

Moving Forward with Flexible Pre-Majors in the BC Transfer System

Prepared by Dr. Fiona McQuarrie, Special Projects Coordinator, BCCAT

June 2019



BCCAT

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*Thanks to Dr. Dezene Huber and Dr. James Gifford,
members of the BCCAT Transfer and Articulation Committee,
who acted as peer reviewers for this report.*



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Introduction

Flexible pre-major agreements (FPMs) have been a feature of the BC Transfer System since the early 2000s. A flexible pre-major is a discipline-specific transfer agreement whose content and structure is developed by an articulation committee and accepted by participating institutions. FPMs consist of “a set of flexible requirements that is a) deliverable by sending institutions and acceptable to receiving institutions¹, and b) deemed to fulfill the lower level requirements for the major [in that specific discipline]. The nucleus of the FPM is an agreement on a set of courses that all receiving institutions will accept in lieu of their own specific course requirements” (FitzGibbon & Orum, 2011, p. 6). At present, there are seven active FPMs in the BC Transfer System, in the disciplines of Anthropology, Biology, English, Economics, Mathematics, Psychology, and Sociology.

A flexible pre-major is a discipline-specific transfer agreement whose content and structure is developed by an articulation committee and accepted by participating institutions.

In 2015, the BC Council on Admissions & Transfer (BCCAT) commissioned a research project exploring the efficacy of FPMs. The resulting report (White & Dace, 2017) addressed how FPMs are “understood, acknowledged and realized in the BC Transfer System” and whether “[they are] generally worth the effort that they require to coordinate, execute and maintain” (p. 3). The report’s findings and recommendations were discussed at meetings of BCCAT and also by BCCAT’s Transfer & Articulation Committee and Research Committee. These discussions acknowledged that additional FPMs will probably not be developed or implemented, and that the existing FPMs have significant operational challenges. Thus, the recommended focus for future FPM research was on identification of the best ways to support existing FPMs.

This report follows that recommended direction by exploring how participants in the BC Transfer System can facilitate the effective functioning of the currently active FPM agreements. The report first reviews the current operations and status of FPMs in the BC Transfer System, and identifies operational issues that policy and practice will need to address. It then reviews research from other jurisdictions on transfer arrangements similar to FPMs, to identify policies or practices around these arrangements that could be adapted for FPMs. It then examines how information on FPMs is communicated on the BC Transfer Guide website, and on the websites of programs and institutions that currently participate in FPM agreements. Finally, it presents recommendations for how the participants in the BC Transfer System can best support FPM agreements.

¹ Prior to 2012, institutions participating in the BC Transfer System were designated either as “sending” or “receiving” institutions, based on whether they sent or received transfer credit. Documentation from before that date uses those designations. In 2012 the “sending” and “receiving” institutional designations were removed. Thus, in this discussion, the terms “sending” or “receiving” are used either as they appear in the source documents, or to indicate the role an institution usually plays in an FPM agreement.

The Current State of FPMs in the BC Transfer System

How FPMs Are Developed and Implemented

The development of FPMs has been funded by BCCAT through Transfer Innovation project grants awarded to articulation committees. These grants were first made available in 1999. The grants have allowed articulation committees to conduct research on the feasibility of an FPM in their discipline, and then to implement an FPM if the articulation committee members decide to proceed with such an agreement. Between 1999 and 2015, 14 articulation committees received funding for FPM-related research. Five committees (Creative Writing, Earth Science, History, Geography, and Political Science) completed feasibility studies and decided not to proceed with an FPM agreement. One articulation committee (Music) implemented an FPM in 1999 and then cancelled it in 2001. Another articulation committee (Computing Education) decided in 2014 to implement an FPM, but has not yet done so. No FPM-related Transfer Innovation grants have been awarded since 2015.

The feasibility studies for FPMs have generally involved a review of the curriculum of majors in the relevant subject, with the goal of identifying common courses or content at the first- and second-year level. Almost all of the FPM feasibility studies are based on comparisons of course equivalencies or content; the exception is the unimplemented Computing Education FPM, which bases its comparisons on learning outcomes.

