Amended by Senate on May 24/11

SFU OFFICE OF THE ASSOCIATE VICE-PRESIDENT, ACADEMIC AND
ASSOCIATE PROVOST

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MEMORANDUM

ATTENTION	Senate	**DATE**	April 11, 2011
FROM	Bill Krane, Chair	**PAGES**	1/1
	Senate Committee on Undergraduate Studies		
RE:	Transfer Students Admitted to SFU with an English mark of C or C- analysis (SCUS 11-13)		

Action undertaken by the Senate Committee on Undergraduate Studies at its meeting of March 3, 2011, gives rise to the following recommendation:

Motion:

That Senate ~~rescinds the statement approved in May 2010~~ *approve* changing the transferable English or certified W grade for admission and FAL exemption from C- to C. The Calendar statements would read:

English Language Admission Requirement
Completion of a three unit English (ENGL) course or a certified W (writing intensive) course for which Simon Fraser University grants transfer credit, with a minimum grade of C-."

Writing-Intensive Course Prerequisite
A minimum grade of C- in a three unit English (ENGL) course or a certified W (writing intensive) course for which Simon Fraser University grants transfer credit

Rationale

As part of a package of changes approved to admission criteria in May 2010, it was proposed to increase the threshold from C- to C for the minimum transferable grade for an English or certified W (writing intensive) course, for the purposes of awarding FAL X99 equivalency. Following approval of this at Senate, it was discovered that a number of problems arise from such a change.

Further investigating the implementation of this change, it became apparent that this specific change was not feasible. All articulated courses transfer to SFU at the level of C-, and this has been the case for many years. More recently, transferable designations of W, Q, and B were also set at the C- level. If SFU were now to require a level of C in the sub-set of college English or W courses for FAL exemption (which acts as the pre-requisite to further W course registration), SFU would be in the untenable position of acknowledging a W designation for a transferable course while at the same time not honouring or awarding the FAL pre-requisite associated with that course. This change would cause significant course selection challenges for transferring students, and related advising complexities.

Because of impacts on prospective students and programming at the college level, raising the overall, acceptable, transfer level in all regards from C- to C for English and W courses would normally require long lead time (eg. 2+ years) for consultation and discussion with SFU's post-secondary partners, and with BCCAT. Such a proposal would be met with strong negative reaction from these quarters and do damage to SFU's relationships. For example, throughout 2004 when other post-secondary institutions learned of SFU's plans for writing-intensive learning, there was significant concern expressed across the provincial system regarding whether SFU was inappropriately devaluing carefully articulated courses and the quality of instruction. What was clear from those discussions, and the subsequent 2 years' of follow-up, was that other BC institutions set high academic standards in their transferable English courses. Subsequently, most BC institutions have made considerable efforts to voluntarily align many of their own courses to SFU's W criteria (sending institutions must apply to SFU for W designation).

Further consideration is required on how best to ensure that transferring students are well prepared for study at SFU. The proposal to increase the acceptable level in English and W courses was attempting to address a perceived decline in the readiness of students transferring from particular colleges. However, an analysis of the data prepared by the office of Institutional Research and Planning (attached) shows that there is no demonstrable pattern of lower academic achievement for those transferring students awarded credit for English or a W course at the level of C- vs. students at the C level in similar courses.

In light of the data demonstrating no improvement in academic readiness, and the course selection challenges this would pose to transferring students; given the potential for damage to SFU's relationships with other post-secondary institutions, and given the problems of implementing the grade change, SCUS believes that proposing this particular change was an error and should be corrected. It is therefore recommended that Senate rescind the change from C- to C, and continue to apply the C- threshold to all transferable courses.

SFU SIMON FRASER UNIVERSITY
INSTITUTIONAL RESEARCH AND PLANNING

To:	Bill Krane, AVP Academic and Assoc Provost, Chair of Senate Committee on Undergraduate Studies (SCUS)	From:	Jacy Lee, Director Institutional Research and Planning (IRP)
Subject:	Transfer Students Admitted to SFU with an English mark of "C" or "C-"	Date:	January 11, 2011

The analysis requested was to determine whether there is a significant difference in the SFU performance of transfer students admitted with an English or W-equivalent mark of "C" versus "C-".

