



# Credit Accumulation in Pathway Programs

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## List of Acronyms

Acronym	Term
<b>BCCAT</b>	British Columbia Council on Admissions & Transfer
<b>BCTS</b>	BC Transfer System
<b>AEST</b>	Ministry of Advanced Education and Skills Training
<b>CDW</b>	Central Data Warehouse

## List of Study-Receivers

Acronym	Study-Receiver
<b>AU</b>	Athabasca University
<b>RRU</b>	Royal Roads University
<b>SFU</b>	Simon Fraser University
<b>UBC</b>	University of British Columbia

## List of Study-Senders

Acronym	Study-Sender
<b>BCIT</b>	British Columbia Institute of Technology
<b>CAM</b>	Camosun College
<b>CAP</b>	Capilano University
<b>CMTN</b>	Coast Mountain College
<b>CNC</b>	College of New Caledonia
<b>COTR</b>	College of the Rockies
<b>DOUG</b>	Douglas College
<b>ECU</b>	Emily Carr University
<b>JIBC</b>	Justice Institute of British Columbia
<b>KPU</b>	Kwantlen Polytechnic University
<b>LANG</b>	Langara College
<b>NIC</b>	North Island College
<b>NLC</b>	Northern Lights College
<b>NVIT</b>	Nicola Valley Institute of Technology
<b>OKAN</b>	Okanagan College
<b>OUC</b>	Okanagan University College
<b>SEL</b>	Selkirk College
<b>TRU</b>	Thompson Rivers University
<b>UFV</b>	University of the Fraser Valley
<b>VCC</b>	Vancouver Community College
<b>VIU</b>	Vancouver Island University

## Glossary of Key Terms

Term	Definition
<b>Study-receiver</b>	The institution at which a student pursued studies following transfer. In this study, the term encompasses Athabasca University, Royal Roads University, Simon Fraser University, and the University of British Columbia.
<b>Study-sender</b>	<p>The institution at which a student pursued post-secondary studies prior to transfer. In this study, the term includes only those publicly funded institutions in British Columbia that submit data to the BC Central Data Warehouse, maintained by the BC Ministry of Advanced Education and Skills Training; see <a href="#">List of Study-Senders</a>.</p> <p>Note: While every BC public post-secondary institution can be both a sending and receiving institution simultaneously, for the purposes of this study, we consider Athabasca University, Royal Roads University, Simon Fraser University, and the University of British Columbia to serve as receivers, and the study senders to serve as senders.</p>
<b>Study disciplines</b>	<p>This report aims to improve understanding of the experiences and performance of pathway-transfer students (defined next) pursuing baccalaureate credentials in the following disciplines:</p> <ul style="list-style-type: none"> <li>• Business/Commerce/Management; collectively here, “Business”</li> <li>• Engineering</li> <li>• Nursing</li> <li>• Social Work</li> </ul>
<b>Pathway-transfer students</b>	<p>For the purposes of this report, a “pathway-transfer student” is a student entering a post-secondary institution with at least a Year 2–level standing (or equivalent) in a baccalaureate program in a study discipline listed above, and who has transferred from a publicly funded post-secondary institution in British Columbia that submits data to the BC Central Data Warehouse. The term is intentionally broad and can include students using block-transfer agreements articulated in the BC Transfer Guide (defined below), as well as other forms of transfer not centrally documented. These students transfer credits from a study-sender that is a member of the BC Transfer System.</p> <p>Pathway-transfer students are further broken down into:</p> <ul style="list-style-type: none"> <li>• Pathway-transfer NTC—students who were admitted to a baccalaureate institution at level Year 2 or higher, with <i>no transfer credits</i> transcribed; and,</li> <li>• Pathway-transfer TC—students who were admitted to a baccalaureate institution at level Year 2 or higher, with <i>transfer credits</i> transcribed.</li> </ul>
<b>Pathway graduates</b>	Students who graduated from one of the study-receivers within the study disciplines. Records of these students were used for the quantitative analysis in this report.
<b>Pathway students</b>	A student enrolled in a baccalaureate study in a study discipline at one of the study-receivers. These students were contacted for optional participation in the student survey.

<b>BC Transfer Guide</b>	The BC Transfer Guide is an online resource that allows to determine whether courses, credits, or programs pursued at one institution are transferable to another within the province.
<b>Direct-entry students</b>	Direct-entry students are those who transferred from secondary school to either their current post-secondary institution or the post-secondary institution they graduated from.

## Executive Summary

Pathway-transfer programs and the students who enrol in them are a little-studied part of the BC Transfer System (BCTS), which is fundamentally built on course-to-course articulation, rather than the pathway-oriented transfer processes seen in many other jurisdictions. This research, on behalf of the British Columbia Council on Admissions and Transfer (BCCAT), highlights a number of issues that can contribute to a system-wide understanding of pathway programs and students, and may assist in developing further program services and supports for students following these pathways.

This study sought to identify potential pathway programs, assess the number of credits completed by pathway-transfer and direct-entry students, and explore the reasons why students complete the number of credits they do.

Defining pathways in British Columbia was not straightforward. None of the sending institutions studied presently track whether a program is considered a pathway program, and institutions had varying ability to identify official pathways for the purposes of the research. This study includes, as pathway students, transfer students admitted at the Year 2 level or higher. If a better understanding of the pathway-transfer experience is valuable to BCTS member institutions, a better ability to track students with such experience will be important.

The cohorts included in this study were:

- Receiving institutions (“study-receivers”): AU, RRU, SFU, UBC.
- Sending institutions (“study-senders”): public post-secondary institutions in British Columbia that report to the Central Data Warehouse data repository (CDW).
- Disciplines: Business, Engineering, Nursing, Social Work.
- Pathway-transfer students: students transferring from one or more study-senders to one of the four study-receivers with Year 2 standing or equivalent in one of the study disciplines who completed their credential between September 2015 and August 2019.

Across all four of these institutions, 23% of the students in this study were considered pathway-transfer students.

*Number of direct-entry and pathway-transfer students by study-receiver and basis of admission (within the study scope) (9,187).*

Study Discipline	Study-Receiver	Number of Students			Transfer Students as % of all Students
		Direct Entry	Pathway-transfer	Total	Pathway-transfer %
<b>Business</b>	AU		18	18	100%
	RRU		68	68	100%
	SFU	931	194	1,125	17%
	UBC	2,863	592	3,455	17%
<b>Engineering</b>	SFU	285	98	383	26%
	UBC	2,752	706	3,458	20%
<b>Nursing</b>	AU		61	61	100%
	UBC	253	210*	465*	45%
<b>Social Work</b>	AU		N<10	N<10	100%
	UBC	22	125	147	85%
<b>Total</b>		<b>7,106</b>	<b>2,081</b>	<b>9,187</b>	<b>23%</b>

There are variable practices around transcribing transfer credits which introduce complexity into studies of pathway program efficiency. Even where transfer credits are not transcribed, students may be granted advanced standing, or block transfer credit recognizing their earlier credits. This study attempts to address this challenge by comparing the number of credits completed at study-senders with the number of credits awarded at study-receivers. Despite this important technical challenge, students felt that their previous work was recognized, and that their pathway was efficient.

Highlights from this research include:

- Among pathway-transfer students, 72% did not have transfer credits transcribed, despite completing credits at a study-sender.
- Pathway-transfer students with transcribed transfer credits completed their credentials at a study-receiver with a similar number of credits as their direct-entry peers.
- Current pathway-transfer students felt that all (30%) or nearly all (44%) of their credits were counted toward their current credential. This suggests that despite not all credits being transcribed at study-receivers, students felt they received appropriate recognition for courses completed.
- A majority of students said they completed no courses beyond their requirements at either the study-sender (63%) or receiver (83%).

The pathways followed by students in this study had some interesting characteristics which might inform future pathway development.

- About 6% of pathway-transfer students) completed at least one credential at a study-sender in addition to their baccalaureate degree at one of the study-receivers.
- Most pathway programs had geographic proximity to the study-receiver.
- Students who attended multiple study-senders typically had a lower proportion of their credits recorded for transfer.
- Not all pathway programs are listed in the BC Transfer Guide, or on study-sender websites.



## Introduction

Pathway-transfer students are a seldom-studied subset of students at BC Transfer System (BCTS) member institutions), which is fundamentally built on course-to-course articulation, rather than the pathway-oriented transfer processes seen in many other jurisdictions. Previous work by Tikina (2020) and Pendleton (2010) found that both direct-entry and transfer students accumulated a different number of credits (both higher and lower) than required by the respective baccalaureate program. This report seeks to better understand how credits are accumulated by students who follow a pathway program through the BCTS. Toward this understanding, the report investigates the experiences and performance of pathway-transfer students pursuing baccalaureate credentials in the following disciplines:

- Business/Commerce/Management (identified throughout this report as “Business”);
- Engineering;
- Nursing; and
- Social Work.

For the purposes of this report, a pathway-transfer student is one who is entering a post-secondary institution with at least a Year 2–level standing (or equivalent) in a baccalaureate program in one of the four study disciplines cited, having transferred from a publicly funded post-secondary institution in British Columbia (see the [List of Study-Senders](#)). The term “pathway-transfer” is intentionally broad, and can include block-transfer agreements articulated in the BC Transfer Guide, transfer programs documented on institutional websites, and other forms of transfer not centrally documented.

The BC Transfer Guide currently includes several types of pathways, such as block-transfer agreements and degree partnership programs. Examples of pathway programs listed in the guide include:

- British Columbia Institute of Technology’s Civil and Structural Engineering, Mechanical Engineering, Electronics, or Mineral Exploration and Mining Technology programs into University of British Columbia (UBC) Engineering;
- Camosun College’s Engineering Bridge program into UBC (or the University of Victoria) Engineering; and
- Camosun College’s Business Administration Diploma into Royal Roads University Bachelor of Commerce.

There are additional programs that match the criteria of pathway programs that are not listed in the BC Transfer Guide. The most prominent are Okanagan College’s (OKAN) Bachelor of Science in Nursing (Years 1 and 2) into UBC Bachelor of Science in Nursing (at the Okanagan campus, or UBC-O), and Kwantlen Polytechnic University’s (KPU) Certificate in Engineering. Both are documented on the study-sender websites as pathway programs but are not listed in the BC Transfer Guide. Based on the broad definition of pathway, such programs were also included in the study.

The main objectives of this study are to:

1. Identify a sample of pathway programs leading to a baccalaureate degree in one of the programs included in the study.
2. Assess the number of credits typically completed by pathway-transfer and direct-entry students in these programs.
3. Explore the reasons why these students complete the number of credits they do.

Toward these ends, the report includes:

- A summary of pathway programs leading to a baccalaureate degree in one of the study disciplines.
- A survey of current pathway-transfer students.
- A quantitative analysis of institutional student demographics and course-credit data for pathway-transfer graduates and direct-entry students who graduated from the same programs.
- A quantitative analysis of provincial enrolment data to identify previously attended institutions, identify potential pathway programs, and determine the number of credits accumulated by pathway students at both study-senders and -receivers.

## Methodology and Data Definitions

Institutional data were requested from four BCTS receiving universities: Athabasca University (AU), Royal Roads University (RRU), Simon Fraser University (SFU), and the University of British Columbia (UBC). These institutions—the study-receivers—were selected based on the prevalence of pathway programs listed in the BC Transfer Guide, as well as the volume of transfer students received based on the Student Transitions Project.<sup>1</sup>

The study's scope included baccalaureate graduates who transferred from a study-sender and completed their degree in Business, Engineering, Nursing, or Social Work at a study-receiver during the period September 2015 to August 2019. The study-senders included in this report are BC institutions that submit student data to the provincial Central Data Warehouse (CDW), maintained by the BC Ministry of Advanced Education and Skills Training (AEST).

Table 1 summarizes which study-senders were included for each of the study-receivers, based on the pathways of actual students in the cohort.

*Table 1- Study-Receivers and Study-Senders*

Study-Receiver	Study-Sender
AU	BCIT, CAM, CNC, COTR, DOUG, KPU, LANG, NLC, OKAN, OUC, SEL, TRU, UFV, VCC, VIU
RRU	BCIT, CAM, CAP, CMTN, DOUG, JIBC, KPU, LANG, NIC, NLC, SEL, TRU, UFV, VCC, VIU
SFU	BCIT, CAM, CAP, CNC, DOUG, JIBC, KPU, LANG, OKAN, TRU, UFV, VCC, VIU
UBC	BCIT, CAM, CAP, CMTN, CNC, COTR, DOUG, ECU, JIBC, KPU, LANG, NIC, NLC, NVIT, OKAN, OUC, SEL, TRU, UFV, VCC, VIU
All	BCIT, CAM, CAP, CMTN, CNC, COTR, DOUG, ECU, JIBC, KPU, LANG, NIC, NLC, NVIT, OKAN, OUC, SEL, TRU, UFV, VCC, VIU,

Study-receivers were asked to provide student data including the number of transfer credits or block-transfer credits received, last institution attended, demographic data, program admitted to, graduation date, credential awarded, credits required for graduation, credits attempted and completed, and an indicator of whether the student changed programs while studying at the study-receiver.

