
Transfer Credit Evaluation of Students Entering Simon Fraser University from B.C. Colleges during the Calendar Year 1998

March 2000

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SUPPORTING BC's
EDUCATION SYSTEM

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Executive Summary

Transcript analysis of approximately 400 students who entered Simon Fraser University during 1998 revealed that they successfully transferred 85.2% of the credits they earned at college. The reasons why the remaining earned credit did not transfer were examined. The primary reason for loss of credit on transfer was that the course does not appear to be a university level course or its content is clearly technical or vocational in nature. Other reasons were that the student had already transferred the maximum allowable credit, so some credits were superfluous. Some SFU courses were weighted with fewer credits than the equivalent college course, some courses were unarticulated for reasons that are unclear and some courses do not receive transfer credit if taken on their own, but must be taken in combination with other courses to receive transfer credit.

The results appeared to show that, for those students who took care in planning their programs and courses, the college transfer route to the University was effective and efficient.

The data compare closely with those of an earlier study of students who transferred to the University of British Columbia.

Purpose

This report shows how Simon Fraser University evaluated transfer credit for those students who transferred from colleges or university colleges in British Columbia in 1998.

This study has been sponsored by the British Columbia Council on Admissions and Transfer (BCCAT). The Council has long been interested in collecting and analyzing data on transfer outcomes, with a view to improving and enhancing access to post-secondary education. In 1998, the BCCAT published a discussion paper titled "Transfer: What's the Problem?" which gives an overview of a debate on the performance of British Columbia's well-established transfer system. Some educators comment that the current system is complex and relatively inefficient. A large number of autonomous institutions set their own curricula and cooperate with varying degrees of success to articulate their courses with others, to enable students to transfer without loss of time or credit. As there is no common curriculum at the provincial universities, colleges are sometimes under pressure to offer transferable academic courses to suit various learning objectives. Recent studies, cited in the bibliography and mentioned in BCCAT's "Transfer: What's the Problem?" paper show two different aspects of this transfer process: anecdotal evidence is offered of students who take excessive years of study to complete bachelors' degrees, losing credit as they transfer and feeling ill-informed about the process. On the other hand, a survey of college and university staff showed that they believed that the current transfer system works relatively well. A transcript analysis study at UBC showed that their transfer students brought 85% of their college credit with them and gave substantial reasons why the remaining 15% of credit did not transfer. This report provides further evidence to contribute to this debate.

Methods

During 1998, there were three intakes of new students; to the Spring semester (January), Summer semester (May or July), and Fall semester (September). The total intake of new undergraduate students for that year was 4970. Of these, 1444 (almost 30%) were classified as British Columbia college transfer students. These students had at least a year of post-secondary academic credit and the majority of that credit was from a BC college or university college, referred to henceforth simply as colleges. There were also other new students who entered SFU after taking college courses, but they were not classified as transfer students because the majority of their credits was from other institutions (e.g. universities) or they had completed less than an academic year (30 credits) of post-secondary credit.

From the total transfer population of 1444, a sample of 400 was selected randomly by computer. This number was chosen to give adequate statistical validity. Three of these students were subsequently dropped from the study due to insufficient data about their college courses, leaving a sample size of 397.

The colleges which are represented in this study are as follows.

- Camosun College
- Capilano College
- University College of the Cariboo
- College of New Caledonia
- Columbia College
- Coquitlam College
- Douglas College
- University College of the Fraser Valley
- Kwantlen University College
- Langara College
- Malaspina University-College
- North Island College
- Northern Lights College
- Northwest Community College
- Okanagan University College
- Selkirk College

In the sample, the following institutions were not represented.

- College of the Rockies
- Institute of Indigenous Government
- Nicola Valley Institute of Technology

These institutions were unrepresented, only for the reason that the sample included none of their transfer students. The College of the Rockies is relatively small and the other two institutions have only recently established articulation agreements with Simon Fraser University.

For the purpose of this study, the B.C. Open University (Open Learning Agency), the B.C. Institute of Technology, the Justice Institute of B.C., Emily Carr Institute of Art and Design and the B.C. provincial universities are excluded.

At the time of entry, each new student is assigned to a faculty at SFU. These faculties are:

- Applied Sciences
- Arts
- Business Administration
- Education
- Science

During 1998, the process for assigning each incoming student to a faculty changed. For Spring and Summer semesters, the faculty shown is the student's choice. Starting Fall semester 1998, SFU admitted new students to a faculty only if there was space in that faculty and the student could be assured of graduation from the faculty, subject only to maintaining the minimum academic performance required for continuance in that faculty. The effect of this was to offer admission into an alternate faculty, usually Arts or Science, to many students whose first choice was a limited enrollment faculty, such as Business Administration, Applied Sciences or Education. Comparisons between admissions to the faculties are therefore unreliable for 1998. However, all faculties at SFU share common transfer credit rules and procedures, so this change in process does not affect the validity of this study.

The college record, as entered on the SFU student database, and related SFU transfer credit records were compared and examined for each student in the sample. This information was entered onto a spreadsheet, which was used to perform calculations to give the:

- 1) number of credits attempted at college;
- 2) number of credits earned at college; and
- 3) number and type of transfer credits granted by SFU.

If there was a discrepancy between the number of credits earned at college and the number of transfer credits granted by SFU, any course that did not transfer was identified and reasons were explored to explain why that course did not transfer. If there were multiple reasons why a course did not transfer, or why students lost credit, the reason that described why most of the credits did not transfer was used. If the student attended more than one college, the college at which most credits were taken was used as the representative college. If a student withdrew from a course, that course was not considered in the number of credits attempted or in the number of credits earned. Data were aggregated into tables to allow easy comparison between the number of credits that students took at college and the number of credits that they were granted when they transferred to SFU, according to the faculty they entered at SFU and the college from which they transferred.

Some colleges, notably the private colleges, Columbia and Coquitlam Colleges, offer both secondary school and post-secondary programs and both are recorded on the same transcript. Universities do not generally grant transfer credit for secondary school work, so there is a case to be made for exclusion of this secondary school credit from the study. However, virtually all of the colleges in the study offer Adult Basic Education (ABE) programs, which are secondary school equivalent programs for adults. Oddly, some college ABE courses receive transfer credit at SFU. It could be argued that all secondary school and ABE courses should be ignored in this study, but there are several other types of courses that also might be best excluded, such as trades courses such as Auto Body Repair. Lacking any clear definition of what are legitimate post-secondary courses, all ABE and secondary school credits attempted and earned have been retained in this study, if they appear on the transcript of a college.

Results

The results of this report are summarized in eight tables and one figure. A list of courses that did not transfer is included in an appendix. Overall, approximately 3,300 credits earned by students at colleges did not transfer to SFU. In the appendix, approximately 1700 of these 'lost' credits are listed. Credits that were earned in excess of the transfer credit limit of 60 credits, which is the equivalent of two academic years or half a standard bachelor's degree, were excluded from the appendix, but were included in the tallies for each of the tables.

TABLE I
SAMPLE OF TRANSFER STUDENTS BY INSTITUTION ATTENDED AND SFU FACULTY OF ADMISSION

Region/College	Applied Sciences	Arts	Business Admin.	Education	Science	Total	% of Sample
Non Lower Mainland							
Northern B.C.							
College of New Caledonia	1	7	-	1	1	10	2.5%
Northern Lights College	-	2	-	-	-	2	0.5%
Northwest Community College	-	3	-	-	-	3	0.8%
Interior/Kootenays							
Okanagan University College	3	4	-	-	1	8	2.0%
Selkirk College	-	-	-	-	1	1	0.3%
UC of the Cariboo	-	4	2	-	4	10	2.5%
Vancouver Island							
Camosun College	-	4	-	-	2	6	1.5%
Malaspina University-College	-	7	1	-	2	10	2.5%
North Island College	-	1	-	-	-	1	0.3%
Total Non Lower Mainland	4	32	3	1	11	51	12.8%
Lower Mainland							
Public							
Capilano College	7	41	8	2	5	63	15.9%
Douglas College	5	64	13	2	16	100	25.2%
Kwantlen University College	4	73	21	6	7	111	28.0%
UC of the Fraser Valley	1	4	1	-	2	8	2.0%
Langara College	2	36	8	2	2	50	12.6%
Private							
Columbia College	4	6	-	-	-	10	2.5%
Coquitlam College	-	4	-	-	-	4	1.0%
Total Lower Mainland	23	228	51	12	32	346	87.2%
Total B.C. College Transfers	27	260	54	13	43	397	100.0%
% of Sample	6.8%	65.5%	13.6%	3.3%	10.8%	100.0%	

This table shows how many students from the sample came from each of the represented colleges. The table shows clearly that most college transfer students came from colleges in the B.C. Lower Mainland, followed by the Interior/Kootenays, Vancouver Island, and Northern B.C. The Lower Mainland colleges account for 87.2% of the sample whereas the non-Lower Mainland colleges account for only 12.8% of the sample. Of the Lower Mainland colleges, most of the students came from Kwantlen University College and Douglas College. This is fully consistent with other data collected and reported by SFU in recent years. Most transfer students were admitted in the Arts faculty (65.5%), followed by Business Administration (13.6%), Science (10.8%), Applied Sciences (6.8%), and Education (3.3%). As mentioned above, these faculty distributions are not entirely reliable in 1998 but are generally consistent with other data collected and reported by SFU in recent years.

