Credits to Graduation

by Anna Tikina, Research Officer, BCCAT

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Executive Summary

The number of credits completed to earn a baccalaureate degree continues to be an important criterion for measuring the effectiveness and efficiency of transfer between post-secondary institutions. Many undergraduates – both transfer and direct entry students – complete more than 120 credits needed for a "traditional" degree. The current study aims to compare the total number of credits completed for a baccalaureate degree by direct entry and transfer students at several large public universities in BC. Evolving from earlier research, this study utilizes a new data source so that credits completed at the sending institution can be more fully documented, rather than relying only on the number of credits recognized at the receiving institution. This goal was achieved by combining the institutional data from the receiving universities, as well as data from the sending institutions accessed through the province-wide Student Transitions Project (STP) dataset.

The Cohort:

- 2015/16 graduates with a BA (Arts), BSc (Science), BCOM (Commerce or Business Administration) or BASC (Engineering)
- Receiving Universities: SFU, TRU, UBC, UFV, UNBC, and UVIC
- Several "high volume" Study Sender institutions: Douglas, Langara, OC, TRU, Selkirk, CNC, Camosun, and CMNT
- Pathways (in Table below): Transfer students transferring credits from ***one*** Study Sender only.

Highlights

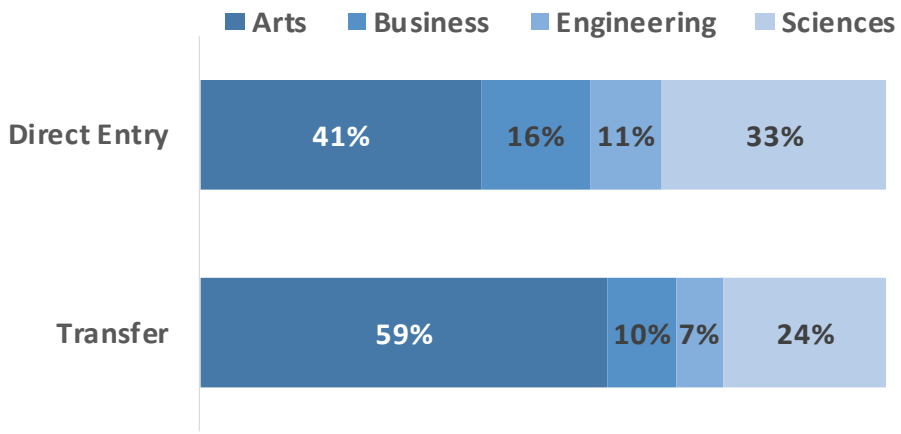
The students from the Study Senders institutions constituted a significant portion of all 2015/16 graduates from SFU, UBC, UNBC and UVic. The number of transfer students in the table below is shown as identified in the STP data.

2015/16 Graduates by Receiving University and basis of admission (within the study scope)

	SFU	TRU	UBC-O	UBC-V	UFV	UNBC	UVic	Total	Total %
Direct Entry	1,571	200	653	3,381	497	226	890	7,418	88%
Transfer	310	9	120	265	17	72	255	1,048	12%
Total	**1,881**	**209**	**773**	**3,646**	**514**	**298**	**1,145**	**8,466**	**100%**
% in Pathways	**16%**	**4%**	**16%**	**7%**	**3%**	**24%**	**22%**	**12%**	

NOTE: The transfer student numbers in this table are lower than the total number of transfer students at each receiving university, because the table only shows the transfer students in the cohort for this study.

- 59% of transfer students graduated from Arts programs. The proportion of direct entry students was smaller: 41% of direct entry students graduated with a BA degree. By comparison, only 24% of the transfer student cohort graduated from Science programs, while 33% of direct entry students graduated in Science.
- About 12% of the direct entry cohort and 8% the transfer student cohort were international students.
- About 40% of transfer students (393 students) received a credential from an institution contributing to the BC Central Data Warehouse (CDW) in addition to a baccalaureate from their receiving university. Transfer students graduating with an Arts degree were slightly more likely to have received a credential from a CDW institution (59% of all transfer students, 63% of CDW credentials). Almost half of all CDW credentials were associate degrees (44% of all credentials) followed by diplomas (32%).
- This study attempted to assess both the number of credits attempted (i.e., credits from all courses, even if a student failed or withdrew from a course) and earned credits (credits obtained when a course is completed). For all direct entry and transfer students, the average difference between attempted and earned credits at a receiving university ranged from 4.1 (in Business programs) to 7.9 credits (in Engineering). The program and overall average difference (of attempted and earned credits) between transfer and direct entry students was marginal, which implies that transfer students perform as well as direct entry students in university courses.
- When including credits from all known sources, transfer students on average completed nine more credits on their way to a baccalaureate than did direct entry students. The difference was greater for students in Engineering, Business and Science programs (representing a full 1 to 2+ semesters of credit). For Arts programs, the difference ranged from one to two 3-credit courses.



Transfer in BC does not appear to add significant barriers on the pathway to a bachelor's degree: transfer students from the Study Senders performed well. While they graduated with a somewhat higher number of credits than the direct entry students, the overall small difference reflects a high alignment of articulated courses.

The overall average number of credits by basis of admission and program area

	Direct Entry	Transfer	Difference	% Difference
Arts	128.8	136.1	7.2	5.4
Business	129.7	143.1	13.4	9.4
Engineering*	168.4	201.2	32.8	16.3
Sciences	137.7	151.8	14.0	9.3
Overall	**136.1**	**144.9**	**8.8**	**6.0**

Note: Numbers may not add up due to rounding.

*There was significant variability in the averages of the number of credits among Engineering pathways. The overall program area average should be interpreted with caution.

- While students who transferred between the same program were much more efficient in their use of credits in some program areas (e.g., in Business), about three-fourths (73%) of transfer students studied in such pre-transfer programs as "General Arts", "General Studies", or "University Transfer". Such broad pre-transfer program categories could not be associated with a specific post-transfer discipline at a university. Only 17% of transfer students (178 students of 1,048 total) had the same CIP (Classification of Instructional Programs) code at their CDW institution and at their receiving university, thus making it difficult to empirically test the assumption that transfer between related programs was more efficient for students.

Transfer in BC does not appear to add significant barriers on the pathway to a bachelor's degree: transfer students from the Study Senders performed well. While they graduated with a somewhat higher number of credits than the direct entry students, the overall small difference reflects a high alignment of articulated courses. The finding that both transfer and direct entry students completed somewhat more credits than required for their credential possibly reflects the exploratory nature of undergraduate studies rather than systemic inefficiencies. The findings that direct entry students earn additional credits at Study Sender institutions, and transfer students earn credentials besides bachelor's degrees confirm that students' pathways through post-secondary education are rarely linear.

Introduction

Transfer as an educational pathway has been widely identified as providing access to students from multiple backgrounds. In British Columbia (BC), the transfer of students between post-secondary institutions is facilitated by the BC Transfer System – a group of post-secondary institutions that collaborate on providing a smooth transfer pathway and experience for students who decide to change institutions on their way to a post-secondary credential. The student-facing online BC Transfer Guide lists course equivalencies that members of the BC Transfer System have established.

However, students often accumulate more credits than are required for their degree. There are many reasons for this, including applying credit equivalencies in the BC Transfer Guide to specific graduation requirements, to students switching to a different program/ major, to the availability of courses necessary to graduate. The question of excess credits, and especially credits lost while transferring, has been raised by multiple authors in many jurisdictions. Research on the number of credits transfer students obtain to graduate with a degree has been conducted in California (Bell & Valliani, 2014), Florida (LaSota, 2014), and Ontario (Sidhu et al., 2016) among others. Various U.S. studies argued that students took a vast number of excess credits to obtain a credential (e.g., Complete College America, 2011; Simone, 2014; Attewell & Monaghan, 2014). Alternatively, Pendleton (2010) discovered that the total number of credits obtained by BC transfer students on their way to a baccalaureate degree differed only slightly from the number of credits obtained by direct entry students who started their university studies immediately after high school.