RRU, SFU, and UBC also sent a list of selected baccalaureate graduates which was used to link the institutional data to system-level data in the Student Transitions Project. The system-level data pertained to students' academic experience at CDW institutions. Appendix 3 contains a full list of the requested data fields. As discussed below, adding this second data source (in addition to the data provided by study-receivers on transfer credits or block-transfer credits received), allowed the study to capture credits completed, but not recognized at study-receivers, and uncovered some interesting results. The methodology utilized in this study is important for studies of transfer system, as it combines insight from provincial databases with data provided by study-receiver institutions. Those interested in methodological details should refer to Appendix 5.

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<sup>1</sup>The Student Transitions Project tracks students between the BC K-12 and public post-secondary education systems and is used to support programming planning and management to help students transition successfully into post-secondary education and graduate (Government of British Columbia, n.d.).

An online survey asked students about their transfer experience. Students received an invitation to participate in the online survey via their institution, with a reminder emailed one week afterward. The survey and invitation can be viewed in Appendix 1.

### **Pathway-Transfer Identification**

Each study-receiver had different data-recording practices for admitted pathway-transfer students (see Table 2). AU and SFU do not use year levels but admit students based on completion of transfer credits. RRU bases their admission on transfer credits completed but does not always record these credits; a student may thus be admitted to a Year 3 level with undocumented transfer credits. UBC uses both models.

The current study distinguished between students whose transfer credits were recorded on a course-by-course basis, and those who were granted advanced standing without specifically recording course equivalencies. The findings therefore confront differences in transcription, admission, and data collection practices between institutions. While this work is complex, it may ultimately lead to a better understanding of how different practices impact the efficiency of transfer pathways (e.g. Do students whose previous credits are granted as course-by-course equivalencies have more, or less of their prior learning recognized than those granted advanced standing?) and the transparency of these processes for students (e.g. Do students whose prior learning is documented in greater detail express greater satisfaction with the transfer process?) This information may inform a number of practices at BC post-secondary institutions developing transfer pathways.

Pathway-transfer students were, therefore, further divided into the following categories:

- Pathway-transfer NTC—students who were admitted to a baccalaureate institution at level Year 2 or higher, with no transfer credits transcribed. This included all pathway-transfer students at SFU and AU, and 19% (217) of UBC pathway-transfer students.
- Pathway-transfer TC—students who were admitted to a baccalaureate institution at level Year 2 or higher, with transfer credits transcribed. All 72 RRU students are included in this group, and 1,485 (81%) of the UBC pathway-transfer students were included in this group.

### **Data Cleaning and Linking**

Appendix 5 includes a table detailing the number of students each institution identified for this study, whether these students were included in the analysis, and the reason for exclusion, if applicable.

Direct-entry students, where applicable, were included as a comparison group to allow the researchers to determine if there were differences in credits accumulated between pathway-transfer and direct-entry students. The direct-entry comparison group provided by SFU included students with a BC12 basis of admission. This definition means that the number of international direct-entry students included in this study is very small. UBC's direct-entry comparison group had a broader base, and as such included a higher proportion of international students. Given the variability of data provided, further analysis of student origin has not been included in this study.

All pathway-transfer students included in this study followed the anticipated pathway, enrolling first in a study-sender, and then at a study-receiver. However, some members of the cohort, also enrolled at a study-sender during, or after, their studies at a study-receiver. These students were included, but the analysis of their enrolment at a study-sender included their studies before transfer only. Excluded from further analysis were students who only attended a study-sender simultaneous to, or following, studies at a study-receiver; students who transferred from an institution that does not submit data to the CDW; transfers from non-BCTS institutions; students of unknown status (no admission year level, no transfer credits); and students with no credits or enrolment records.<sup>2</sup> These cases demonstrate the level of mobility shown by a subpopulation of BC students.

The study combined institutional data provided by the study-receivers with provincial data from the CDW. These data were linked with the use of a unique-to-this-study anonymous student identification number, specifically assigned to each student record in this study by study-receivers.<sup>3</sup>

Table 3 shows the number of pathway-transfer and direct-entry students in the study cohort by study-receiver and study discipline. For the following analysis, anonymized records of the following groups of students were used:

- Pathway graduates: students who graduated with a baccalaureate during the period from September 2015 to August 2019 from one of the study-receivers within the study disciplines who were admitted as transfer students at Year 2 level or higher.
- Direct-entry graduates: students enrolled at one of the study-receivers within the study disciplines who were admitted as direct-entry students and who graduated with a baccalaureate during the period from September 2015 to August 2019. AU and RRU offer a limited number of direct-entry programs; therefore, no direct-entry comparison was possible for either institution.

Across all study-receivers, about a quarter (23% of all students) in the cohort were pathway-transfer students. Pathway-transfer NTC were roughly three quarters of all pathway-transfer students (dominated by the large number of UBC students in this category).

In some disciplines, and at some study-receivers, the proportion of pathway-transfer students in the cohort was much higher than the proportion of direct-entry students. In UBC Social Work programs, 85% of all students were pathway-transfer students, and in UBC Nursing programs almost half of the cohort (48%) were. In SFU and UBC Engineering and Business programs, pathway-transfer students constituted about a quarter (26%) of the cohort. This distribution may be indicative of the prevalence of transfer pathways in a specific study discipline.

*Table 2 - Number of Pathway-Transfer and Direct-Entry Students in the Study Cohort by Study-Receiver and Discipline (n=9,187).*

Study Discipline	Study-Receiver	Number of Students	Transfer Students as % of all Students
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<sup>2</sup> Given that RRU is an institution that submits data to the CDW, the CDW dataset contained duplicates of the RRU institutional data (78 enrolment records). These duplicate records were excluded from the analysis.

<sup>3</sup> AU does not submit data to the CDW, and no data linkage was possible. Only AU institutional data were used for analysis related to AU.

		Direct Entry	Pathway-Transfer NTC	Pathway-Transfer TC	Pathway-Transfer Total	Total	Pathway-Transfer NTC	Pathway-Transfer TC	Pathway-Transfer %
<b>Business</b>	AU			18	18	18		100%	0%
	RRU		68		68	68	100%		0%
	SFU	931		194	194	1,125		17%	17%
	UBC	2,863	479	113	592	3,455	14%	3%	17%
<b>Engineering</b>	SFU	285		98	98	383		26%	26%
	UBC	2,752	682	25*	706	3,458	20%	1%	20%
<b>Nursing</b>	AU			60*	60*	60*		100%	100%
	UBC	253	165	45*	211	465*	38%	9%	45%
<b>Social Work</b>	AU			N<10	0	N<10		100%	
	UBC	22	91	34	125	147	62%	23%	85%
<b>Total</b>		<b>7,106</b>	<b>1,485</b>	<b>596</b>	<b>2,081</b>	<b>9,187</b>	<b>17%</b>	<b>6%</b>	<b>23%</b>

Note: \*Indicates a rounded number. For rows/columns containing cells with N<10, the value of one other cell is rounded up or down to the nearest 5.

Table 4 shows the number of students pursuing each discipline by study-sender, broken down by student type. This table includes all study-receivers.

Among pathway-transfer students, LANG had the largest number (488, or 23%), representing nearly one quarter of all students in this study, followed by KPU (256, 12%) and TRU (246, 11%). LANG was also the largest sender in Business, likely due to the number of pathways and geographic proximity to UBC Vancouver. CAM was the largest sender in Engineering, due to their Engineering Bridge programs. OKAN was the largest sender in Nursing, owing to their partnership with UBC Okanagan's Nursing programs (76 of 86 transfers, with the remaining 10 to AU). TRU was the largest sender in Social Work. Further breakdowns of disciplinary trends are shown in Appendix 4.

Table 3 - Number of Pathway-Transfer Students in the Study Cohort by Student Type, Study-Sender, and Study Discipline Across all Study-Receiver (n=9,187).

Student Type (High-Level)	Study-Sender (Last)	Business	Engineering	Nursing	Social Work	Grand Total	% of Student Type
<b>Direct-Entry</b>	N/A	3,545	2,743	108	20*	6,416	90%
	OKAN	16	47	69		132	2%
	LANG	65	48	N<10		118	2%
	DOUG	58	46	N<10		107	2%
	VCC	41	22	N<10		64	1%
	BCIT	15	26	N<10		42	1%
	KPU	N<10	14	12	N<10	35	0%
	CAP	16	16	N<10		35	0%
	TRU	N<10	13	11		26	0%
	SEL	N<10	12	N<10		25	0%
	CAM	N<10	14	N<10		21	0%
	COTR	N<10	N<10	N<10		18	0%
	JIBC	N<10	N<10	N<10		11	0%
	ECU	N<10	N<10	N<10		11	0%
	8 Other Institutions	N<10	23	12	N<10	45	1%
	<b>Total</b>	<b>3,794</b>	<b>3,037</b>	<b>253</b>	<b>22</b>	<b>7,106</b>	
<b>Pathway-Transfer</b>	LANG	326	120	11	31	488	23%
	KPU	120	122	N<10	N<10	255	12%
	TRU	44	83	58	54	239	11%
	CAM	60*	136	11	N<10	209	10%
	DOUG	127	44	11	12	194	9%
	CAP	81	84	N<10	N<10	170	8%
	OKAN	25	30	86	N<10	143	7%
	UFV	23	74	10	11	118	6%
	CNC	N<10	46	N<10	N<10	58	3%
	VIU	N<10	24	N<10	N<10	42	2%
	VCC	N<10	N<10	33	N<10	41	2%
	BCIT	18	N<10	N<10	N<10	37	2%
	SEL	11	15	N<10		27	1%
	8 Other Institutions	18	15	23	N<10	13	1%
	<b>Total</b>	<b>872</b>	<b>804</b>	<b>272</b>	<b>133</b>	<b>2,081</b>	
<b>Grand Total</b>		<b>4,666</b>	<b>3,841</b>	<b>525</b>	<b>155</b>	<b>9,187</b>	

Note.

- \*Indicates a rounded number. For rows/columns containing cells with N<10, the value of one other cell is rounded up or down to the nearest 5.
- Other study-senders include CMTN, COTR, ECU, JIBC, NIC, NLC, NVIT, and OUC. Within disciplines, there were fewer than 10 students from each study-sender.

## Analysis and Discussion

### Analysis of Academic Experience Prior to Transfer

#### *Last Study-Sender Institution Attended Prior to Transfer*

##### **Athabasca University (AU)**

Based on the last study-sender attended prior to transfer, Vancouver Community College (VCC) was the largest sender to AU, with 21 students (24% of all AU pathway-transfer students) pursuing a pathway-transfer option. OKAN also sent 10 students (11% of all AU pathway-transfer students). The remaining 56 students studied at a variety of study-sender institutions, and each study-sender had 10 or fewer transfer students.

##### **Royal Roads University (RRU)**

Half (36) of RRU pathway-transfer students came from CAM. The geographic proximity of RRU and CAM (both institutions are located in Victoria) could be a factor in the popularity of this pathway program. The remaining 36 students studied at a variety of study-sender institutions (Table 1), and each study-sender had fewer than 10 transfer students.

##### **Simon Fraser University (SFU)**

Students transferred to SFU from a variety of institutions (Appendix 4). KPU (86 students) and DOUG (78 students) had the highest numbers and percentages, 29% and 27% of all SFU pathway-transfer students, respectively. Three quarters (73%, 63 of 86 students) of KPU pathway-transfer students graduated with a Business degree, and the rest (27%, 23 students) were in Engineering programs. The majority of DOUG pathway-transfer students (57 students, 77% of all DOUG students) were in Business programs. Almost 50% of LANG pathway students at SFU were in Business, and the other half were in Engineering programs. CAP students constituted 16% of all SFU pathway-transfer students; of them, 37 students graduated with a Business degree and 9 students completed an Engineering degree.

##### **University of British Columbia (UBC)**

UBC had the largest number of pathway-transfer students and the largest number of study-senders (Appendix 4). LANG, located near UBC Vancouver, represented 26% (440 of 2,081) of UBC pathway-transfer students, while TRU, based in Kamloops, in closer proximity to UBC-O, represented 11% of UBC pathway-transfer students. More pathway-transfer students from TRU, KPU, and CAM graduated with a degree in Engineering than with other disciplines. This finding suggests that pathway options are effectively supporting transfer into and degree completion from UBC Engineering. For other study-senders, more transfer students were in Business programs than in other study disciplines.