TABLE II

AVERAGE NUMBER OF CREDITS ATTEMPTED, EARNED, AND TRANSFERRED PER STUDENT

	<u>Applied Sciences</u>	<u>Arts</u>	<u>Business Admin.</u>	<u>Education</u>	<u>Science</u>	<u>Total</u>	<u>Ttl # of Credits</u>
Average number of credits attempted at B.C. College	56.6	59.1	59.8	64.5	60.0	59.3	23542
Average number of credits earned at B.C. College	51.9	56.1	55.6	61.5	55.6	55.9	22181
Difference between credits attempted and earned at a BC college	4.7	3.0	4.2	3.0	4.4	3.4	1362
Average number of transfer credits granted at SFU	44.4	49.0	45.2	49.7	44.0	47.6	18897
Difference between BC college credits earned and SFU transfer credit	7.5	7.1	10.4	11.8	11.6	8.3	3284
Average number of transfer credits granted at SFU as a percentage of average credit earned at BC college	85.5%	87.3%	81.3%	80.8%	79.1%	85.2%	

Student Sample Size	27	260	54	13	43	397
% of Sample	6.8%	65.5%	13.6%	3.3%	10.8%	100.0%

Total Number of Credits earned at BC Colleges	1400	14590	3003	799	2389	22181
% of B.C. College credit earned	6.3%	65.8%	13.5%	3.6%	10.8%	100.0%

Table II shows the average number of credits that students attempted and earned at the college(s) that they attended, as well as the average transfer credits that were granted to those students on admission to SFU. At college, transfer students generally attempted about two years of study or 60 credits and failed or duplicated only a small proportion of these credits, 3.4 credits on average. Overall, SFU granted transfer credit for 85.2% of all the credits students earned at college. This varies somewhat between faculties, ranging from 79.1% in Science to 87.3% in Arts.

FIGURE I
TRANSFER CREDITS GRANTED BY SFU VS. CREDIT EARNED AT BC COLLEGES

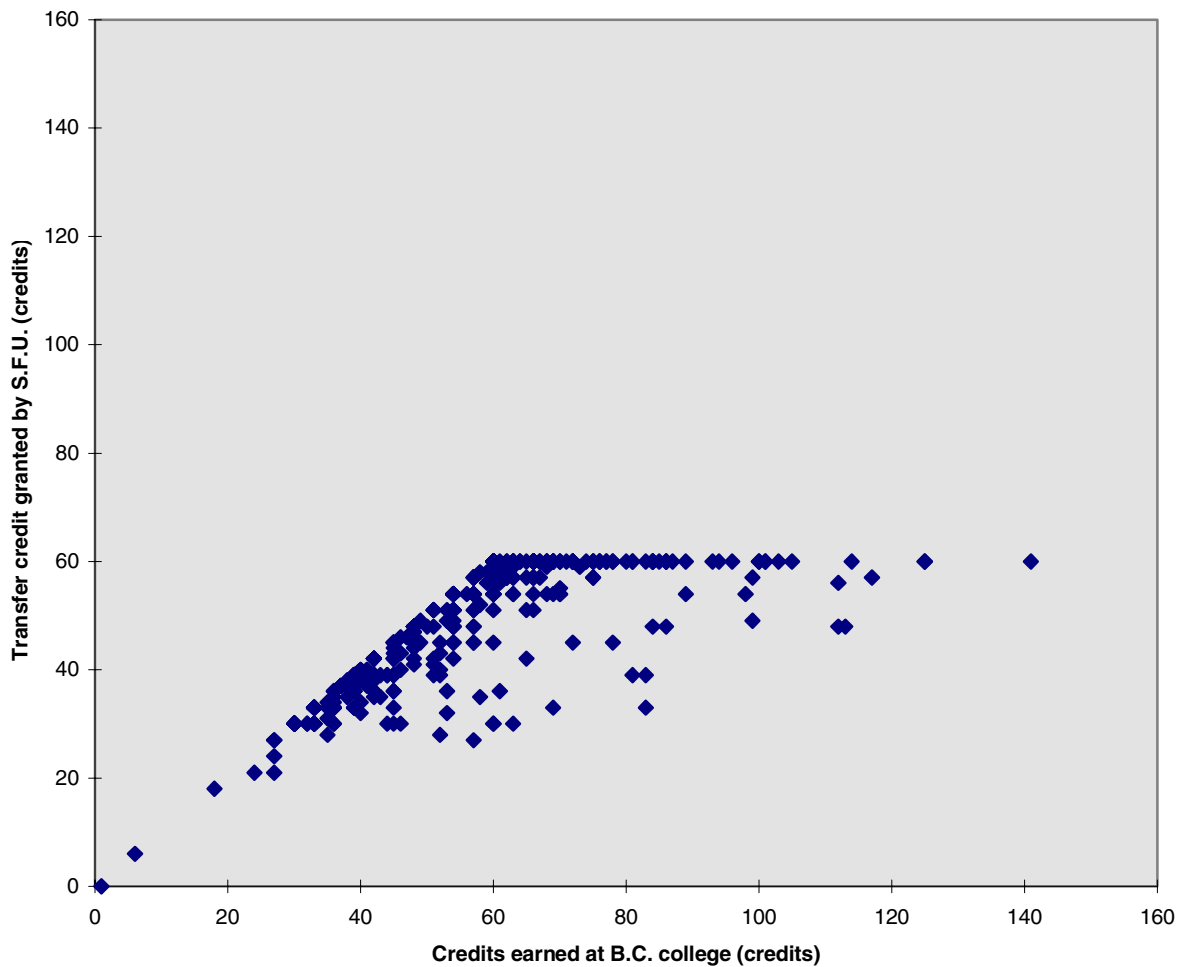


Figure I is a plot of college credits earned and corresponding SFU transfer credits granted for each student in the sample. It clearly shows how SFU transfer credits were limited to 60 in every case and the extent of the college credits earned, amounting to over 140 credits in one case. Efficient transfer is represented by the 45 degree line, where there is fairly strong clustering. Some students appear to have earned fewer than 30 SFU transfer credits, because they have some transfer credits from institutions which are not part of this study. In two cases, it is clear that the students were incorrectly classified as college transfers, because they had earned only 3 - 6 credits at a BC college, and had completed the majority of their post-secondary work at a university. It was decided to leave these students in the sample because their data had negligible effect on the overall study.

TABLE III
TOTAL CREDIT GRANTED AT SFU AS A
PERCENTAGE OF TOTAL CREDIT EARNED AT A B.C. COLLEGE

<u>Region/College</u>	<u>Applied Sciences</u>	<u>Arts</u>	<u>Business Admin.</u>	<u>Education</u>	<u>Science</u>	<u>SFU Total</u>	<u>Student Sample Size</u>	<u># of College Credits Earned</u>
	(%)	(%)	(%)	(%)	(%)	(%)		
Non Lower Mainland								
Northern B.C.								
College of New Caledonia	100.0	91.8	-	47.4	100.0	88.1	10	520
Northern Lights College	-	100.0	-	-	-	100.0	2	74
Northwest Community College	-	75.4	-	-	-	75.4	3	195
Interior/Kootenays								
Okanagan University College	90.8	94.7	-	-	100.0	93.6	8	407
Selkirk College	-	-	-	-	92.3	92.3	1	39
UC of the Cariboo	-	91.2	100.0	-	71.3	82.9	10	585
Vancouver Island								
Camosun College	-	97.0	-	-	92.9	95.7	6	340
Malaspina University-College	-	96.4	86.7	-	82.2	92.0	10	578
North Island College	-	100.0	-	-	-	100.0	1	30
Total Non Lower Mainland						89.2	51	2768
Lower Mainland								
Public								
Capilano College	87.5	89.6	81.3	88.2	70.6	88.7	63	3311
Douglas College	68.1	86.2	78.4	71.6	78.7	82.6	100	5788
Kwantlen University College	98.1	85.0	78.4	82.7	74.9	83.2	111	6529
UC of the Fraser Valley	80.8	93.3	91.9	-	94.0	91.2	8	431
Langara College	95.6	85.3	88.4	97.3	85.3	86.6	50	2755
Private								
Columbia College	98.1	93.2	-	-	-	95.0	10	421
Coquitlam College	-	96.0	-	-	-	96.0	4	178
Total Lower Mainland						84.7	346	19413
Total B.C. College Transfers	85.6	87.5	81.2	80.9	79.2	85.2	397	22181
Total Number of Credits earned at BC College	1400	14590	3003	799	2389	22181		

Table III breaks out the data of Table II by college. It shows the percentage of earned college credits that students transferred to SFU, by the college to which they were principally assigned (i.e. where they earned most of their credits). The table shows that the 'efficiency of transfer' was slightly higher (89.2%) for students from outside the Lower Mainland than for those from within (85.3%). Some colleges outside the Lower Mainland show very high percentages of college credits that transferred but these samples are small, so they are not reliable.