Students often accumulate more credits than are required for their degree. There are many reasons for this, including applying credit equivalencies in the BC Transfer Guide to specific graduation requirements, to students switching to a different program/ major, to the availability of courses necessary to graduate.

The research identifies a variety of potential reasons to explain why the total number of credits accumulated by a student could be larger than what is required for a credential. One reason is the lack of articulated courses or established program pathways between a sending and a receiving institution. This lack of established equivalencies leads to the student "losing" credits obtained at the sending institution, if the student has to re-take courses at the receiving institution. On the other hand, there are a variety of reasons why students change programs. When the student chooses a program at a receiving institution that is not closely related to the programs they studied in originally, some credits obtained for the original program will inevitably be inapplicable and could be considered "lost". However, the program "swirl" (Johnson & Muse, 2012) is characteristic of both transfer and direct entry students, and does not imply ineffectiveness of transfer pathways.

Moreover, students' intent to receive a baccalaureate (or the lack of such intent) is rarely taken into account in studies that emphasize the credit "loss". A student may "test" post-secondary studies by entering a diploma or an associate degree program, and then, encouraged by success in these studies, continue into a bachelor's program. While the student may have obtained more credits in total than their baccalaureate degree required, the experience of collecting credits in their original program translates into successful baccalaureate completion, which may not occur otherwise. Having completed two credentials (e.g., a diploma and a degree) vs. one credential (degree only) can provide additional benefits in the labour market.

Nonetheless, the number of credits to receive a baccalaureate degree continues to be an important criterion for measuring the effectiveness and efficiency of transfer between post-secondary institutions in BC. Pendleton (2010), using data provided by receiving (post-transfer) universities, concluded that transfer students were able to graduate with approximately the same number of credits as direct entry students. The main limitation of the study was that only the data from the receiving institutions were examined. The credits completed at a sender which were not accepted by the receiving university were not included in the analysis. This one-sided approach has been used by a few previous studies in different jurisdictions.

The objective of the current study is to compare the total number of credits obtained for a baccalaureate degree by direct entry and transfer students at several large public universities in BC. The current study aims to augment previous research through analyzing case studies of high-volume senders to each receiving institution that participated in the study. This research attempts to account for the total number of credits utilizing the data from both "sides" of transfer, i.e., from both receiving and from sending institutions.

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The objective of the current study is to compare the total number of credits obtained for a baccalaureate degree by direct entry and transfer students at several large public universities in BC. This research attempts to account for the total number of credits.

Methodology and Data Definitions

Institutional data were requested from six BC receiving universities: Simon Fraser University (SFU), Thompson Rivers University (TRU), University of British Columbia (UBC), University of the Fraser Valley (UFV), University of Northern British Columbia (UNBC), and University of Victoria (UVic). SFU, UBC, UNBC and UVic were the only receiving universities included in the 2010 study. This study aimed at expanding the scope and capturing the increased range of degree completion options in the BC post-secondary system. Thus, a couple of universities that have become large receivers during the last decade, such as TRU and UFV, were also included.

The study scope included 2015/16 baccalaureate graduates who completed a BA (Arts), BSc (Science), BCOM (Commerce or Business Administration), or BASC (Engineering) degree. Given the complexity of contemporary transfer pathways, only data from several "high volume" sender institutions (Study Senders) were included in the study for each receiving university. These senders were selected based on the volume of student mobility from a specific sender to a specific receiver in the Student Transitions Project (STP).

Table 1. The list of BC public post-secondary institutions participating in the study

Study Receivers	Study Senders
SFU	Douglas College, Langara College
UBC	Douglas College, Langara College, Okanagan College (OC), Thompson Rivers University, Nicola Valley Institute of Technology (NVIT)*, Selkirk College
UFV	Douglas College, Langara College
TRU	OC, Selkirk College, College of North Caledonia (CNC)
UVic	Camosun College
UNBC	Coast Mountain College (CMNT), College of North Caledonia (CNC)

*Due to the limited number of students in the sample of this study, NVIT was ultimately not included as a Study Sender in the analysis.

Receiving institutions only provided data for transfer students who were admitted with transfer credits from a single Study Sender, unless the second previous institution was the receiver, e.g., students in both "Sender – Receiver", and "Receiver – Sender – Receiver" pathways were included. Limiting the complexity of student pathways in this way was necessary to increase the likelihood that all credits completed by students were captured.

Unlike the Pendleton (2010) study, the data request did not include demographic data (except international student status) or GPA. The data request focused on the number of total credits for each student, the number of credits they transferred in, and the number and type of programs these credits were associated with. The number of credits attempted was also included, so as to estimate whether there was a difference between transfer and direct entry students in terms of the number of credits attempted. The full list of fields for the institutional data request is shown in **Appendix 1**.

All Study Sender post-secondary institutions are BC institutions that submit their student data to the Ministry of Advanced Education, Skills and Training (AEST) Central Data Warehouse (CDW). The STP data used in this study included the following data from the CDW: the number of transfer credits by semester, the programs with which these credits were associated at the sending post-secondary institution, and the name of the sending institution where those credits were completed. The full list of requested STP data fields can be found in **Appendix 2**.

The sending institution data included information on the student's enrolment at any BC public sending institution. This methodology aimed to minimize the number of possible "uncounted" credits. However, students may have obtained credits from private or out-of-province institutions that were not counted in the CDW or assessed by the receiving universities.

Data Cleaning and Linking

The institutional data were reviewed for consistency. Besides transfer students not from the Study Senders, the following students were excluded from the cohort:

- One transfer student from NVIT (the number was too small for a meaningful analysis);
- Five direct entry students graduating with two degrees each (three UFV students, and two SFU students). The data for one SFU transfer student graduating with two degrees was accounted for the first degree the student was enrolled in.
- Eight hundred and nine (809) students (571 direct entry and 238 transfer students) were excluded because they were awarded a credential based on fewer than 105 total recorded credits. A minimum of 105 credits was adopted based on evidence that some institutions awarded credits applicable to the credential in recognition of tests completed, and the available data (while not comprehensive) suggested this commonly amounted to about 15 credits. The majority of excluded students who graduated with fewer than 105 credits were at UBC. The concentration of graduates with fewer than 105 credits at the university likely reflects its institutional business practices. All UNBC engineering students were similarly excluded (all of them direct entry students), including UNBC engineering one student who had over 105 credits.
- A number of students identified as "direct entry" in institutional data appear nonetheless to have been granted advanced standing or transfer credit for previous post-secondary course work. 69 direct entry students admitted to UBC at any level except Year 1 were excluded (16 UBC-O students and 53 UBC-V students). These excluded UBC direct entry students were admitted with advanced standing to study level Year 2 or higher, presumably through block transfer agreements. Almost half of the excluded students entered UBC-V's Engineering program from Camosun College, which has a block transfer-type Engineering bridge program with UBC. Defining such students as direct entry reflects the institutional practices of how these students are recorded in the institutional data.
- Similarly, seven UNBC "direct entry" students who were awarded over 15 transfer credits were also excluded, as were 43 UNBC transfer students who started their Nursing degree program earlier than entering UNBC (i.e., with a negative difference of Year Degree Start to Year Start). These students were likely enrolled in the CNC-UNBC Nursing partnership program. Perhaps such UNBC transfer students (and UBC Engineering students described above) can later be discussed in an additional analysis as block transfer students.

UBC and TRU provided data on all transfer students, not only on students from their corresponding Study Senders. The full data set suggested that, for these universities, transfer students transferring credits from Study Senders represented five percent of all 2015/16 transfer graduates at TRU, 14% at UBC-V, and 40% at UBCO.

The study combined institutional data from the six receiving universities with data accessed through a provincial database - the STP. The institutional data and the STP data were linked by a unique student identifier provided by the receiving universities. The unique student identifier, which is different from the provincial Personal Education Number (PEN), was created by the university and shared with the STP. Slightly fewer students were identified in the CDW data than in the institutional data (**Table 2**). The difference could be attributed to unmatched PENs or could result from the definition of transfer used in this study.

