

# Research Results

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## Credits to Graduation:

### A Comparison of Transfer Graduates and Secondary School Graduates at BC Research Universities.

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#### Introduction

This study examines the number of credits earned at graduation for two groups of students who graduated with a baccalaureate degree: those who were admitted as transfer students and those admitted as secondary school students<sup>1</sup> to one of the four BC research universities [Simon Fraser University (SFU), University of British Columbia, Vancouver (UBC), University of Northern British Columbia (UNBC) and University of Victoria (UVic)].

Prior studies<sup>2</sup> have examined various aspects of the transfer system and the transfer student experience and have shown that transfer students are more likely to be older and take longer to complete their degree, primarily because they are more likely to be attending part-time. However, it is not known if transfer students routinely take more credits than secondary school students in order to fulfill all the requirements of their chosen degree. Assessing whether the transfer route is as efficient as the secondary school route is an important indicator of the effectiveness of the transfer system in BC.

If a degree requires 120 credits, then ideally students should have attained that number or close to it upon graduation. If transfer students have planned their transfer courses well, receive all appropriate credit upon admission to the university and are able to apply that credit to their chosen program, they should be able to graduate with the same number of credits acquired by secondary school students. That is, the transfer route to a degree should be as efficient as the secondary school route.

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This study investigates (a) if transfer students are being awarded sufficient credit for their transfer courses, (b) if they are graduating with the same number of total credits (transferred and earned at the university) as those admitted on the basis of secondary school and (c) whether or not the transfer route is systemically placing transfer students at a disadvantage.

#### Cohort

Each research university provided a data file of all students who graduated in fall 2007 or spring 2008 with an arts, science, commerce/business administration or engineering degree. The cohort was restricted to graduates who were admitted to the university from a BC secondary or post-secondary institution.<sup>3</sup>

Each university's data file included variables which allowed for comparisons across several measures such as credits awarded and credits completed at receiving institutions.

<sup>1</sup> Students admitted under the 'secondary school' category include direct entry students who began studying at a university immediately following high school; those who delayed entry between high school and university without completing post-secondary courses in between; and those students who attended a post-secondary institution, completed some courses but not sufficient courses to qualify as 'transfer' and were therefore admitted mostly on the basis of their secondary school courses and grades with some transfer credits awarded for applicable post-secondary courses.

<sup>2</sup> See [bccat.ca/publications](http://bccat.ca/publications).

<sup>3</sup> Graduates from other admission categories and jurisdictions were excluded from the study and represent 22% of graduates in Arts, Business, Engineering and Science programs at all four universities.

**Table 1: Distribution of graduates by university and program**

Degree Program student graduated with	SFU	UBC	UNBC	UVic	Total	% of Cohort
Arts	1,212	1,550	118	992	3,872	50%
Business	394	486	112	132	1,124	14%
Engineering	70	517	2	108	697	9%
Science	282	1,080	160	550	2,072	27%
<b>Total</b>	<b>1,958</b>	<b>3,633</b>	<b>392</b>	<b>1,782</b>	<b>7,765</b>	<b>100%</b>
<b>% of cohort</b>	<b>25%</b>	<b>47%</b>	<b>5%</b>	<b>23%</b>	<b>100%</b>	

In addition, UBC was also able to provide credits completed at previous institutions so we are able to report on all credits completed for UBC graduates (presented for transfer, awarded transfer and credits completed at UBC).

The cohort included 7,765 graduates with 50% in arts, 27% in science, business at 14% and engineering at 9% (see **Table 1**). The distribution of graduates by program is consistent with the size of these programs at the respective universities. UBC, the largest of the four universities, has 47% of the graduates in the cohort file, followed by SFU (25%), UVic (23%) and UNBC (5%). SFU has the highest proportion of transfer graduates (53%), followed by UNBC (51%), UVic (45%) and UBC (31%) (see **Figure A**).

Graduates at SFU and UVic are more likely to be in arts (62% and 56% respectively). At UBC, however, graduates are equally distributed between arts (43%) and science and engineering (44%). At UNBC, the majority of graduates are in science programs (41%), with similar distributions for arts (30%) and business (29%).