Scope and Methodology

In consultation with Jo Hinchliffe, Assistant Registrar and Secretary to SCUS, we defined the sample for analysis to include students admitted from a college or university, whose highest postsecondary English or W-equivalent course mark transferred at admission was a "C" or "C-", and who did not submit a high school English grade. If students transferred in more than one English or W-equivalent course, the highest mark achieved was used to determine eligibility for the sample. The sample included students admitted to SFU each term going as far back as fall 2006. Students were followed to the end of the summer 2010 term.

The student sample was divided into two groups: the "C" group who had a mark of "C" in a postsecondary English or W-equivalent course, and the "C-" group who had a mark of "C-". The SFU performance of these students was measured using the following outcomes:

- SFU grade point average (GPA), including:
    - first-term GPA,
    - second-term GPA,
    - 30-credit cumulative GPA (CGPA), and
    - 60-credit cumulative GPA (CGPA),
- SFU academic standing, measured as:
    - "On Academic Probation" (OAP) within two years of admission, and
    - "Required to Withdraw"[1] (RTW) within two years of admission.

The performance outcomes were assessed using the t-test[2] for GPA means, and the chi-square test for academic standing (OAP and RTW.) In the analysis of GPA, all students who had achieved the GPA of interest were included in the analysis. (For example, all students who had achieved 30 credits were included in the analysis of 30-credit CGPA.) The analysis of academic standing was restricted to students

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[1] "Required to Withdraw" (RTW) is defined to include those who are required to withdraw and those who are on Extended Academic Probation (EAP). EAP students are those who were initially RTW, but who have been allowed to stay at SFU by enrolling in the "Back On Track" program. Although these students have not literally been required to withdraw from the university, their SFU performance is equivalent to the RTW group.

[2] The t-test is appropriate for continuous variables that follow a normal distribution. The first two GPA outcomes exhibit slightly bimodal distributions, due to a group of students with a semester GPA of zero. As such, the analysis of the GPA outcomes was repeated using the Mann-Whitney test for non-parametric distributions. This did not appreciably change the results (see SPSS output in Appendix B.)

admitted in fall 2008 or earlier, so that all students in that analysis could be followed for two years. The academic probation outcome (OAP) was further investigated by looking at each entry cohort (by admission term) separately.

For all tests, the p-value can be used to determine whether the performance difference between the two groups is statistically significant. In general, a p-value of less than 0.05 indicates that there is a statistical difference between the two groups[3].

The effect size[4,5] is a measure of the performance difference between the two groups, while taking the amount of the variability into account. An effect size of 0.2 is usually considered small, 0.5 moderate, and 0.8 large. A positive sign indicates that the "C" group had a higher GPA average or lower OAP/RTW rate than the "C-" group (better performance). A negative sign indicates that the "C" group had a lower GPA average or higher OAP/RTW rate than the "C-" group (worse performance).

<u>Results</u>

The sample contained 1,410 students: 1,043 in the "C" group, and 367 in the "C-" group.

Table 1 displays the results for the GPA outcomes, and Table 2 displays the results of the analysis on academic standing.

Table 1: Analysis of GPA Outcomes

SFU Performance Outcome	Sample Size		Average GPA		Difference ("C" - "C-")	Effect size	p-value (t-test)
	"C" Group	"C-" Group	"C" Group	"C-" Group			
1st term GPA	1,037	365	2.21	2.11	0.1	0.12	0.06
2nd term GPA	901	308	2.25	2.2	0.05	0.06	0.34
30-credit CGPA	517	161	2.53	2.55	-0.02	-0.06	0.48
60-credit CGPA	267	64	2.6	2.62	-0.02	-0.04	0.78

Table 2: Analysis of Academic Standing

SFU Performance Outcome	Sample Size		Percent		Difference ("C-" - "C")	Effect size	p-value (chi-square test)
	"C" Group	"C-" Group	"C" Group	"C-" Group			
% OAP within 2 Years	600	180	48%	57%	9%	0.08	0.03
by admission term							
fall 2006	*82*	*29*	*55%*	*76%*	*21%*	*0.19*	*0.05*
spring 2007	*59*	*11*	*51%*	*55%*	*4%*	*0.03*	*0.82*
summer 2007	*56*	*17*	*39%*	*53%*	*14%*	*0.12*	*0.32*
fall 2007	*102*	*34*	*48%*	*38%*	*-10%*	*-0.09*	*0.32*
spring 2008	*80*	*33*	*56%*	*70%*	*13%*	*0.12*	*0.18*
summer 2008	*67*	*20*	*48%*	*55%*	*7%*	*0.06*	*0.57*
fall 2008	*154*	*36*	*42%*	*53%*	*11%*	*0.08*	*0.25*
% RTW within 2 Years	600	180	20%	27%	7%	0.07	0.06

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[3] In general terms, the p-value represents the probability of being wrong if we conclude that there is a difference between the two groups. It is fairly standard to use a cut-off of 0.05, or 5%, to determine whether we should conclude that a difference exists.