Table 2. The number of students identified and percent match between institutional and STP data

Transfer Students	SFU	TRU	UBC-O	UBC-V	UFV	UNBC	UVic	Total
In University data	314	12	124	280	18	75	258	1,081
In CDW data (Matched)	310	9	120	265	17	72	255	1,048
Percentage matched in both sources	**99%**	**75%**	**97%**	**95%**	**94%**	**96%**	**99%**	**97%**

The matched data were used for the cohort description and further analysis.

Cohort Description

Tables 3 and **4** provide details on the distribution of direct entry and transfer students in the resulting cohort. Overall, transfer students constituted 12% of the students in the study cohort. The percent of transfer students ranged from three percent at UFV to almost a quarter at UNBC and UVic (**Table 3**).

The students from Study Senders constitute a significant portion of all 2015/16 graduates in the SFU, UBC, UNBC and UVic cohorts. It was surprising to see the relatively small number of transfer students in the cohorts from TRU and UFV. We do not have the full data set to determine how the transfer students graduating from the study sender institutions compared with the full population of transfer student graduates at these institutions, but, for example, some transfer student graduates may have been excluded from the cohort because they transferred credits from several institutions.

Table 3. The number of transfer and direct entry students in the study cohort by Receiving University

(Note: The transfer student numbers shown in this table are lower than the total number of transfer students at each receiving university, because the table only shows the transfer students in the cohort for this study. Please see the Methodology and Data Definitions section for the description how the cohort was defined.)

	SFU	TRU	UBC-O	UBC-V	UFV	UNBC	UVic	Total	Total %
Direct entry	1,571	200	653	3,381	497	226	890	7,418	88%
Transfer	310	9	120	265	17	72	255	1,048	12%
Total in cohort	**1,881**	**209**	**773**	**3,646**	**514**	**298**	**1,145**	**8,466**	**100%**
Transfer students as % of institutional cohort	**16%**	**4%**	**16%**	**7%**	**3%**	**24%**	**22%**	**12%**	

Table 4. The number of transfer students by Study Sender and Receiving University

Study Sender	SFU	TRU	UBC-O	UBC-V	UFV	UNBC	UVic	Total
Camosun College							255	255
Coast Mountain College						6		6
College of New Caledonia		1				66		67
Douglas College	181		1	35	14			231
Langara College	129		9	205	3			346
Okanagan College		4	99	6				109
Selkirk College		4	3	3				10
Thompson Rivers University			8	16				24
Total	**310**	**9**	**120**	**265**	**17**	**72**	**255**	**1,048**

About 12% of direct entry students and eight percent of transfer students were international students. Fourteen percent of transfer students (12 students), who originally were enrolled as international students, later changed their status to domestic during their way to a baccalaureate.

High school graduation dates for students in the transfer cohort ranged from 1992 to 2012. About 73% of the transfer students graduated from high school in 2006 or later. About a fifth (18%, 184 students) of the transfer cohort did not have a high school graduation date – these included 64 international students, and 120 students who might be either domestic high school non-graduates, or international students who had changed their visa status prior to entering a CDW institution. About 65% of transfer students with a known high school graduation date registered in post-secondary programs at a CDW institution within one year of high school graduation. An additional 29% transitioned to CDW post-secondary institutions within five years of high school graduation. It was not possible to identify whether transfer students were enrolled in a non-CDW institution during the period between their high school graduation and their enrolment at a CDW PSI.

By linking the CDW data with the data from the Receiving Universities, it was possible to establish that about six percent of transfer students were enrolled in a program at a receiving university before starting studies at a CDW institution. For the rest, eight percent registered at a receiving university within one year of starting studies at a CDW PSI, while more than half of the students in the cohort transferred within two (28% transfer students) or three (27% of students) years of starting a program at a CDW institution.

About one-third of transfer students (38%, 393 students) had credentials other than the baccalaureate degree completed in 2015/16 academic year (**Table 5**). Some students had more than one credentials: 393 students had 450 credentials in total. The majority of these additional credentials (63% of credentials) were held by students in Arts programs (as recorded by a receiving university). By credential type, almost half of these credentials were associate degrees (44%), followed by diplomas (32% of all credentials).

Table 5. Credential received at CDW institutions by credential type and university program area

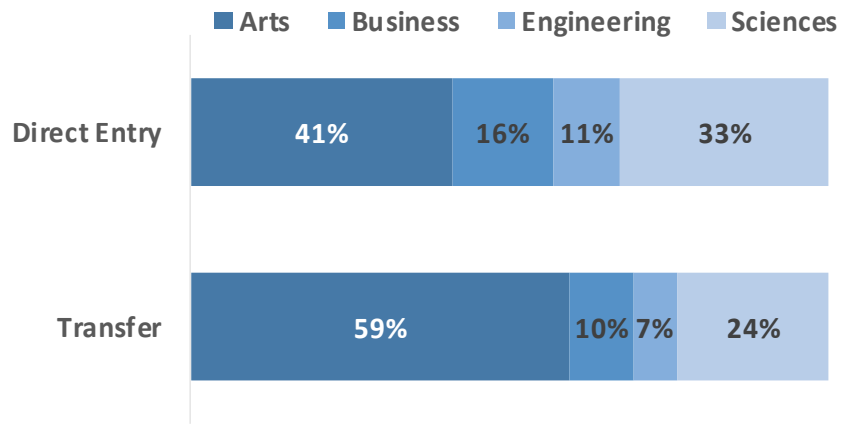
	University Program Area*					
CDW Credential Category	Arts	Business	Engineering	Sciences	Total	% Total
ADVANCED DIPLOMA			17		17	4%
ASSOCIATE DEGREE	152	5	2	41	200	44%
CERTIFICATE	28	6	7	6	47	10%
DEVELOPMENTAL CREDENTIAL	17	11		8	36	8%
DIPLOMA	84	17	18	26	145	32%
POST-DEGREE CERTIFICATE	1				1	0%
SHORT CERTIFICATE	1			3	4	1%
Total	**283**	**39**	**44**	**84**	**450**	**100%**
% Total	**63%**	**9%**	**10%**	**19%**	**100%**	

*Note: University Program Areas (for the degrees the students graduated with) are shown as recorded by a receiving university.

Program of Baccalaureate Study

Most students in the cohort graduated with Arts degrees (43% of all graduates), followed by Sciences degrees (32%) (Tables 6 and 7, and Figure 1). The rank of the programs by percent of graduates remained the same as in the 2010 study: Arts, Sciences, Business, and Engineering. One possible explanation for the predominance of Arts transfer graduates may be a larger number of Associate of Arts degrees than Associate of Science degrees, which provided a larger number of pathways to transfer. However, a larger percent of students graduated in 2015/2016 with a science degree (32% vs. 27% in 2010) and fewer with an Arts degree (43% vs. 50% in 2010). On the other hand, the cohort in the 2010 study was not exactly the same as in this study. In the current study, focusing on Study Senders, the size of the cohort was roughly 75% of the size of the 2010 cohort. Thus, caution should be taken when interpreting this result.

Figure 1. The percent of baccalaureate graduates by program and basis of admission



Note: Percentages may not add up to 100% due to rounding.