#### *Number of Study-Sender Institutions Attended*

About a quarter (512) of pathway-transfer students in the study attended more than one study-sender.

<sup>4</sup> Students whose transfer credits were articulated on a course-by-course basis (Pathway Transfer TC) were equally as likely to have attended multiple study-senders as were students whose prior learning was recognized through advanced standing.

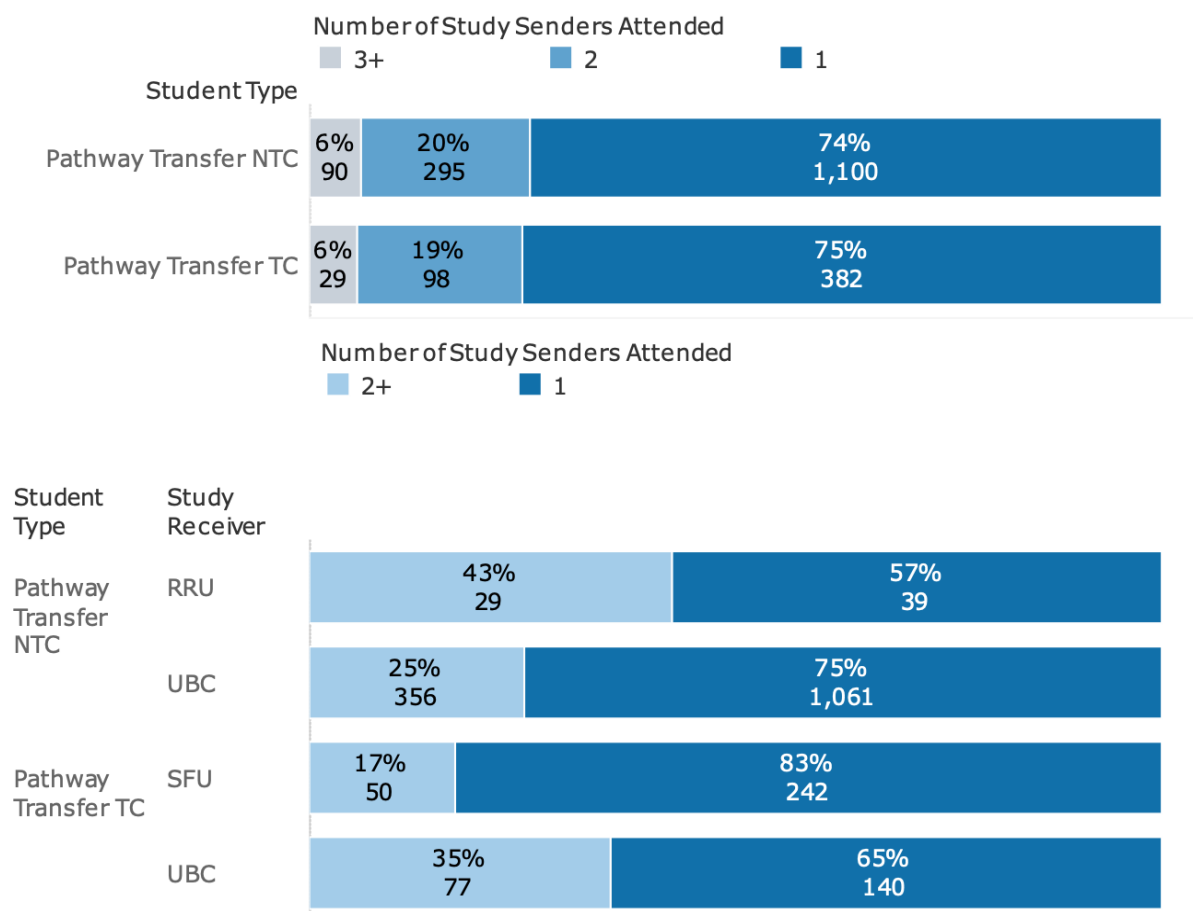
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<sup>4</sup> This analysis excludes AU, because the number of study-senders and the data on previous credentials were not available for AU pathway-transfer students.



The percentage of pathway-transfer students attending multiple study-senders varied significantly between institutions, as shown in Figure 1, below. The lower percentage at SFU could be a result of streamlined pathways to the institution's Business and Engineering programs: an average of 82% of study-sender credits were recognized by SFU (Figure 3). Another possible reason could be the nature of programs and practices at each study-receiver, which could be more or less favourable to transfer credits collected at multiple sender institutions. Previous research has found that students attending multiple institutions tend to take longer to complete their studies (Heslop, 2015), and to collect more credits on their way to a baccalaureate, especially if they earn other post-secondary credentials beyond the bachelor's degree (Tikina, 2020).

Figure 1 - Percent and Number of Pathway-Transfer Students by the Number of Study-Senders, Student Type, and Study-Receiver (n=1,994).



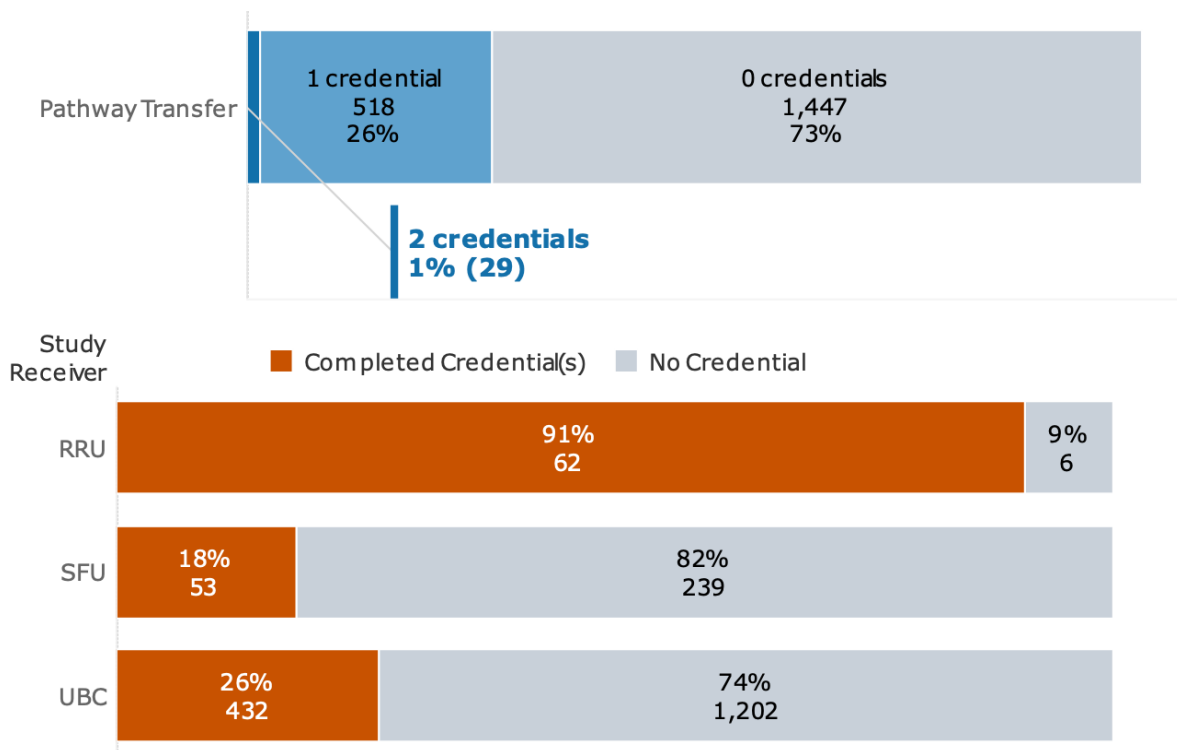
Note.

- Direct-entry students are excluded.
- AU is excluded from this figure as it does not submit to the CDW.

### Credentials Completed at Study-Senders

Figure 2 shows the number and proportion of credentials completed at a study-sender, by discipline. On average, 27% of pathway-transfer students (547 students) completed at least one credential prior to transferring. Of them, 29 students (1% of pathway-transfer students) completed two credentials. The percentage varied by study-receiver: 91% (62 of 68 students) of RRU students completed a credential (due to the nature of RRU's admissions and program structure), compared to 18% (53 of 292 students) at SFU and 26% (432 of 1,634 students) at UBC. No AU data were available for this type of analysis. The percent of students completing a prior credential was highest in Engineering for pathway-transfer NTC students (37%, 251 students), and in Social Work for pathway-transfer TC students (53%, 18 students).

Figure 2 - Percent and Number of Credentials Completed by Pathway-Transfer Students by Study Discipline (n=1,994).



Note.

- AU is excluded from this figure as it does not submit to the CDW.

## Credit Accumulation

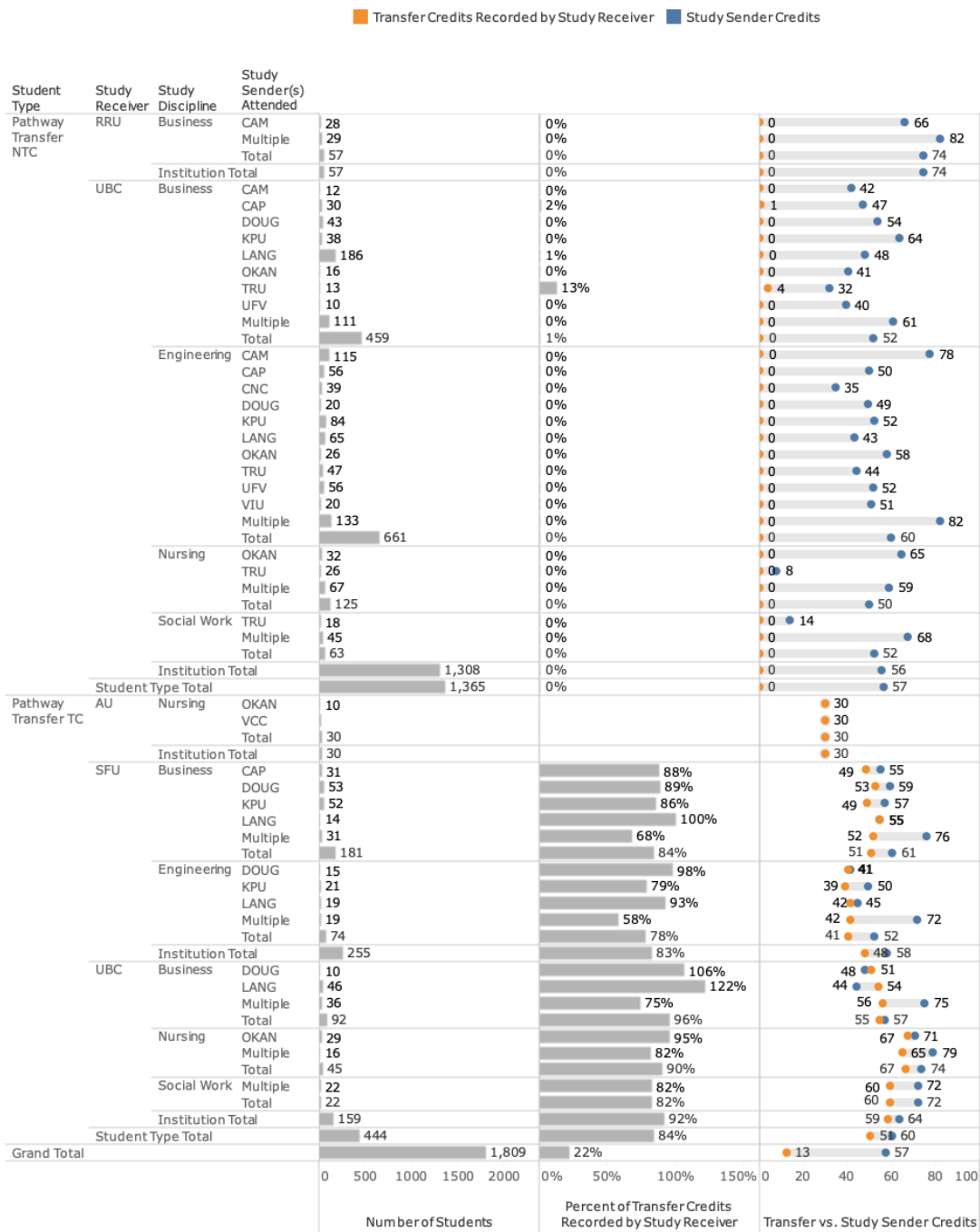
One of the key objectives of the current study was to assess the efficiency of pathway programs for students. Given the benefits to some students (lower tuition costs, studying closer to home, smaller class size, more liberal admission requirements), can students be assured that, on average, they will not be required to complete substantially more credits than students directly admitted to a study-receiver? Further, it was hoped that this exploratory study could identify specific programs and institutional pathways that might provide models for future pathway development.