The final structure and content of an FPM agreement is developed and voted on by the members of the articulation committee. Individual institutions then decide whether they wish to participate in the FPM. Participation is indicated by institutional representatives signing a standardized “sign-on” form. This form was developed by BCCAT’s FPM Working Group in 2011 as a means of verifying that “an institution is party to a FPM agreement and that the institution recognizes its obligations” (FitzGibbon & Orum, 2011, p. 7). Members of the articulation committee implementing the FPM are usually responsible for obtaining the necessary sign-on signatures at their own institution. The signatures confirm that the institution will accept the courses named in the agreement as collectively equivalent to the first- and second-year required courses in the institution’s own major. The number and type of signatories vary depending on each institution’s own internal approval processes, but generally the form is signed by the head or director of the relevant department and by a dean or other senior administrator. The signed forms are archived at BCCAT’s office.

Any updates or revisions to the content of an FPM are the responsibility of the articulation committee that created the agreement. Articulation committees usually discuss FPM updates and revisions at articulation committee meetings; some articulation committees ask attendees to include any curriculum or program changes potentially affecting the FPM in their institutional reports to the meeting. FPM revisions can also be initiated through other means (e.g. through email discussions among the articulation committee members). Any changes to FPMs are usually communicated by the articulation committees to BCCAT, so that the BC Transfer Guide can be updated, and to the participating institutions. Institutions that wish to sign on to FPMs, or that wish to end their FPM participation, usually contact either BCCAT or the relevant articulation committee to initiate that process.

The responsibilities of the different participants in FPM operations are summarized in Table 1.

TABLE 1: Responsibilities of FPM Participants

Articulation Committee (as a whole)	<ul style="list-style-type: none"> • Develop and implement FPM agreement • Revise content/structure of agreement as necessary • Notify BCCAT of changes or updates to the agreement, for changes to BC Transfer Guide
Articulation Committee members	<ul style="list-style-type: none"> • Obtain signatures to verify FPM institutional participation, and provide signatures to BCCAT for archiving • Participate in articulation committee’s process of revisions/changes to FPM content or structure • Provide FPM information to their own institution, including communicating revisions or changes to agreement • Bring FPM-related concerns, ideas, and issues to the committee for discussion or resolution
Participating institutions	<ul style="list-style-type: none"> • Provide FPM information to relevant parties, e.g. advisors, registrars, students, departments/faculties • Raise awareness of FPMs as an option for students • Honour transfer arrangements as described in FPM agreements
BC Council on Admissions & Transfer	<ul style="list-style-type: none"> • Maintain FPM section and FPM course information on BC Transfer Guide website (with updates or changes as provided by articulation committee) • Maintain archive of institutional sign-ons to FPM agreements • Assist articulation committees as needed with maintenance, revision, or updating of FPM agreements

Benefits of and Challenges to FPMs

The White and Dace (2017) report on FPMs collected data from interviews with key informants, from focus groups at two institutions currently participating in FPM agreements, and from reviews of FPM-related documentation such as articulation committees’ meeting minutes. The analyses of these data identified these benefits of FPMs:

- The multi-institutional FPM structure offers students flexibility and mobility in pursuing their studies.
- FPMs benefit students by clearly indicating to them what courses they must take in order to enter the third year of a specific major at the participating degree-granting institutions. Additionally, because the agreements outline course equivalencies across participating institutions, students can take pre-major courses at more than one institution, as long as all the pre-major requirements are completed prior to the student entering their desired degree program.
- For institutions, FPMs facilitate timetabling, enrollment projections, and instructor assignments, e.g. the number of students intending to complete an FPM will indicate to a program or institution which FPM-related courses should be timetabled and when.
- FPMs may increase retention at non-degree-granting institutions by allowing students to complete the first two years of a major there, rather than them having to take most or all of a four-year degree program elsewhere.

BCTransferGuide.ca has an FPM page with a general explanation of these agreements. This page also has links to separate pages for each active FPM agreement; the individual FPM pages have a summary of the agreement and a link to the complete FPM report produced by the articulation committee.

Participation in FPMs may also make non-degree-granting institutions more attractive to students by creating additional transfer opportunities for them.