Table 6. Baccalaureate graduates by program and basis of admission

Program	Direct Entry	Transfer	Total	Total %	Difference from 2010 Study (Graduates of 2007/08)
Arts	3,027	620	3,647	43%	-7%
Business	1,174	106	1,280	15%	1%
Engineering	779	71	850	10%	1%
Sciences	2,438	251	2,689	32%	5%
Total	**7,418**	**1,048**	**8,466**	**100%**	

Table 7. Transfer students by program and Receiving University

	Program Area	SFU	TRU	UBC-O	UBC-V	UFV	UNBC	UVic	Total	% Total
Direct Entry	Arts	766	91	210	1,257	282	45	376	3,027	41%
	Business	314	109		446	140	71	94	1,174	16%
	Engineering	91		113	501			74	779	11%
	Sciences	400		330	1,177	75	110	346	2,438	33%
Direct Entry Total		**1,571**	**200**	**653**	**3,381**	**497**	**226**	**890**	**7,418**	**100%**
Transfer	Arts	252	5	62	136	12	12	141	620	59%
	Business	7	4		44	3	25	23	106	10%
	Engineering	10		9	22			30	71	7%
	Sciences	41		49	63	2	35	61	251	24%
Transfer Total		**310**	**9**	**120**	**265**	**17**	**72**	**255**	**1,048**	**100%**
Grand Total		**1,881**	**209**	**773**	**3,646**	**514**	**298**	**1,145**	**8,466**	**100%**

Stated Number of Credits Required for Graduation

Each receiving university provided the number of credits required for graduation from programs with a graduating student in the cohort. This stated number of required credits serves as a benchmark to evaluate the number of credits actually completed by students in the cohort. Baccalaureate degrees in Engineering required the highest number of credits for completion, with programs in the current study ranging from 143 to 177 required credits (Table 8). Arts and Business degrees typically required 120 or 121 credits, and graduates with those degrees comprised 75% of the cohort. Arts and Business Honours or Combined Honours degrees required 132 credits. The requirements for Science programs ranged from 120 credits (the majority of programs; 76% of science graduates) to 147 credits. Overall, 81% of the cohort graduated with degrees requiring 120 or 121 credits in Arts, Business and Science.

In comparison to the results of the 2010 study, Arts and Business programs still required the same number of credits to graduate as in 2010. The range of required credits for Science programs stayed almost the same as in 2010; the majority of students graduated with between 120 and 139 credits. However, two streams requiring 145 and 147 credits were not present in 2010. Engineering programs increased the number of required credits on both "ends" of the range: 136 to 161 credits were required in 2010, compared to 143 to 177 credits in 2018 (**Table 8**).

Table 8. Number of students in cohort by program area and number of required credits for graduation (Combined direct entry and transfer students)

Number of Credits Required for Graduation	Arts	Business	Engineering	Sciences	Total
120	3,598	721		2,056	6,375
121		490		32	522
122				65	65
123				83	83
124				9	9
126				9	9
127				21	21
128				6	6
129				26	26
130				3	3
132	49	69		106	224
133				10	10
134				93	93
136				18	18
137				10	10
139				7	7
143			10		10
144			122		122
145			170	21	191
146			21		21
147			117	114	231
148			4		4
149			92		92
152			69		69
153			81		81
154			99		99
156			1		1
159			26		26
165			3		3
177			35		35
Total	**3,647**	**1,280**	**850**	**2,689**	**8,466**

As noted earlier, direct entry and transfer students were distributed differentially across program areas and within program areas. They were enrolled in programs requiring different amounts of credits for graduation. On average, both direct entry and transfer students were enrolled in Arts and Business programs that had very similar numbers of credits required for graduation. In Engineering programs, direct entry students graduated from programs requiring on average slightly more credits. The opposite was true for Science programs – more transfer students graduated from Bachelor of Science programs requiring a slightly higher number of credits than the programs, which enrolled direct entry students.

The program types and the required credits for each program type influenced the number of credits obtained for graduation at university. The largest proportion of the students graduated with a major (74% of the whole cohort; 6,306 students). More transfer students graduated with a major (81% of transfer students, 856 students) than direct entry students (73%, 5,449 students). However, even for this program type (i.e., baccalaureate with a major), the number of required credits ranged from 120 to 161 credits, which affected the number of credits required for graduation for both direct entry and transfer students.

The number of "specializations" (e.g., major, minor, or concentration) at the receiving university was determined by the number of program CIPs in the students' records. The majority of both direct entry and transfer students were enrolled in one "specialization". This number included 65% of direct entry students (4,854 students), and 72% of transfer students (750 students). The rest were enrolled in more "specializations". The overall number of specializations per student ranged from 1 to 7 for direct entry, and from 1 to 4 for transfer students. For the students enrolled in one to three "specializations", the average number of obtained credits grew as the student's number of "specializations" grew. This correlation was observed in all four program areas for both direct entry and transfer students. The number of programs taken by transfer students during their studies at the CDW post-secondary institutions was similarly correlated with the average number of obtained credits.

The Year Level of Admission for Transfer Students

It is assumed that a full-time student can accumulate roughly 30 credits in a typical academic year on the way to baccalaureate. The relation between the year level and the number of transferred-in credits was not assessed: most institutions record the number of granted credits, but not the number of credits presented for transfer. Almost half of transfer students (47%, 493 students) were admitted to the third year of baccalaureate studies. Another 41% (428 students) were admitted to the second year. In addition, 10% of transfer students were admitted to the first year, and a small number of UFV, UNBC, and UVic transfer students (one percent of all transfer students) were admitted to the fourth year of baccalaureate studies. On average, the students admitted to fourth year collected much more credits than the rest (Table 9); however, their small numbers call for caution in interpreting this result. Notably, transfer students admitted to third year at UBC-V, UBC-O and UFV collected fewer credits on their way to baccalaureate than such students admitted to first or second year. This pattern was not present at other receiving universities.

The data in **Table 9** include transfer students in all four program areas; thus the programs "mix" by a receiving university and the number of credits required by program affect the number of completed credits by university. For example, the greater number of graduates from program areas that require larger number of credits to graduate, such as Engineering or Science, would increase the average for a specific university.

Table 9. The average number of credits by Receiving University and Year Level of Admission for transfer students

Receiving University	Year Level Admitted to	Average # Credits Completed	Total # of Transfer Students
SFU	1	131.5	21
	2	140.9	148
	3	142.9	141
SFU Total/ Overall		**141.2**	**310**
TRU	Unknown	129.4	9
TRU Total/ Overall		**129.4**	**9**
UBC-O	1	143.3	18
	2	144.4	31
	3	130.7	71
UBC-O Total/ Overall		**136.2**	**120**
UBC-V	1	149.1	46
	2	142.6	118
	3	139.9	100
UBC-V Total/ Overall		**142.7**	**264**
UFV	1	177.0	1
	2	171.2	6
	3	154.0	7
	4	193.7	3
UFV Total/ Overall		**168.4**	**17**
UNBC	1	130.0	14
	2	140.1	27
	3	142.6	29
	4	183.5	2
UNBC Total/ Overall		**140.3**	**72**
UVic	1	147.0	5
	2	147.8	98
	3	161.3	145
	4	194.0	2
UVic Total/ Overall		**156.0**	**250**
Total/Overall	**3**	**144.9**	**1,042**

Note: the numbers in the table do not include five UVic transfer students admitted to level "U", and one UBC-V transfer student admitted to level "Access".

The Maximum and Average Number of Transfer Credits

Several factors influence the number of credits than can be transferred. Many post-secondary institutions have residency policies that require students to earn roughly half of all credits for a credential at the institution. Institution-specific residency requirements (i.e., the proportion of time/ credits the student has to take at the receiving university to graduate) typically allow between 0 and 60 transfer credits to be used toward program completion (e.g., at SFU[1] or UVic[2]). The additional UBC data showed that the maximum transfer credit granted at UBC was 76 credits, while the maximum of *presented* transfer credits was 126 credits. It is highly likely for transfer students who obtain significantly more than 60 credits at the sending institution(s) to lose the credits beyond the allowed 60 when they transfer to the receiving institution. The residency policies may also vary by program/ faculty.

In addition to the residency requirements, institutional practices of assessing transfer credit may also differ (e.g., assessing all transfer credits vs. assessing only transfer credit applicable to the student's program). Transfer students at institutions assessing/ recording all transfer credits may appear to collect more credits than transfer students at universities that assess only applicable transfer credits.