Figure 3 shows the percent and number of transfer credits recorded by study-receiver, credits taken at the study-sender(s), and number of students. The chart shows only those pathways that have 10 or more students, thus excluding 346 students.

Because pathway-transfer NTC students did not have their previous credits assessed (and were, instead granted advanced standing to the appropriate year in their receiving program), they averaged near zero transfer credits recorded, with minor exceptions. However, data from the Student Transitions Project confirmed that these students did, of course, complete a range of credits at study-sender institutions. Engineering had the highest average number of credits not recorded in this manner, with students from CAM completing an average of 82 credits, none of which were recorded on UBC transcripts. Utilizing the STP data, we can see that Engineering transfers averaged 60 credits completed at study-senders, while Business transfers averaged 52, Social Work transfers 52, and Nursing transfers 50.

Pathway-transfer TC students had a large majority of their transfer credits recorded, averaging 84% in SFU Business, 78% in SFU Engineering, 96% in UBC Business, 90% in UBC Nursing, and 82% in UBC Social Work. Transfers from DOUG (106%) and LANG (122%) to UBC Business were awarded more transfer credits than they pursued at the study-sender(s). The current study cannot definitively explain why these students were granted more credits than they completed at their study-sender, but it is possible that these students possessed transfer credits either from a non-study-sender or in the form of advanced placement, international baccalaureate, or similar. Attendees of multiple study-senders typically had a lower proportion of their transfer credits recognized, suggesting that pathways involving multiple senders may include more of these issues.

Figure 3 - Credits Accumulated at Study-Sender(s) vs. Study-Receiver Transfer Credits Recorded by Study-Receiver, Study Discipline, and Study-Sender (n=1,809).



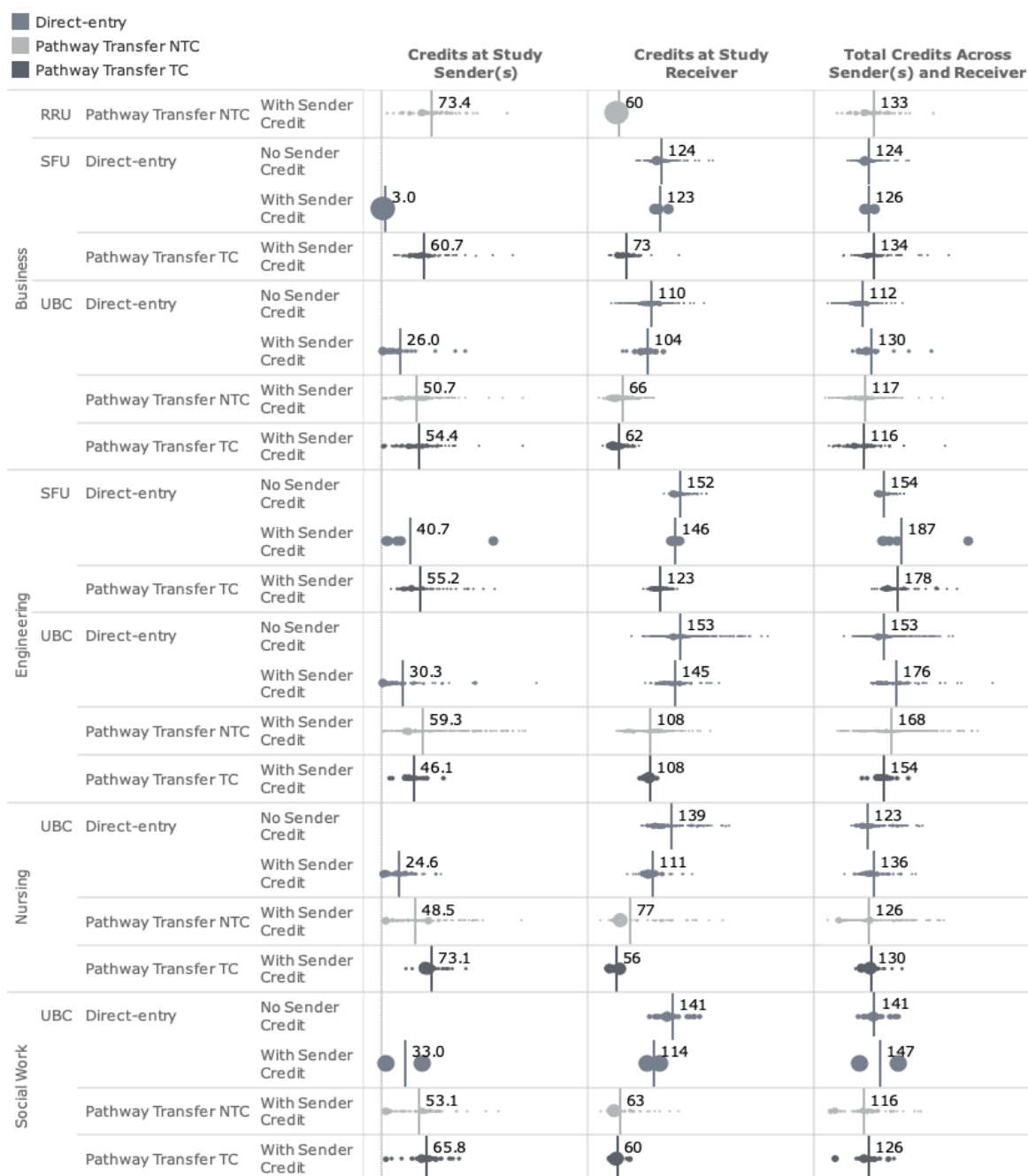
Note.

- A total of 272 pathway-transfer (120 NTC and 152 TC) students are not shown in this figure due to fewer than 10 transfers in that particular combination of study-receiver, study discipline, and study-sender.
- AU pathway-transfer TC students meet the definition of completing 30 transfer credits from a study-sender, but because AU does not submit data to the CDW, no percent of transfer credits recorded can be calculated.
- Direct-entry students are excluded from this chart.

Figure 4 highlights the number of credits earned at the study-sender, study-receiver, and combined. It includes pathway-transfer (TC and NTC) students who completed credits at one or more study-senders, plus direct-entry students for comparison.

Generally, pathway-transfer students completed more credits than did direct-entry students, although the percentage difference was small, ranging from a couple of courses, to slightly over one semester of credit across the full degree program. There does not seem to be a consistent pattern distinguishing the number of credits completed by pathway-transfer students whose credits were articulated on a course-by-course basis (Pathway-transfer TC) and those granted advanced standing (Pathway-transfer NTC)

Figure 4 - Distribution of Credits Accumulated by Study-Receiver, Study Discipline, and Student Type (n=9,096).



Note.

- 91 pathway-transfer TC students from AU, SFU, and UBC are excluded from this chart as they did not have study-sender credit. For further detail on this group, see Table 5.
- The total credits across sender(s) and receivers may not be equal to the sum of credits at study-sender(s) + credits earned at study-receiver for a variety of reasons, which may include transfer credits from non-CDW institutions, advanced placement or international baccalaureate credits, test credits, dual enrolments, or similar.
- While AU is included in this chart, only credits earned at AU (the study-receiver) are reported as AU does not submit to the CDW. See Table 5 for a more detailed comparison for AU

Where Figure 4 highlights credits completed at the study-sender and receiver, Table 5 expands this analysis to include values recorded by the study receiver: transfer credits recorded, credits completed at the study-receiver, and total credits at the study-receiver. It also provides an estimate of the number of study-sender credits not recorded by the study-receiver.<sup>5</sup>

In every study discipline and for every student type, the total credits recorded by the receiver is different than the total credits across study-sender and study-receiver. Distinguishing between those students with study-sender credit and those who have no study-sender credit highlights that study-sender credits are not always recorded or otherwise recognized towards baccalaureate programs.

It was expected that pathway-transfer NTC students would see a high number of study-sender credits not recorded by the study-receiver. For example, RRU Business students averaged 73 credits that were not recorded, a reasonable number given that 60 credits are required to enter RRU Business. Similarly, UBC Engineering pathway-transfer NTC students averaged 59 credits not recorded.

The group that stands out is the direct-entry with study-sender group with high numbers of credits not recorded. The methodology employed in this study (comparing data on credits completed at study-senders, with data on credits awarded at study-receivers) resulting in the unanticipated finding that ten percent direct-entry students in the sample had attended a study-sender, and were subsequently admitted to a study-receiver as direct-entry students. OKAN, LANG, and DOUG had the largest groups of students of this type. Although the current study is not able to identify why the data reflects this counter-intuitive pattern, possible explanations may include taking upgrading, or non-credit courses, not disclosing prior post-secondary experience, or completing fewer than the study-receiver's minimum threshold for post-secondary transfer (typically 24 or 30 transferrable credits).

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<sup>5</sup> Study-sender credits were not available for AU because it does not submit to the CDW.

Table 4 - Credits Transferred, Earned at Study-Receiver, and Earned Across Both Sender and Receiver (n=9,187).

		Student Type	Credits at Study Sender ?	Number of Students	Study Sender Credits	Transfer Credits Recorded by Study Receiver	Credits Earned at Study Receiver	Total Credits Recorded by Receiver (note Error! Reference source not found.)	Total Credits Across Sender and Receiver (note Error! Reference source not found.)	Credits Not Recorded by Study Receiver (note Error! Reference source not found.)
Business	AU	Pathway Transfer TC	No	18		58	38	104		
	RRU	Pathway Transfer NTC	Yes	68	73	0	60	60	133	73
	SFU	Direct-entry	No	926		0	124	125	124	
			Yes	N<10	3	2	123	125	126	1
		Pathway Transfer TC	No	N<10		57	64	121	64	
			Yes	192	61	51	73	124	134	9
	UBC	Direct-entry	No	2827		0	110	110	112	
			Yes	36	26	1	104	105	130	25
		Pathway Transfer NTC	Yes	479	51	0	66	67	117	50
			Yes	113	54	53	62	114	116	2
Engineering	SFU	Direct-entry	No	279		0	152	153	154	
			Yes	6	41	7	146	153	187	34
		Pathway Transfer TC	No	N<10		60	132	192	132	
			Yes	97	55	40	123	163	178	15
	UBC	Direct-entry	No	2651		0	153	153	153	
			Yes	101	30	0	145	145	176	30
		Pathway Transfer NTC	Yes	682	59	0	108	108	168	59
			Yes	24	46	44	108	151	154	3
Nursing	AU	Pathway Transfer TC	No	61		30	80	120		
	UBC	Direct-entry	No	159		0	139	139	123	
			Yes	94	25	0	111	111	136	25
		Pathway Transfer NTC	Yes	165	48	0	77	77	126	48
			No	N<10		66	64	130	64	
			Yes	45	73	66	56	123	130	7
Social Work	AU	Pathway Transfer TC	No	N<10		60	42	119		
	UBC	Direct-entry	No	20		0	141	141		
		Direct-entry	Yes	N<10	33	0	114	114	147	33
		Pathway Transfer NTC	Yes	91	53	0	63	63	116	53
			Yes	34	66	59	60	119	126	7

Note.

1. Only credits recorded by AU (transferred and earned) were available.



2. Total Recorded by Receiver includes credits earned, credits transferred that were recorded for credit, and other transfer credit such as exam credit, Advanced Placement, or International Baccalaureate.
3. Credits Across Sender and Receiver includes Study-Sender Credits and Credits Earned at Study-Receiver. It excludes Transfer Credits Recorded by Receiver as this would otherwise be double counted with Study-Sender Credits. This value is not calculated for AU students because AU does not submit to the CDW.
4. Credit Not Recorded by Receiver is an estimate of the number of Study-Sender credits completed that were not recorded as Transfer Credit. This figure is an estimate because transfer credits recorded by the receiver includes other forms of transfer credit that are not disaggregated. This value is not calculated for AU students because AU does not submit to the CDW. This value is also not calculated for students who do not have Study-Sender Credit, such as direct-entry students or pathway-transfer students who may have attended a non-study-sender and received transfer credit.

## **Student Experience with Transfer Pathways**

A survey of current UBC, SFU, and AU students in the considered study disciplines highlighted students' experiences with transfer pathways. Students invited to participate in the survey were enrolled at one of the study-receivers within the study disciplines, were admitted as transfer students at Year 2 level or higher, and were within approximately 30 credits of graduation.

