participation in tutorials and discussions” (p. 40, 2003-2004 Calendar), we recommend that, beginning with the 2006-3 intake,

² <http://www.sfu.ca/integritytaskforce/releasedreport.pdf>

² <http://www.sfu.ca/integritytaskforce/releasedreport.pdf>

³ Or Applications of Math 12

applicants to SFU be required to demonstrate their competence in English language skills in one of the following ways:

Direct Admission from Grade 12

- (a) A grade of 86% (A) or higher in a course equivalent to (or more advanced than) English 12 (more advanced English courses would include Advanced Placement and International Baccalaureate);
- (b) A grade of 60% - 85% (C to B) in a course equivalent to (or more advanced than) English 12 plus a score of 4 or 5 on the essay portion of the Language Proficiency Index (LPI) or an equivalent score on an accepted language proficiency test;
- (c) A score of 6 on the essay portion of the LPI or an equivalent score on an accepted language proficiency exam.

Continuation Requirement for Students Admitted with English 12 grades in the 60% - 69% Range

Applicants admitted on the basis of English 12 (or equivalent) grades in the 60%-69% range will be required to register in a Foundational Writing Skills (FWS) course within their first 30 credits at SFU and to complete it with a grade of C or better within their first 45 credits before being allowed to register in a W course. Students who fail to obtain a grade of C or better in an FWS course after attempting it a maximum of two times will be required to withdraw. Such students would have to re-apply for admission. They could be re-admitted if they established that they had acquired the necessary proficiency in English.

Enrolment Cap

We recommend that admissions requiring registration in an FWS course be limited to 500 students in an academic year. (Note that this figures is based on current enrolments and may change as enrolments rise.) As a result, some students who meet the minimum English/Writing admission standard may not be admitted.

Admission by college or university transfer

We recommend the following admission requirements for college or university transfer students:

- (a) Fulfillment of the requirements for direct admission from high school; or
- (b) A grade of C or better in a certified W course that is transferable to SFU.

International applicants

We do not recommend any changes to the admission standards for International applicants. International applicants may satisfy SFU's English language competency requirement in one of several ways. Applicants may submit an acceptable IELTS score (or an equivalent score from another approved test of English language proficiency). Applicants admitted on the basis of their IELTS score will be "streamed" into W or

Foundational Writing Skills courses on the basis of that score. Applicants admitted on the basis of a score earned on a different English language proficiency test (e.g., TOEFL, CAEL, etc.) will also be required to take the LPI or an equivalent language proficiency test before the conclusion of their first semester at SFU.

International students who score below 4 on the essay portion of the LPI, or who fail to obtain an acceptable score on an equivalent exam, will be required to withdraw from any W course in which they may have registered and to register instead in an appropriate program or pre-W course (which, depending on the student's level of competence might be the English Bridge Program, the English Language and Culture Program or a Foundational Writing Skills course).

The Language Instruction Committee may make additional recommendations about admission, writing requirements and resources for International students.

Students with Disabilities, Diverse Qualifications and Programs for Mid-Career Adults

We do not recommend any changes in our current policies, as stated in the 2003-2004 Calendar.

Why the Language Proficiency Index?

The Writing Support Group evaluated available language proficiency tests and decided that none was superior to the LPI, which is administered by an Institute housed at UBC. The LPI is already taken for placement purposes by most students admitted to UBC, UVic and other post-secondary institutions in BC, so introducing its use here should not pose an additional financial burden on most applicants. The Writing Support Group continues to examine other English language proficiency exams that may be more suitable for students with English as an alternative language.

<i>Recommendation: New Admissions and Continuation Requirements Pertaining to Quantitative Skills</i>
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All students admitted to SFU should be adequately prepared to complete the quantitative aspects of their programs, including the new Q courses. To ensure that we meet this goal, we recommend improved admission standards pertaining to quantitative skills.

Direct admission from Grade 12

We recommend that, beginning in 2006-3, all applicants be required to demonstrate their competence in quantitative skills as a part of the admissions process by obtaining a grade of 60% (C) or higher in a course equivalent to Principles of Math 11 (or Applications of Math 12), or in a course equivalent to Principles of Math 12 (whichever is required for admission to their specific Faculty and/or Program).

Applicants who obtain math scores in the 60% - 69% range may be admitted, but will be required either to register directly in a Foundational Quantitative Skills (FQS) course or to take a diagnostic quantitative skills test within their first semester. The diagnostic test will contain modules equipped to assess the quantitative abilities needed for all types of Q courses. Admitted students who choose to take the diagnostic test and who score 70% or higher on the appropriate module will be eligible to register in an appropriate Q course (that is, a Q course with prerequisite skills assessed by the module). Those who score below 70% will be required to register in an appropriate Foundational Quantitative Skills course within their first 30 credits and to obtain a grade of C or better within their first 45 credit units before being eligible to register in a Q course. Students who fail to obtain a grade of C or better in an FQS course after a maximum of two attempts will be required to withdraw from SFU. Such students would have to re-apply for admission. They could be re-admitted if they established that they had acquired the necessary proficiency in quantitative skills.

Admission by college or university transfer

Students transferring from other post secondary institutions must either (a) meet the math requirements of students who are admitted directly from high school, or (b) obtain a grade of C or better in a certified Q course that is transferable to SFU.

International applicants

International applicants may meet the Q admission requirement by fulfilling either the Grade 12 or college transfer entry standard.

<i>Recommendation: New Post-secondary Transfer Admissions Requirements</i>

(Note: this recommendation has been integrated in 1a and 1b above.)

To improve the consistency between our admission requirements for applicants from high schools and applicants from post-secondary institutions, we recommend that students entering SFU from other colleges, universities or institutes be required to meet the same English and math standards as those required of students admitted directly from high school. For example, all students seeking admission to the Faculty of Arts would have to successfully complete Principles of Math 11 or Applications of Math 12 (or their equivalent) and English 12 (or its equivalent). Students transferring from other post-secondary institutions may also meet our English and quantitative standards by obtaining at least a grade of C in a W or Q course that is transferable to SFU.

<i>Recommendation: A Course-specific Test of Quantitative/Analytical Proficiency</i>

As a result of our consultations, we abandoned this recommendation in the conviction that the University and its students will be better served by the measures now outlined in

our revised Recommendation for improved Quantitative admissions and continuation standards (above).

2.3 Navigating the New Course Requirements

The Recommendation below reiterates and elaborates on the University-wide requirements approved in principle by Senate in October 2002. We have specified an implementation date, recommended when W and Q courses should be taken, specified that at least one W course should be taken at the upper division, preferably in the student's discipline, and outlined a process for exemptions.

<i>Recommendation: New WQB Graduation Requirements</i>

We recommend that the following University-wide graduation requirements be implemented for students admitted to SFU for the Fall 2006 (2006-3) semester:

- 6 credits of courses that foster writing abilities (W courses), including at least one course in the upper division, preferably within the student's discipline;
- 6 credits of courses that foster quantitative abilities (Q courses);
- 24 credits of breadth, including:
 - 18* credits of Designated Breadth (DB), consisting of 6 credits in the Humanities, 6 credits in the Sciences and 6 credits in the Social Sciences; and
 - 6 credits of Undesignated Breadth (i.e., courses taken outside the student's major program).

*Programs may waive the requirement that their students take the DB courses in their areas. For instance, Biological Sciences may exempt its students from completing DB Science courses. In such cases, students would be required to replace the credits with Undesignated Breadth (UB) courses. In the example cited, Biological Sciences majors would replace the 6-credit Science DB requirement with an additional 6 credits of UB, for a total of 12 credits of DB (6 in the Humanities and 6 in the Social Sciences) and 12 credits of UB (courses outside their programs).

Note that these WQB requirements are minimum requirements; programs may set additional W, Q and/or B requirements for their students.