In programs with residency requirements, the maximum of transferred credits reached 139 credits (in Arts programs) and 115 credits (in Engineering programs). The average number of transferred credits was still lower than 60 for all four program areas (ranging from 48.8 credits in Engineering to 52.0 credits in Science programs), indicating that the number of students transferring more than 60 credits was relatively small.

The mode (the most frequent value) of transferred credits varied among programs: 60 credits for Arts, Sciences, and Business programs, and 64 credits for Engineering programs (at UVic). Sixty-credit programs (associate degrees or diplomas) have been traditionally developed to facilitate further transfer into a baccalaureate degree. Although the variability of timing when students transfer (i.e., the stage of their studies, or the number of credits in their program) has increased in the recent years, the large numbers of students transferring 60 credits may indicate that the pathway of transferring into Year 3 of university studies is still popular.

Attempted and Earned Credits at University

This study inquired into both attempted credits (i.e., credits from all courses, even if a student failed a course) and earned credits (credits obtained when a course is completed). The analysis of the average difference between the amount of attempted credits and total credits earned at receiving universities indicated that transfer students often required fewer attempted credits than direct entry students in all program areas except for Engineering (Table 10). The average difference between numbers of attempted and earned credits was the highest in students in Engineering programs, for both direct entry students (7.5 credits) and transfer students (7.9 credits). Students in business programs showed the smallest difference between numbers of attempted and earned credits (4.2 credits for direct entry students, and 4.0 for transfer students).

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[1] "At least half of the program's total units must be earned through Simon Fraser University study; and At least two thirds of the program's total upper division units must be earned through Simon Fraser University study." (https://www.sfu.ca/students/calendar/2019/summer/fees-and-regulations/credentials-offered/definitions.html#residency%20requirements)

[2] "[A]t least 18 of the 300 or 400 level units must be UVic courses, and at least 30 of the units must normally be UVic courses. Students should be aware that up to 30 units of transfer credit will normally be applied toward degree requirements." (https://web.uvic.ca/calendar2019-01/undergrad/info/regulations/graduation.html) 30 UVic units equal 60 credits at other universities.

Table 10. Average difference between attempted and earned credits at university by program area, Receiving University*, and basis of admission

Program Area	Receiving University	Direct Entry (A)	Transfer (B)	Overall	Difference between transfer and direct-entry (B-A)
Arts	SFU	3.9	4.0	4.0	0.1
	TRU	4.9	0.8	4.6	-4.1
	UBC-O	6.9	4.5	6.1	-2.4
	UBC-V	7.2	5.8	6.9	-1.4
	UFV	4.6	0.9	4.5	-3.7
	UNBC	3.4	4.2	3.6	0.8
Arts Overall		**5.8**	**4.7**	**5.6**	**-1.1**
Business	SFU	1.3	2.3	1.3	1.0
	TRU	10.3	5.3	10.2	-5.0
	UBC-V	2.3	3.5	2.6	1.2
	UFV	7.9	2.0	7.8	-5.9
	UNBC	12.5	7.4	11.1	-5.1
Business Overall		**4.2**	**4.0**	**4.2**	**-0.2**
Engineering	SFU	9.0	10.2	9.2	1.2
	UBC-O	5.1	3.3	5.0	-1.8
	UBC-V	7.8	8.5	7.8	0.8
Engineering Overall		**7.5**	**7.9**	**7.5**	**0.4**
Sciences	SFU	5.8	4.3	5.6	-1.5
	UBC-O	4.6	2.4	4.2	-2.2
	UBC-V	5.0	5.4	5.1	0.4
	UFV	7.3	2.0	7.1	-5.3
	UNBC	5.4	3.4	4.9	-2.0
Sciences Overall		**5.2**	**4.2**	**5.1**	**-1.0**
Overall		**5.5**	**4.7**	**5.4**	**-0.8**

Note: * UVic data on attempted credits were not available.

Although the receiving universities provided data on students whose transfer credits came from a single Study Sender institution, the data revealed that at all receiving universities, a number of transfer students attended more than one CDW PSI, possibly without transferring credits from all of those. Almost a quarter (24.5%, 346 students) attended two or more CDW institutions – both prior to transferring to a receiving university and during their studies for the baccalaureate. The average number of accumulated credits was roughly the same (1.2 credits difference) for all transfer students who started a university program prior to enrolling in a Study Sender institution and for all transfer students who went to a Study Sender first and then transferred to a university.

The Overall Total of Credits Completed to Graduate with a Baccalaureate

The CDW data revealed that the transfer students in the selected pathways collected the majority of credits from the Study Senders, but the total of accumulated credits for some students included credits from other BC public post-secondary institutions. Some students transferred to university with a previously obtained credential.

Some direct entry students at receiving universities were also identified in the CDW data, meaning they had accumulated post-secondary credit prior to entering or during the studies at the receiving university despite being recorded as direct entry from high school. Where these data were available, these credits were included in the total number of credits these students obtained on the way to a baccalaureate.

Combining the total number of credits completed at CDW institutions with the total number of credits completed at a receiving university revealed that transfer students on average completed more credits on their way to baccalaureate than did the direct entry students (**Table 11**). This difference was greatest for students in Engineering programs – roughly a year of full-time study credit load. Engineering programs tend to be highly diverse without a common first and second year curriculum. The difference in Business and Science programs ranged around a semester of full-time study credit load. For Arts programs, the difference of credits between direct entry and transfer students amounted to two or three 3-credit courses. (**Table 11**).

Table 11. The overall average number of credits completed by basis of admission and program area.

Program Area	Direct Entry	Transfer	Difference
Arts	128.8	136.1	7.2
Business	129.7	143.1	13.4
Engineering*	168.4	201.2	32.8
Sciences	137.7	151.8	14.0
Overall	136.1	144.9	8.8

*There was significant variability in the averages of the number of credits among Engineering pathways.
The overall program area average should be interpreted with caution.

Table 12. The total average of credits completed by receiving university.

Receiving University		Average # Credits		Total # Students		
	Program Area	Direct Entry	Transfer	Direct Entry	Transfer	Difference
SFU	Arts	128.8	136.9	766	252	8.1
	Business	129.5	140.7	314	7	11.2
	Engineering	157.7	197.4	91	10	39.7
	Sciences	132.6	154.2	400	41	21.6
SFU Total/ Overall		**131.6**	**141.2**	**1571**	**310**	**9.6**
TRU	Arts	136.6	144.0	91	5	7.4*
	Business	**138.2**	**111.3**	**109**	**4**	**-26.9***
TRU Total/ Overall		**137.5**	**129.4**	**200**	**9**	**-8.0**
UBC-O	Arts	125.6	129.2	210	62	3.6
	Engineering	152.9	186.1	113	9	33.2
	Sciences	128.8	136.3	330	49	7.5
UBC-O Total/ Overall		**131.9**	**136.4**	**653**	**120**	**4.4**
UBC-V	Arts	125.8	134.4	1257	136	8.6
	Business	123.4	139.1	446	44	15.7
	Engineering	170.5	175.4	501	22	4.9
	Sciences	141.0	151.1	1177	63	10.1
UBC-V Total/ Overall		**137.4**	**142.6**	**3381**	**265**	**5.2**
UFV	Arts	138.9	164.3	282	12	25.4
	Business	130.0	177.7	140	3	47.7*
	Sciences	143.7	179.5	75	2	35.8*
UFV Total/ Overall		**137.1**	**168.4**	**497**	**17**	**31.3**
UNBC	Arts	124.9	136.5	45	12	11.6
	Business	126.5	131.2	71	25	4.7
	Sciences	134.6	148.1	110	35	13.6
UNBC Total/ Overall		**130.1**	**140.3**	**226**	**72**	**10.2**
UVic	Arts	131.7	136.5	376	141	4.8
	Business	152.5	165.3	94	23	12.7
	Engineering	191.7	225.8	74	30	34.1
	Sciences	140.8	164.3	346	61	23.5
UVic Total/ Overall		**142.5**	**156.3**	**890**	**255**	**13.8**
Overall / Total		**136.1**	**144.9**	**7,418**	**1048**	**8.8**

* Note: Some UVic graduates (267 students; 23% of UVic students in the cohort) completed programs with a co-op component. UVic students who completed a co-op earned significantly more credits for their degrees than UVic students without a co-op. 76% of students completing a co-op were direct entry students.