TABLE IV
TOTAL CREDITS NOT GRANTED AT SFU AS A
PERCENTAGE OF TOTAL CREDITS EARNED AT A B.C. COLLEGE

<u>Region/College</u>	<u>Applied Sciences</u> (%)	<u>Arts</u> (%)	<u>Business Admin.</u> (%)	<u>Education</u> (%)	<u>Science</u> (%)	<u>SFU Total</u> (%)	<u>Student Sample Size</u>	<u># of College Credits Earned</u>
Non Lower Mainland								
Northern B.C.								
College of New Caledonia	0	8.2	-	52.6	0	11.9	10	520
Northern Lights College	-	0	-	-	-	0	2	74
Northwest Community College	-	24.6	-	-	-	24.6	3	195
Interior/Kootenays								
Okanagan University College	9.2	5.3	-	-	0	6.4	8	407
Selkirk College	-	-	-	-	7.7	7.7	1	39
UC of the Cariboo	-	8.8	0	-	28.7	17.1	10	585
Vancouver Island								
Camosun College	-	3	-	-	7.1	4.3	6	340
Malaspina University-College	-	3.6	13.3	-	17.8	8	10	578
North Island College	-	0	-	-	-	0	1	30
Total Non Lower Mainland	7.9	7.6	4.6	52.6	17.7	10.8	51	2768
Lower Mainland								
Public								
Capilano College	12.5	10.4	18.7	11.8	29.4	11.3	63	3311
Douglas College	31.9	13.8	21.6	28.4	21.3	17.4	100	5788
Kwantlen University College	1.9	15	21.6	17.3	25.1	16.8	111	6529
UC of the Fraser Valley	19.2	6.7	8.1	-	6	8.8	8	431
Langara College	4.4	14.7	11.6	2.7	14.7	13.4	50	2755
Private								
Columbia College	1.9	6.8	-	-	-	5	10	421
Coquitlam College	-	4	-	-	-	4	4	178
Total Lower Mainland	15.5	13.4	19.4	16.6	22.0	15.3	346	19413
Total B.C. College Transfers	14.4	12.5	18.8	19.1	20.8	14.7	397	22181

Table IV is essentially the inverse of Table III. It shows the percentage of college credits that were not granted credit by SFU. As is also recognizable from Table III, Table IV shows that SFU did not grant credit for 14.7% of the earned college credits.

TABLE V
TOTAL CREDIT EARNED AT A B.C. COLLEGE AS A PERCENTAGE
OF TOTAL CREDIT ATTEMPTED AT A B.C. COLLEGE

<u>Region/College</u>	<u>Applied Sciences</u> (%)	<u>Arts</u> (%)	<u>Business Admin.</u> (%)	<u>Education</u> (%)	<u>Science</u> (%)	<u>Total</u> (%)	<u>Student Sample Size</u>
Non Lower Mainland							
Northern B.C.							
College of New Caledonia	100	95.6	-	100	100	96.1	10
Northern Lights College		92.5	-	-	-	92.5	2
Northwest Community College		97	-	-	-	97	3
Interior/Kootenays							
Okanagan University College	88.9	95	-	-	94.4	92.1	8
Selkirk College		-	-	-	100	100	1
UC of the Cariboo		100	100	-	100	100	10
Vancouver Island							
Camosun College		100	-	-	91.3	97.1	6
Malaspina University-College		98.5	93.8	-	100	98.5	10
North Island College		90.9	-	-	-	90.9	1
Total Non Lower Mainland						96.8	51
Lower Mainland							
Public							
Capilano College	90.5	94.1	88.5	91.9	83	91.8	63
Douglas College	90.4	95.3	96	96.1	91.8	94.6	100
Kwantlen University College	91.7	96.9	92.3	93.8	94.2	95.5	111
UC of the Fraser Valley	90.1	92	100	-	100	94.5	8
Langara College	100	94.3	92	100	79.8	93.9	50
Private							
Columbia College	94.6	89.9	-	-	-	91.5	10
Coquitlam College		90.8	-	-	-	90.8	4
Total Lower Mainland						94.1	346
Total B.C. College Transfers	91.6	95.3	92.9	95.2	92.6	94.4	397

This table shows how successful students were at college, listed by the college at which they completed most of their studies. The table indicates the percentage of credits that were attempted and were successfully earned (passed and/or completed). The results show that students passed 94.4% of credits they attempted. However, comparisons between colleges should be made cautiously, because the courses that were attempted unsuccessfully could have been taken at another college and because courses from which the student withdrew are excluded. The last day in a semester or term that a student is permitted to drop a course without academic penalty varies considerably among colleges. Consequently, a student at one college might receive a 'fail' grade for giving up on a course near the end of the term, but if s/he had taken the course at a different college, s/he might have received a withdrawal or course drop instead.

TABLE VI
UNASSIGNED CREDIT GRANTED AT SFU AS A PERCENTAGE OF
TOTAL CREDIT GRANTED AT SFU

<u>Region/College</u>	<u>Applied Sciences</u> (%)	<u>Arts</u> (%)	<u>Business Admin.</u> (%)	<u>Education</u> (%)	<u>Science</u> (%)	<u>SFU Total</u> (%)	<u>Student Sample Size</u>	<u>Total # of SFU Credits Granted</u>
Non Lower Mainland								
Northern B.C.								
College of New Caledonia	6.7	14.5	-	51.9	7.1	15.5	10	458
Northern Lights College	-	32.4	-	-	-	32.4	2	74
Northwest Community College	-	29.9	-	-	-	29.9	3	147
Interior/Kootenays								
Okanagan University College	25.9	-	-	-	5.9	18.9	8	381
Selkirk College	-	-	-	-	8.3	8.3	1	36
UC of the Cariboo	-	21.3	8	-	6	12.6	10	485
Vancouver Island								
Camosun College	-	8.3	-	-	22.4	14.1	6	326
Malaspina University-College	-	13.9	7.7	-	2.5	10.9	10	532
North Island College	-	30	-	-	-	30	1	30
Total Non Lower Mainland						15.7	51	2469
Lower Mainland								
Public								
Capilano College	7.6	20.9	6.2	10	6.4	18.6	63	2881
Douglas College	11.6	16.2	15.3	8.5	7.8	14.5	100	4780
Kwantlen University College	13.2	14	15.3	18.1	11.3	14.3	111	5434
UC of the Fraser Valley	6.8	17	15.8	-	18.9	15.8	8	393
Langara College	15.1	28.1	13.9	21.3	14.8	24.7	50	2385
Private								
Columbia College	11.7	7.3	-	-	-	9	10	400
Coquitlam College	-	17.4	-	-	-	17.4	4	172
Total Lower Mainland						16.2	346	16445
Total B.C. College Transfers	11	18.1	13.5	17.3	9.3	16.1	397	18914

Total Number of Credits Granted at SFU	1199	12737	2440	646	1892	18914
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This table shows the percentage of the credits that SFU granted to transfer students as unassigned credit. If a college course receives unassigned transfer credit, all students who transfer in with that course receive the same unassigned credit, as published in the BCCAT Transfer Guide, regardless of their faculty or program. Unassigned credit is credit which does not exactly match any specific course at SFU. For example, a college course in Ukrainian history might be given 3 unassigned History credits at SFU,

because we have no similar course, yet the course is recognized as a valid university level history course. At SFU, this is known as a Type 2 transfer credit. Similarly, a college course in Nordic mythology might be granted 3 unassigned General Elective credits at SFU i.e. it is recognized as a valid university level course, but there is no specific SFU discipline closely associated with those credits. At SFU, this is known as a Type 3 transfer credit. The values in this table represent both Type 2 and Type 3 credits, but almost all will be Type 2. Of the total credits granted by SFU, 16.1% were unassigned. Unassigned credit is often regarded as less desirable than assigned credit, but this is not necessarily so. The utility of a particular transfer credit depends on the student's program. For example, an unassigned Chemistry transfer credit is equally as valuable as an assigned transfer credit in all degree programs, except those in the natural sciences, where specific course credit is usually needed to progress to the next level and to meet degree requirements.

The faculty reflects the student's chosen or assigned faculty at SFU, not the discipline of the unassigned credit. The unassigned credit might result from course work taken at the student's assigned college or from another college that they had attended.

TABLE VII
TRANSFER CREDIT NOT GRANTED (BY REASON) AS
A PERCENTAGE OF THE TOTAL CREDIT NOT GRANTED

<u>Reason why transfer credit was not granted at SFU</u>	<u>Applied Sciences</u>	<u>Arts</u>	<u>Business Admin.</u>	<u>Education</u>	<u>Science</u>	<u>SFU Total</u>
	(%)	(%)	(%)	(%)	(%)	(%)
Course is assumed to be not university level or is technical/vocational	22.0	33.4	43.9	40.5	31.8	34.5
Maximum transfer credit exceeded in program	22.0	21.9	18.2	35.9	13.0	20.6
Course credit at SFU weighted less than source course	35.3	14.3	16.0	7.2	31.8	18.3
Course appears to be university level, but is not articulated	15.1	19.8	14.6	4.0	21.0	17.9
Course credit is only available when taken in conjunction with other course(s) - 'cluster credit'	5.6	5.3	6.1	4.6	2.4	4.9
Maximum transfer credit exceeded in subject/year level	-	2.6	-	7.8	-	1.9
Course duplicates a course already transferred	-	2.7	1.2	-	-	1.9
TOTAL	100	100	100	100	100	100
Number of credits	201	1853	563	153	497	3267

Table VII summarizes the reasons why 14.7% (Table IV) of earned college credits were not granted any credit by SFU. The assignment of these reasons was difficult because in many cases, there are multiple

reasons and in other cases the reasons are not obvious. The most significant reason is given for each instance and no case has been reported twice.