Students will be encouraged to take at least one W and one Q course within their first 30 credits at SFU and will be required to take at least one W and one Q course within their first 60 credits. Transfer students who have not received transfer credit for a W and/or Q course will be required to take at least one W and/or one Q course within their first 30 credit units at SFU.

Why require one W course in the Upper division?

Lower-division writing courses expose students to the “tools of the trade” by: **(a)** introducing them to university-level academic writing; **(b)** enabling them to recognize disciplinary differences; **(c)** helping them appreciate citation practices, the use of and reporting on sources, library research skills, essay structure, paraphrasing, etc.; **(d)** helping them develop attitudes about writing as a means of learning as well as communication; and **(e)** fostering learning skills in collaboration, drafting processes and revision strategies.

Upper-division writing courses apply and use the tools and strategies of writing in different contexts. They are attentive to: **(a)** the relation between theory and data, and the use of primary sources; **(b)** the acquisition of meta-strategies—knowing that you know what you know, and how; **(c)** the shift from dependence on the instructor as the source of knowledge to students’ development of their own analytical ability; **(d)** the preparation of students for professional and workplace contexts; **(e)** professional forms of writing; **(f)** analysis and synthesis of complex data and ideas; **(g)** the acquisition of scholarly research attitudes and skills; **(h)** the importance of critical participation in civil society; and **(i)** the specifics of disciplinary practices.

The fundamental purpose of the writing initiative is to make sufficient improvements in the literacy of SFU students to enable them to become decent writers. A student who passes two lower-division W courses may not meet this standard. Upper-division writing experiences are viewed by all members of the Writing Support Group and other experts in writing as qualitatively superior to lower-division writing experiences. Universities with exemplary writing programs typically structure their writing requirements in ways that ensure that students take upper-division courses in their disciplines. Third- and fourth-year students are better prepared intellectually to benefit from training in writing; upper-division writing courses are more likely than lower-division writing courses to be in students’ disciplines, and upper-division classes tend to be smaller than lower-division classes.

Many SFU departments are keen to develop upper-division writing courses; they can accommodate the needs of their students by making a relatively small number of their upper-division courses writing intensive.

2.4 Joint Majors, Double Majors, Majors with Required Minors, 2nd degrees

Students undertaking joint or double majors will be required to meet the same requirements as other students, but they will be required to meet them only once. Students seeking second degrees from SFU who have fulfilled the WQB requirements while earning their first degrees at SFU will not be required to fulfill additional WQB requirements for their second degrees.

The academic work of students who obtained a first degree from another institution or from SFU prior to the introduction of the WQB requirements will have to be assessed to determine WQB course credit.

2.5 Exemptions

It is possible that the completion of the full breadth requirement will prove unduly onerous for students in programs that permit few elective credits. In such cases, and in cases in which the requirements would otherwise jeopardize the academic integrity of the program, the program may petition SCUS for its students to be exempted from some portion of the breadth requirement (Section 5.6).

2.6 Toward a New Student Learning Centre

When Senate passed the new WQB requirements in principle, it recommended “the development and maintenance of additional support services such as a writing centre and a math centre be added to the issues which the task force will address.”

Although we believe that our proposed changes to admissions policy will improve the readiness of new students to meet the demands of a university curriculum, some students will continue to need additional academic assistance.

Recommendation: The creation of a Task Force or equivalent body to explore the establishment of a Student Learning Centre

We recommend that the Vice President, Academic establish a Task Force or comparable body to review existing University-wide student academic support services and structures and to make recommendations about the establishment of a Student Learning Centre. Such a centre might offer workshops, clinics, individual consultations and peer tutoring, and assist in the development of such new online resources as skills-assessment quizzes and self-guided tutorials. Our recommendation and covering memo appear as Appendix G.

The Task Force on Academic Honesty and Integrity has recommended the University “establish an Academic Learning Centre for the Burnaby campus and accommodate the needs of students at Harbour Centre and the Surrey campuses.” The Language Instruction Committee plans to recommend that a Student Learning Centre be the point of contact between ESL students admitted to SFU and programs designed to improve their academic English. Currently, the English Bridge Program and the English Language and Culture Program offer services of this kind.

Recommendation: Foundational Writing Skills Courses

We recommend the development of a set of new Foundational Writing Skills (FWS) courses for students admitted to SFU with low grades in English and/or low scores on a language proficiency test. Such courses would prepare students to read and write at a first-year university level. Although FWS courses may provide some remedial assistance, they would not be equivalent to English 12. Rather, they would establish a framework for uses of reading and writing that direct students toward such goals of university literacy as use of Standard English, accurate representation, critical assessment of sources, and the ability to construct and develop arguments. We would expect such courses to be designed in somewhat different ways for students with English as a first language and students with English as an alternative language.

We recommend that registration in the FWS courses be capped at 500 students per academic year. (Note that the limit of 500 is based on current enrolments and may change as enrolments rise.) This enrolment limit may result in the minimum English grade for admission being higher than 60% (Grade 12) or C (for college transfer).

We recommend that FWS courses be 3 credit courses, but that these credits be “additive” rather than “integral.” That is, students passing the courses would be awarded academic credit and their course grades would be included in the calculation of their GPAs. However, FWS credits would not count toward the number of credits required to graduate (usually 120).

We recommend that students required to take FWS courses must obtain a grade of C or higher in an FWS course before registering in a W course. Students should be allowed to repeat an FWS course only once. Following two unsuccessful attempts, students should be required to withdraw. Such students would have to re-apply for admission. They could be re-admitted if they established that they had acquired the necessary proficiency in English.

We recommend that tuition for FWS courses be charged at the Basic Tuition Fee rate.

Students needing additional assistance before attempting Foundational Writing Skills courses would be referred to appropriate resources. Such resources might include the English Bridge Program, the English Language and Culture Program, individual assistance or online, self-directed programs that teach basic skills. Delivery of these resources could be coordinated through a Student Learning Centre.

Recommendation: Foundational Quantitative Skills Courses

SFU currently offers some foundational level mathematics courses, but we believe additional courses will need to be developed. Foundational Quantitative Skills (FQS) courses would prepare students to enter Q courses at a first-year university level. Different kinds of FQS courses would be offered for students who seek to register in different kinds of Q courses.

We recommend that registration in FQS courses be limited to 500 students in an academic year. (Note that the limit of 500 is based on current enrolments and may change as enrolments rise.) We do not believe that this requirement is likely to function as an enrolment cap at the admissions level because statistical evidence suggests that fewer than 500 students per year would require an FQS course.

We recommend that FQS courses be 3 credit courses, but that these credits be “additive” rather than “integral.” That is, students passing the courses would be awarded academic credit and their course grades would be included in the calculation of their GPAs. However, FQS credits would not count toward the number of credits required to graduate (usually 120).

We recommend that students required to take FQS courses must obtain a grade of C or higher in an FQS course before registering in a Q course. Students should be allowed to repeat an FQS course only once. Following two unsuccessful attempts, students should be required to withdraw from SFU. Such students would have to re-apply for admission. They could be re-admitted if they established that they had acquired the necessary proficiency in quantitative skills.

We recommend that tuition for FQS courses be charged at the Basic Tuition Fee rate.

Students needing additional assistance before attempting FQS courses would be referred to appropriate resources. Such resources might include individual assistance or online, self-directed programs that teach basic skills. Delivery of these resources could be coordinated through a Student Learning Centre.

3: ISSUES FOR FACULTY

3.1 Innovation and Collaboration

Implementing the new requirements will create opportunities for faculty to develop new courses and to redesign existing courses in ways that enhance their teaching experiences and the learning experiences of their students. Faculty who have structured their courses to include a writing-intensive component have been impressed with the contributions this

change has made to the quality of the courses. Some have even said that they would never go back to their old way of teaching the courses. Their enthusiasm has been nourished by feedback from students who have said that, in spite of their initial reservations and some increase in effort required, they learned significantly more than they did in courses without a writing-intensive component.