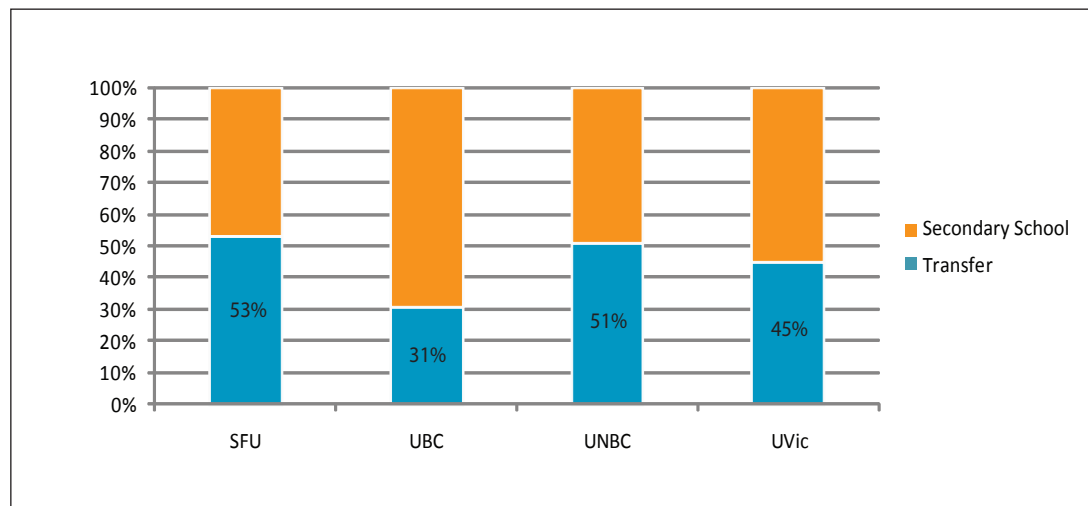
The majority of transfer graduates (61%) in the cohort graduated with a degree in arts compared to secondary school students at 42%. It appears that students who wish to pursue degrees in science and engineering fields are more likely to attend university directly from high school.

### Credits Required

Universities provided the number of credits required for degree program completion. In most cases, this appears to be the minimum number of credits required for the degree and not necessarily reflective of the credits required for the range of options and choices that students selected.

The majority of graduates (6,492) are registered in programs in arts, business and science which require a minimum of 120-121 credits for degree completion. Graduates who complete engineering degrees are required to take a minimum of 136 credits and for some as much as 161 credits. There is considerable variation among engineering programs at UBC, and variation also exists when comparing programs among universities.

**Figure A: Proportion of graduates by admissions basis**



## Credits Awarded and Completed

Since most universities require that students complete a minimum of two years of study (equivalent to 60 credits) at the university, we expected that transfer students would receive approximately 60 credits or less for transfer at the receiving institution.

On average, transfers were awarded 50 credits upon admission to university with some awarded in excess of 60 credits and as high as 187 (UNBC) and 149 (UVic).

As seen in **Table 2**, transfer graduates complete slightly fewer credits on average than those admitted on the basis of secondary school. This includes transfer credits awarded plus credits earned at the research university. UNBC transfers take slightly more credits but the difference is not statistically significant.

**Table 3** shows UBC transfer graduates completed slightly fewer credits than secondary school graduates in all four degree programs. At SFU transfers also have on average slightly fewer credits with the exception of those in science. At UVic transfers complete slightly more credits than secondary school graduates with the exception of those in science and at UNBC transfer graduates in all three program areas complete slightly more credits.

Transfers are not necessarily choosing the 'one major' path to graduation. In arts, 33% of transfers choose a combination of program options. This compares to 47% for secondary school admits. In science, the proportion of transfers in dual programs is 29% compared to 37% for secondary school admits. Transfer graduates in almost all honours programs also take on average slightly fewer credits to degree completion.

If we restrict the analysis to major programs which require 120 or 121 credits for degree completion, we find that, except for UNBC and to a lesser extent UVic, transfer students in most 'single' major programs complete slightly fewer credits than secondary school students. The exception, however, is science where transfers at three of the four universities tend to complete more credits for their programs.

Note that graduates from business programs at UVic seem to complete an unusually higher number of credits than is required for the program. Business students at UVic complete 12 credits of co-op placements in addition to the 120 credits required for the degree program. At the other three universities, co-op placements are counted within the 120 credits required for degree completion.