A total of 84 responses, a response rate of about 10%, was received from students in Engineering (49 respondents, or 58%), Business (28 respondents, 33%), and Nursing (7 respondents, 8%) programs. These students had studied in a variety of sending institutions pre-transfer; the largest numbers of respondents were from LANG (14 respondents), CAPU (11), OKAN (10), DOUG (9), and KPU (9). Unfortunately, privacy considerations meant it was not possible to distinguish between students on the basis of how their transfer credits were recognized (Pathway Transfer TC vs. Pathway Transfer NTC). Future research may specifically consider whether course-by-course transfer assessment creates more transparency, and therefore more satisfaction for students.

About two thirds (63) of respondents had completed a post-secondary credential prior to transfer. The majority of the respondents with previous credentials (38 responses) were in Engineering programs. Diplomas, certificates, and other baccalaureate degrees were the most common credentials reported by the respondents.

Three quarters of the respondents (79%, 67 students) indicated they had 0–30 credits remaining in their program at the study-receiver. A smaller group (18%, 15 students) reported that they had more than 30 credits remaining, perhaps reflecting their desire to complete more than the minimum required courses. The rest of respondents were unsure.

About a third of respondents (26 students, 31% of all respondents) had all credits from their previous institution transferred toward their degree, and 43% of all respondents (36 respondents) reported that most credits were counted. Ninety-two percent of respondents in Business programs had all or almost all credits transferred. This percentage was smaller for respondents in Engineering programs (68% of all respondents in Engineering reported that all or almost all of their credits transferred) and much smaller for respondents in Nursing programs (43% of all respondents in Nursing). The significant percent of students whose courses did not transfer confirms the results of the quantitative analysis above, which indicated that graduates in these programs needed to take up to a full semester worth of additional credits.

In contrast, almost half (47%, 23 students) of respondents in Engineering programs had learned about their transfer pathways prior to or at the time they were admitted to their study-sender. Thirty-nine percent of respondents in Engineering had not been aware of the pathways. Interestingly, the percentage of respondents not being aware of pathways was higher for respondents in Business programs (43%, 12 students) than in Engineering; however, a much higher percent of respondents in Business reported almost all credits transferred. Nursing had a higher proportion of respondents who had not initially planned to transfer, or who were unaware of pathway programs. This may have been a factor in why a small percentage of Nursing respondents had all their credits transferred.

*Table 5 - Reasons Why Credits Were Not Transferred (n=90).*

	Number of Responses
The courses I took at my previous institution had a different focus than those in my current university	21
Unsure	17
I changed my program or subject of study	10
The curriculum at my previous institution changed and was not in alignment with the curriculum at current university	8
Requirements at current university changed after I began my studies at my previous institution, but before my transfer to current university	7
The curriculum at current university changed and was not in alignment with the curriculum at my previous institution	6
The courses I took were completed too long ago to be considered for current university	2
I was unable to submit course outlines for evaluation	2
Other *	17
Total	90

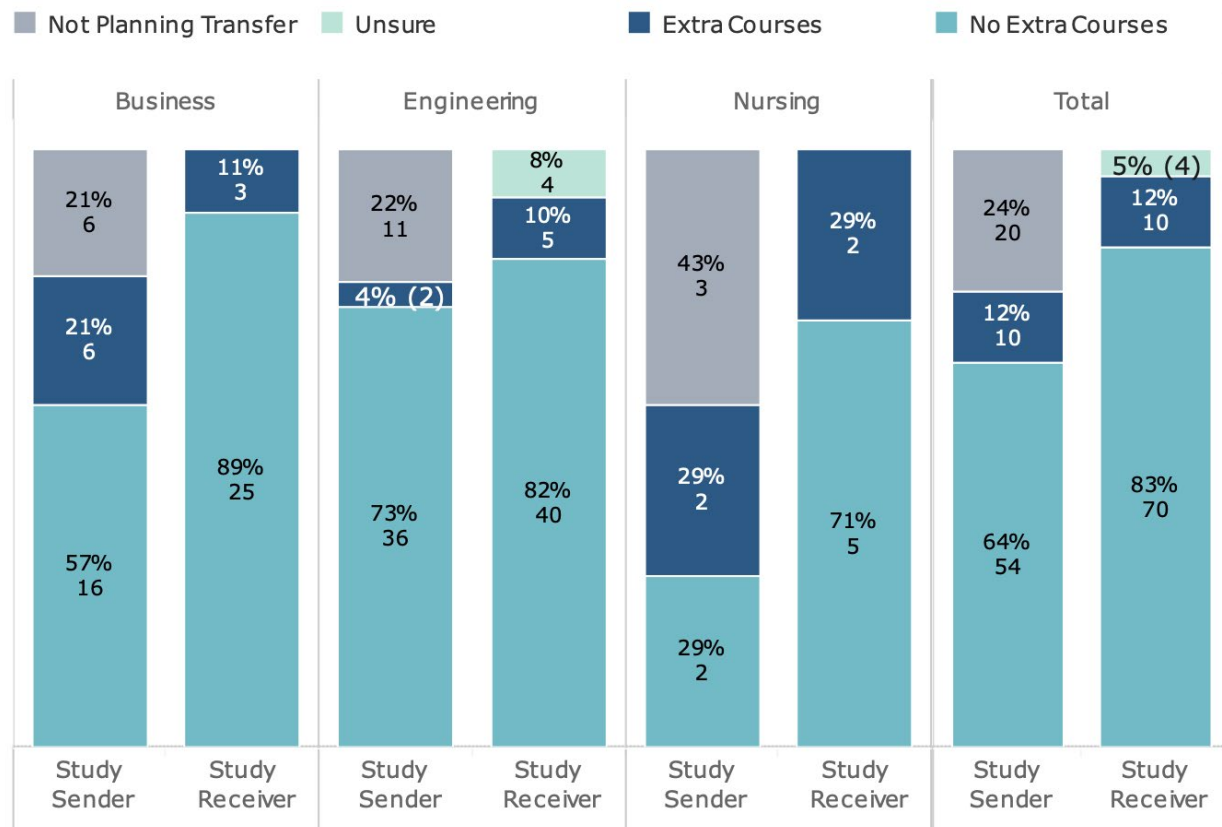
*Note.* Respondents could choose multiple response options for this question.

\*Other reasons included exceeding the maximum possible number of transfer credits, likely linked with residency requirements at the study-receivers. Curriculum not being aligned for transfer, or courses not being equivalent, were also mentioned.

The most frequently mentioned reason why not all credits were transferred pertained to a difference in program focus between a study-sender and a study-receiver. Approximately 20% of students were unsure why some of their credits had not transferred (17/84 respondents). This raises the issue of whether more transparency is required as pathway students move between institutions.

The majority of pathway-transfer students did not take, and were not planning to take, extra courses, either at the study-sender or study-receiver. About 12% of respondents (10) reported that they had taken or were planning to take courses that would not be counted toward their baccalaureate degree.

Figure 5 - Did You Take/Do You Plan to Take Courses You Knew Would Not Count Towards Your Credential? (n=84)



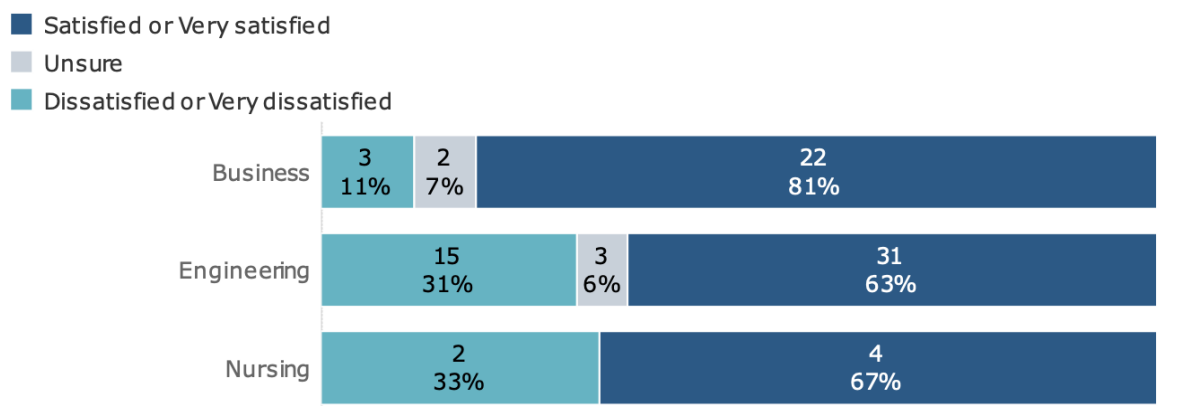
Half of the students who gave reasons for taking courses that would not count toward their degree (14 of 28 respondents) mentioned that they had personal or professional interest in the topic covered by the non-required courses. Two thirds (63%, or 7 of 11) of Engineering respondents to this question indicated this reason. Business students' responses were more distributed. Other reasons included maintaining full-time student status, taking additional upgrading courses in math, English, or writing (this reason was not mentioned by Engineering students), and exploring or making a program change.

A degree audit is tool that helps students meet academic requirements. The percentage of students who reported being aware of the degree-audit tool throughout their degree program ranged from 64% for Business respondents to 77% for respondents in Engineering programs. An additional 7% of all respondents (6 of 83) reported that they used the degree-audit tool partway through their degree. The level of awareness suggests that the majority of pathway-transfer students are using degree audits to assist in their course planning. However, additional supports may be needed to raise the awareness of the tool to all pathway-transfer students. It would be interesting to compare the level of awareness and usage of degree-audit tools with that of direct-entry students, a topic worthy of research consideration.

Academic advising plays a role in the choice of courses students make on their path toward a baccalaureate, and the survey explored satisfaction with advising. Overall, about 50% of respondents were satisfied or very satisfied with advising both prior to and after transfer. About a quarter (23%, or 19 of 82 respondents) were dissatisfied or very dissatisfied with advising prior to transfer.

More than two thirds of respondents were also satisfied or very satisfied with the transfer process. The percentage of those satisfied or very satisfied with the transfer process was the highest for respondents in Business programs (81%, or 22 of 27 respondents), and it was the lowest for respondents in Engineering (63%, 31 of 49).

Figure 6 - Satisfaction with the Transfer Process (n=82).



Despite challenges with not receiving credit for all their courses, and taking courses that they knew would not be counted toward their degree (Figure 5), students on the whole felt that their previous post-secondary program had adequately prepared them for their degree: 65% (54 of 84 respondents) selected either a 4 or a 5 on a scale ranging from 1 (poor preparation) to 5 (great preparation).

The survey respondents left a number of suggestions regarding how pathway students could be better supported on the journey toward their educational goals. The common themes for improving transfer processes were related to the helpfulness of faculty-specific advisors in contrast to “general advisors,” issues with staff turnover at the advising offices, availability of alerts as well as better communication between institutions on currency of courses and agreements, and more “peer initiatives” and greater involvement in student activities for transfer students to get accustomed to their post-transfer institution.

## Further Research

Given the variable practices used by receiving institutions to recognize prior learning by transfer students (course-by-course articulation vs. advanced standing), it would be interesting to explore which approach is more transparent for students. Helping students understand why some of their previous academic credit is not recognized at their new institution may improve student satisfaction, and confidence, in pathway programs.

This research identified that nearly 12% of pathway-transfer students attended a study-sender simultaneous to or following their studies at RRU, SFU, and UBC. Further analysis of pathways pursued during or after studies at a study-receiver might help students and educators better understand how this type of student mobility is facilitated.

Further comparing the tools and services utilized by pathway-transfer versus direct-entry students would indeed be helpful. This study found that more than two thirds of pathway-transfer students were aware of their institution's degree-audit tools to assist with course planning, and half of the respondents were satisfied with academic advising before and after transferring. Further research into the tools and services utilized by these students, in comparison with direct-entry students, could help better prioritize how services and tools are resourced and promoted.

One pattern uncovered in this study is the group of students with previous credits at one or more study-sender institutions, who were admitted as direct-entry students. About 9% of all SFU and UBC direct-entry students in this study (a total of 690 UBC and SFU direct-entry students) had been enrolled in a study-sender and admitted as direct-entry. Although the current study is not able to identify why the data reflects this counter-intuitive pattern, it is of some consequence for studies of transfer efficiency as they artificially reduce the average number of credits completed by single-institution students. Of course, and more importantly, they also impact other students by potentially impacting the fair application of admission criteria, access to entrance scholarships, etc. It would be interesting to explore in greater detail the magnitude and consequence of this phenomenon.

The research uncovered that many pathways were not included in the BC Transfer Guide. This analysis did not consider the reasons *why* specific institutions do not comprehensively list pathway options on the BC Transfer Guide website. It would be helpful to involve institutional representatives to better understand their perceptions of the pros and cons of itemizing and promoting pathway programs.