Some students are insecure about their quantitative abilities. We need quantitative courses that will help these students allay their insecurities. Courses that enable students to acquire skills, such as those involved in evaluating the statistical information they encounter daily through the media and elsewhere, understanding basic probabilities and risks, and completing their own income tax forms, are of considerable practical value. Designing such courses is a challenging but potentially rewarding experience.

Creating breadth courses that expose students to new ways of thinking about important issues and the “big ideas” that shape cultures should offer an exciting and invigorating experience for faculty. Replacing or supplementing the current array of breadth requirements with one coherent set should help organize, standardize and clarify the curriculum.

3.2 Definitions of W, Q and B Courses

To designate courses as W, Q and B, we need criteria that enable us to distinguish them from other kinds of courses. In April 2003 we sent preliminary definitions of W, Q and B courses to programs for comment. Following discussion of the comments and suggestions we received,⁴ we revised the definitions, and they have been further refined as a result of comments received during our consultations on the previous edition of this Discussion Paper.

3.2.1 What is a W course?

On the assumption that students entering W courses have met a basic competency standard (see Section 2.2), we propose that W courses fulfill the following conditions:

1. Students have opportunities to use writing as a way of learning the content of the course and are taught to write in the forms and for the purposes that are typical of disciplines and/or professions, in ways that are clearly distinguished from remedial and foundational skills courses.

⁴ A compendium of WQB comments received in response to our April questionnaire is available at http://www.sfu.ca/ugcr/WQB_Requirements/

2. Examples of writing within the disciplines are used as a means of instruction about typical structures, modes of reasoning, styles of address, and the use of technical language and of evidence.
3. Students receive appropriate feedback and response to their writing that is based on explicit criteria and is directed at improving the quality of their writing.
4. Revision is built into the process of writing for formal assignments, usually in terms of revisions of the same paper, or alternatively, in revisions accomplished through successive similar assignments.
5. At least half the course grade is based on written work for which students receive feedback (see Criterion 3).

On these criteria, courses that require written assignments but do not provide explicit instruction in writing would not qualify as W courses. A list of courses developed in conjunction with the Centre for Writing Intensive Learning or which are otherwise deemed likely to be W courses is available in Appendix C.

3.2.2 What is a Q course?

Definition

To qualify as *Quantitative/Analytic* (or ‘Q’ for short), a course must have either quantitative (numerical, geometric) or formal (deductive, probabilistic) reasoning as part of its primary subject matter, or make substantial use of such reasoning in practical problem solving, critical evaluation, or analysis.

Interpreting the Q Definition

1. Mathematics courses already required in Math, the Sciences, Engineering, Business Administration and Economics, and statistics courses required in Social Science programs clearly qualify as Q courses, as do the symbolic logic courses offered in Philosophy.
2. Courses currently offered in programs such as Engineering Science, Physics, Chemistry, Biology, Business, Economics and other Social Science programs that contain a significant math or stats component also would be eligible for Q designation.
3. A third type of course eligible for Q designation will be designed especially for students in the Humanities and Fine Arts. The goal of such courses will not be simply to nurture traditional math skills. Such courses will aspire to the greater challenge of deepening the understanding and appreciation of quantitative and formal reasoning, their ubiquitous utility, and their creative potential. We view such courses as focusing on the relation between **(a)** concepts and structures communicated through numbers and other systems of abstract representation (such as formal languages, programming languages, geometries, graphs) and **(b)** fostering students' ability to engage more effectively with the subject matter of their respective programs and practical everyday situations. Such courses need not focus primarily on quantitative or formal reasoning methods, but should give significant exercise to such techniques through model building and problem solving, both in class and in course assignments.

3.2.3 What is a Designated Breadth (DB) course?

Designated Breadth (DB) courses expose students to new theoretical perspectives, forms of thought and modes of enquiry. To qualify as a DB course, a course must be intellectually accessible to “non-majors”; that is, students’ ability to master the course content must not depend on bringing to it the kind of specialized knowledge typically possessed by students majoring in a discipline. Although most DB courses will be introductory in nature, upper-division courses may qualify as DB courses if they do not require students to have specialized knowledge or specific prerequisites.

In addition, we propose that a DB course substantially fulfills AT LEAST ONE of the following three conditions:

1. It explicitly addresses how and why a discipline (or disciplines) defines, acquires and organizes knowledge in particular ways; it identifies important questions and

- problems in the discipline (or disciplines) and describes procedures used to generate valid answers to the questions or workable solutions to the problems.
2. It is designed to give students a broad understanding of the historical development and/or the contemporary dynamics of the physical, natural, social and/or cultural environments.
 3. It provides a survey of a substantial body of the knowledge, theories and/or controversies that are deemed to be central to a discipline or disciplines.

3.2.4 What is an Undesignated Breadth (UB) course?

A UB course is simply a course taken outside a student's program, as determined by the program. For example, the Department of History might decide that courses in all programs except History count as UB courses.

3.3 Designing and Developing W, Q and B courses

If the proposed changes to the undergraduate curriculum are to succeed, we will need to develop W, Q and B courses that appeal to students and accomplish the goals for which they are designed. Developing enough W courses, Q courses for students who have had difficulty with quantitative concepts, and Designated Breadth courses in the Sciences to meet the demand will be particularly challenging.

3.3.1. Designing W-courses: A Sample of Models

Writing courses that meet the W criteria (Section 3.2.1) may be designed in a wide variety of ways. See Appendix C for examples.

3.3.2 Instructional Support for the Development of W, Q and B Courses

Faculty who are interested in revising existing courses to qualify as WQB courses, or who wish to develop new WQB courses, may obtain expert assistance from the following sources.

Learning and Instructional Development Centre (LIDC): LIDC is mandated to support and promote effective teaching of all kinds, to assist in the integration of instructional technologies, and to provide media services and classroom support. LIDC staff are available to help faculty develop conventional and online teaching materials, webpages, videos and interactive exercises.⁵

⁵ <http://www.sfu.ca/lidc/>

Centre for Writing-intensive Learning (CWIL): CWIL is mandated to provide expert guidance to instructors from all disciplines interested in adding a writing-intensive component to their courses or developing new writing-intensive courses. CWIL is specifically mandated to help faculty design assignments and instructional strategies that help fulfill departmental criteria for successful writing in the discipline, and to offer workshops, seminars, summer institutes, departmental retreats and other forms of training sessions for faculty and TAs for writing-intensive course development, assessment and revision.⁶

Support Groups: Members of the Writing, Quantitative and Breadth Support Groups are available for consultation. They are an excellent resource to draw on for inspiration, tips and cautions about what to do and what to avoid. In addition, many SFU faculty have considerable expertise in the development of writing-intensive, quantitative-intensive and breadth courses.

Reference material: Material is available on the Internet pertaining to the development of W,Q and B courses (e.g., the LIDC and CWIL websites above). Widely used in developing W-type courses elsewhere is John C. Bean's *Engaging Ideas: The Professor's Guide to Integrating Writing, Critical Thinking, and Active Learning in the Classroom*: Jossey-Bass, 2001.

Funds are available to support the development and recurring offering of W, Q and B courses.

3.4 Certifying W, Q and B Courses

We recommend that, during implementation, courses be designated W, Q and B by the appropriate Support Group based on documentation supplied by the programs nominating the courses for these designations.

One or more successor bodies with expertise in and commitment to each requirement should be charged with monitoring and maintaining the lists of W, Q and B courses to ensure that there is an ample supply to meet the demand and that the goals envisioned for these requirements continue to be met.