At an institutional level, the largest differences between the number of credits completed by direct entry students and transfer students were at UFV (about 33 credits difference) and UVic (roughly 14 credits difference) (Table 11). For the rest of the universities, the difference was much smaller, from a trivial difference of 3.6 credits at UBC-V to 11.5 credits at UNBC. Caution is needed in interpreting the results for TRU and UFV students, as their transfer students numbers were quite small. The detailed data of the number of credits obtained by receiving university, Program Area, degree type, and the basis of admission are shown in **Appendix 3**. **Appendix 4** contains the distribution of students by the number of completed credits by the basis of admission and the receiving university.

The mix of programs the transfer students graduated from at a receiving university influenced the overall average number of credits. A greater number of students in Engineering and Science programs would imply a higher average number of credits, given the greater number of credits required to graduate for these programs. This applies to interpreting the overall average results by Study Sender and receiving university (**Table 12** and **Appendix 5**).

Table 13. Average number of credits completed by transfer students in each program area, by each Study Sender by program area

Study Sender	Arts	Business	Engineering	Sciences	Overall Average	Total Students
Camosun College	136.5	165.3	225.8	164.3	156.3	255
Coast Mountain College		139.5		156.0*	150.5	6
College of New Caledonia	138.8	130.5		147.1	139.8	67
Douglas College	138.7	152.5	189.8	154.9	143.7	231
Langara College	135.7	137.8	187.5	153.5	141.7	346
Okanagan College	131.0	123.0*	160.0*	136.3	132.8	109
Selkirk College	133.5*	107.3*	144.5*	126.0*	125.6	10
Thompson Rivers University	123.6*	159.0*	184.8	140.2	159.8	24
Total/ Overall	**136.1**	**143.1**	**201.2**	**151.8**	**144.9**	**1,048**

Notes: * averages where the number of transfer students in the category was 5 or smaller.
Program areas are shown as recorded by the receiving university.
An average with fewer than 120 credits may not account for other possible credits not included into this study (e.g., test credits) that would bring the number of total credits to or over 120.

Program Match between the Sender and the Receiver

Studies of transfer student credit completion commonly assume that students who transfer between similar program areas will do so more efficiently, with fewer total credits to acquire after transfer in order to graduate. Conversely, if students change their program area post-transfer, the number of transfer credits applicable to their new program would be smaller, and they would be required to acquire more credits at the receiving university to complete their credential.

The data revealed that 17% of transfer students (178 students of 1,048 total) had the same CIP at their CDW institution and their receiving university. Among these, 37% (65 students) had one or more credentials with the same CIP as their main baccalaureate program, predominantly in Arts programs. The relatively small proportion of program matches could be explained by the fact that about 73% of transfer students studied in General Studies, General Arts, or University Transfer programs (CIP 24) at the CDW Study Senders, but typically were enrolled into a more specific discipline program at a receiving university. Many students may have a planned credential pathway in mind, but do not register in a program without proper incentives to declare a specific program. Being registered in general studies may provide them with greater flexibility.

Overall, the analysis of the number of credits to graduate between transfer students with or without matching CIP was inconclusive (**Table 14**). There was only a marginal overall difference between the total number of credits for students with or without matching programs. Business was the only program area where the difference in the average number of credits was much smaller for transfer students with matching CIP. This could imply that there may be factors beyond matching program that affect the number of credits for graduation (e.g., streamlined college and university courses needed for a professional designation). Also, the results may imply that pre-transfer studies even in different subjects than the student enrols in at the receiving institutions can prepare students to generally perform well academically and obtain their baccalaureate post-transfer.

Table 14. The average number of credits for transfer students with matching pre- and post-transfer CIP codes, and all transfer students

		Average # Credits		Number of Students		
Program Area	With Matching CIP	Without CIP Match	Difference	With Matching CIP	All Students	% with Matching CIP
Arts	139.9	135.4	4.5	88	620	14%
Business	131.6	148.1	-16.5	32	106	30%
Engineering	265.5	199.3	66.2	2*	71	3%
Sciences	150.1	152.2	-2.2	56	251	22%
Grand Total/ Overall	**143.0**	**145.3**	**-2.3**	**178**	**1,048**	**17%**

Note: * Due to the small number of students in the category, caution is needed in interpreting this result.

Conclusion

This study contributes to the body of literature on the efficacy of BC's transfer pathways as a way for students to obtain a baccalaureate degree. Following previous similar studies, the analysis explored the number of credits 2015/16 direct entry and transfer baccalaureate graduates obtained on their way to completing the degree. This research explored the pathway from both "sides": we accounted for credits earned at a receiving university, and for credits earned from certain "typical" sending institutions.

The results indicate that a variety of factors influenced the number of credits students obtained. These factors include the program area; Engineering degrees typically require more credits to graduate than, for example, Arts or Business degrees. They also include the credentials received in addition to the bachelor's degrees, prior or during baccalaureate studies. While transfer students obtained overall slightly more credits than direct entry students, it appears that transfer pathways into Arts and Business degrees are more aligned than similar pathways in Sciences and Engineering.

The study results indicate that transfer students performed as well as direct entry students in terms of attempted and earned credits. There was a negligible difference between transfer students and direct entry students on this metric. The study results also showed that some direct entry students also earned credits at Study Sender institutions on their way to a baccalaureate degree. This finding confirms the notion that students' pathways to and through post-secondary education are rarely linear. The current transfer environment allows students a range of options for degree completion, as well as for post-secondary studies and credentials other than the baccalaureate.

Future research could include a comparison of the average number of credits completed at sending and receiving institutions for similar credentials, for example, psychology or criminology degrees now offered at both colleges and universities. The use of the system-wide database (Student Transitions Project) would also allow for including all CDW institutions as senders in a future study; expanding the scope to include all institutions offering degrees would also better characterize the transfer environment in the province. Another possible qualitative study could explore the motivations of baccalaureate graduates through focus groups, in order to better understand students' program selection process and the "linearity" of their educational path.

While transfer students obtained overall slightly more credits than direct entry students, it appears that transfer pathways into Arts and Business degrees are more aligned than similar pathways in Sciences and Engineering.

References

Attewell, P., & Monaghan, D. (2016). How many credits should an undergraduate take? *Research in Higher Education*, 57(6), 682–713. https://doi.org/10.1007/s11162-015-9401-z

Bell, A., & N. Valliani. (2014). *The Real Cost of College: Time & Credits to Degree at California State University.* Retrieved from https://realcostofcollegeinca.org/wp-content/uploads/2014/06/Real-Cost-of-College_Full-Report_CSU.pdf

Complete College America. (2014). *Four-Year Myth. Make College More Affordable.* Retrieved from http://completecollege.org/wp-content/uploads/2014/11/4-Year-Myth.pdf

Johnson, I., & Muse, W. (2012). Student swirl at a single institution: The role of timing and student characteristics. *Research in Higher Education*, 53(2), 152–181.