[4] Effect size used in Table 1 (on GPA average) is "Cohen's d", calculated by subtracting the "C-" group mean from the "C" group mean, and dividing the result by the pooled standard deviation. The pooled standard deviation is calculated as follows: Pooled SD = $\sqrt{((N_1 - 1) \cdot S_1^2 + (N_2 - 1) \cdot S_2^2)/(N_1 + N_2 - 2)}$.

[5] Effect size used in Table 2 (on academic standing) is "Phi", calculated by taking the square root of the ratio of the chi-square statistic over the total sample size.

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From Tables 1 and 2, only Academic Probation (OAP) differs significantly between the two groups (p-value < 0.05), with "C-" students being significantly more likely to be OAP within 2 years of admission. When individual entry cohorts were analyzed, the percent OAP was higher in the "C-" group in all entry cohorts with the exception of one[6]. However, the higher prevalence of OAP among the "C-" group was only statistically significant among students admitted in fall 2006 (p-value = 0.05). Among students admitted after fall 2006, both groups were equally likely to be on academic probation (OAP) within two years.

It should be noted that two other performance outcomes (first-term GPA and RTW within 2 years) are close to showing a statistically significant difference. It is possible that a larger sample size would have revealed a significant difference in these two outcomes as well.

For the remaining GPA outcomes (second-term GPA, 30-credit CGPA, and 60-credit CGPA), the evidence does not suggest that there is a significant difference in performance between the "C" and "C-" groups.

Conclusions

The results show that, for all but one outcome analyzed, there is no statistically significant difference in academic performance at SFU between the "C" and "C-" groups. The analyses on GPA means and percent RTW within 2 years do not suggest that there is a significant difference in performance between the two groups. Analysis of the sample as a whole (not at the individual admission cohort level) suggests that the "C-" group is significantly more likely to be OAP within two years of admission to SFU. However, on closer investigation, higher prevalence of OAP in the "C-" group was only statistically significant among students admitted in one of the seven cohorts analyzed. With the exception of the fall 2006 cohort, both groups were equally likely to be OAP within two years.

Comparing means of the GPA outcomes, the largest mean difference is found in the 1st term, where the "C-" group's mean is 0.10 lower than the "C" group. It appears that once students get past their first term, the two groups have comparable second-term GPAs, as well as 30-credit and 60-credit CGPAs. This may suggest that intervention before or in the first term for "C-" students could help improve their chances of academic success at SFU.

Finally, a change in the admission procedure to require a mark of "C" in a postsecondary English or W-equivalent course would have excluded 367 students from admission to SFU over the past four years.

Appendices

Included in this memo are two appendices. Appendix A provides a list of institutions from which the students transferred their English or W-equivalent courses, and Appendix B contains the SPSS output of the statistical tests conducted.

For technical details on the analysis, please contact Jessica Tilley, Intermediate Analyst at jessica_tilley@sfu.ca or at local 2-4661.

cc. Jo Hinchliff, Assistant Registrar (Secretary to SCUS)

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[6] The "C" group admitted in fall 2007 had a higher prevalence of OAP compared to the "C-" group but the difference was not found to be statistically significant.

Appendix A: List of Institutions

Table A contains a list of institutions where the students in the sample completed their postsecondary English or W-equivalent course. Note that while there were 1,410 students in the sample, Table A contains 1,428 entries. This is because some students transferred appropriate courses from more than one institution.

Table A: List of Institutions where Students Completed Postsecondary English or Equivalent