- The process of developing an FPM, even if the articulation committee decides not to implement an FPM agreement, is a valuable exercise. It gives articulation committee members the opportunity to collectively identify the disciplinary knowledge and skills that a student should acquire at each stage of the degree-completion process, and to assess how that content is structured and delivered in their own institution's program.

The report noted that the BC Transfer Guide (BCTG) site provides a comprehensive and easily accessible source of FPM information. The BCTG site has an FPM page with a general explanation of these agreements. This page also has links to separate pages for each active FPM agreement; the individual FPM pages have a summary of the agreement and a link to the complete FPM report produced by the articulation committee. The visibility and awareness of FPMs on the BCTG site is also increased by a text notification that appears above search results for courses that are part of an FPM. The notification indicates that the course is part of an FPM, and includes a link to the relevant FPM agreement. This information is especially important for BCTG users who might otherwise not know of this transfer option.

The report identified these challenges related to the operation of FPMs:

- FPMs are not recorded on transcripts at either sending or receiving institutions [see below].
- There is no formal tracking or documentation of how many students complete FPMs and/or use them for transfer [see below].
- There is a general lack of awareness of FPMs and their function within the BC post-secondary system. Other forms of multi-institutional transfer arrangements, such as associate degree transfer agreements or block transfer agreements, are more widely used and understood. FPMs are also not common outside of BC, which makes them less understood by transfer system participants with experience in other jurisdictions.
- There is a general lack of awareness of FPMs at institutions participating in FPMs, in both registrarial and advising functions and in departments/programs. This lack of awareness occurs at both sending and receiving institutions. Awareness of FPMs also seems to rely on the expertise of specific individuals rather than on more broadly held knowledge within programs or operational areas.
- The content of FPM agreements is not regularly reviewed or updated.

- The FPM concept was developed when the BC post-secondary system was more clearly divided into degree-granting and non-degree-granting institutions. The BC post-secondary system has subsequently evolved into a much less differentiated system (e.g. colleges now offering four-year degrees), and it is more challenging to make FPMs relevant and functional in that newer context.
- Optimal completion of FPM requirements (i.e. within 60 credits of study and with minimal credit “loss” when a student transfers) can only occur if students choose to complete FPMs relatively early in their academic progress. Students may not want to, or may not be ready to, declare a major near the start of their studies.
- Students and their parents may prefer programs that result in a credential, and an FPM is not a credential.
- Because of turnover in the membership of articulation committees, knowledge of FPMs at committees, and at the institutions represented in committees’ membership, may be lost or incomplete.

When FPMs first became part of the BC Transfer System, the members of the BC Registrars Association determined that FPMs were not credentials, and thus FPM completion would not be recorded on transcripts of either sending or receiving institutions. White and Dace (2017) identify this decision as affecting FPMs’ functionality in three significant ways. First, the lack of FPM notations on transcripts means that faculty, advisors, or staff at receiving institutions must review transferring students’ transcripts to determine whether a student has completed FPM requirements. But in order for this review to happen, the relevant faculty, staff or advisor must know that FPMs are in place and also know how they function. Often, this knowledge is lost in personnel turnover.

Second, FPMs not being notated on transcripts means that it is not possible to track FPM enrollment or usage through the methods by which program enrollment or transfer activity are usually tracked, e.g. through the post-secondary student and institutional data in the provincial government’s Central Data Warehouse. Individual institutions or programs may keep their own records of FPM activity, but the lack of centralized system-wide data makes it difficult to assess the overall usage or effectiveness of FPMs. There is no way to accurately measure the number of students using FPMs as a transfer mechanism, either at a specific point in time or across time. It is also impossible to derive other potentially useful FPM-related information (e.g. whether students who use FPMs to transfer successfully complete their intended program of study).

Finally, FPMs not being recorded on transcripts means that, in practice, FPMs function as course-by-course transfer agreements. Since the FPM is not formally identified or notated, receiving institutions generally assess the transfer of completed FPMs on the basis of the transferability of individual courses within the FPM agreement, rather than on the collective completion of the required 1st and 2nd year courses.