For DB courses, the process of certification will include determining the sub-group or groups (B-Sci, B-Hum, B-Soc) to which a DB course belongs. Programs seeking to have a course certified DB will be asked to recommend a classification. The Breadth Support Group may seek clarification from other programs regarding the appropriate classification/category proposed for a DB course.

⁶ <http://www.sfu.ca/cwil/>

The content of some courses may qualify them to be classified in more than one subgroup (e.g., both B-Sci and B-Soc). When a course qualifies for more than one DB designation, students taking the course may select one (and only one) of the designations.

Credits for individual courses should not be split. However, specialized programs such as the Semester for Dialogue and various Field Schools may qualify to have some or all of their credits distributed among classifications (e.g., 6 credits B-Hum, 6 credits B-Soc).

All courses that are identified, revised or developed as a result of this curriculum initiative will have to go through the normal channels of review and approval at Departmental, Faculty and University levels.

4: RESOURCE ISSUES

4.1 A Planning Challenge

Implementation of the W, Q and B requirements is intended to improve the quality of undergraduate education at SFU without overburdening students with additional requirements. Most students should be able to fulfill the WQB requirements within the credit hours currently required in their programs.

Careful planning will be required to ensure that an appropriate number of courses are available to students, and that a suitable quantity of fiscal, human and physical resources are available to support the development, implementation and maintenance of the new requirements. SFU currently provides significant support for writing, quantitative and breadth courses. Although it should be possible to redirect some resources, we believe that substantial additional resources will be required.

4.2 Modeling Supply and Demand

We have prepared estimates of the number of course spaces that will be needed to enable students to meet the WQB requirements. Our analysis indicates that the challenge of developing enough courses to meet the need will be greatest for writing courses, quantitative courses for Humanities students and designated breadth courses in Science. Documents setting out our estimates of the development and recurring funds necessary to implement the proposed WQB requirements, and the models from which we derived our estimates, are available on our website.⁷

4.3 Resource Allocation

We are eager to encourage and support the participation of faculty and programs in the identification and development of W, Q and B courses. We have prepared guidelines and

⁷ http://www2.sfu.ca/ugcr/Task_Forces_and_Support_Groups/UCITF/Documents/

procedures to guide the allocation of resources to implement and sustain the proposed new requirements. We expect the costs of initial development to be higher than the costs of maintaining the requirements.

Models for teaching W, Q and B courses differ in expense, but different models may be necessary to support different pedagogies. We are committed to developing fair and open procedures for the allocation of resources and to making hard decisions that ensure that resources are allocated equitably and used effectively and efficiently. Whenever possible, structures designed to develop, implement and maintain the requirements should be housed within, and be complementary to, existing University frameworks. Our proposed allocation process is outlined in some detail in a document available on our website.⁸ The long-term success of the W, Q and B requirements will depend on implementing sustainable teaching and administrative models.

4.4 Procedures for Resource Allocation

The procedure we propose to follow for the allocation of resources for WQB pilot projects is outlined in Section 4.3 and in our Resource Allocation document (see footnote 8). Following implementation, we recommend that normal course approval processes be followed.

5: ADMINISTRATIVE ISSUES

5.1 Using Existing Structures

Our guiding principle in all administrative matters has been to integrate the proposed changes into the existing administrative and decision-making structures of the University in a way that meshes with the needs of other BC post-secondary institutions. In this section we address some relevant issues.

5.2 Recruitment

We do not believe that requiring domestic students who apply to SFU to write a language proficiency test will entail a significant hardship. Students admitted to other BC universities are required to take such tests, and most BC students write them relatively early in the application process. Our student recruiters report they are often asked by potential applicants from BC high schools why SFU does not require applicants to take the LPI (as do UBC and UVic, in order to place students in appropriate first-year English courses). Most high school students who apply to SFU also apply to other BC colleges or university colleges.

⁸ http://www2.sfu.ca/ugcr/Task_Forces_and_Support_Groups/UCITF/Documents/

Students applying to UBC and UVic from outside BC are not exempted from the language proficiency requirement, although some students choose to write a language proficiency test or tests following their arrival in BC. Sittings of the LPI are offered in a number of locations outside of BC, and individual sittings can be arranged anywhere in the world. Special administrations of an appropriate language proficiency test or tests will be arranged at appropriate times for International students.

Some concern has been expressed that requiring language proficiency scores will discourage otherwise qualified applicants from applying to SFU, but as mentioned, most applicants take the test anyway. Although data provided by Analytical Studies suggest that a relatively small number of high school students applying to SFU would be deemed inadmissible on the basis of low grades in English 12 or on language proficiency tests, we believe the benefits of identifying such students are worth the costs.

We expect a similar number of applicants will be denied admission on the basis of poor grades in the required math courses.

The proposed requirements are sufficiently flexible to allow for exceptions to be made when appropriate. We believe that the statement of SFU's commitment to excellence implicit in the new requirements should be beneficial to recruiting activities.

5.3 Admissions

One foreseeable impact of the changes in the admission process is that applicants would have to write a language proficiency test far enough in advance for their scores to be included in their applications. Currently, the early admission deadline for Fall semester entry (for Canadian high school applicants) is two months before the regular application deadline. Students seeking early admission would have to write a language proficiency test before December of their Grade 12 year. Such students could, however, be granted admission contingent on achieving an acceptable language proficiency score.

Applicants seeking admission to SFU in other semesters would have more time to submit language proficiency scores, because Spring and Summer semesters have no "early admission" process. Administratively, the admissions process need not change significantly; applicants would simply submit additional information that should be helpful in making admissions decisions.

We are proposing that the International English Language Testing System (IELTS) be given priority over the Test of English as a Foreign Language (TOEFL) as a means for International applicants to demonstrate proficiency in the English language. We have arrived at this position after multiple consultations with SFU International and the Language Instruction Committee. Our proposals "promote" IELTS, which we believe is a more reliable predictor of proficiency in academic English, by making it possible for those submitting an acceptable IELTS score to register directly in a W course. Those who submit scores from other English language proficiency test will still be required to take the LPI sometime before the conclusion of their first semester at SFU.

The proposed quantitative admissions standard requires no additional information from applicants, although a post-admissions assessment of Q skills is required for those whose math grades are in the lowest acceptable range.

It is difficult to know whether the proposed changes to SFU's English language and quantitative admission requirements would result in a change in the demographic profile of students admitted to SFU. What is perhaps more easily predicted is an improvement in the skill set and academic readiness of admitted students.

5.4 Transfer and Articulation

SFU grants transfer credit for most of the academic courses taken by students at BC's "sending institutions" (institutes, colleges, and university colleges). We will work with the sending institutions to determine which transfer courses warrant certification as W, Q or B.

5.4.1. Articulating Q Courses

We recommend that Q credit be granted for university-level courses that have been certified as meeting the criteria for our Q courses and are transferable to SFU. Q for the Humanities-type courses may require closer analysis.

5.4.2 Articulating W Courses

We expect the articulation process to be more complex for W courses. The characteristics that distinguish a W course from other courses are in large part pedagogical and these features are often not apparent from standard course descriptions. Transfer courses will have to be examined carefully to determine whether they meet the W criteria. Adding to this complexity is the possibility that a transfer course may merit a W designation when taught in one way, but not when taught another way (while being fully deserving of "non-W" transfer status in both cases). Because most transfer courses are lower division, many students will be unable to satisfy the requirement to take one upper-division W course before they are admitted to SFU.

5.4.3 Articulating B Courses

It will be relatively easy for students to satisfy UB requirements with transfer courses. In general, we recommend that courses eligible for transfer credit for an SFU course with a DB designation be awarded SFU DB credit.