Pendleton, S. (2010). *Credits to Graduation: A comparison of the number of credits undertaken toward degree completion by students admitted on the basis of BC secondary school and those admitted as BC transfer students to British Columbia's four research universities (SFU, UBC, UNBC and UVic)*. Retrieved from http://www.bccat.ca/pubs/creditstograduation.pdf

LaSota, R. R. (2014). *Factors, Practices, and Policies Influencing Students' Upward Transfer to Baccalaureate-Degree Programs and Institutions: A Mixed-Methods Analysis* (Thesis). Retrieved from https://digital.lib.washington.edu/researchworks/handle/1773/25022

Sidhu, R., Lin, S., Munro, Y., Smith, R., Parna, J., & De Oca Sarasua, E. (2016). *Are Excess Credits for College-to-University Transfer Students a Concern? A Case Study within the Ontario Context*. Retrieved from http://www.oncat.ca/files_docs/content/pdf/en/oncat_research_reports/2014-32-Final-Report-Excess-Credit-Study-at-York-University.pdf

Simone, S. A. (2014). *Transferability of Postsecondary Credit Following Student Transfer or Coenrollment.* Retrieved from http://nces.ed.gov/pubs2014/2014163.pdf

Appendix 1: Data Specifications: Information Shared between a Receiving Institution and BCCAT

The study includes graduates with a BA (Arts), BSc (Science), BCOM (Commerce or Business Administration) or BASC (Engineering) degrees in Academic year 2015/16 (Fall 2015 and Spring 2016 graduates). Both direct entry graduates and transfer graduates are included. Baccalaureate graduates pursuing a second degree are excluded.

Variables Requested:	Specifications
Name of Receiving institution	
Unique student Identifier	A unique identifier, not Student Number at institution. (e.g., SFU_LANG001)
Day of birth (DD)	Day of birth only; no month and year
Transfer or secondary school	Students with fewer than 15 awarded transfer credits are considered secondary school (direct entry) students. A transfer student is a student who transfers from a BC post-secondary institution with a minimum of 15 eligible credits as articulated in the BC Transfer Guide.
Degree program student graduated with	
Program Type 1 (Major/Minor/Double Major/ Double Minor/Honors, etc.)	
Subject Area 1 (e.g., English)	
CIP Code 1 for Subject Area 1	
Program Type 2 (Major/Minor/Double Major/ Double Minor/Honors, etc.)	
Subject Area 2 (e.g., Psychology)	
CIP Code 2 for Subject Area 2	
...	
Program Type X (Major/Minor/Double Major/ Double Minor/Honors, etc.)	Please include the information for all other (3 to X) programs that student graduated with
Subject Area X (e.g.,)	Please include the information for all other (3 to X) programs that student graduated with
CIP Code X for Subject Area X	Please include the information for all other (3 to X) programs that student graduated with
Degree Program start year	
Completion/ Graduation Year	
Completion/ Graduation Month	
Start year at University	
Year Level admitted to	
Sending Institution Name	
Transfer credits granted	the total of all granted transfer credits
Total credits required for graduation	total credits by program
Total credits attempted at University	Including failed courses
Total credits earned at University (excludes transfer credit)	
Ever international student (y/n)	Preferably, indicate whether the student required a visa permit to study. If this is not available, indicate whether the student ever paid international student fees at your institution.

Appendix 2. Student Transitions Project Data Elements Requested

STP data will provide information on students' post-secondary programs, number and time of registration and transitions and demographics, as specified by the data elements shown in the section below. It will also be used to assess the number of credits completed by the identified students by semester. This data is requested for **all** institutions the student was registered in to account for the credits the students might have obtained beyond the Sender institutions. Time period of interest is from 2001-2016.

Data within STP (from Accumulated Credits file):

K12_GRAD_YEAR_MONTH
PSI_FULL_NAME_CUR
PSI_SCHOOL_YEAR
PSI_REG_TERM
PSI_PROGRAM_CODE
PSI_CIP_CODE
PSI_ENROLMENT_SEQUENCE
PSI_CREDENTIAL_CATEGORY
PSI_CREDENTIAL_PROGRAM_DESC
PSI_CREDENTIAL_CIP
PSI_MIN_START_DATE
CREDENTIAL_AWARD_DATE
PSI_NEW_STUDENT_FLAG
PSI_VISA_STATUS
SUM_TOTAL_CREDITS (by semester)

Appendix 3. The number of credits obtained by receiving university, Program Area, and basis of admission

SFU: The number of credits obtained by Program Area, program type, and basis of admission

		Average Credits		Total Students		
Program Area	Program Type	Direct Entry	Transfer	Difference	Direct Entry	Transfer
Arts	Major	127.4	136.5	9.1	660	218
	Honours	141.1	144.7	3.6	36	11
	Minor	134.2	136.3	2.1	23	7
	Joint Major	127.7	139.6	11.9	23	12
	Double Major	147.9	156.5	8.6	21	2
	Extended Minor	133.0	125.0	-8.0	2	2
	Joint Honours	125.0			1	
Arts Total		**128.8**	**137.2**	**8.4**	**766**	**252**
Business	Major	125.8	142.8	17.0	228	6
	Honours	138.9	148.0	9.1	66	1
	Joint Major	137.1			17	
	Joint Honours	153.0			2	
	Double Major	168.0			1	
Business Total		**129.5**	**143.7**	**14.2**	**314**	**7**
Engineering	Major	156.8	197.4	40.6	87	10
	Honours	178.5			4	
Engineering Total		**157.7**	**197.4**	**39.7**	**91**	**10**
Sciences	Major	130.9	149.2	18.3	355	35
	Honours	149.2	162.3	13.1	30	4
	Minor	142.0	188.0	46.0	9	1
	Joint Major	133.4			5	
	Double Major	144.0	204.0	60.0	1	1
Sciences Total		**132.6**	**153.3**	**20.6**	**400**	**41**
Overall/ Total		**131.6**	**141.9**	**10.3**	**1,571**	**310**

UVic: The number of credits obtained by Program Area, program type, and basis of admission

		Average Credits		Total Students		
Program Area	Program Type	Direct Entry	Transfer	Difference	Direct Entry	Transfer
Arts	Major	131.7	136.5	4.8	376	141
Business	Major	152.5	165.3	12.7	94	23
Engineering	Major	191.7	225.8	34.1	74	30
Sciences	Major	140.8	164.3	23.5	346	61
Overall/ Total		**142.5**	**156.3**	**13.8**	**890**	**255**

TRU: The number of credits obtained by Program Area, program type, and basis of admission

		Average Credits		Total Students		
Program Area	Program Type	Direct Entry	Transfer	Difference	Direct Entry	Transfer
Arts	Major	136.6	144.0	7.4	91	5
Business	Major	138.2	111.3	-26.9	109	4
Overall/ Total		**137.5**	**129.4**	**-8.0**	**200**	**9**

UFV: The number of credits obtained by Program Area, program type, and basis of admission

		Average Credits		Total Students		
Program Area	Program Type	Direct Entry	Transfer	Difference	Direct Entry	Transfer
Arts	Major	138.0	165.5	27.5	264	10
	Minor	151.8	158.0	6.3	18	2
Arts Overall/ Total		**138.9**	**164.3**	**25.4**	**282**	**12**
Business	Major	130.0	177.7	47.7	140	3
Business Overall/ Total		**130.0**	**177.7**	**47.7**	**140**	**3**
Sciences	Major	143.7	179.5	35.8	75	2
Sciences Overall/ Total		**143.7**	**179.5**	**35.8**	**75**	**2**
Overall/ Total		**137.1**	**168.4**	**31.3**	**497**	**17**

UNBC: The number of credits obtained by Program Area, program type, and basis of admission

		Average Credits		Total Students		
Program Area	Program Type	Direct Entry	Transfer	Difference	Direct Entry	Transfer
Arts	Major	123.7	130.8	7.1	43	10
	Major w/ Honours	139.0	175.0	36.0	1	1
	Double Major	162.0	155.0	-7.0	1	1
Arts Overall/ Total		**124.9**	**136.5**	**11.6**	**45**	**12**
Business	Major	126.5	125.1	-1.4	41	13
	Double Major	126.5	137.8	11.4	30	12
Business Overall/ Total		**126.5**	**131.2**	**4.7**	**71**	**25**
Sciences	Major	132.9	148.4	15.5	83	33
	Major w/ Honours	134.5	144.0	9.5	19	2
	Double Major	141.2			5	
	Double Major w/ Honours	171.3			3	
Sciences Overall/ Total		**134.6**	**148.1**	**13.6**	**110**	**35**
Overall/ Total		**130.1**	**140.3**	**10.2**	**226**	**72**