White and Dace (2017) also suggest that the articulation committees whose academic disciplines would be most feasible for FPMs, but who do not have an FPM in place, have either already investigated the suitability of FPMs and decided not to create one, or have developed other forms of multi-institutional transfer or curriculum coordination, such as transfer grids, benchmarking standards or learning outcomes for comparable courses, or a common core curriculum. In other words, it is unlikely that additional FPMs will be created in the BC Transfer System. Thus, this report’s recommendations are framed within the characteristics and context of the seven FPMs currently in effect.

Research on FPM-like Agreements in other Jurisdictions

As noted above, a challenge that BCTS members have identified around the functioning of FPMs is that FPM agreements are not similar in structure, function or name to multi-institutional transfer agreements in other jurisdictions. A review of the published research on such agreements indicates that transfer agreements with structures identical to FPMs are uncommon, even though several jurisdictions have arrangements with similar names, such as “pre-major”. However, the research on agreements that have some commonalities with FPMs produces some information that may be valuable in assessing how to best support BC’s FPM agreements. The information gathered from the literature review will be categorized by the types of agreements that have some similarities to FPMs.

Associate Degrees

Associate degree programs in the United States and elsewhere are structured similarly to the Associate of Arts and Associate of Science degrees offered in BC. The curriculum of associate degrees in BC “comprises two years of university level study” chosen from “a broad range of course offerings balanced with in-depth study in specific disciplines” (BC Transfer Guide, 2018). Most BC universities guarantee that transfer students who have completed an associate degree will receive 60 hours of lower-level credit in a four-year (120-credit) degree program. Similar arrangements exist in other jurisdictions. Thus, associate degrees are similar to FPMs in that both offer a structured pathway into four-year degree programs, and in that completion of the designated courses fulfills lower-level credit requirements in the receiving programs.

Associate degrees in the US are offered almost exclusively by two-year colleges that are not authorized to grant four-year degrees. This has raised the issue of whether associate degrees should be structured as terminal degrees or as “stackable” credentials intended to facilitate access to more advanced study (Carey, 2017). Research in several jurisdictions has indicated that the majority of students who earn associate degrees go directly into the workforce and do not use the credential to transfer into other programs (see, e.g., Howieson & Raffe [2013], Carey [2017], Fink & Jenkins [2017]). One explanation for this outcome is that many associate degrees are awarded in technical or vocational disciplines where a four-year degree is not necessary for employment, or does not exist. However, it has also been suggested that associate degree students may be primarily interested in acquiring a credential that takes a relatively short time to complete and is perceived as more directly linked to employability. Poor coordination between associate degree requirements and bachelor degree requirements may also discourage associate degree holders from transferring to bachelor’s degree programs (Chase, 2011).

The issue of the purpose of associate degrees has been addressed in some US jurisdictions by creating associate degree programs specifically designed for transfer: these are usually called Associate of Arts-Transfer and Associate of Science-Transfer (Hodara, Martinez-Wenzl, Stevens & Mazzeo, 2016). In at least one US jurisdiction (California) these degrees were created by legislation, with the goals of increasing transfer rates between two- and four-year colleges and improving degree completion rates. The difference between associate degrees for transfer and other types of associate degrees is that students completing the transfer associate degree are usually guaranteed 60 hours of transfer credit at a receiving institution and/or are guaranteed admission to a degree-granting institution or to a specific program (Moore & Shulock, 2014). While the transfer associate degrees are relatively new, some research indicates that students taking this type of associate degree are more likely to use the degree to transfer to another institution or program, and are also more likely to graduate from a four-year degree program (Hodara, Martinez-Wenzl, Stevens & Mazzeo, 2016).

The curriculum of associate degrees in BC "comprises two years of university level study" chosen from "a broad range of course offerings balanced with in-depth study in specific disciplines".

Because associate degrees are credentials, unlike FPMs, it is likely that in other jurisdictions they are recorded on student transcripts. Thus, students registered in or completing the credential could be identified, and student progress and outcomes within these programs could also be tracked to provide feedback on student usage or success rates. However, the research on associate degrees also suggests that any transfer arrangement intended to create a pathway into a four-year degree program will be most successful if it is based on a clear identification of the characteristics of the students likely to use the transfer agreement (e.g. demographics, academic background). It is also important to understand those students' motivations and expectations, so that the transfer agreement can be designed to facilitate the desired outcomes. Since FPMs are intended to create pathways into degree programs, these findings are relevant to the effective functioning of FPMs. The findings also emphasize the importance of curricular coordination and communication among institutions participating in these types of transfer agreements.