Institution	# Students	Institution	# Students
Douglas College	279	Northern Lights College	2
Langara College	238	Grande Prairie Regional College	2
Kwantlen Polytechnic University	194	Corpus Christi College	2
Fraser International College	179	University of Calgary	2
Columbia College	179	University of B.C. Okanagan	2
Coquitlam College	108	Concordia Univ Coll of Alberta	2
Capilano University	72	Univ of Northern British Col	2
Thompson Rivers Open Learning	19	Dalhousie University	2
Univ of the Fraser Valley	17	Memorial Univ of Newfoundland	1
Selkirk College	14	Brandon University	1
University of Victoria	13	Athabasca University	1
Trinity Western University	13	College of New Caledonia	1
Alexander College	12	Hong Kong Baptist University	1
Vancouver Island University	8	St Francis Xavier University	1
Thompson Rivers University	8	University of Manitoba	1
University of British Columbia	6	University of Regina	1
University of Alberta	6	University of Saskatchewan	1
Grant MacEwan University	6	Seneca College	1
Vancouver Community College	5	University of Western Ontario	1
Inst of Indigenous Government	3	University of Windsor	1
Okanagan College	3	Lakehead University	1
Camosun College	2	Cascadia Community College	1
Mount Royal University	2	Unknown	10
Nicola Valley Inst of Tech	2	Total	1,428

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Appendix B: SPSS Output

T-Test on GPA:

Group Statistics

	Grade	N	Mean	Std. Deviation	Std. Error Mean
Term 1 GPA	C	1037	2.2115	.81611	.02534
	C-	365	2.1095	.90017	.04712
Term 2 GPA	C	901	2.2484	.83137	.02770
	C-	308	2.1960	.83760	.04773
30-Credit CGPA	C	517	2.5256	.41822	.01839
	C-	161	2.5524	.40361	.03181
60-Credit CGPA	C	267	2.6014	.34615	.02118
	C-	64	2.6153	.37224	.04653

Independent Samples Test

		Levene's Test for Equality of Variances	
		F	Sig.
Term 1 GPA	Equal variances assumed	5.446	.020
	Equal variances not		
Term 2 GPA	Equal variances assumed	.590	.443
	Equal variances not		
30-Credit CGPA	Equal variances assumed	.013	.910
	Equal variances not		
60-Credit CGPA	Equal variances assumed	1.990	.159
	Equal variances not		

Independent Samples Test

		t-test for Equality of Means					Interval of the	
		t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Term 1 GPA	Equal variances assumed	1.999	1400	.046	.10203	.05105	.00189	.20217
	Equal variances not	1.907	587.800	.057	.10203	.05350	-.00304	.20711
Term 2 GPA	Equal variances assumed	.953	1207	.341	.05241	.05498	-.05545	.16028
	Equal variances not	.950	528.167	.343	.05241	.05518	-.05599	.16081
30-Credit CGPA	Equal variances assumed	-.715	676	.475	-.02676	.03744	-.10027	.04675
	Equal variances not	-.728	275.340	.467	-.02676	.03674	-.09909	.04558
60-Credit CGPA	Equal variances assumed	-.284	329	.777	-.01389	.04889	-.11007	.08229
	Equal variances not	-.272	90.898	.786	-.01389	.05113	-.11545	.08767

Mann-Whitney Test:

Ranks

	Grade	N	Mean Rank	Sum of Ranks
Term 1 GPA	C-	365	668.32	243936.50
	C	1037	713.18	739566.50
	Total	1402		
Term 2 GPA	C-	308	587.76	181029.50
	C	901	610.89	550415.50
	Total	1209		
30-Credit CGPA	C-	161	351.95	56664.00
	C	517	335.62	173517.00
	Total	678		
60-Credit CGPA	C-	64	169.02	10817.50
	C	267	165.28	44128.50
	Total	331		

Test Statistics

	Term 1 GPA	Term 2 GPA	30-Credit CGPA	60-Credit CGPA
Mann-Whitney U	177141.500	133443.500	39614.000	8350.500
Wilcoxon W	243936.500	181029.500	173517.000	44128.500
Z	-1.821	-1.004	-.924	-.281
Asymp. Sig. (2-tailed)	.069	.315	.356	.778

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Chi-Square Test, OAP:

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
oap * grade	780	55.3%	630	44.7%	1410	100.0%

oap * grade Crosstabulation

			grade		
			C	C-	Total
oap	No	Count	312	77	389
		% within grade	52.0%	42.8%	49.9%
	Yes	Count	288	103	391
		% within grade	48.0%	57.2%	50.1%
Total		Count	600	180	780
		% within grade	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4.710a	1	.030		
Continuity Correction	4.349	1	.037		
Likelihood Ratio	4.724	1	.030		
Fisher's Exact Test				.034	.018
N of Valid Cases	780				.