## Conclusion

This study provides additional insight on the effectiveness of transfer pathways from BCTS member institutions to several BCTS universities for students pursuing a baccalaureate degree. This study followed similar research by Tikina (2020) and Pendleton (2010). All BC public institutions that report to the CDW were included as study-senders. The study focused on transfer pathways into Business, Engineering, Nursing and Social Work programs.

This research suggests that there are a variety of program options available for students pursuing a pathway transfer. The province's central repository of such information, the BC Transfer Guide, lists some program options. They are usually listed as block-transfer or associate-degree agreements. However, there are a variety of pathway programs that are not documented on this resource. Some are

documented on study-sender websites, but this study confirmed that there are pathways used by a non-trivial number of students, which are not documented on either resource. There may be an opportunity to increase the number of students pursuing pathway programs if the information on available pathways were made available centrally. Further research could address prospective incentives for sending and receiving institutions to list partnership programs in the BC Transfer Guide, as well as investigate whether students might find such lists useful.

For those students whose transfer credits were recorded by study-receiver (pathway-transfer TC), the results indicate that pathways are relatively efficient based on the proportion of transfer credits recognized by the study-receiver. On average, 83% of credits completed across study-senders were recorded as transfer credit for this group. While this varied by study-sender, the outliers were those who attended multiple study-senders, where proportions of transfer credits recorded ranged as low as 25 percentage points below the average of 83%.

Student pathways to a baccalaureate degree tend to be non-linear, with just over one-in-four pathway-transfer students attending more than one study-sender. The research showed that attending multiple study-senders tended to result in a lower proportion of transfer credits being recorded by the study-receiver.

When comparing the number of credits completed at the study-sender and study-receiver, significantly higher numbers of credits were completed in Engineering, with an average of 145 credits completed at the study-receiver, and 167 credits across both study-sender and study-receiver for all student groups (including direct-entry students with no study-sender credit). In Engineering, the students who completed the largest number of credits included direct-entry students with study-sender credit (187 credits at SFU, and 176 at UBC), as well as pathway-transfer TC students (176 credits at SFU, and 168 at UBC).

The areas where pathway-transfer students completed more credits than direct-entry students with no study-sender credit included SFU Business (134 vs. 124), UBC Business (116-117 vs. 112), SFU Engineering (178 vs. 154), and UBC Engineering (pathway-transfer NTC averaged 168, while both direct-entry and pathway-transfer TC averaged about 154). Conversely, pathway-transfer students completed fewer credits than direct-entry students in UBC Social Work. The other areas had a similar number of credits completed.

Pathways appeared to take slightly more credits to complete overall, but were relatively efficient pathways for students that could be completed within a similar timeframe to direct-entry students. Comparing credits completed at study-senders versus recorded by study-receivers also allowed this research to estimate the number of credits that were not recorded. While we expected large numbers of credits not recorded for pathway-transfer NTC students, that difference was not significant. Nonetheless, survey respondents did indicate a reasonably high level of uncertainty about why some of their credits were not recognized, and greater transparency may benefit some learners.

Almost three quarters of respondents (74%) indicated that they had had all or almost all credits transferred. The need to make up for courses that did not transfer could be one of the reasons of accumulating extra credits on the way to a baccalaureate. On the other hand, many pathway students reported changing the focus of their studies, and exploring study areas that were not related to their study program. Some respondents had not planned to transfer originally. Change of plans and exploration also plays a role in accumulating excess credits beyond degree requirements.

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## Appendix 1. Survey Instrument

The British Columbia Council on Admissions & Transfer (BCCAT) and Plaid Consulting are conducting research on transfer credits. We are contacting you, as a student with experience of transferring credits, to request your participation in a survey for this project. This survey aims to learn more about how transfer credits are recorded at universities, and your experience of the transfer process.

The survey will take approximately 15 to 20 minutes to complete. Participation is voluntary, and you may choose to stop participating at any time. Your completion of the survey implies informed consent to participate. Your identity will remain anonymous (including to us), and your survey responses will not be linked to performance data such as grade point averages. Survey responses will be encrypted and stored securely in Canada; following completion of the study, the responses will be securely destroyed.

After completing the survey, you can enter a draw to win one of 50 gift cards (value \$20). You will also have the option of providing your email to receive a notification when the report is published. Your contact information will be entered on a separate survey that is not tied to your survey responses.

At the end of the survey, you will have the option to revoke (cancel) your participation. If you choose to revoke your participation, your survey responses will not be used in the study and will be securely destroyed.

If you would like more information about this project, please contact:

- Andrew Drinkwater at Plaid Consulting: [andrew@plaid.is](mailto:andrew@plaid.is)
- Anna Tikina at the BC Council on Admissions & Transfer: [atikina@bccat.ca](mailto:atikina@bccat.ca)

We appreciate your time. Thank you in advance for contributing to this project.

You can skip any non-required question by leaving the response blank.

You can skip any question by leaving the response blank.

### Part 1: Introduction/Demographic

Question	Choices
Thank you for participating in this survey. All questions on this page are required. Remaining questions on the survey are optional.  1. Which university are you currently enrolled in?	Implied from unique survey URL Other (please specify)
2. Do you provide consent for your anonymous responses to be used in this research?	Yes, I provide consent for my responses to be used in this research. No, I revoke (do not provide) my consent for my responses to be used in this research.  (If No, show next page and disable submission)



If No to Q2 (only) Else skip this page	Thank you for your time. Per your request to revoke permission to participate in this research, your responses will not be included in this research. You may now close your browser. (Next and submit buttons disabled)
(Only if Q2 = Yes for all questions beyond here)3. What other post-secondary institutions have you previously attended? (Select all that apply)	List of all BCTS institutions Other(s) (please specify)
4. What year did you first enroll in post-secondary education?	Years list
5. Select the subject area that is most closely related to the degree program you are currently enrolled in at UNIVERSITY:	Business/Commerce/Management Engineering/Applied Science Nursing Social Work/Child and Youth Care/Human and Social Services Other (please specify)
6. Have you been awarded any post-secondary credentials (please select all that apply).	Multi-select list of credential types Other (please specify)
7. How many academic credits do you still need to complete in order to graduate with your baccalaureate degree?	0-30 31-60 61-90 91-120 Unsure

## Part 2: Transfer Credits

8. Were all the credits from the institution you transferred from counted toward the degree program you are currently enrolled in?	Yes, all credits from the institution I transferred from were counted towards my degree program requirements No, not all credits from the institution I transferred from were counted.
8a. Follow-up: If No to Q8: do you know how many credits were counted towards your credential? Else skip	Almost all About half Very few None Unsure

<p>8b. Follow-up: If No to Q8 are you aware of why some of your credits were not counted?</p> <p>Else skip</p>	<p>I changed my program or subject of study Requirements at my current university changed after I began my studies at my previous institution, but before my transfer to my current university My grades were lower than required by my current university/my program at my current university I was unable to submit course outlines for evaluation The courses I took were completed too long ago to be considered for my university The courses I took at my previous institution had a different focus than those in my current institution The curriculum at my previous institution changed and was not in alignment with the curriculum at my current university The curriculum at my university changed and was not in alignment with the curriculum at my previous institution Other (please specify) Unsure</p>
<p>9. At your previous institution(s), did you take any courses that you knew would not be accepted for transfer at the time of taking the course?</p>	<p>Yes No I did not know I would be transferring at the time I took the course</p>

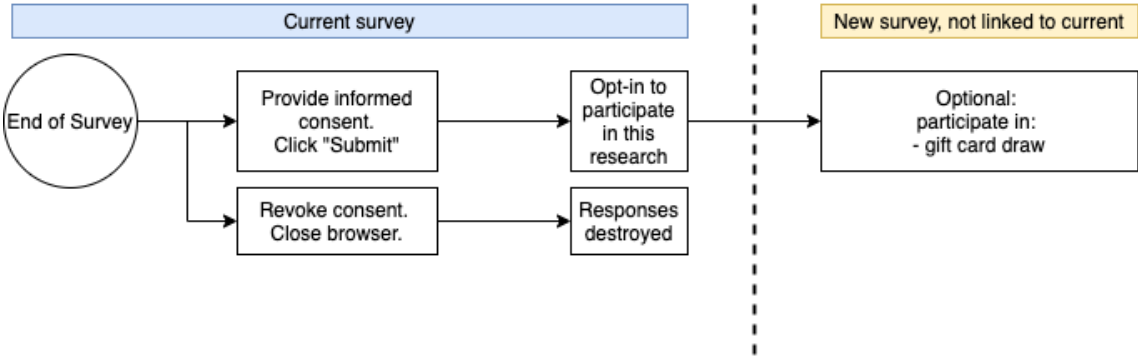
<p>9a-e. Follow-up: If Yes to Q9 For which reasons did you take these courses? Please select all that apply.</p> <p>Else skip</p>	<p>Multiple-select. For each choice (A-E), if respondent selects that choice, then display sub-question (shown with dots).</p> <p>I had a personal and/or professional interest in the topic I had a personal interest in the topic. I wanted to develop supplemental professional skills or knowledge outside of my main program area. Other (please specify) I needed to maintain my status as a full-time student I was waiting for access to courses required for my program I needed to maintain full-time status to maintain my funding I needed to maintain full-time status to maintain my visa requirements I needed to maintain full-time status to maintain my standing in my program I needed to maintain full-time status to maintain expectations of others (family, guardians, friends, etc.) Other (please specify) I was exploring or making a program change I was exploring a possible program change that I have not made at this time I was in a different program and have now changed my educational objectives Other (please specify) I needed to take some additional courses (such as English/Math/writing/computer courses) before I could take courses required by my program.</p> <p>I needed to take some additional credits in: English Math Writing Computer skills Other (please specify)</p> <p>Other (please specify)</p>
<p>10. At your current university, have you taken, or do you plan to take, any courses that will not count towards your degree?</p>	<p>Yes No Unsure</p>
<p>10a-e. Follow-up: If Yes to Q10</p>	<p>(see same list as Q9a above)</p>

For which reasons did you take or plan to take these courses? Please select all that apply. Else skip	
--	--

### Part 3: Transfer Experience

11. How satisfied were you with your transfer process from the institution you transferred from to your current university?	Very dissatisfied Dissatisfied Unsure Satisfied Very satisfied
12. Did you plan to transfer when you were completing your previous post-secondary credential?	Yes No Unsure
13. When did you learn about the “pathway” program (e.g. certificate to degree option, diploma to degree option, bridging program) that could be transferred for a degree?	Prior to or at the time I was admitted to my previous post-secondary study During my previous post-secondary study When I completed my certificate/diploma After I transferred to my current university I was unaware of the “pathway” program
14. How satisfied were you with the advising you received before and after your transfer? Advising before your transfer Advising after your transfer	Very dissatisfied Dissatisfied Unsure Satisfied Very satisfied
15. Do you have access to a personalized degree audit at your current university, such as DegreeWorks, that allows you to see your progress on your degree requirements online? These tools allow you to monitor your progress towards degree completion and indicate which course requirements have been and have not been met.	Yes, for the full duration of my degree. Yes, but this was implemented part-way through my degree. No Unsure
16. How well do you feel your post-secondary program that you took before transfer prepared you for the degree you are pursuing, with 1 being poor preparation and 5 being great preparation?	1-5 scale
17. Do you have any recommendations for how the transfer process can be improved?	Text box

### Part 4: Concluding

<p>18. Are there any other comments you'd like to add regarding your experiences as a transfer student?</p>	<p>Text box</p>
<p>You have reached the end of the survey. Assuming you are satisfied with your responses, please select "Yes" to the next question, and then click the "Submit" button below to provide your informed consent to participate in this research.</p> <p>Informed consent means that you have read the survey information, understand how your information will be used, and agree to have your responses included in the data. After submitting your response, a new survey will be started, where you can enter the optional gift card draw. The new survey is not linked to your responses in the current survey.</p> <p>If you no longer wish to participate, please select "No" in the following question.</p>  <pre> graph LR     EOS((End of Survey)) --&gt; P[Provide informed consent. Click "Submit"]     EOS --&gt; R[Revoke consent. Close browser.]     P --&gt; O[Opt-in to participate in this research]     R --&gt; D[Responses destroyed]     O -.-&gt; N[Optional: participate in: - gift card draw]     style P fill:#fff,stroke:#333     style R fill:#fff,stroke:#333     style O fill:#fff,stroke:#333     style D fill:#fff,stroke:#333     style N fill:#fff,stroke:#333     </pre>	
<p>19. Do you provide consent for your anonymous responses to be used in this research?</p>	<ul style="list-style-type: none"> <li>• Yes, I provide consent for my responses to be used in this research.</li> <li>• No, I revoke (do not provide) my consent for my responses to be used in this research.</li> </ul>
<p>If Q19=No:</p>	<p><b>Selecting "No" will revoke your permission to participate in this research? Are you sure?</b></p> <p>[Checkbox to confirm]</p> <p>Per your request to revoke permission to participate in this research, your responses will not be included in this research. You may now close your browser.</p> <p>Thank you for your time and for sharing your experience with us.</p> <p>[Submit button disabled]</p>

If Q19=Yes:	<p>Thank you for your time and for sharing your experience with us.</p> <p><b>Please click the "Submit" button below to be forwarded to a new survey to enter the gift card draw.</b></p> <p><b>[Submit button enabled]</b></p>
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### Submission Screen

Thank you for completing this survey.