5.5 Record Keeping

The new Student Information System (SIMS) will be able to track completed W, Q and B requirements. Courses with W, Q or B labels will be listed in the SFU Calendar, the electronic course catalogue and, when successfully completed, on students' records. Students will be able to see which courses carry which designation for course selection

purposes, and students and advisors will be able to track which requirements remain to be completed for graduation. We propose that the W, Q and B requirements be noted in cumulative fashion on students' official transcripts.

5.6 Standards and Exemptions

If a program is unable to implement the new requirements without jeopardizing the academic integrity of its curriculum, it may apply for an exemption. We propose that programs seeking exemptions prepare a rationale for their request, then consult with the relevant Support Group(s), which will forward the request to the Task Force. After review, the Task Force will forward its recommendation along the following path: the appropriate Department or Program UCC → the Faculty UCC → SCUS → SCUP → Senate.

6: CONCLUSION

We believe that this initiative has the potential to enhance significantly the quality of undergraduate education at SFU and to elevate its national profile. It also contains the potential to make faculty more aware of and engaged in the University curriculum as a whole and to engender a set of new and exciting courses. Although the costs of implementing the proposed recommendations may be significant in material and staff resources, we believe the benefits will vastly outweigh the costs.

We welcome your comments and suggestions. Please send them to slrhodes@sfu.ca.

APPENDICES

Appendix A: A Summary of Revisions made in the Recommendations in the November Discussion Paper

Recommendation 1a: New admissions requirements pertaining to Writing skills

In November we recommended that, to be admitted to SFU, applicants who obtained a grade below 80% in English 12 or an equivalent course be required to obtain an acceptable score on a language proficiency test. We have upgraded the English 12 standard to 86%. We believe that the higher grade (A) is a better predictor of readiness for a university Writing course. The higher standard will not produce a significant increase in the number of applicants who write a language proficiency test, because most applicants to SFU apply to other BC post-secondary institutions that require the Language Proficiency Index (LPI) or an equivalent language proficiency test.

In November we recommended that students with English 12 grades between 60% and 69% and an acceptable score on a language proficiency test be required to obtain a grade of C- in a Foundational Writing Skills course as a condition for continuation. We have raised this grade to C because grades below C are generally considered to be unsatisfactory and below community expectations for academic performance.

Recommendation 1b: New admissions requirements pertaining to Quantitative skills

In November we recommended that instructors of introductory-level Quantitative courses be encouraged to develop course-specific tests to assess the preparedness of their students to learn the quantitative concepts they intended to teach (our previous Recommendation 3). During our consultations, we found that members of the community believed that this recommendation “watered down” the Ad Hoc Committee’s original recommendation. Some members of the community commented on the discrepancy between the English language and Quantitative standards. Our previous recommendation, it was thought, would not ensure that students were adequately prepared to take Q courses, and, it was suggested, we were not being sufficiently directive in placing students at the appropriate Q levels. Finally, the recommendation was viewed as impractical, requiring many instructors to create quantitative proficiency tests. In response to such concerns, we abandoned this recommendation in favour of the following (which we include here in its entirety):

Direct admission from Grade 12

We recommend that, beginning in 2006-3, all applicants be required to demonstrate their competence in quantitative skills as a part of the admissions process by obtaining a grade of 60% (C) or higher in a course equivalent to Principles of Math 11 (or Applications of Math 12), or in a course equivalent to Principles of Math 12 (whichever is required for admission to their specific Faculty and/or Program).

Applicants who obtain math scores in the 60% - 69% range may be admitted, but will be required either to register directly in a Foundational Quantitative Skills (FQS) course or to take a diagnostic quantitative skills test within their first semester. The diagnostic test will contain modules equipped to assess the quantitative abilities needed for all types of Q courses. Admitted students who choose to take the diagnostic test and who score 70% or higher on the appropriate module will be eligible to register in an appropriate Q course (that is, a Q course with prerequisite skills assessed by the module). Those who score below 70% will be required to register in an appropriate FQS course within their first 30

credits and to obtain a grade of C or better within their first 45 credit units before being eligible to register in a Q course. Students who fail to obtain a grade of C or better on an FQS course after a maximum of two attempts will be required to withdraw from SFU until they have demonstrated the necessary competence.

Admission by college or university transfer

Students transferring from other post-secondary institutions must either (a) meet the math requirements of students who are admitted directly from high school, or (b) obtain a grade of C or better in a certified Q course that is transferable to SFU.

International applicants

International applicants may meet the Q admission requirement by fulfilling either the high school or the college transfer entry standard.

We believe that this recommendation restores an appropriate level of symmetry between the W and Q requirements, though it does not make them completely symmetrical. Differences between the W and Q requirements are unavoidable because no standardized test equivalent to the LPI is available to assess quantitative proficiency prior to admission, and no other BC (or to our knowledge, Canadian) university assesses the quantitative proficiency of students prior to admission. Furthermore, we currently require all direct entry students to submit English 12 grades, which are included in the calculation of our admission GPA, because all programs require this level of mastery of English. However, different programs require different levels of mathematical proficiency for admission, and Math 11 grades are not counted in our admission GPA. Finally, our conception of quantitative proficiency is not limited to mathematical skills, making it difficult to assess.

Instructors may set prerequisites for quantitative courses based on math grades or scores on appropriate modules of the quantitative proficiency test that exceed the minimal levels we have identified.

Recommendation 2: New post-secondary transfer admissions requirements

As suggested above, transfer students may either fulfill the requirements for direct admission from high school or obtain at least a grade of C in a W or Q course transferable to SFU.

Recommendation 3: Post-admission test of quantitative proficiency (abandoned: see Recommendation 1b above)

Recommendation 4: New WQB graduation requirements

In November we recommended that students be required to take 6 credits of courses that foster writing abilities (W courses), including at least one course from the upper division. Following extensive discussion, we revised this recommendation to read: "including at least one course in the upper division, preferably within the student's discipline."

The fundamental purpose of the writing initiative is to make sufficient improvements in the literacy of SFU students to enable them to become decent writers. A student who passes two lower-division W courses may not meet this standard. Upper-division writing experiences are viewed by all members of the Writing Support Group and other experts in writing as qualitatively superior to lower-division writing experiences. Universities with exemplary writing programs typically structure their writing requirements in ways that ensure that students take upper-division courses in their disciplines. Third- and fourth-year students are better prepared intellectually to benefit from training in writing; upper-division writing

courses are more likely than lower-division writing courses to be in students' disciplines, and upper-division classes tend to be smaller than lower-division classes.

Recommendation 5: The creation of a Task Force or equivalent body to explore the establishment of a Student Learning Centre.

This recommendation has been advanced to the VP, Academic and appears as Appendix G.

Recommendation 6a: Foundational Writing Skills courses

In November we recommended that students with English 12 grades between 60% and 69% be required to take a Foundational Writing Skills (FWS) course. Refining this recommendation, we now stipulate that:

- Enrolment in FWS courses should be limited to 500 students in one academic year. Note that this “cap” may result in an elevation of the English 12 grade required for admission.
- The 3 credits granted for FWS courses should be “additive” rather than “integral.” By this we mean that such courses should be granted academic credit and the grades students earn should be included in the calculation of their GPAs, but the credits should not count toward those required to graduate (usually 120 credits).
- Students should pay for FWS courses at the Basic Tuition Fee rate.
- A grade of C or higher in an FWS course should be required as a prerequisite to register in a W course.
- Students should be allowed to repeat a FWS course only once. Following two unsuccessful attempts, students should be required to withdraw until they establish that they have acquired the proficiency in English necessary for re-admission.

Implicit in this requirement is the belief that it is appropriate to offer a relatively small number of students who have not yet acquired the level of English proficiency needed to complete a university-level W course, but who have demonstrated exceptional abilities in other subject areas, an opportunity to redress this problem after admission. However, we need to limit the resources we invest in courses designed to teach students skills they should have acquired prior to admission.