**Table 2: Average total credits (transfer credits awarded plus credits earned at university)**

	Secondary School	Transfer	Total
SFU	131	128	129
UBC	137	132	136
UNBC	128	130	129
UVic	131	131	131
<b>Total</b>	<b>134</b>	<b>130</b>	<b>133</b>

**Table 3: Average total credits (transfer credits awarded plus earned), by program**

Average number of credits completed					
Degree	Institution	Required Credits	Secondary School	Transfer	Average
Arts	SFU	120 to 132	128	128	<b>128</b>
	UBC	120	127	126	<b>127</b>
	UNBC	120 to 132	124	127	<b>126</b>
	UVic	120	125	126	<b>126</b>
<b>Arts Total</b>			<b>127</b>	<b>127</b>	<b>127</b>
Science	SFU	120 to 132	132	133	<b>132</b>
	UBC	120 to 134	138	133	<b>137</b>
	UNBC	120 to 139	132	137	<b>134</b>
	UVic	120 to 132	132	132	<b>132</b>
<b>Science Total</b>			<b>136</b>	<b>133</b>	<b>135</b>

Average number of credits completed					
Degree	Institution	Required Credits	Secondary School	Transfer	Average
Business	SFU	120 to 132	130	127	<b>129</b>
	UBC	121	128	123	<b>127</b>
	UNBC	120	123	126	<b>125</b>
	UVic	120	135	136	<b>136</b>
<b>Business Total</b>			<b>129</b>	<b>127</b>	<b>128</b>
Engineering	SFU	140 to 157	153	150	<b>153</b>
	UBC	136 to 157	170	162	<b>167</b>
	UNBC	161	162	167	<b>162</b>
	UVic	147	164	167	<b>165</b>
<b>Engineering Total</b>			<b>167</b>	<b>163</b>	<b>166</b>

## Credits Presented and Credit Awarded

UBC is the only institution able to provide transfer credits presented when students apply for admission in addition to transfer credits awarded. Transfer students from UBC represent just over 1/3 of all transfer graduates so may reflect the experience of a representative number of transfer students to research universities. An examination of the UBC dataset (credits presented plus credits awarded and credits earned at the university) shows that on average, transfer graduates at UBC still complete slightly fewer credits over the course of their post-secondary studies with little variation by program. UBC's quantitative dataset is further confirmed by the results of their qualitative surveys.<sup>4</sup> In the *New to UBC* survey administered in 2009, 88% of transfer respondents said that they received 'all or most' of the credit that they expected upon transfer to UBC.

## Performance

Prior studies<sup>5</sup> have shown that upon first entering university, transfer student grades drop slightly but by the time they graduate, transfers perform as well academically as secondary school students. We examined GPAs for graduates in senior level courses (3rd year and higher). Data for UBC, UNBC and UVic confirm results of prior studies: transfers perform as well as secondary school students with very small variation by program and university. In fact, at UBC, with the largest proportion of transfers in Arts, there is no difference in the performance of transfer and secondary school graduates.

SFU provided a cumulative GPA for its cohort that includes performance in first and second year courses, and therefore SFU data are not directly comparable. SFU's cumulative GPA does however provide a good proxy for performance of students at SFU and seems to indicate that secondary school students perform slightly better, but the differences are very small.

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## Conclusions

The most significant finding in this study is that the transfer route does not seem to disadvantage transfer students and in fact transfer students are able to graduate with approximately the same number of credits as secondary school students, accounting for both total credits awarded at sending institutions as well as credits completed at receiving institutions.

They choose a combination of programs which include single majors, double majors and honors programs and, while there is some variation by program and institution, in most cases transfers complete on average fewer credits than graduates admitted on the basis of secondary school grades.

As students transfer to and from different institutions, the sequencing of pre-requisites and requirements does not appear to present gaps in their progress toward degree completion. In fact, such gaps are negligible and there is virtually no evidence of students having to "catch-up" at the receiving institution.

Furthermore, transfer graduates perform as well academically as secondary school graduates with very small variations in GPA by university and program. Students who choose the transfer route seem to be well prepared to meet the academic challenges facing them at the university.

A great deal of the success of the transfer system can be attributed to the fact that courses for transfer have been well articulated among post-secondary institutions in British Columbia, providing students with a relatively seamless process of transfer as well as different pathways to degree completion.

<sup>4</sup> See [pair.ubc.ca/surveys/index.htm](http://pair.ubc.ca/surveys/index.htm)

<sup>5</sup> See [bccat.ca/publications](http://bccat.ca/publications)