You will now be forwarded to a new survey to enter the gift card draw, should you choose to enter.  
(Page forwarded in 1 second)

### Part 5: Gift Card Draw

This section is separate from the main survey to ensure that your survey responses are not linked to your contact information.

GC1. Please enter your email address to be entered to win one of 40 gift cards (value \$25).	Email input
<p>GC2. Are you interested in being notified when this report is published?</p> <p>If you do not wish to be notified, you can check the report out on BCCAT's website (bccat.ca) when it is published.</p>	<p>Yes [Email input]</p> <p>No</p>

### End Page

Thank you very much for completing this survey!

For more information about this project, please contact:

- Plaid Consulting at [andrew@plaid.is](mailto:andrew@plaid.is)
- BCCAT at [atikina@bccat.ca](mailto:atikina@bccat.ca)

To learn more about Plaid's privacy policy click here (link to <https://plaid.is/privacy/>).

Thank you for completing this survey.

You will now be forwarded to a new survey to enter the gift card draw, should you choose to enter.

## *Appendix 2. Survey Invitation*

Below is the text of survey invitation sent to students at the University of British Columbia. A similar invite was sent to students at other study-receivers.

Hello,

The British Columbia Council on Admissions & Transfer (BCCAT) and Plaid Consulting are conducting research on transfer credits. We are contacting you, as a student with experience of transferring credits, to request your participation in a survey for this project. This survey aims to learn more about how transfer credits are recorded at universities, and your experience of the transfer process.

As part of this research, researchers are conducting an **online survey** to learn more about the experiences students have had with the transfer system and the supports available to them. The survey is expected to take approximately 15 to 20 minutes to complete.

**You are receiving an invitation to participate in this research because you have been identified by the University of British Columbia as a student who transferred from a BC public post-secondary institution.** Your feedback will help to assess programs and supports for all post-secondary students with transfer experience. Those who complete the survey will be entered in a random draw to win one of 50 gift cards valued at \$20.

You can access the survey here: <https://at.plaid.is/pathways-ubc>

**Who can I contact if I have any questions about this research?** If you have any questions about this research, please contact Plaid Consulting at [info@plaid.is](mailto:info@plaid.is).

**Who is conducting this research?** This research is conducted by Plaid Consulting Inc. The primary investigator of this research is Andrew Drinkwater ([andrew@plaid.is](mailto:andrew@plaid.is)).

**Who is funding this research?** This research is funded by the British Columbia Council on Admissions & Transfer (BCCAT).

This research is not contracted or conducted by the University of British Columbia. You are receiving this email from us so that we can keep you anonymous to researchers. Your decision to participate or not to participate in this survey will not affect your grades or academic standing at UBC, or any other institution you have attended. UBC will not be informed of your decision to participate or not participate in this research.

**Will I remain anonymous?** Your survey responses will remain completely anonymous.

If you choose to opt in to the gift card draw or notification of report publication, researchers will need an email address to contact you solely for these purposes. You can create an email account for this research if you would not like to disclose your personal email address.

**Where is the survey hosted?** The survey is hosted on BlueX by Explorance, a fully encrypted and secure survey platform. Explorance hosts data in Microsoft's Canadian data centre.

**Can I start the survey and then choose not to submit my answers?** Yes, you can withdraw at any time by either closing your browser without submitting your survey or by choosing the "Revoke" option before submitting your survey. Once you have submitted your survey, the researchers will not be able to identify which survey submission belongs to you, and will no longer be able to remove your answers.

If you are interested in participating in this research, please follow the link below to our secure and encrypted survey where you will find further instructions and consent information.

<https://at.plaid.is/pathways-ubc>

Thank you for considering participating in this research!



## Appendix 3. Fields Requested from the Student Transitions Project

The following list of fields was requested from the Student Transitions Project.

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 4. Analysis of Pathway Programs

This section of the analysis looks more closely at the pathways students pursue from a study-sender through to baccalaureate-degree completion at a study-receiver. The first part of the section focuses on the programs that students pursued as part of their pathway at study-sender institutions, while the second part focuses on credential-completion pathways at study-senders.

### ***Program Pathways***

This section focuses on programs pursued by students at their last institution prior to their transfer, regardless of whether they completed a credential in those programs. AU is excluded from this section as it does not submit to the CDW, and neither pre-AU enrolment nor credential completion at a study-sender could be determined.

### *Program Pathways into Business*

Within the study discipline of Business, the largest groups of students came from study-senders with geographic proximity to the study-receiver.

Figure 8 shows program pathways with 10 or more pathway-transfer graduates (regardless of transfer credits), and whether those program pathways are listed on either the BC Transfer Guide website or the study-sender's website.

To RRU, there were 72 students who previously attended a study-sender. Of these, 36 (50%) transferred from a program at CAM, with 15 pursuing a diploma in Business Administration and an additional 8 pursuing a diploma in Hospitality Management prior to transferring to Business at RRU. The diploma in Business Administration pathway is documented on both the BC Transfer Guide and CAM websites, while the diploma in Hospitality Management appears to only be documented in the BC Transfer Guide.

To SFU, the largest group of students (24) transferred via the DOUG Diploma in Commerce and Business. This program is not listed as a block-transfer program in the BC Transfer Guide but is listed on the DOUG website. The next largest programs were bachelor's-degree programs in Business from CAP and KPU. These programs would not typically be viewed as pathways, and are not documented as such on either website.

To UBC, by far the largest group of students that transferred were from LANG: 301 of 592 (51%). Of these, 110 students transferred from the LANG Associate of Arts program, which was listed on both the BC Transfer Guide and LANG website; 57 from the LANG Diploma in Arts and Science, which was listed only on the LANG website; and 32 from LANG Diploma in Arts and Science General (Arts), which was not listed on either website. From other senders, 32 came from the DOUG Diploma in Commerce and Business Administration, which was also not listed on either website. Other large senders included CAP (43), TRU (38), and OKAN (25).

Across SFU and UBC, there were three programs (Figure 8), representing 100 students, that each sent more than 10 students, where the only documentation about the pathway appeared to exist on the study-sender website, and not in the BC Transfer Guide. The info in Figure 8 may serve as a starting point for articulation committees to consider whether these programs should be considered for block

transfer or similar in the BC Transfer Guide. At SFU, all 26 students were pathway-transfer NTC, while at UBC all 74 were.

*Pathways into Business with 10 or More Students, and Whether the Pathway is Formally Listed on the BC Transfer Guide or Study-Sender Website (n=479).*

Pathway Listed On:

■ BCTG and Study Sender Website ■ Study Sender Website (Only) ■ Not Listed

						Number of Students
Business	RRU	CAM	Diploma	Business Administration	BCTG and Study Sender Web..	15
	SFU	DOUG	Diploma	Comm and Busn Admin Dipl	Study Sender Website (Only)	26
		CAP	Bachelor Degree	Bachelor of Business Admin	Not Listed	24
		KPU	Bachelor Degree	Bach of Bus Admin-Accounting	Not Listed	22
		DOUG	Diploma	General Studies Diploma	Not Listed	10
	UBC	LANG	Associate Degree	Associate of Arts: Commerce & Business Studies	BCTG and Study Sender Web..	110
		LANG	Diploma	Diploma: Arts and Science	Study Sender Website (Only)	57
		DOUG	Diploma	Comm and Busn Admin Dipl	Not Listed	32
		LANG	Diploma	Diploma: Arts & Science General (Arts)	Not Listed	32
		TRU	None	Undeclared	Not Listed	26
		LANG	Associate Degree	Associate of Arts: Arts (General)	BCTG and Study Sender Web..	23
		LANG	Diploma	Diploma: Arts & Science Commerce	Study Sender Website (Only)	20
		OKAN	Associate Degree	Associate of Arts	BCTG and Study Sender Web..	19
		CAP	Bachelor Degree	Bachelor of Business Admin	Not Listed	18
		DOUG	Diploma	General Studies Diploma	Not Listed	17
		CAP	None	Arts and Sciences - General	Not Listed	15
		LANG	Bachelor Degree	Bachelor of Business Admin: Business Management	Not Listed	13

*Note.*

- AU is excluded from this figure as it does not submit to the CDW.
- Programs where fewer than 10 students transferred are excluded from this chart (representing 375 students: 53 from RRU, 112 from SFU, and 210 from UBC).
- An additional 8 students transferred to RRU from the CAM Hospitality Management Diploma. This pathway does not appear to be listed on the study-sender website but is documented in the BC Transfer Guide as a block-transfer program.
- An additional 13 students transferred to UBC from associate-degree programs offered by LANG or SEL. Associate-degree programs are guaranteed 60 transfer credits. These are documented in the BC Transfer Guide.

### *Program Pathways into Engineering*

Figure 9 shows program pathways with 10 or more pathway-transfer graduates (regardless of transfer credits) and whether those program pathways are listed on either the BC Transfer Guide website or the study-sender website.

Within the study discipline of Engineering, offered only by SFU and UBC, there were a large number of study-senders.

KPU sent a total of 23 students to SFU, 19 of which were pursuing a Certificate in Engineering. This program appears to be listed only on the KPU website and not in the BC Transfer Guide. LANG sent 21 students, 14 of whom were in the Diploma in Arts and Science program; this program does not appear to be listed either on the LANG website or BC Transfer Guide. DOUG sent 21 students, 10 of whom were in the Associate Degree in Science program, documented only in the BC Transfer Guide.

To UBC, there were 706 transfers into Engineering. Similar to SFU, the largest sending program was KPU's Certificate in Engineering, which sent 73 students, and which does not appear in the BC Transfer Guide. CAM's Engineering Bridge programs sent a total of 82 students, the largest of which was from the Civil Engineering Bridge program (43), followed by the Mechanical Engineering Bridge (30); the CAM Bridge programs are listed in the BC Transfer Guide and on the CAM website.

An additional 40 students transferred from CAP Engineering Year 1, documented only on the CAP website. A variety of other programs sent more than 10 students to UBC, summarized in Figure 9.

Across SFU and UBC, there were 10 programs (Figure 9), representing 279 students that each sent more than 10 students, where the only documentation about the pathway appeared to exist on the study-sender website and not in the BC Transfer Guide. The info in Figure 9 may serve as a starting point for articulation committees to consider whether these programs should be considered for block transfer or similar in the BC Transfer Guide. At SFU, all 19 transfers were pathway-transfer TC, while at UBC all 252 were.

*Pathways into Engineering with 10 or More Students, and Whether the Pathway is Formally Listed on the BC Transfer Guide or Study-Sender Website (n=565).*

Pathway Listed On:

- BCTG and Study Sender Website
  Not Listed  
 Study Sender Website (Only)
  BCTG (Only)

					Number of Students
Engineering	SFU	KPU	Certificate	Certificate in Engineering	Study Sender Website (Only) 19
		LANG	Diploma	Diploma: Arts and Science	Not Listed 14
		DOUG	Associate Degr.	Science - Associate Degree	BCTG (Only) 10
	UBC	KPU	Certificate	Certificate in Engineering	Study Sender Website (Only) 73
		CAM	Advanced Diplo..	Civil Engineering Bridge	BCTG and Study Sender Web.. 43
		CAP	None	Engineering - First Year	Study Sender Website (Only) 40
		CNC	Associate Degr.	University Transfer	Not Listed 38
		TRU	None	Engineering Transfer	Study Sender Website (Only) 35
		CAM	Advanced Diplo..	Mechanical Engineering Bridge to UBC	BCTG and Study Sender Web.. 30
		UFV	Bachelor Degree	Bachelor of Science	Not Listed 27
		CAP	Diploma	Engineering Transition	Study Sender Website (Only) 24
		TRU	None	Undeclared	Not Listed 23
		CAM	Diploma	Mechanical Engineering Technology	Study Sender Website (Only) 21
		LANG	Diploma	Diploma: Arts and Science	Not Listed 21
		UFV	None	Engineering Transfer	Study Sender Website (Only) 21
		CAM	Diploma	Civil Engineering Technology	Study Sender Website (Only) 19
		LANG	Associate Degr.	Associate of Science: Science (General)	BCTG and Study Sender Web.. 17
		LANG	Certificate	Certificate: Arts & Science Engineering	Study Sender Website (Only) 17
		VIU	Bachelor Degree	Bachelor of Science	Not Listed 16
		TRU	Bachelor Degree	Bachelor of Science in General Science	Not Listed 14
		DOUG	Associate Degr.	Science - Associate Degree	BCTG and Study Sender Web.. 12
		OKAN	Associate Degr.	Associate of Science	BCTG and Study Sender Web.. 11
		DOUG	Diploma	General Studies Diploma	Not Listed 10
		LANG	Certificate	Engineering Transfer	Study Sender Website (Only) 10

*Note.*

- AU is excluded from this chart as it does not submit to the CDW.
- Programs where fewer than 10 students transferred are excluded from this chart (representing 239 students: 55 from SFU and 184 from UBC).
- An additional 6 students transferred to SFU from various associate-degree programs.
- An additional 29 students transferred to UBC from various associate-degree programs.