Recommendation 6b: Foundational Quantitative Skills courses

The recommended admission standard for quantitative skills is supplemented with a recommendation to develop Foundational Quantitative Skills (FQS) courses parallel to FWS courses.

In addition to the foundational math courses we currently offer, we recommend the development of new Foundational Quantitative Skills courses for students admitted to SFU with low grades in math and/or low scores on a quantitative proficiency test. Such courses would prepare students to enter Q courses at a first-year university level. Different kinds of FQS courses could be offered for students who seek to register in different kinds of Q courses.

We recommend that registration in FQS courses be limited to 500 students in an academic year. We do not believe that this requirement is likely to function as an enrolment cap at the admissions level, because statistical evidence suggests that fewer than 500 students per year would require an FQS course.

We recommend that FQS courses be 3 credit courses, but that these credits be “additive” rather than “integral.” That is, students passing the courses would be awarded academic credit and the grades for the courses would be included in the students’ GPAs. However, FQS credits would not count toward the number of credits required to graduate (usually 120).







We recommend that students required to take FQS courses be required to obtain a grade of C or higher before registering in a Q course. Students should be allowed to repeat a FQS course only once. Following two unsuccessful attempts, students should be required to withdraw from SFU until they establish that they have acquired the quantitative proficiency necessary for re-admission.

We recommend that students should pay for FQS courses at the Basic Tuition Fee rate.

Students needing additional assistance before attempting FQS courses would be referred to appropriate resources. Such resources might include individual assistance or online, self-directed programs that teach basic skills. Delivery of these resources could be coordinated through a Student Learning Centre.






Implicit in this recommendation is the assumption that it is appropriate to offer a relatively small number of students who manifest problems with quantitative proficiency but demonstrate exceptional abilities in other subject areas an opportunity to redress such problems in their first year. However, we need to limit the resources we invest in courses designed to teach students skills they should have acquired prior to admission.

Appendix B1: Graphic Representation of the Proposed New English Language Admissions Standard

2006 English language skills competence requirements			
Direct entry from Grade 12 applicants			
English requirement	Additional requirements		
A grade of 86% or higher in a course equivalent to, or more advanced than, English 12 (e.g. AP or IB)			
A grade of 70% to 85% in a course equivalent to, or more advanced than, English 12	Plus a score of Level 4 or 5 on the essay component of the LPI (or an equivalent score on an accepted language proficiency test)		
A grade of 60% to 69% in a course equivalent to, or more advanced than, English 12	Plus a score of Level 4 or 5 on the essay component of the LPI (or an equivalent score on an accepted language proficiency test)	and completion of a Foundational Writing Skills Course with a grade of C or better (before being allowed to register in a W course)	
A score of Level 6 on the essay component of the LPI or equivalent test (or an equivalent score on an accepted language proficiency test)			
Post-secondary institution transfer applicants			
English requirement	Students transferring from other post-secondary institutions must either <i>(a)</i> meet the English requirements of students who are admitted directly from high school, or <i>(b)</i> obtain a at least a C grade in a W course that is transferable to SFU.		
			
International applicants			
English requirement	Additional requirements		
Acceptable IELTS test score	Students will be “streamed”, according to their IELTS score, into either W courses or a Foundational Writing Skills (FWS) course. Students streamed into the FWS course must achieve a grade of C or better before they may register in a W course.		
Acceptable test score in other tests of English language proficiency standards (TOEFL, CAEL, etc.)	Plus a score of Level 4 on the essay component of the LPI or an equivalent score on an accepted language proficiency test		
<i>International applicants who score below Level 4 on the essay component of the LPI must complete a Foundational Writing Skills Course with a grade of C or better before being allowed to register in a W course.</i>			

Demonstrated English Competence

Appendix B2: Graphic Representation of the Proposed New Quantitative Admissions Standard

2006 Quantitative skills competence requirements		
Direct entry from Grade 12		
Quantitative skills requirement	Additional requirements	
A grade of 70% or higher in Principles of Math 11 (or Applications of Math 12) or Principles of Math 12		
A grade of 60% to 69% in Principles of Math 11 (or Applications of Math 12) or Principles of Math 12	Plus a score of 70% or better on a diagnostic quantitative skills test (before being allowed to register in a Q course)	
<i>OR</i>		
A grade of 60% to 69% in Principles of Math 11 (or Applications of Math 12) or Principles of Math 12	Plus completion of a Foundational Quantitative Skills Course with a grade of C or better (before being allowed to register in a Q course)	
<p>Important Note: In all cases involving admission from Grade 12, the math requirement that must be met (i.e., Principles of Math 11 [or Applications of Math 12] OR Principles of Math 12) is set by the Faculty or program to which admission is being sought.</p>		
Post-secondary transfer applicants		
Quantitative skills requirement		
Students transferring from other post-secondary institutions must either <i>(a)</i> meet the math requirements of students who are admitted directly from high school, or <i>(b)</i> obtain a grade of C or better in a course that is equivalent to an SFU Quantitative course.		
International applicants		
Quantitative skills requirement		
International students may meet the Quantitative admission requirement by fulfilling either the Grade 12 or college transfer entry standard, but must meet one or the other.		

Demonstrated Quantitative Skills Competence

Appendix C: Examples of Existing W, Q and B Courses

A number of courses, each within their own particular context and for their own purposes, are currently offered at the University and would potentially qualify as meeting the W, Q or B requirements. The list of potential W, Q and B courses provided below is meant to supply a sense of the range of existing courses that may conform to our draft definitions.

Writing courses

Business

The Business Communications course BUS 360 is designed to provide students with the strategies and skills to communicate effectively in the business world. While the main emphasis in the course is on written communication – memos, letter, email, reports and employment documents – other types of communication are important and are addressed. Students are required to do writing in class and out of class. Feedback is provided on out of class work and the students are then given the opportunity to re-write the work. The primary goal is to raise their communication performance to a professionally acceptable level within realistic business contexts.

Engineering

The ENSC Undergraduate Communication program is a four-year integrated program that consists of a sequence of six courses and other program requirements relating to mandatory co-op and the honours thesis. Three one-credit communications courses are paired with courses from the core curriculum to create a three- to five-credit writing-intensive unit. For example, ENSC 102-1 *Form and Style in Professional Genres* is paired with PHYS 131-2 *Physics Laboratory I*. ENSC 102 focuses on the style and format of technical writing with attention to laboratory reports. It also includes resumes, cover letters and interview skills to help students prepare for their first internship semester. The three paired courses and another two-credit stand-alone course could be classified as writing intensive. All four are taught by senior lecturers supported by TAs who have been trained within the program.

English

English 199 introduces students to the practice of scholarly writing. Focusing specifically on the research genres, it addresses the conditions students encounter as readers at university, and the expectations they must meet as writers at university. Accordingly, students are expected to be prepared to read and master complex and often lengthy scholarly materials from a variety of disciplines, and to concentrate on developing their own ability to compose rigorous scholarly argument. Assuming students' competence at sentence level, and presupposing some experience of the contexts of university writing, English 199 is neither a remedial course nor one suitable for writers seeking ESL instruction.

Students undertake six assignments, ranging from 400 to 1500 words, developed from assigned readings of the type described above. One of these assignments is composed in class, and a passing grade in the in-class assignment is a necessary (but not sufficient) condition for passing the course.

Physics

PHYS 332 is a lab course that is being revised with the idea of converting it into a writing-intensive course. Students work on a series of experiments during the semester and write up one of these experiments as a paper suitable for submission to a physics journal. Several of the other assignments have been changed to enhance and develop this experience.

The writing-related assignments are used to get the students ready to write their final report. For example, students are asked to analyze a classic physics paper with emphasis on how the material is presented and how the scientific argument is developed. Other assignments ask them to make an outline of their formal report or write drafts of figure captions or other sections. These are read and returned with comments, but not marked. The full draft of the final report is returned with comments on strengths and weaknesses and students are given the opportunity to revise.