Guided Pathways

Various forms of "guided pathways" initiatives exist in several US jurisdictions. Like FPMs, these forms of transfer are intended to ease students' transitions between institutions, and to minimize the amount of credit taken at one institution that is not accepted for credit, or not applicable to a chosen program, at the receiving institution. Guided pathways models also assist students in completing their programs in an optimal amount of time and without acquiring unmanageable amounts of debt. As the name suggests, guided pathways models facilitate these outcomes by ensuring that students are aware of specific program requirements at receiving institutions and of the courses that must be completed at the sending institution to meet those requirements (MRDC, 2016).

In comparing guided pathways models to FPMs, it is important to acknowledge that guided pathways are usually only one part of a set of coordinated initiatives (American Association of Community Colleges, 2018). These initiatives generally include:

- increasing the resources directed toward student advising;
- developing detailed program plans for every student, including a semester-by-semester sequence of courses;
- creating and implementing online tools which allow students to track their academic progress (e.g. number of credits completed, courses still needed for program completion and their pre-requisites);
- reviewing or revising curriculum to optimize course content, sequencing and transferability, and to align more directly with curriculum at receiving institutions; and,
- undertaking detailed institutional- and system-wide data collection to identify potential barriers to transfer or program completion, with the intention of addressing these barriers sooner rather than later (Moore & Shurlock, 2014).

Some US states, such as Massachusetts, have also encouraged students to use guided pathways models by adding incentives for transfer. For example, the “Mass Transfer” plan in Massachusetts features “A2B” (associate-to-bachelor) transfer agreements, which not only guarantee students that their credits will transfer from community college to university, but also offer incentives such as guaranteed university admission and tuition rebates or freezes for students that achieve specified GPA levels (Mass Transfer, 2018). The “Mass Transfer” site also allows students to choose their sending and receiving institutions and desired area of study, and immediately see the specific courses that are transferable and the program requirements those courses will fulfill (e.g. major or elective requirements). The pages with this information also provide contact information for advisors at both the sending and receiving institutions.

FPMs, like guided pathways models, clearly outline the courses that students must take to facilitate their admission to the 3rd year of a degree program. Like FPMs, guided pathways models are designed to provide students with options for admission to multiple institutions, and are most effective at supporting student success when a student commits to staying on the planned academic path (e.g. not changing their major). However, unlike guided pathways, FPMs are generally not part of institution-wide or system-wide initiatives that incorporate other components. Research on guided pathways models suggests that comprehensive sets of initiatives are more successful than isolated individual initiatives. Simultaneously implementing multiple initiatives with all of them designed to increase the information available to students, ensure sufficient student support, and minimize transfer credit loss can increase student retention and transfer rates, and also can use institutional resources more effectively (Jenkins, Lahr, Fink, Ganga, Kopko, Brown & Patterson, 2018).

Meta-majors

Meta-majors are similar to guided pathways models in that they are operational models designed to establish efficient pathways for students pursuing credential completion or transfer. The major difference between meta-majors and guided pathways is that meta-majors are structured to encourage credential completion while also accommodating changes in students’ academic interests. In a meta-major model, programs with similar themes are grouped into categories, such as “business and technology” and “engineering and industry”; students then enrol in a category rather than in a specific major (although they can also select a specific major). The intent of the groupings is to give students the opportunity to explore different academic options within their general area of interest, while minimizing the credit loss that might result from changing majors or programs. Advising and program planning in meta-major models focus on initially guiding students into courses within the meta-major that are likely to be applicable to multiple majors in that category (Waugh, 2016). Students are encouraged to take more degree-specific courses only after they have identified their preferred major or area of study.