### *Program Pathways into Nursing*

Within the study discipline of Nursing, offered only at UBC, the largest study-sender was OKAN, with 79 (34%) of 232 transfers to UBC Nursing. The majority of these (63) were part of the partnership program between OKAN and UBC-O. While this program (OKAN's Bachelor of Science in Nursing Year 1 and 2, toward a Bachelor of Science in Nursing at UBC-O) is not listed in the BC Transfer Guide, it is described

on both OKAN<sup>6</sup> and UBC<sup>7</sup> websites as a partnership. Among these 63 students, 25 (40%) were pathway-transfer NTC, while the remaining 38 (60%) were pathway-transfer TC. Because these students enter UBC-O at Year 3, we consider it a pathway program. The next largest sender was TRU, with 54 students who had not declared a program of study. VCC sent an additional 10 students via transfer.

While it does not appear at this time that the OKAN–UBC-O Nursing partnership is undersubscribed, it would be beneficial to list this agreement in the BC Transfer Guide, as many other block-transfer agreements are. There may further be an opportunity at TRU to help Nursing students declare a more specific program, which may help their transfer opportunities.

*Pathways into Nursing with 10 or More Students, and Whether the Pathway is Formally Listed on the BC Transfer Guide or Study-Sender Website (n=127).*

Pathway Listed On:

■ Study Sender Website (Only) ■ Not Listed

						Number of Students
Nursing	UBC	OKAN	Bachelor Degree	Bachelor of Science in Nursing Year 1 and 2	Study Sender Website (Only)	63
		TRU	None	Undeclared	Not Listed	54
		VCC	None	University Transfer Sciences	Not Listed	10

*Note.*

- AU is excluded from this chart as it does not submit to the CDW.
- Programs where fewer than 10 students transferred are excluded (84 students).

### *Program Pathways into Social Work*

Within the study discipline of Social Work, offered only at UBC, 211 students transferred, including 127 from programs sending 10 or more students. The largest group was from TRU (54), followed by LANG (29), University of the Fraser Valley (UFV; 11), and DOUG (10). Ten other institutions sent a combined total of 23 students. Nearly all TRU transfers (52) were undeclared. No single LANG program sent more than 10 students, but the largest groups were, respectively, undeclared, Diploma in Arts and Science, general interest, and Associate of Arts. No program at DOUG or KPU sent more than 10 students. No pathway programs into Social Work are documented on the study-sender website, and the only pathways documented in the BC Transfer Guide are associate-degree pathways, which guarantee 60 transfer credits.

### **Credential-Completion Pathways**

Considering the 547 (27%) students at RRU, SFU, or UBC (Figure 2) who completed at least one credential at a study-sender, there were a wide variety of pathways. This section focuses on credentials completed at the last study-sender attended prior to transfer.

<sup>6</sup> [Okanagan College, Bachelor of Science in Nursing \(Years 1 and 2\)](#)

<sup>7</sup> [UBC Okanagan News, Nursing program partnership formed with Okanagan College](#)

### *Credential-Completion Pathways into Business*

Within the study discipline of Business, the largest groups of students came from study-senders with geographic proximity to the study-receiver. At RRU, 34 students transferred from CAM, 30 of whom completed a certificate or diploma in Business Administration, Business Management, Hospitality Management, or Tourism and Business. At SFU, 16 of the 37 credential completers transferred from the Diploma in Commerce and Business Administration at DOUG. At UBC, the 58 credential completers were spread across a wider variety of programs, the largest of which was the Diploma in Arts & Science: Commerce at LANG, which 10 students completed.

### *Credential-Completion Pathways into Engineering*

Within the study discipline of Engineering, offered only by SFU and UBC, there was little geographic proximity related to transfer pathways. At SFU, there were few students (7) who completed a credential prior to transfer. Instead, the largest groups of students came from specific pathway programs destined for UBC: 128 of the 234 credential completers transferred from CAM. Nearly two thirds (82 of 128) of these students completed an advanced diploma in either the Civil Engineering (50) or Mechanical Engineering (32) Bridge programs. An additional 43 completed diplomas in Civil or Mechanical Engineering programs not explicitly coded as bridge programs. These groups were split across UBC campuses, with 49 transferring from CAM to UBC-O, 79 to UBC Vancouver. A further 14 students transferred from OKAN to UBC-O, with 13 completing diplomas in Civil, Electronic, or Mechanical Engineering.

### *Credential-Completion Pathways into Nursing*

Within the study discipline of Nursing, offered only at UBC, 25 students completed credentials from a variety of institutions: BCIT, CAP, DOUG, JIBC, KPU, LANG, OKAN, UFV, VCC, and VIU (Vancouver Island University); no institution sent more than 10 students. Six of these credentials were directly in Nursing, but also present were programs in Kinesiology, Science, Primary Care, Counselling, and Health Care.

### *Credential-Completion Pathways into Social Work*

Within the study discipline of Social Work, offered only at UBC, 24 students completed credentials prior to transfer. Ten students transferred from LANG, from a variety of associate degree, certificate, and diploma programs. Other transfers came via CAM, CAP, DOUG, KPU, LANG, OKAN, OUC (the former Okanagan University College), and UFV.

## *Appendix 5. Notes on Method*

Institutions were asked to provide student data including the number of transfer credits or block-transfer credits received, last institution attended, year and month first enrolled, age at time of first enrolment, national status (domestic or international), gender, program admitted to, graduation date, credential awarded, credits required for graduation, credits attempted and completed, and an indicator of whether the student changed programs while studying at the study-receiver.

RRU, SFU, and UBC also sent a list of selected baccalaureate graduates to AEST. This list was used to link the institutional data to system-level data in the Student Transitions Project. The system-level data pertained to students' academic experience at CDW institutions. The CDW data consisted of secondary-school graduation year and month, and post-secondary information, including institution name, years of attendance, classification of instructional program (CIP) code, credentials completed, earliest study dates, national status (domestic or international), and credits completed. [Appendix 3](#) contains a full list of the requested data fields.

In order to correctly identify the last institution as recorded by the study-receivers, a list of BCTS member institutions was obtained from the BCCAT website. This was augmented manually with institution's former names, where applicable (for example, Capilano University [CAP] was formerly known as Capilano College). As the study-receivers record the last institution name differently, approximate text matching based on the Levenshtein distance metric (Gitau, 2018) was used to match the provided last institution name to the specific BCTS member institution. This method was used to correct for varying naming conventions for the same institution, such as "Thompson Rivers University," "Thompson Rivers University, Open Learning," "Thompson rivers open learning university," and "TRU." This process identified 23 public BCTS institutions to be included as study-senders (Table 1).

The table below shows the number of students who could be matched between the institutional and CDW data. An average of 79% of pathway-transfer students were matched between the study-receivers and the CDW data for study-senders. About 27% completed a credential prior to transfer. A further 4% of students enrolled at a study-sender while attending, or after graduating from, a study-receiver; these groups were outside of the scope of the current study but may merit further research.

For the purposes of this report, only "Enrolled at a Study-Sender Prior to Transfer (Matched)" are considered for pathways analysis. The data for 87 AU pathway-transfer students (not shown in the table below) were included in the analysis, where possible.



*Number of Pathway-Transfer Students Identified and Percent Match Between Study-Receiver and CDW Data (n=2,512).*

Study-Receiver	Student Type	Total Number of Students in Study-Receiver Data	Enrolled at a Study-Sender Prior to Transfer (Matched)		Completed a Credential at a Study-Sender Prior to Transfer (Among Matched)		Enrolled at a Study-Sender While Attending Study-Receiver (Among Matched)		Enrolled at a Study-Sender After Graduating From Study-Receiver (Among Matched)	
		N	N	%	N	%	N	%	N	%
RRU	Pathway-Transfer NTC	78	68	87%	62	91%	0	0%	N<10	4%
SFU	Pathway-Transfer TC	305	292	96%	53	18%	N<10	1%	20*	7%
UBC	Pathway-Transfer NTC	1,875	1,417	76%	384	27%	90*	5%	171	9%
UBC	Pathway-Transfer TC	254	217	85%	48	22%	21	8%	29	11%
Grand Total		2,512	1,994	79%	547	27%	109	4%	224	9%

*Notes:*

- AU is excluded from this table as it does not submit to the CDW.
- Direct-entry students are excluded from this table.

In addition to the pathway-transfer students described above, SFU and UBC provided anonymized records for students enrolled within the study disciplines who were admitted as direct-entry students and who graduated with a baccalaureate during the period from September 2015 to August 2019. AU and RRU offer a limited number of direct-entry programs; therefore, no direct-entry comparison was possible for either institution. The table below provides detail on the pathway transfer and direct-entry student records included in the cohort, and those which were excluded.

*Number of Students Included or Excluded from Study Cohort, by Transfer Status, Student Type, and Study-Receiver (n=11,309, included n=9,187).*

	Student Type	Overall Study Inclusion/Exclusion Reason	AU	RRU	SFU	UBC	Grand Total
Included	Direct-Entry	Direct-Entry			1,120	5,296	6,416
		Direct-Entry — Attended Study-Sender Prior to Enrolling at Study-Receiver (No Transfer Credit)			86	593	679
		Direct-Entry — Attended Study-Sender Prior to Enrolling at Study-Receiver (Received Transfer Credit)			10	N<10	10*
	Pathway-Transfer NTC	Pathway-Transfer NTC — Attended Study-Sender Prior to Transfer (Received Transfer Credit)		68		1,417	1,485
	Pathway-Transfer TC	Pathway-Transfer TC — Attended Study-Sender Prior to Transfer (Received Transfer Credit)			289	216	505
		Pathway-transfer TC (AU)	87				87

E x c l u d e d		Pathway-transfer TC — Attended Study-Sender Prior to Transfer (No Transfer Credit)			N<10	N<10	N<10
	Total Included		87	68	1,508	7,524	9,187
	Unknown	Unknown Status				31	31
	Direct-Entry	Attended Study-Sender During/After Study-Receiver			154	1,097	1,251
		Direct-Entry — No Previous Institution (Received Transfer Credit)			N<10		N<10
		No Credits Reported			N<10		N<10
	Pathway-Transfer NTC	Study-Sender Does Not Report to CDW (In-Province)		N<10		129	131
		Study-Sender Does Not Report to CDW (Private Institutions)				129	129
		Attended Study-Sender During/After Study-Receiver				92	92
		No Credits at Study-Sender		N<10		68	72
		No Enrolment Records at Study-Sender		N<10		21	25
		Study-Sender Does Not Report to CDW (Out-of-Province)				19	19
	Pathway-Transfer TC	Study-Sender Does Not Report to CDW (Private Institutions)				16	16
		Study-Sender Does Not Report to CDW (In-Province)			N<10	N<10	16
		No Enrolment Records at Study-Sender			N<10	10	15
		Attended Study-Sender During/After Study-Receiver				N<10	N<10
		Study-Sender Does Not Report to CDW (Out-of-Province)				N<10	N<10
	Transfer/Other	Non-BCTS Transfer	23			296	319
	Total		23	10	170	1,919	2,122
	Grand Total		110	78	1,678	9,443	11,309

An online survey was conducted using the Explorance BlueX platform. The survey asked students about their experiences as transfer students. The survey was open for responses for a minimum of two weeks, but responses were typically received closer to deadlines. At AU, responses were received April 20–29, 2021; at SFU, February 23–March 31, 2021; at UBC, April 8–27, 2021. Two versions of the survey were created: one for the BC study-receivers (RRU, SFU, and UBC), and one for AU. SFU was left open longer than the other institutions as the same survey was used for RRU and UBC. AU and UBC students were invited to participate in April, later than SFU students. Students received an invitation to participate in the online survey via their institution, with a reminder emailed one week afterward.

The survey and invitation can be viewed in [Appendix 1](#). Results were exported from BlueX and analyzed using Safe Software's FME data integration platform, Tableau Software, and Python.

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