The faculty member who usually teaches the course handles all of the feedback and marking involved in the writing-related assignments and in the formal report. He does not feel comfortable assigning this evaluation to a TA.

Quantitative/Analytical Courses:

BUEC 232: Data and Decisions I

An introduction to business statistics with a heavy emphasis on applications and the use of Excel. Students will be required to use statistical applications to solve business problems.

STAT 101: An Introduction to Statistics

An introductory course in the collection, description, analysis and summary of data, including the concepts of frequency distribution, parameter estimation and hypothesis testing.

SA 255: Introduction to Social Research

An introduction to the conduct of sociological and anthropological research. Topics covered include: the relationship between theory and research, concept formation, operationalization, exploratory studies, hypothesis generation and testing, data collection techniques within both sociology and anthropology, the assessment of causality, the critical evaluation of research on both theoretical and methodological grounds, the definition of research problems, and ethical issues in social research.

Quantitative/Analytical Courses for the Humanities

PHIL 110: Introduction to Logic and Reasoning

The aim of this course is to familiarize students with fundamental techniques of correct reasoning. Special attention is given to the methods of logic in particular, and to their role in the discovery of truth not only within science and philosophy but within all forms of rational enquiry.

EDUC 211: Mathematical Experience 1: Numbers and beyond (pending approval)

Builds on a variety of mathematical topics to build the mathematical literacy of Liberal Arts students in general and to increase their capabilities for quantitative reasoning and deductive argumentation in particular.

EDUC 212: Mathematical Experience 2: Shape and Space (pending approval)

Mathematics will be presented as meaningful and accessible human activity situated in relevant historical and cultural contexts. Focus on aesthetics and utility of mathematics, with

emphasis on problem solving, participatory investigations and collaborative projects rather than applying the lecture/tutorial format.

Late Renaissance Thought and the New Universe (from Dartmouth University)

Focuses on the problem of planetary motion and the search for a satisfactory predictive model in the sixteenth and seventeenth centuries, exploring the interactions between mathematical, scientific, political, philosophical, artistic and magical fields of discourse in the early modern period. Developed and co-taught by a mathematician and an English professor.

Mathematics and Music (from Dartmouth University)

Reveals the mathematical structures and patterns underlying music. Students learn about timbre (through Fourier analysis), scales, melody, rhythm, musical structure. Developed and co-taught by a mathematician/composer and a musician.

Mathematics and Science Fiction (from Dartmouth University)

Draws on a substantial body of novels and stories that depend on mathematical ideas. Is mathematics simply a way of mystifying, even intimidating, readers, or does understanding the underlying mathematics contribute to the total experience of reading a story?

Designated Breadth Courses

Designated Breadth in the Humanities courses (B-Hum):

HIST 105: Western Civilization from the Ancient World to the Reformation Era

An introduction to the Greek and Roman origins of Western Civilization, and its development to the 16th Century.

HUM 101: Introduction to the Humanities

An introduction to issues and concepts central to the study of the Humanities. Through exposure to primary materials drawn from different periods and disciplines, students will become acquainted with a range of topics and ideas relating to the study of human values and human experience.

Designated Breadth in the Sciences courses (B-Sci):

BISC 100: Introduction to Biology

An introduction to the basic concepts of biology, emphasizing evolution as a unifying theme. Topics include cell structure, mitosis and meiosis, DNA structure and function, evolution and population and ecosystem ecology.

EASC 103: The Rise and Fall of Dinosaurs

An introductory course that deals with the class Dinosauria and, in particular, how our understanding of this extinct group of animals has been radically altered in the light of new discoveries during the last few decades. The course addresses the rise of the dinosaurs, criteria for the recognition of the different groups, fossil data regarding dinosaur metabolism, evidence of dinosaur behavior, possible evolutionary relationships with birds and so-called feathered dinosaurs, and theories of dinosaur extinction.

EVSC 200: Introduction to Environmental Science

The course focuses on how environmental scientists develop their insight and how the scientific discoveries eventually become incorporated (or not) into new regulations and attitudes.

PHYS 190: Introduction to Astronomy

Historical astronomy, telescopes, the sun and the solar system, stellar evolution, galaxies, cosmology.

Designated Breadth in the Social Sciences courses (B-Soc):

ARCH 105: Evolution of Technology

A history of technology from earliest times to the beginning of the Industrial Revolution. The course will discuss the causes and effects of technological change, as illustrated by specific technological developments including stone tools, metallurgy, agriculture, etc.

CRIM 104: Sociological Explanations of Criminal and Deviant Behaviour

A survey of some major sociological perspectives on crime and deviance that will include both mainstream and critical theories. These will include: anomie, neutralization, control, group conflict, sub-cultural, ecological, functionalist and critical theories. Critical analysis of the assumptions upon which each theory is based. Examination of the similarities and differences between/among the various explanations.

HIST 151: The Modern Middle East

An introductory survey of the changing societies of the Middle East since 1800. Emphasis will be placed on familiarizing students with the basic aspects of Islamic society, the influence of European imperialism, the modernization of traditional societies, the origins of the Arab-Israeli conflict, and the social and political ferment in the period since the Second World War.

LAS 140: Cultural Heritage of Latin America

A multi-disciplinary introduction to contemporary Latin American culture through the examination of pre-Columbian, Iberian, and African civilizations.

SA 100: Perspectives on Canadian Society

An examination of Canadian society from the perspective of the social sciences — an introduction both to the nature of Canadian society and to the use of sociological and anthropological concepts applied to the analysis of modern societies in general. This course is meant to appeal to those who specifically wish to expand their knowledge of Canadian society, and also to those who may be considering further work in sociology and anthropology. Topics to be considered include class structure, the nature of Canada's population, regional variation, gender relations, multiculturalism, native issues.

Appendix D: Types of Writing-intensive courses

1. **Content courses with a writing component.** Existing courses (often relatively small in size) are modified to include writing assignments, typically with marker assistance. The balance of grades in such courses is adjusted to reflect the value attached to the written work.⁹
2. **Writing courses linked to content courses.** One- and two-credit courses of this type are currently offered in the School of Engineering by lecturers with expertise in writing, rhetoric and technical communication who are assisted by TAs.¹⁰
3. **Discipline-specific writing courses.** Courses of this type are stand-alone writing courses designed to teach students to write in the genre of the disciplines that offer the courses. The writing courses taught in the Faculty of Business Administration, which are supported by a peer-mentoring program, are examples. It has been suggested that SFU develop a course for writing in the Sciences.
4. **English writing courses:** In English 199 and English 371, students from different disciplines are taught to write in the genres of their disciplines.¹¹
5. **Content courses taught by faculty with the assistance of trained TAs.** Relatively large content courses are restructured to meet the criteria for W courses. TAs assume the primary responsibility for helping students develop their writing skills. TAs are trained and their workload is adjusted to reflect the additional work required to supply feedback and marking of writing.¹²
6. **Content courses taught by faculty with the assistance of a head writing instructor and TAs:** A writing component is added to a relatively large course whose content is taught primarily by a faculty member. The writing component is overseen primarily by another instructor with expertise in teaching writing. Under the supervision of the faculty member, the writing instructor teaches tutorials and coaches and coordinates the teaching of several TAs, monitoring the writing-intensive features of the course, providing instruction on essay grading and revision, and organizing W-intensive tutorials.

⁹ See <http://www.sfu.ca/cwil/facresp/disciplines/archaeology.html> for an example.