Chi-Square Test, OAP by Admission Term:

OAP * Grade * Admission Term Crosstabulation

Admission Term				Grade C	Grade C-	Total
Fall 2006	OAP	No	Count	37	7	44
			% within grade	45.1%	24.1%	39.6%
		Yes	Count	45	22	67
			% within grade	54.9%	75.9%	60.4%
	Total		Count	82	29	111
			% within grade	100.0%	100.0%	100.0%
Spring 2007	OAP	No	Count	29	5	34
			% within grade	49.2%	45.5%	48.6%
		Yes	Count	30	6	36
			% within grade	50.8%	54.5%	51.4%
	Total		Count	59	11	70
			% within grade	100.0%	100.0%	100.0%
Summer 2007	OAP	No	Count	34	8	42
			% within grade	60.7%	47.1%	57.5%
		Yes	Count	22	9	31
			% within grade	39.3%	52.9%	42.5%
	Total		Count	56	17	73
			% within grade	100.0%	100.0%	100.0%
Fall 2007	OAP	No	Count	53	21	74
			% within grade	52.0%	61.8%	54.4%
		Yes	Count	49	13	62
			% within grade	48.0%	38.2%	45.6%
	Total		Count	102	34	136
			% within grade	100.0%	100.0%	100.0%
Spring 2008	OAP	No	Count	35	10	45
			% within grade	43.8%	30.3%	39.8%
		Yes	Count	45	23	68
			% within grade	56.3%	69.7%	60.2%
	Total		Count	80	33	113
			% within grade	100.0%	100.0%	100.0%
Summer 2008	OAP	No	Count	35	9	44
			% within grade	52.2%	45.0%	50.6%
		Yes	Count	32	11	43
			% within grade	47.8%	55.0%	49.4%
	Total		Count	67	20	87
			% within grade	100.0%	100.0%	100.0%
Fall 2008	OAP	No	Count	89	17	106
			% within grade	57.8%	47.2%	55.8%
		Yes	Count	65	19	84
			% within grade	42.2%	52.8%	44.2%
	Total		Count	154	36	190
			% within grade	100.0%	100.0%	100.0%

Chi-Square Tests

admit_term		Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Fall 2006	Pearson Chi-Square	3.943	1	0.047		
	Continuity Correction	3.114	1	0.078		
	Likelihood Ratio	4.129	1	0.042		
	Fisher's Exact Test				0.051	0.037
	N of Valid Cases	111				
Spring 2007	Pearson Chi-Square	0.051	1	0.822		
	Continuity Correction	0.000	1	1.000		
	Likelihood Ratio	0.051	1	0.822		
	Fisher's Exact Test				1.000	0.542
	N of Valid Cases	70				
Summer 2007	Pearson Chi-Square	0.995	1	0.318		
	Continuity Correction	0.515	1	0.473		
	Likelihood Ratio	0.986	1	0.321		
	Fisher's Exact Test				0.404	0.236
	N of Valid Cases	73				
Fall 2007	Pearson Chi-Square	0.988	1	0.320		
	Continuity Correction	0.632	1	0.426		
	Likelihood Ratio	0.997	1	0.318		
	Fisher's Exact Test				0.427	0.214
	N of Valid Cases	136				
Spring 2008	Pearson Chi-Square	1.763	1	0.184		
	Continuity Correction	1.246	1	0.264		
	Likelihood Ratio	1.802	1	0.180		
	Fisher's Exact Test				0.210	0.132
	N of Valid Cases	113				
Summer 2008	Pearson Chi-Square	0.323	1	0.570		
	Continuity Correction	0.098	1	0.754		
	Likelihood Ratio	0.323	1	0.570		
	Fisher's Exact Test				0.618	0.377
	N of Valid Cases	87				
Fall 2008	Pearson Chi-Square	1.322	1	0.250		
	Continuity Correction	0.928	1	0.335		
	Likelihood Ratio	1.314	1	0.252		
	Fisher's Exact Test				0.268	0.168
	N of Valid Cases	190				

Chi-Square Test, RTW:

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
rtw * grade	780	55.3%	630	44.7%	1410	100.0%

rtw * grade Crosstabulation

			grade		Total
			C	C-	
rtw	No	Count	480	132	612
		% within grade	80.0%	73.3%	78.5%
	Yes	Count	120	48	168
		% within grade	20.0%	26.7%	21.5%
Total		Count	600	180	780
		% within grade	100.0%	100.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.641	1	.056		
Continuity Correction	3.258	1	.071		
Likelihood Ratio	3.514	1	.061		
Fisher's Exact Test				.063	.037
N of Valid Cases	780				

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