The most common reason that credit was not granted is that the courses appear to be not taught at the university level or are technical or vocational in nature. Many students took courses in college which were either developmental or remedial (such as English as a second language), were equivalent to secondary school courses (e.g. algebra) or were intended for those directly pursuing careers (e.g. horticulture). Business Administration and Education students were significantly more likely to have taken such 'non-academic' courses.

Large numbers of college credits were unusable because students exceeded transfer credit limits. Rather than add these surplus credits to a student's record, Simon Fraser University instead limits the total transfer credit granted to any student to the most useful sixty credits for the chosen program. This practice of limiting credit is aimed at providing the most accurate information to the student and her or his academic adviser, in the absence of a sophisticated 'degree audit' system. In many cases, these 'lost' credits were, in any event, not transferable for other reasons, such as having not been articulated for credit with the University. Typically, they represent a shift in the student's goals or show that the student was starting an academic career at a basic level, through remedial education. In both of these common situations, it is unlikely that the students expected to receive university credit for these courses. Education students were significantly more likely to have taken such 'extra' courses.

For some students, particularly those in Applied Sciences and Science, credit was lost because college courses carried more credit than the equivalent university course. While some SFU science disciplines give separate laboratory credit from lecture credit (e.g. Chemistry and Physics), the assignment of credit values often does not coincide with the credit values given by colleges. For example, at Kwantlen University College, BIOL 1110/1210 are worth ten credits but when these courses are transferred to SFU as BISC 101/102 they are worth eight credits.

The most troubling category is that of courses that appear to be acceptable for transfer credit, but which, for unknown reasons, have not been articulated for credit. The initiative for seeking transfer credit lies with the colleges, but it is likely that they receive little direct feedback on transfer outcomes from their former students, so might be unaware of problems experienced by their students after they leave. In addition, there appear to be a few errors in the SFU data related to some of the 'source courses' from colleges. For example, we found that for one college ENG.250 was taken in Fall 1998 and received no transfer credit. However, this course does not appear to exist. Probably an error was made when the paper transcript was re-keyed to the SFU system. The correct course was presumably ENGL250 – an articulated and transferable course. Since SFU uses a computer-based transfer credit evaluation tool, such an error is not easy to detect, yet can cost a student substantial credit. Adoption by colleges of Electronic Data Transfer (EDT or EDI) greatly reduces this error factor. In 1998, both Douglas College and Kwantlen University College sent records to SFU via EDT, no doubt to the benefit of their students.

Other reasons for a course to not transfer are relatively uncommon. In a few cases, transfer credit is granted only for a combination of courses, but not for each course individually. This occurs for some accounting courses, hence is more likely to affect Business Administration students. For example, Accounting 110/210 at Douglas College is worth six credits, but transfers to SFU as BUS 251 which is worth only three credits. Some disciplines, principally languages, limit credit at certain levels. Finally, students sometimes duplicate credit at the same or at different institutions, sometimes intentionally and sometimes unknowingly.

TABLE VIII
AVERAGE NUMBER OF CREDITS NOT GRANTED PER STUDENT LISTED BY REASON

Reason why transfer credit was not granted at SFU	Applied Sciences (cr.)	Arts (cr.)	Business Admin. (cr.)	Education (cr.)	Science (cr.)	SFU Total (cr.)
Course is assumed to be not university level or is technical/vocational	1.7	2.4	4.4	4.7	3.7	2.9
Maximum transfer credit exceeded in program	1.7	1.5	1.9	4.2	1.5	1.8
Course credit at SFU weighted less than source course	2.7	1.0	1.7	0.9	3.7	1.5
Course appears to be university level, but is not articulated	1.1	1.4	1.5	0.5	2.4	1.5
Course credit is only available when taken in conjunction with other course(s), i.e. 'cluster credit'	0.3	0.4	0.7	0.5	0.3	0.4
Maximum transfer credit exceeded in subject/year level	-	0.2	-	1.0	-	0.1
Course duplicates a course already transferred	-	0.2	0.2	-	-	0.1
TOTAL	7.5	7.1	10.4	11.8	11.6	8.3

This table summarizes the reasons why, on average, 8.3 earned college credits per student did not transfer to SFU. Clearly, the most important reason is that the college course credit earned was not judged to be appropriate for credit towards a Bachelor's degree at SFU. The reader might find Appendix 1 helpful in forming his or her own judgment on this matter. In the opinion of the authors, the vast majority of students who choose to take courses that will not transfer to the University to which they intend to transfer do so in full knowledge of this, and are in no way surprised at the transfer credit evaluation they receive.

Comparisons with the 1998 UBC study

The 1998 UBC study of transcripts of transfer students was mentioned earlier and is cited in the bibliography. In general, the outcomes were similar. The 1998 study showed that UBC transfer students attempted and passed fewer transfer courses, on average, suggesting that they were transferring earlier to UBC than to SFU. On average, they received 4.4 fewer transfer credits at UBC than at SFU, but this represented a generally similar 'efficiency of transfer' to both universities, with UBC being on average 0.3% lower. On average, UBC transfer students 'lost' 7.5 transfer credits each, when they transferred, whereas SFU students 'lost' 8.3 credits. UBC grants a significantly greater proportion of unassigned credits than SFU (29.1% vs. 16.1%). This might be due in part to the year-long nature of some UBC courses, compared with the semester-long courses that are typical at colleges and at SFU.

The UBC study included a Table IX, which identified by college where credit was weighted less at UBC than at the college. A similar table was not reproduced in this study, but the overall comparison reveals that SFU Science and Applied Sciences students lose more credit in this way than do those in other faculties, i.e. 2.7 and 3.7 credits respectively, compared with UBC transfer students who lost on average 3.2 and 4.6 credits in Applied Science and Science. These slightly lower figures for SFU are to be expected because it is widely known that in some Science disciplines, notably Physics and Chemistry, SFU grants separate lecture and lab credits and attempts to match the credits granted by colleges. Another factor affecting transfer credit in Science and Applied Sciences is SFU's restriction on credit for higher level computer programming languages. Students who have already learned one language receive reduced credit for learning additional languages, because there is much conceptual and theoretical overlap of content (e.g. BASIC versus PASCAL). Some colleges grant full credit for each language learned, whether or not the student has already achieved mastery in another programming language.

Further Comments

Colleges have broad educational mandates: they were not established to offer exclusively academic programs for later transfer to a university and to suggest that would be to greatly diminish their place in the post-secondary system. College students attend for a wide variety of reasons, and as one can see in Appendix 1, sometimes over an extended period, in a variety of programs. The college transcripts of the sampled students provide the raw data for this study, but behind each transcript lies a personal history that can only be guessed at. 'Lost' credit is a misnomer if the completion of a (non-transferable) certificate in the 1980's led to steady employment and a successful career until, by the mid 90's, the individual decides to return to college, work towards a new career goal by earning university entrance and complete a degree. Similarly, a mature student who decides on a university degree but whose English skills are weak would hardly consider Adult Basic Education courses as wasted time or 'lost' credit. Without these essential foundations, the subsequent learning would be in jeopardy. Hence, in future studies of 'transfer efficiency,' it might be argued that 'source' courses should be chosen more selectively. If that had been done in this study, the overall efficiency of transfer would be significantly higher, at over 90%. Transfer efficiency would also be much higher (about 88%) if the credits taken in excess of SFU's transfer credit limits were excluded.

These results should be encouraging both to students and to those working cooperatively at universities and colleges to make transfer easy, efficient and seamless. From the viewpoint of an average transfer student who was successful in making the transition from a college to a university, it seems clear that the transfer process works efficiently for the great majority of students.

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Appendix I

B.C. College Courses not Granted Credit at SFU

The following college course credits were earned by students who transferred to SFU, but no transfer credit or reduced transfer credit was granted. Courses taken by students in excess of 60 credits are excluded.

The first column shows the subject code and the course number.

The second column shows the semester and the year the course was taken.

If more than one student did not receive transfer credit for a course in a semester, the number of students is shown.

The third column shows the credit value of the course given by the college.

The fourth column shows the course title.

Some of the course credit values are not known. A credit value of n/a indicates that the college assigned no credit value.

Blanks indicate that no information could be found about the course.