¹⁰ <http://www.ensc.sfu.ca/undergrad/courses/ENSC101.html>

¹¹ <http://www.sfu.ca/cde/cp/engl/engl199.htm>

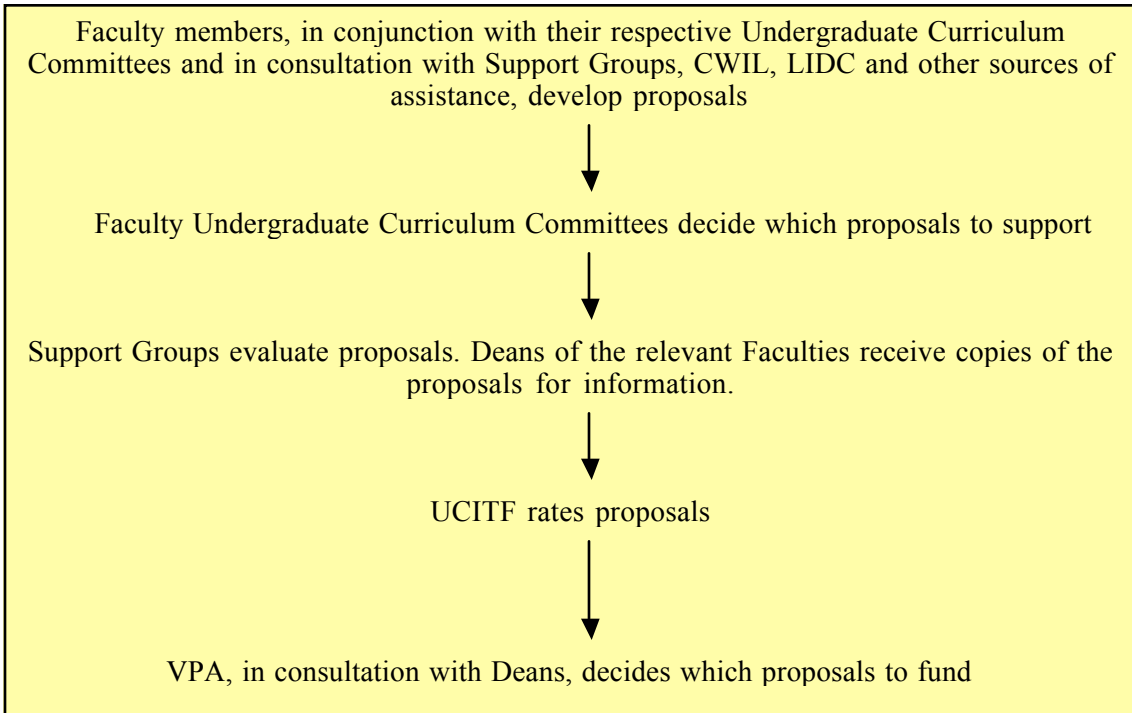
¹² (For an example see

http://www.sfu.ca/cwil/docs_content/fac_docs/w_courses/HIST_101_syllabus.)

Appendix E: Decision-making Process for the Initial Allocation of Resources to Develop W, Q and B Courses

Initially, we anticipate a large number of requests for resources. After the WQB requirements are in effect, we expect the administration of the requirements and allocation of resources needed to maintain them to be integrated into the regular operations of the University.

We propose to employ the following process for making decisions about the allocation of resources for the development, adaptation and/or teaching of W, Q and B courses:



Appendix F: Consultation Schedule

The Undergraduate Curriculum Implementation Task Force has carried out a comprehensive consultation process in relation to the Discussion Paper and has considered all input received from members of the SFU community and other institutions. Further comments on the REVISED Discussion Paper may be submitted to Susan Rhodes via email at slrhodes@sfu.ca until April 7, 2004.

2003

November 26 VPs & Deans

December 3 SCUP

December 8 SCUTL

December 9 SCUS

December 11 Admissions

Recruitment

SFU International

December 11 Chairs

Directors

Administrators

December 12 BC Council on Admissions
and Transfer

February 12 Open Forum, Burnaby

February 19 Open Forum, Surrey

February 24 TSSU

February 26 Course Accessibility
Implementation Cttee

March 2 Arts DAs

March 5 College Advisors

March 8 Langara College

March 19 ContemporaryArts

March 22 VPs

March 23 Science DAs

March 24 Deans

April 1 Kwantlen UC,

April 1 Kinesiology UCC

April 7 Susan Kennedy, Min of
Education

April 13 SCUS

April 14 Douglas College

April 20 FAS UCC

April 21 SCUP

April 26 SCUTL

May 7 BCCAT English

Articulation Committee

June 4 BCCAT Mathematics

Articulation Committee

2004

January 5 Senate

January 12 Douglas College

Communications

Department

January 14 Faculty of Science UCC

January 15 Faculty of Arts UCC

January 22 Student Services

February 4 Faculty of Business UCC

February 4 Chemistry UCC

February 11 Faculty of Education UPC

**Appendix G: Memo and Recommendation to John H. Waterhouse regarding the
creation of a new Task Force**



**SIMON FRASER UNIVERSITY
Office of the Vice President Academic
Undergraduate Curriculum Implementation Project**

TO: John H. Waterhouse, Vice President, Academic **FROM:** KC Bell, Coordinator
Undergraduate Curriculum
Implementation Task Force

RE: Recommendation from the UCI Task Force **DATE:** February 4, 2004

I am forwarding to you a recommendation from the Undergraduate Curriculum Implementation Task Force. As you know, the Discussion Paper published in November contains a recommendation to establish a new task force (or similar working group) “to review existing university-wide student academic support services and structures and to make recommendations about the establishment of a centralized Student Learning Centre.”

Our consultations to date have suggested that we broaden this recommendation to include consideration of academic supports beyond those required to address the writing and quantitative skills that form the core of our mandate. As well, the curriculum project groups believe that the work of the new task force should not await the conclusion of our consultation process before beginning. To this end, we are sending our detailed recommendation to you now.

A recommendation to create a Task Force or other working group to research and make recommendations on enhancing student academic support

The Undergraduate Curriculum Implementation Task Force included the following recommendation in its current Discussion Paper (page 5):

Recommendation 5: A Student Learning Centre

We recommend that a Task Force be established to review existing University-wide student academic support services and structures and to make recommendations about the establishment of a centralized Student Learning Centre.

The draft report by the Academic Integrity Task Force contained a similar recommendation and another is anticipated from the Language Instruction Committee.

Because expanded academic support for students will need to be in place when the new curriculum requirements are introduced in September 2006, we recommend that the Vice President, Academic create a Task Force or similar working group to:

- a) estimate the increased demand that will be created for student support services by the new writing, quantitative and breadth requirements;
- b) determine which academic and service units currently provide academic support in the areas of writing and quantitative skills;
- c) determine the range and service providers of language and other academic support currently provided for ESL students within the University; and
- d) identify the most efficient (centralized, “distributed,” or “blended”) and effective (“best practices”) means of enhancing academic support to meet the increased demand so that all appropriate services are available in September 2006.

It may be useful for this group to consider in their review and recommendations academic support offered to students in areas other than writing and quantitative skills.

We suggest that the new task force be chaired by a faculty member in order emphasize that academic support remains clearly the heart of its mandate.

Specific Tasks and Responsibilities Mandate

By June 1st, 2004:

- Survey the forms of academic support in the areas of writing and quantitative skills currently offered by academic and service units at SFU
- Conduct a needs assessment of the kind and extent of additional academic support that students will need to fulfill the new graduation requirements
- Compile an “inventory” of all academic and service units currently offering academic support to ESL students, outline the nature of the support each provides, its cost and how those costs are covered
- Recommend what additional writing and quantitative skills support should be made available, in what form, and what resources will be needed to provide it
- Recommend how the provision of student academic skills support can be offered most effectively and efficiently (centralized, distributed or “blended” models)
- Develop an overall strategy and timeline for providing these enhanced student academic support services
- Liaise with the UCI Task Force and the Language Instruction Committee as needed