UBC-O: The number of credits obtained by Program Area, program type, and basis of admission

		Average Credits		Total Students		
Program Area	Program Type	Direct Entry	Transfer	Difference	Direct Entry	Transfer
Arts	Major	125.7	128.7	3.0	188	56
	Honours	127.3	133.5	6.2	9	2
	General Arts	123.4	137.0	13.6	8	1
	Combined Major	121.8	133.0	11.2	5	3
Arts Overall/ Total		**125.6**	**129.2**	**3.6**	**210**	**62**
Engineering	Degree	152.9	186.1	33.2	113	9
Engineering Overall/ Total		**152.9**	**186.1**	**33.2**	**113**	**9**
Sciences	Major	127.7	131.0	3.4	206	22
	Nursing Deg (BSN)	134.8	144.3	9.5	69	21
	Honours	124.7	128.0	3.3	46	6
	General Science	125.6			7	
	Combined Major	145.5			2	
Sciences Overall/ Total		**128.8**	**136.3**	**7.5**	**330**	**49**
Overall/ Total		**131.9**	**136.4**	**4.4**	**653**	**120**

UBC-V: The number of credits obtained by Program Area, program type, and basis of admission

		Average Credits		Total Students		
Program Area	Program Type	Direct Entry	Transfer	Difference	Direct Entry	Transfer
Arts	Major	126.0	134.6	8.6	1146	127
	Honours	125.7	135.0	9.3	53	6
	Interdisc. Studies Arts	123.0	127.3	4.4	44	3
	Combined Major	124.5			14	
Arts Overall/ Total		**125.8**	**134.4**	**8.6**	**1257**	**136**
Business	Option	123.1	139.1	16.0	439	44
	Combined Major	142.3			7	
Business Overall/ Total		**123.4**	**139.1**	**15.7**	**446**	**44**
Engineering	In	170.5	175.4	4.9	501	22
Engineering Overall/ Total		**170.5**	**175.4**	**4.9**	**501**	**22**
Sciences	Major	136.8	148.3	11.6	846	48
	Pharmacy	176.1	189.5	13.4	110	4
	Combined Major	135.5	141.2	5.7	109	5
	Honours	150.0	150.0	0.0	56	2
	General Science	136.7	144.0	7.3	20	1
	Combined Honours	140.8			13	
	Global Resources	119.0			9	
	Nursing Degree	154.1	153.5	-0.6	7	2
	Minor	146.2	187.0	40.8	6	1
	Concentration	131.0			1	
Sciences Overall/ Total		**141.0**	**151.1**	**10.1**	**1177**	**63**
Overall/ Total		**137.4**	**142.6**	**5.2**	**3381**	**265**

Appendix 4. The distribution of students by the number of completed credits by the basis of admission and the receiving university

Receiving University	Credits Completed	Arts	Business	Engineering	Sciences	Total
SFU						
Direct Entry	100 - 120	150	55		54	259
	121 - 140	521	228	1	266	1016
	141 - 160	77	22	65	66	230
	161 - 180	13	7	15	7	42
	181 - 200	4	1	9	3	17
	>200	1	1	1	4	7
Direct Entry Total		**766**	**314**	**91**	**400**	**1571**
Transfer						
	100 - 120	11				11
	121 - 140	163	4		11	178
	141 - 160	52	2	1	17	72
	161 - 180	16	1	3	6	26
	181 - 200	9		2	5	16
	>200	1		4	2	7
Transfer Total		**252**	**7**	**10**	**41**	**310**
TRU						
Direct Entry	100 - 120	29	52			81
	121 - 140	49	50			99
	141 - 160	10	4			14
	161 - 180	3	2			5
	181 - 200		1			1
Direct Entry Total		**91**	**109**			**200**
Transfer	100 - 120		2			2
	121 - 140	2	2			4
	141 - 160	2				2
	161 - 180	1				1
Transfer Total		**5**	**4**			**9**

(table cont'd on following page)

Receiving University	Credits Completed	Arts	Business	Engineering	Sciences	Total
UBC-O						
Direct Entry	100 - 120	120		2	162	284
	121 - 140	69		4	137	210
	141 - 160	15		84	21	120
	161 - 180	4		17	5	26
	181 - 200	2		2		4
	>200			4	5	9
Direct Entry Total		**210**		**113**	**330**	**653**
Transfer						
	100 - 120	14			10	24
	121 - 140	42			25	67
	141 - 160	4		2	10	16
	161 - 180	1		2	2	5
	181 - 200	1		2	2	5
	>200			3		3
Transfer Total		**62**		**9**	**49**	**120**
UBC-V						
Direct Entry	100 - 120	644	154	9	163	970
	121 - 140	512	273	15	660	1460
	141 - 160	65	18	178	188	449
	161 - 180	12	1	166	55	234
	181 - 200	12		98	57	167
	>200	12		35	54	101
Direct Entry Total		**1257**	**446**	**501**	**1177**	**3381**
Transfer						
	100 - 120	19	3		1	23
	121 - 140	85	25	2	23	135
	141 - 160	18	13	4	20	55
	161 - 180	8		10	16	34
	181 - 200	6	3	3	2	14
	>200			3	1	4
Transfer Total		**136**	**44**	**22**	**63**	**265**

Receiving University	Credits Completed	Arts	Business	Engineering	Sciences	Total
UFV						
Direct Entry	100 - 120	30	15		4	49
	121 - 140	182	107		37	326
	141 - 160	26	16		22	64
	161 - 180	27	2		8	37
	181 - 200	10			2	12
	>200	7			2	9
Direct Entry Total		**282**	**140**		**75**	**497**
Transfer						
	100 - 120	1				1
	121 - 140	4				4
	141 - 160	2	2		1	5
	161 - 180	1				1
	181 - 200	2				2
	>200	2	1		1	4
Transfer Total		**12**	**3**		**2**	**17**
UNBC						
Direct Entry	100 - 120	19	34		12	65
	121 - 140	25	34		74	133
	141 - 160	1	3		19	23
	161 - 180				3	3
	181 - 200				1	1
	>200				1	1
Direct Entry Total		**45**	**71**		**110**	**226**
Transfer	100 - 120	2	7		2	11
	121 - 140	7	12		14	33
	141 - 160	1	6		11	18
	161 - 180	1			5	6
	181 - 200	1			2	3
	>200				1	1
Transfer Total		**12**	**25**		**35**	**72**

(table cont'd on following page)

Receiving University	Credits Completed	Arts	Business	Engineering	Sciences	Total
UVic						
Direct Entry	100 - 120	127	1		55	183
	121 - 140	166	1		151	318
	141 - 160	50	73		85	208
	161 - 180	23	17	13	35	88
	181 - 200	3	2	42	14	61
	>200	7		19	6	32
Direct Entry Total		**376**	**94**	**74**	**346**	**890**
Transfer						
	100 - 120	14		1		15
	121 - 140	78			17	95
	141 - 160	32	12	6	14	64
	161 - 180	16	7	1	11	35
	181 - 200	1	3	3	11	18
	>200		1	19	8	28
Transfer Total		**141**	**23**	**30**	**61**	**255**

Appendix 5. Average number of credits obtained by transfer graduates, categorized by Study Sender and receiving university

Study Sender	SFU	TRU	UBC-O	UBC-V	UFV	UNBC	UVic	Overall
Camosun College							156.3	156.3
Coast Mountain College						150.5*		150.5
College of New Caledonia		166.0*				139.4		139.8
Douglas College	140.8		137.0*	149.7	166.0			143.7
Langara College	141.7		139.2	141.2	179.7*			141.7
Okanagan College		129.5*	133.1	130.3				132.8
Selkirk College		120.3*	119.0*	139.3*				125.6
Thompson Rivers University			180.1	149.7				159.8
Overall	**141.2**	**129.4**	**136.4**	**142.6**	**168.4**	**140.3**	**156.3**	**144.9**

Note: * denotes averages with the total number of transfer students in the category of 5 or fewer.

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