College/ course code	Term taken	Credit	Course title
<u>Camosun College</u>			
ABEN050	Summer 1995		
ABEN080	Fall 1995	n/a	Provincial English
ABENINTER	Summer 1995	n/a	Intermediate English
AMEC100	Summer 1994		Auto Mechanic Repair
AMEC200	Summer 1994		Auto Mechanic Repair
AMEC300	Summer 1994		Auto Mechanic Repair
BUSI157	Fall 1990	3	Introduction to Business
MATH060	Fall 1996	4	Algebra 2 (ABE)
MATH235	Spring 1997	3	Applied Data Analysis 1/Applied Data Analysis 2
PHYS060	Fall 1993	4	Introductory Physics (ABE)
<u>Capilano College</u>			
APSC120	Fall 1997	1	Introduction to Engineering
ARC100	Fall 1993	3	Strategies for Student Success
ARC100	Spring 1996	3	Strategies for Student Success
ARC100	Fall 1996	3	Strategies for Student Success
ARC100	Spring 1997	3	Strategies for Student Success
ARC105	Spring 1996	3	College Reading and Study Skills
BADM101	Fall 1993	3	Management
BADM102	Summer 1995	3	Quantitative Methods
BADM106	Fall 1994	3	Organizational Behaviour
BADM106	Spring 1996	3	Organizational Behaviour
BADM108	Spring 1996	3	Introduction to Business
BADM201	Summer 1995	3	Business Systems
BCMP021	Fall 1993	1	Basic Computing Studies
BCMP031		n/a	Intermediate Computing Studies
BCPT121	Fall 1994	3	Business Computing I
BMKT161	Spring 1994	3	Marketing
BMKT161	Fall 1994	3	Marketing
BMKT161	Fall 1996	3	Marketing
BMKT161	Spring 1997	3	Marketing
BMTH031	Spring 1994	n/a	Intermediate level Mathematics
BSMG170	Spring 1993	3	
BSMG180	Spring 1982	3	Business Computing I
BSMG187	Spring 1993	3	Introduction to Business
BSMG210	Fall 1992	3	Small Business Management
BSMG240	Fall 1992	3	Canadian Business Law I
BSMG241	Spring 1993	3	Canadian Business Law II
BSMG271	Fall 1992	3	Merchandising
CHEM030	Spring 1995	3	An Introduction to Chemistry
CHEM104	Fall 1994	3	Fundamentals of Chemistry I
x2 CHIN150	Spring 1996	3	Spoken Mandarin I: For Speakers of Other Chinese Dialects
COMM297	Spring 1998	3	Capital Markets and Institutions
COMM392	Spring 1998	3	Labour Relations
COMP201	Fall 1996	4	Working with Computer Systems and Networks
x2 COMP201	Spring 1997	4	Working with Computer Systems and Networks
COMP201	Fall 1997	4	Working with Computer Systems and Networks
ENG.250	Spring 1993	1	
ENS100	Fall 1991	1	Choir I
ENS150	Spring 1992	1	Choir II
ESL068	Fall 1996	3	Upper Advanced Reading & Vocabulary
ESL088	Fall 1995	3	College Preparatory English Level II - Reading & Vocabulary
ESL093	Fall 1993	3	Advanced Vocabulary and Reading

College/ course code	Term taken	Credit	Course title
ESL094	Spring 1994	3	Advanced Vocabulary and Reading
ESL098	Fall 1993	3	College Preparatory English Level III -Reading & Vocabulary
ESL099	Spring 1994	3	College Preparatory English Level III - Writing & Grammar
F.A.100	Fall 1974	3	History of Art I
JAZZ240	Fall 1993	1.5	Form and Analysis
JAZZ241	Spring 1994	1.5	Counterpoint
LGAS152	Fall 1995	various	Legal Assistant
LGAS153	Spring 1997	various	Legal Assistant
LGAS155	Fall 1996	various	Legal Assistant
LGAS156	Spring 1996	various	Legal Assistant
LGAS157	Fall 1996	various	Legal Assistant
LGAS162	Spring 1996	various	Legal Assistant
LGAS170	Fall 1995	various	Legal Assistant
LGAS172	Spring 1997	various	Legal Assistant
LGAS176	Fall 1995	various	Legal Assistant
LGAS179	Fall 1996	various	Legal Assistant
LGAS180	Spring 1996	various	Legal Assistant
LGAS181	Fall 1996	various	Legal Assistant
LGAS182	Spring 1997	various	Legal Assistant
LGAS199	Spring 1998	various	Legal Assistant
LGAS252	Fall 1995	various	Legal Assistant
LGAS253	Spring 1997	various	Legal Assistant
LGAS254	Spring 1996	various	Legal Assistant
LGAS255	Fall 1996	various	Legal Assistant
LGAS256	Spring 1996	various	Legal Assistant
LGAS262	Spring 1997	various	Legal Assistant
LGAS264	Fall 1996	various	Legal Assistant
LGAS265	Spring 1997	various	Legal Assistant
x3 MATH090	Fall 1996	1.5	Introductory Algebra with Functions (ABE)
x3 MATH095	Fall 1996	1.5	Intermediate Algebra with Functions (ABE)
x2 MATH095	Spring 1997	1.5	Intermediate Algebra with Functions (ABE)
MATH099	Spring 1994	3	Intermediate Algebra
MATH099	Spring 1995	3	Intermediate Algebra
MATH099	Fall 1995	3	Intermediate Algebra
MATH099	Spring 1996	3	Intermediate Algebra
x5 MATH124	Spring 1998	3	Discrete Mathematics I
PMI101		various	Private Music Instruction
PMI128	Spring 1992	2	Private Music Instruction
PMI179	Fall 1992	1	Private Music Instruction
PMI228	Fall 1992	2	Private Music Instruction
PMI279	Spring 1993	1	Private Music Instruction
PMI379	Fall 1993	1	Private Music Instruction
PMI429		various	Private Music Instruction
PMI479	Spring 1994	1	Private Music Instruction
PMI525		various	Private Music Instruction
PMI544	Fall 1993	2	Private Music Instruction
PMI578	Spring 1994	1	Private Music Instruction
PMI644	Spring 1994	2	Private Music Instruction
THTR205	Fall 1997	3	Bodywork
THTR252	Fall 1997	3	Advanced Lighting and Sound I
THTR253	Spring 1998	3	Advanced Lighting and Sound II

Columbia College

ENGL099	Fall 1997	0	College preparation for non-native speakers
ENG100	Fall 1997	3	Language and Composition

College/ course code	Term taken	Credit	Course title
ENG100	Spring 1998	3	Language and Composition
<u>College of New Caledonia</u>			
ECON152	Fall 1996	3	
SSF273	Summer 1993	4	Classroom Assisting
STSS800	Fall 1995	2	
<u>Coquitlam College</u>			
AR12	Summer 1994	n/a	Art 12
CE12A	Spring 1994	n/a	Consumer Education 12
CH12	Summer 1994	n/a	Chemistry 12
CS12	Spring 1994	n/a	Computer Science 12
ECON100A	Fall 1994	3	Introduction to Economics
EN12	Summer 1994	n/a	English 12
EN12B	Spring 1994	n/a	English 12
EN12C	Summer 1994	n/a	English 12
ENGL097	Spring 1997	n/a	TOEFL Preparation
GEO12	Fall 1994	n/a	Geography 12
MA12B	Spring 1994	n/a	Mathematics 12
WESL11	Summer 1996	n/a	Writing ESL II
<u>Douglas College</u>			
ACCT130			
x2 ACCT220		3	Computerized Accounting
ACCT220	Fall 1996	3	Computerized Accounting
ACCT220	Spring 1997	3	Computerized Accounting
ACCT220	Fall 1997	3	Computerized Accounting
AMSL100	Fall 1990	3	American Sign Language
BUSN320	Fall 1993	3	Business Law I
BUSN320	Fall 1996	3	Business Law I
BUSN320	Fall 1996	3	Business Law I
BUSN470	Fall 1996	3	Business Simulation
BUSN470	Fall 1997	3	Business Simulation
BUSN479			
x2 CHEM104	Fall 1994	4	Preparation for General Chemistry
x2 CHEM104	Fall 1995	4	Preparation for General Chemistry
CMNS105	Fall 1992	3	Introduction to Workplace Writing
CMNS105	Fall 1993	3	Introduction to Workplace Writing
CMNS105	Spring 1996	3	Introduction to Workplace Writing
CMNS105	Summer 1997	3	Introduction to Workplace Writing
CMNS110	Fall 1990	3	Workplace Writing for Child, Family, and Community Studies
CMNS110	Spring 1994	3	Workplace Writing for Child, Family, and Community Studies
CMNS110	Spring 1998	3	Workplace Writing for Child, Family, and Community Studies
CMNS115	Spring 1993	3	Practical Writing
CMNS115	Spring 1994	3	Practical Writing
COAC141	Fall 1996	3	Basic Coaching Foundations
COAC142	Fall 1996	3	Basic Coaching Principles
x4 COOP099	Spring 1998	1	Co-op Ed Readiness
COOP100	Summer 1998	9	
CRWR150	Spring 1996	3	
DVST210	Summer 1997	3	Mathematics - Fundamental Level
x3 DVST310	Fall 1993	3	Mathematics I
DVST310	Spring 1995	3	Mathematics I
DVST310	Spring 1997	3	Mathematics I
DVST310	Fall 1997	3	Mathematics I