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The difference between how students usually choose courses and how students choose courses in the meta-major model has been likened to the difference between a cafeteria menu - where patrons choose whatever appeals to them, in any order or number - and a *prix fixe* restaurant menu, where patrons select options within a category, and the categories are presented sequentially (Waugh, 2016). Meta-majors are similar to FPMs in establishing program paths to fit students' interests and to ensure efficient credit transfer. However, meta-majors are structured to address the reality that students' academic interests may change. Students may resist declaring a specific major early in their academic career if they fear that by doing so they will acquire credits that cannot be used elsewhere. Also, students may not want to choose a major if they do not feel they know enough about different academic subjects to decide where they want to concentrate their studies.

Nevertheless, the meta-major model demonstrates the value of identifying cross-curricular commonalities that can be utilized to facilitate students' transfer or degree completion opportunities. It is possible that commonalities could be identified and built on in the FPM model, since some faculty members teach in more than one subject area and thus participate in multiple articulation committees (e.g. a biology instructor might also attend chemistry and health education articulation meetings). However, the challenge in creating cross-disciplinary FPMs is that with the exception of the FPMs in Anthropology and Sociology, which are administered by the same articulation committee, the other five FPMs are in academic disciplines that do not have obvious cross-curricular connections.

Interstate Passports

This transfer initiative, launched in 2016, was developed by a consortium of institutions in the Western US. It currently has participating institutions in 13 states (Walker, Sherman & Shea, 2016). Rather than basing transfer on course or program equivalencies, the interstate passport model bases transfer on agreed-upon learning outcomes in nine knowledge and skill areas. Faculty members representing each discipline within an area collectively developed the learning outcomes for that area, and then identified courses in their own disciplines that, in their professional opinion, met the learning outcomes at specified levels of proficiency. This model allows students to "carry" learning between participating institutions, and to receive credit for courses at those institutions that are recognized as providing the identified learning outcomes.

Like FPMs, the interstate passport model is designed to maximize student flexibility in moving between institutions while minimizing the acquisition of non-transferable credits. The interstate passport model was not initiated by faculty members, but, like FPMs, the model is grounded in faculty members' disciplinary expertise, and on their assessments of equivalencies. The model also demonstrates an alternative basis (learning outcomes) for establishing course equivalencies, and recognizes that students may move between different post-secondary systems in different geographical regions, rather than remaining within a specific area or system.

There are system-wide indicators in both Canada and British Columbia of interest in developing transfer agreements that are not limited to a specific province or region. Delegates from institutions in other provinces have also attended BC articulation committee meetings as guests. Organizations such as the Pan-Canadian Consortium on Admission and Transfer (PCCAT) are exploring possibilities for inter-provincial transfer within Canada, and British Columbia has an example of a province-wide cross-institutional cooperation framework in the Western Deans' Agreement. This agreement facilitates students' graduate program completion by waiving tuition fees for students registered at one institution but taking courses at another institution (Western Canadian Deans of Graduate Studies, 2018). Thus, there may be opportunities to expand FPMs to include institutions in other jurisdictions or regions (with the exception of Yukon College and Athabasca University, which are already BC Transfer System members).

Other Themes

Some of the published research and information on FPM-like transfer agreements is not presented in the context of a specific transfer model, but nevertheless provides insights relevant to FPMs. Since transfer is a two-way process, the role of the receiving institution in FPM-like agreements has been identified as having a significant impact on the success of such agreements (e.g. Patton & Pilati, 2012). Receiving institutions should be part of the development and operational processes of these agreements; the burden of responsibility for curricular alignment and inter-institutional linkages should not fall solely on sending institutions. Receiving institutions should also clearly communicate, to students and to sending institutions, important information such as general and program-specific admission requirements and relevant transfer credit policies (e.g. maximum amounts of transferable credit), so that transferring students can make informed choices and have realistic expectations.

Along similar lines, intra- and inter-institution coordination and appropriate infrastructure are also important to the success of FPM-like agreements. Coordination may be more complex in multi-institutional, multi-disciplinary agreements, and in jurisdictions with multiple post-secondary systems, such as California with its two statewide university systems. Nevertheless, such coordination is essential to ensure that transfer agreements remain functional and accessible. Similarly, the institutional infrastructure needed for FPM-like transfer agreements to function effectively should be identified and implemented along with the agreements themselves. For example, the responsibility for student advising in the relevant programs should be clearly identified, and institutions must also provide enough staffing so that students have adequate and timely access to advising (Jenkins, Lahr, Fink, & Ganga, 2018).