College/ course code	Term taken	Credit	Course title
DVST350	Spring 1994	3	Developmental Writing
x2 DVST410	Spring 1994	4.5	Mathematics II
DVST410	Summer 1995	4.5	Mathematics II
DVST410	Fall 1996	4.5	Mathematics II
DVST410	Spring 1998	4.5	Mathematics II
x2 DVST411	Fall 1995	4.5	Mathematics III
DVST411	Fall 1996	4.5	Mathematics III
DVST411	Spring 1997	4.5	Mathematics III
x2 DVST450	Fall 1994	3	Introduction to Research Papers and Academic Assignments
DVST470		3	Science - Advanced Level
EASL255	Summer 1996	3	Upper Intermediate Conversation for Students of ESL
EASL275	Spring 1994	3	Composition for Upper Intermediate Students of ESL
EASL275	Spring 1995	3	Composition for Upper Intermediate Students of ESL
EASL275	Summer 1996	3	Composition for Upper Intermediate Students of ESL
EASL275	Spring 1997	3	Composition for Upper Intermediate Students of ESL
EASL344	Fall 1995	3	Advanced Listening for Students of ESL
EASL345	Summer 1994	3	Advanced Listening for Students of ESL
EASL354	Fall 1995	3	Advanced Conversation and Discussion for Students of ESL
EASL355	Summer 1994	3	Advanced Conversation and Discussion for Students of ESL
EASL355	Fall 1996	3	Advanced Conversation and Discussion for Students of ESL
EASL365	Summer 1994	3	Advanced Reading Skills for Students of ESL
EASL365	Fall 1995	3	Advanced Reading Skills for Students of ESL
EASL365	Summer 1996	3	Advanced Reading Skills for Students of ESL
EASL375	Summer 1994	3	Paragraph and Essay Composition for Students of ESL
x2 EASL375	Fall 1995	3	Paragraph and Essay Composition for Students of ESL
x2 EASL375	Spring 1996	3	Paragraph and Essay Composition for Students of ESL
EASL375	Summer 1996	3	Paragraph and Essay Composition for Students of ESL
EASL375	Fall 1996	3	Paragraph and Essay Composition for Students of ESL
x2 EASL375	Spring 1997	3	Paragraph and Essay Composition for Students of ESL
x3 EASL376	Summer 1997	3	Editing and Proofreading for Students of ESL
EASL445	Fall 1995	3	College Preparatory Listening and Notetaking for Students of ESL
x2 EASL455	Fall 1995	3	College Preparatory Discussion and Participation Skills for Students of ESL
EASL455	Fall 1996	3	College Preparatory Discussion and Participation Skills for Students of ESL
EASL464	Fall 1995	3	College Preparatory Reading Skills for Students of ESL
EASL465	Fall 1995	3	College Preparatory Reading Skills for Students of ESL
EASL465	Spring 1996	3	College Preparatory Reading Skills for Students of ESL
EASL465	Fall 1996	3	College Preparatory Reading Skills for Students of ESL
EASL474	Fall 1995	3	Essay Composition and Research Papers for Students of ESL
EASL475	Spring 1996	3	Essay Composition and Research Papers for Students of ESL
x2 EASL475	Fall 1996	3	Essay Composition and Research Papers for Students of ESL
EASL475	Spring 1997	3	Essay Composition and Research Papers for Students of ESL
EASL475	Fall 1997	3	Essay Composition and Research Papers for Students of ESL
ENGL124	Spring 1993	3	Writing Skills
x2 ENGL124	Spring 1995	3	Writing Skills
ENGL124	Summer 1995	3	Writing Skills
ENGL124	Fall 1995	3	Writing Skills
ENGL124	Spring 1997	3	Writing Skills
HMSE109	Fall 1990	3	Community Support Worker - Introduction to Community Support
HMSE109	Spring 1991	3	Community Support Worker - Introduction to Community Support
HMSE119	Fall 1990	3	Community Support Worker - Supporting Needs of Children with Mental Hand
HMSE119	Spring 1991	3	Community Support Worker - Supporting Needs of Children with Mental Hand
HMSE142	Fall 1990	2	Community Support Worker - Helping Skills
HMSE142	Spring 1991	2	Community Support Worker - Helping Skills
HMSE169	Fall 1990	3	Community Support Worker - Training Techniques I
HMSE169	Spring 1991	3	Community Support Worker - Training Techniques I

College/ course code	Term taken	Credit	Course title
HMSE179	Fall 1990	1.5	Community Support Worker - Augmentative Communication I
HMSE179	Spring 1991	1.5	Community Support Worker - Augmentative Communication I
HMSE199	Fall 1990	4.5	Community Support Worker Practicum I
HMSE199	Spring 1991	4.5	Community Support Worker Practicum I
HMSE219	Spring 1991	1.5	Supporting Needs of Adults with Mental Handicaps
HMSE229	Spring 1991	3	Handicapping Conditions
HMSE242	Spring 1991	2	Group and Teamwork Skills
HMSE259	Spring 1991	2	Leisure Activities
HMSE269	Spring 1991	3	Training Techniques II
HMSE279	Spring 1991	1.5	Augmentative Communication II
HMSE299	Spring 1991	4	Community Support Worker Practicum
HMSE309	Summer 1991	3	Community Support Advanced
HMSE339	Summer 1991	3	Personal Care Needs of People with Multiple Handicaps
HMSE342	Summer 1991	2	Family Support Skills
HMSE369	Summer 1991	3	Training Techniques III
HMSE389	Summer 1991	4	Community Support Worker Practicum
HMSE399	Summer 1991	2	Community Support Worker Practicum
HUMD100	Fall 1994	3	Personal Development
HUMD100	Spring 1996	3	Personal Development
HUMD142	Summer 1992	1.5	Career Explorations
x2 HUMD142	Spring 1993	1.5	Career Explorations
HUMD142	Fall 1993	1.5	Career Explorations
HUMD142	Summer 1994	1.5	Career Explorations
HUMD142	Fall 1995	1.5	Career Explorations
HUMD142	Spring 1996	1.5	Career Explorations
x2 HUMD142	Fall 1996	1.5	Career Explorations
HUMD142	Fall 1997	1.5	Career Explorations
LIBR111	Fall 1995	1.5	Skills for College Library Research
LIBR111	Fall 1996	1.5	Skills for College Library Research
LIBR111	Spring 1998	1.5	Skills for College Library Research
MARK295	Summer 1995	3	Business Marketing
MARK295	Fall 1995	3	Business Marketing
MARK295	Fall 1996	3	Business Marketing
MARK295	Fall 1993	3	Business Marketing
MARK295	Fall 1994	3	Business Marketing
MARK295	Fall 1995	3	Business Marketing
MARK375	Fall 1994	3	Retailing and Merchandising
MARK375	Summer 1995	3	Retailing and Merchandising
MARK375	Fall 1995	3	Retailing and Merchandising
MARK375	Spring 1997	3	Retailing and Merchandising
x2 MARK390	Fall 1996	3	Marketing Management
MARK410	Spring 1995	3	Sales Management
MARK410	Spring 1996	3	Sales Management
MATH101	Fall 1992	3	Basic Algebra
x3 MATH101	Spring 1995	3	Basic Algebra
x2 MATH101	Fall 1996	3	Basic Algebra
MATH101	Spring 1997	3	Basic Algebra
MATH101	Fall 1997	3	Basic Algebra
MATH101	Spring 1998	3	Basic Algebra
MODL072	Summer 1995		
MODL185	Summer 1995	3	
OADM100	Fall 1995	2	Keyboarding
OADM101	Fall 1995	2	Keyboarding Applications I
OADM201	Fall 1995	2	Keyboarding Applications II
OADM308	Spring 1996	3	Word Processing - Microsoft Word for Windows

College/ course code	Term taken	Credit	Course title
PHYS104	Fall 1988	5	Practical Physics
PHYS104	Spring 1995	5	Practical Physics
PHYS104	Fall 1995	5	Practical Physics
x2 PHYS104	Spring 1996	5	Practical Physics
PHYS104	Fall 1996	5	Practical Physics
PHYS104	Fall 1997	5	Practical Physics
RCAP100	Spring 1995	1.5	Health: Lifestyle and Choices
RCAP101	Spring 1995	3	Health and Healing: Concepts for Practice
RCAP102	Spring 1995	1.5	Human Relations: Interpersonal Communications
RCAP110	Spring 1995	1.5	Work Role: Introduction to Resident Care Program Practice
RCAP111	Spring 1995	7	Healing: Personal Care Skills and Resident Care
RCAP112	Spring 1995	3	Healing: Special Needs in Resident Care
RCAP113	Summer 1995	4	Resident Care Attendant: Practicum
RESS100	Spring 1993	1.5	Reading Skills for College
x2 RESS100	Fall 1993	1.5	Reading Skills for College
x3 RESS100	Spring 1994	1.5	Reading Skills for College
RESS100	Fall 1994	1.5	Reading Skills for College
RESS100	Fall 1995	1.5	Reading Skills for College
RESS100	Fall 1996	1.5	Reading Skills for College
RESS110	Fall 1991	1.5	Study Skills for College
RESS110	Spring 1993	1.5	Study Skills for College
x2 RESS110	Fall 1993	1.5	Study Skills for College
x3 RESS110	Spring 1994	1.5	Study Skills for College
x2 RESS110	Spring 1995	1.5	Study Skills for College
RESS110	Fall 1995	1.5	Study Skills for College
RESS110	Fall 1996	1.5	Study Skills for College
SOSC140		3	Behaviour in Organizations
STGE405	Spring 1997	2.5	Technical Direction
STGE410	Spring 1997	2	Lighting IV: Design
STGE411	Spring 1997	2	Audio Techniques II: Recording and Reinforcement

Kwantlen University College

ABED080	Spring 1994	3	Advanced English (ABE)
ABED080	Fall 1994	3	Advanced English (ABE)
ABED082	Spring 1996	4.5	Advanced Mathematics (Algebra) (ABE)
ABED090	Spring 1994	3	(ABE)
ACCT1130	Fall 1996	3	Business Mathematics
x2 ACCT1250		3	
x2 ACCT130	Spring 1994	3	Business Mathematics
x2 ACCT130	Fall 1994	3	Business Mathematics
ACCT130	Fall 1995	3	Business Mathematics
x2 ACCT130	Spring 1996	3	Business Mathematics
ACCT130	Summer 1996	3	Business Mathematics
x2 ACCT2310	Fall 1996	3	Intermediate Accounting I
x2 ACCT2335	Fall 1996	3	Taxation
ACCT2380	Spring 1997	3	Managerial Finance
x2 ACCT2410	Spring 1997	3	Intermediate Accounting II
x3 ACCT2445	Spring 1997	3	Auditing
ACCT310	Fall 1993	3	Intermediate Accounting I
x2 ACCT335	Fall 1995	3	Taxation
ACCT380	Spring 1995	3	Managerial Finance
x2 ACCT380	Spring 1996	3	Managerial Finance
ACCT410	Spring 1994	3	Intermediate Accounting II
ANTH111	Summer 1996	3	Introduction to Physical Anthropology

College/ course code	Term taken	Credit	Course title
ANTH1XX	Summer 1996	3	
BUSI1250	Fall 1996	3	Human Resources Management I
BUSI2390	Fall 1996	3	Business Law
BUSI2390	Summer 1997	3	Business Law
BUSI2390	Summer 1998	3	Business Law
BUSI250	Spring 1994	3	Human Resources Management I
BUSI250	Fall 1994	3	Human Resources Management I
BUSI250	Spring 1995	3	Human Resources Management I
BUSI250	Spring 1996	3	Human Resources Management I
x2 BUSI315	Fall 1995	3	Human Relations in Organizations
BUSI390	Fall 1994	3	Business Law
BUSI390	Fall 1995	3	Business Law
BUSI390	Spring 1996	3	Business Law
CARP100	Spring 1993	various	Carpentry
CARP101	Spring 1993	various	Carpentry
CARP105	Spring 1993	various	Carpentry
CARP110	Spring 1993	various	Carpentry
CARP120	Spring 1993	various	Carpentry
CARP121	Spring 1993	various	Carpentry
CARP130	Spring 1993	various	Carpentry
CARP140	Spring 1993	various	Carpentry
CARP141	Spring 1993	various	Carpentry
CARP142	Spring 1993	various	Carpentry
CBSY2405	Spring 1997	3	Accounting Information Systems
CBSY305	Fall 1994	3	Advanced Microcomputer Applications
CBSY305	Spring 1996	3	Advanced Microcomputer Applications
CBSY405	Spring 1995	3	Accounting Information Systems
CHEM094	Spring 1994	4	Preparation for General Chemistry
CMNS110	Spring 1996	3	Introduction to Business and Technical Writing
CMNS1120	Spring 1997	3	Oral Communications for Career Students
CMNS1120	Spring 1998	3	Oral Communications for Career Students
CSWC100	Fall 1993	3	Wellness: Self and Others
CSWC120	Fall 1993	3.5	Introduction to Practice
CSWC130	Fall 1993	3	Supporting Learning I
CSWC140	Fall 1993	3	Introduction to the Community
CSWC200	Spring 1994	1.5	Working with Others I
CSWC210	Spring 1994		Life Span: Change and Development
CSWC230	Spring 1994	3	Supporting Learning II
CSWC240	Spring 1994	1.5	Community Living
CSWC250	Spring 1994	3	Working in Schools
CSWC260	Spring 1994	2.5	Personal Care
CSWC270	Spring 1994	2.5	Community Support Worker Practicum II
CSWC300	Summer 1994	1.5	Working with Others II
CSWC330	Summer 1994	3	Supporting Learning III
CSWC340	Summer 1994	1.5	Social Networks
CSWC370	Summer 1994	3.5	Practicum III
EASL0097	Fall 1996	3	English for Non-Native Speakers - Level 3: Listening and Speaking Skills
EASL0098	Fall 1996	3	English for Non-Native Speakers - Level 3: Reading and Writing Skills
EASL095	Spring 1995	3	English for Non-Native Speakers - Level 2: Listening and Speaking Skills
EASL096	Spring 1995	3	English for Non-Native Speakers - Level 2: Reading and Writing Skills
EASL097	Spring 1995	3	English for Non-Native Speakers - Level 2: Oral/Listening Skills
EASL098	Spring 1995	3	English for Non-Native Speakers - Level 2: Writing Skills
ECON1XX	Summer 1996	3	
ENGL0099	Fall 1996	3	Writing Skills
ENGL0099	Spring 1997	3	Writing Skills

College/ course code	Term taken	Credit	Course title
ENGL0099	Fall 1997	3	Writing Skills
ENGL0099	Spring 1998	3	Writing Skills
x2 ENGL099	Spring 1993	3	Writing Skills
ENGL099	Spring 1995	3	Writing Skills
x2 ENGL099	Fall 1995	3	Writing Skills
ENGL099	Spring 1996	3	Writing Skills
FINA1222	Spring 1998	3	History of Western Art
FREN301	Fall 1993	3	French Canadian Literature
FREN302F	Spring 1994	3	A Survey of Modern French Literature
HORT102	Fall 1993	3	Botany
HORT104	Fall 1993	3	Fundamentals of Soils and Amendments
HORT106	Fall 1993	1.5	Horticultural Mechanics
HORT171	Fall 1993	2	Introduction to Greenhouse Work I
HORT201	Spring 1994	1.5	Introduction to Pests and Their Control
HORT202	Spring 1994	2	Plant Physiology
HORT204	Spring 1994	2	Growing Media
HORT261	Spring 1994	3	Plant Propagation I
HORT271	Spring 1994	2	Introduction to Greenhouse Work II
HORT300	Summer 1994	2	Horticultural Work Experience
HORT302	Fall 1994	2	Greenhouse Pests
HORT361	Fall 1994	3	Plant Propagation II
HORT370	Fall 1994	2	Greenhouse Systems and Structures
HORT371	Fall 1994	3	Cut Flower Production
HORT372	Fall 1994	3	Greenhouse Vegetable Production
HORT373	Fall 1994	1.5	Greenhouse and Nursery Equipment
HORT399	Fall 1994	1	Practicum Review
HORT470	Spring 1995	2	Greenhouse Management
HORT471	Spring 1995	3	Pot Plant Production
HORT472	Spring 1995	2	Forestry Seedling Production
HORT473	Spring 1995	3	Greenhouse Environment and It's Control
HORT474	Spring 1995	3	Bedding Plant Production
HORT476	Spring 1995	1	Ergonomics and Safety
MATH0092	Fall 1996	3	Fundamental Mathematics
x3 MATH0093	Fall 1996	3	Fundamental Mathematics
x2 MATH0093	Spring 1997	3	Fundamental Mathematics
x2 MATH0093	Fall 1997	3	Fundamental Mathematics
MATH092	Fall 1993	3	Fundamental Mathematics
MATH092	Fall 1995	3	Fundamental Mathematics
x9 MATH093	Fall 1993	3	Fundamental Mathematics
MATH093	Spring 1994	3	Fundamental Mathematics
MATH093	Fall 1994	3	Fundamental Mathematics
x2 MATH093	Spring 1995	3	Fundamental Mathematics
x6 MATH093	Fall 1995	3	Fundamental Mathematics
x2 MATH093	Spring 1996	3	Fundamental Mathematics
x2 MRKT1120	Fall 1996	3	Marketing Essentials
x2 MRKT120	Fall 1993	3	Marketing Essentials
x2 MRKT120	Fall 1995	3	Marketing Essentials
MRKT1230	Spring 1997	3	Basic Marketing II
MRKT2333	Fall 1997	3	Marketing Management I
x2 MRKT2340	Fall 1997	3	Marketing Research
MRKT234	Fall 1997	3	Marketing Research
MRKT2360	Fall 1996	3	Selling and Sales Management
MRKT2360	Fall 1997	3	Selling and Sales Management
MRKT2401	Spring 1998	3	Advertising
MRKT2425	Spring 1997	3	Retail Merchandising

College/ course code	Term taken	Credit	Course title
MRKT2425	Spring 1998	3	Retail Merchandising
MRKT2444	Spring 1998	3	Marketing Management II
MRKT2490	Spring 1998	3	Consumer Behaviour
MRKT401	Spring 1996	3	Advertising
MRKT444	Spring 1996	3	Marketing Management II
PHI110Q	Spring 1990	3	
PHI150Q	Fall 1990	3	
PHI155J	Spring 1992	3	
POL120Q	Spring 1991	3	
PSY100Q	Fall 1990	3	
PSY200Q	Fall 1991	3	
RSS110	Spring 1984	1.5	
SOC125Q	Fall 1990	3	
TCOR104	Spring 1992	1	Sketching for the Trades
TCOR105	Spring 1992	2	Wood and Metal Fabrication

Langara College

	ARTHIST195	Spring 1997	3	Special Topics
	BIOL105	Fall 1997	0	Field School
	BUSPRO115	Fall 1991	3	Introduction to Business in Canada
	CERAMICS118	Fall 1995	3	Introduction to Ceramics I
	CERAMICS218	Spring 1996	3	Introduction to Ceramics II
	CIS115	Spring 1997	3	Systems Analysis
	CIS118	Fall 1994	8	COBOL Programming
	CIS212	Fall 1991	3	Microcomputer Systems and Applications
	CLASSST105	Fall 1995	0	Lecture Series
	COMMUN118	Fall 1994	3	Written Communication
	COMMUN118	Fall 1995	3	Written Communication
	COMMUN118	Fall 1997	3	Written Communication
	CRIMJUS217	Spring 1996	3	Security
	CRIMJUS217	Spring 1997	3	Security
	DESIGN118	Fall 1995	3	Visual Communication: Print Medium I
	DESIGN218	Spring 1996	3	Visual Communication: Print Medium II
	DESIGN318	Fall 1996	3	Computer Graphic Design I
	DESIGN418	Spring 1997	3	Computer Graphic Design II
	ENG107	Fall 1995	3	Language & Composition 1
	ENG107	Fall 1996	3	Language & Composition 1
x3	ENG107	Spring 1997	3	Language & Composition 1
	ENG107	Summer 1997	3	Language & Composition 1
x2	ENG121	Summer 1997	3	Reading and Writing Skills
	ENG127	Summer 1996	3	Essay Writing and Short Prose Selections
	LEARND115	Fall 1981		Learning Disabilities
	LEARND215	Spring 1982		Learning Disabilities
	MATH100	Spring 1995	3	Mathematics Skill Development
	MATH100	Fall 1995	3	Mathematics Skill Development
	MATH100	Spring 1996	3	Mathematics Skill Development
	MATH101	Spring 1996	3	Basic Algebra
	MATH116	Fall 1994	3	Mathematics for General Insurance
	MATH150	Fall 1995	3	Basic and Intermediate Algebra
	MATH150	Spring 1996	3	Basic and Intermediate Algebra
	MATH150	Fall 1996	3	Basic and Intermediate Algebra
	PCE/CNFT105	Spring 1995	0	Peace and Conflict Studies - Lecture Series
	PHYSED112	Fall 1995	1	Introduction to Physical Fitness
	PHYSED117	Spring 1996	1	Foundations of Fitness and Wellness
	PHYSED118	Fall 1997	1	Healthy Lifestyles

College/ course code	Term taken	Credit	Course title
PHYSED124	Summer 1997	1	Tennis
PHYSED144	Spring 1991		Track and Field and Curling
PHYSED166	Fall 1990	3	Teaching Children's Dance
PHYSED167	Fall 1990	3	Active Play
x2 PHYSICS114	Fall 1993	3	Basic Physics
PHYSICS219	Spring 1997	3	Engineering Mechanics
PRINTMAK319	Fall 1997	3	An Introduction to Intaglio/Relief
PRINTMAK419	Spring 1998	3	Advanced Intaglio/Relief
PUBED116	Fall 1981		Public Education
PUBED216	Spring 1982		Public Education
PUBSP110	Spring 1998	3	Public Speaking
REC160	Fall 1990	3	Foundations of Recreation
REC165	Spring 1991	3	Survey of Therapeutic Recreation
REC168	Spring 1991	3	Recreation Program Planning
REC169	Fall 1990	3	Outdoor Recreation I
REC260	Fall 1991	3	Culture, Arts, and Heritage in Leisure Services
REC261	Spring 1991	3	Leadership and Group Processes
REC268	Fall 1991	3	Leisure Services Systems Planning
REC361	Fall 1991	3	Leadership Methods
REC379	Fall 1991	0	Recreation Internship Colloquium
REC470	Fall 1991	3	Recreation Trends and Issues
REC479	Fall 1991	15	Recreation Internship
SCIENCE150	Fall 1981	3	Science for Teaching Assistants 1
SCIENCE250	Spring 1982	3	Science for Teaching Assistants 2
STAT181	Spring 1997	3	Descriptive and Elementary Inferential Statistics
TEACHAS118	Fall 1981	3	Teacher Assistant Workshop
TEACHAS119	Fall 1981	3	Teacher Assistant Fieldwork
TEACHAS218	Spring 1982	3	Teacher Assistant Workshop
TEACHAS219	Spring 1982	3	Teacher Assistant Fieldwork
WOMENST105	Fall 1997	0	Lecture Series
WOMENST216	Fall 1997	3	Further Perspectives on Women

Malaspina University-College

ENGL067	Fall 1996	n/a	English - Provincial (ABE)
GEOG112	Fall 1995	3	Earth Environments
MATH154	Fall 1997	3	Introductory College Algebra
QUME298	Fall 1997	3	Computers and Information Processing in Business
WHMS099	Spring 1994	0	
WHMS099	Fall 1995	0	
WHMS099	Fall 1996	0	

Okanagan University College

BIOL113	Fall 1995	3	Human Anatomy and Physiology I
BIOL123	Spring 1996	3	Human Anatomy and Physiology II
MATH011	Spring 1997	n/a	ABE Mathematics
PSYC220	Fall 1997	3	Lifespan Development
SOCI250	Fall 1997	3	Crime and Society
SOCI306	Spring 1998	3	Families and Society

University College of the Cariboo

BBU221	Spring 1994	3	Financial Accounting
BBU312	Fall 1995	3	Business Finance
BBU315	Fall 1996	3	Investments
BBU319	Fall 1995	3	Integrative Financial and Managerial Accounting
BBU320	Spring 1996	3	Financial Accounting: Assets

College/ course code	Term taken	Credit	Course title
BBU321	Fall 1996	3	Financial Accounting Equities
BBU329	Fall 1996	3	Income Taxation for Business Decision-Making
BBU336	Spring 1996	3	Management Science
BBU346	Spring 1996	3	International Business
BBU374	Spring 1996	3	Organization Theory
BBU393	Spring 1997	3	Commercial Law
BBU420	Spring 1997	3	Advanced Financial Accounting
BBU421	Spring 1997	3	Accounting Theory
BBU423	Fall 1997	3	Principles of Auditing
BBU424	Spring 1997	3	Managerial Accounting II
BBU428	Spring 1997	3	Management Information Systems
BBU478	Fall 1996	3	Seminar in Administrative Policy
BUEC333	Fall 1995	3	Economic and Business Statistics II
BUEC433	Fall 1997	3	Forecasting in Business and Economics
CESL057	Fall 1996	n/a	College Reading Skills
CESL058	Fall 1996	n/a	College Composition
CHEM050	Fall 1996	3	Introductory College Chemistry I
CHEM060	Spring 1997	3	Introductory College Chemistry II
CNST200	Spring 1997	3	Introduction to Canadian Studies
x2 COMP050	Fall 1996	3	Introduction to Micro Computers
ENGL100	Spring 1994	0	
MATH050	Summer 1996	3	Introduction to Algebra (ABE)
MATH051	Summer 1996	3	Algebra 2 (ABE)
PHED110	Fall 1992	3	Basketball
PHED114	Fall 1994	3	Aquatics
PHED116	Fall 1992	3	Soccer
PHED128	Fall 1994	3	Games, Contests, and Relays
PHED212	Spring 1993	3	Biodynamics of Physical Activity
PHYS050	Spring 1997	3	Introduction to Physics I (ABE)
PHYS060	Spring 1998	3	Introduction to Physics 2
STSS101	Fall 1992	2	Student Success Seminars
STSS102	Spring 1993	1	Student Success Seminars

University College of the Fraser Valley

BIO083	Fall 1995	4	Pre-college Biology I
BIO093	Spring 1996	4	Elementary Biology
COMM300	Spring 1987	3	Communications for Human Services I
COMM350	Fall 1997	3	Communications II (Advanced)
CRIM102	Fall 1987	3	
CRIM106	Spring 1987	3	
CRIM300	Fall 1987	6	
CRIM340	Fall 1987	2	Introduction to Peace Officer Use of Force
ENGL101	Spring 1995	3	Pre-college Composition
ENGL101	Fall 1996	3	Pre-college Composition
x2 ENGL101	Fall 1997	3	Pre-college Composition
HSER600	Fall 1992	2	Counselling Skills for Addictions
HSER601	Spring 1993	2	Group Facilitation Skills
HSER602	Spring 1993	2	Family Work in Addictions
HSER610	Fall 1992	2	The Nature of Substance Abuse
HSER611	Spring 1993	2	Psychobiology and Pharmacology of Substance Abuse
HSER612	Spring 1993	2	The Community Treatment of Substance Abuse
HSER627	Fall 1992	1.5	Self-care seminar

College/ course code	Term taken	Credit	Course title
HSER628		1.5	Self-care seminar
HSER629	Spring 1993	1	Self-care seminar
LING101	Spring 1998	3	Introduction to Language
PHYSED300	Spring 1987	2	~