Another emergent theme is the importance of faculty members having a central role in developing and maintaining effective FPM-like agreements. While the impetus for creating these agreements may come from administrators, inter-institutional networks, or governments, faculty members are subject matter experts, and are usually largely responsible for course and curriculum development at their institutions. Thus, their professional judgement and experience are essential in creating pathways which reflect appropriate sequential development of students' skills and knowledge, and which ensure that students are adequately prepared for each stage of their academic progress.

Finally, assessments of the need for, or structure of, FPM-like transfer agreements should ideally be contextualized within the framework of students' academic preferences and goals. For example, low transfer rates from two-year to four-year programs may indicate that students are experiencing barriers to successful transfer, but they may also indicate that students prefer shorter credential programs, or that students can afford the cost of a two-year program but not a four-year program. Accurately understanding the factors driving student mobility patterns is crucial in designing transfer agreements that achieve desired outcomes, and that facilitate, rather than discourage, students' academic progress.

It is also important to recognize when transfer agreements may not be an appropriate method of addressing a problem. For example, if low student retention rates in a program are caused by students not having adequate academic preparation for the program's courses, or by students perceiving employment as more appealing than completing the program, creating transfer agreements for that program will likely not improve retention rates. This theme also emphasizes the benefits of frequent and detailed data collection around student mobility and transfer agreement usage, to support informed decisions on transfer agreements' purposes, structures and operations.

Communication of Information on BC FPMs

Information on the FPMs in the BC Transfer System is available from several online sources: from the BC Transfer Guide website, from the BCCAT-hosted websites of the articulation committees involved in FPMs, and from the websites of programs and institutions participating in FPM agreements. White and Dace (2017) stated that “communication was expressed by stakeholders as the most integral and most absent component in the development and implementation of FPMs” (p. 4). In light of that finding, the following section will examine the presentation and content of FPM information in the identified sources.

BC Transfer Guide

The BC Transfer Guide (BCTG) site (<http://www.bctransferguide.ca>) has a link to FPM information on its home page, in the “Transfer Options” section at the bottom of the page. The link is titled “Flexible Pre-Majors” which could be confusing to visitors who only know the FPM acronym. The home page link leads to the FPM-specific page (<http://www.bctransferguide.ca/fpm>) which has an outline of the general FPM structure and links to descriptions of each of the seven FPM agreements currently active. As previously mentioned, a text notification with a link to the relevant FPM information on the BCTG site appears on the screen whenever the site’s search function is used for a course that is part of an FPM.

The FPM link on the BCTG home page gives high visibility to FPMs as options within programs, and makes the FPM information easy to locate for users specifically seeking FPM-related information. However, given that the FPM name is likely not immediately familiar to many BCTG users, this link may not be explored by users who do not know what an FPM is, even if an FPM would be a suitable program option for them.

On each individual FPM page, the FPM description has been adapted from the FPM implementation reports approved by the relevant articulation committee, and is intended to be accessible to students, advisors and administrators across the BC Transfer System.²

The FPM description outlines the topics that the articulation committee has determined as constituting 1st and 2nd year content in the discipline, and lists the course(s) at each participating institution that the institution has identified as addressing those topics. Each description also contains standard disclaimers around student admission to a receiving institution through an FPM, e.g. that FPM completion does not guarantee admission to the 3rd year of a program, and that receiving institutions may have general GPA and/or breadth requirements that must also be met for a student to be admitted. Each FPM page also includes a link to the complete text of the final report on the FPM at the time of its implementation.

Comparing the individual FPM pages shows that the descriptions of the FPMs are not presented in a consistent format. This is partially due to the distinctive characteristics of each agreement. For example, the Mathematics FPM agreement only lists the requirements of each receiving institution, leaving it up to students, advisors, and sending institutions to determine which of the sending institution’s courses will meet those requirements. Other FPMs list the relevant courses at both sending and receiving institutions. It seems unlikely that a student considering undertaking an FPM in a specific discipline would be interested in FPMs in other unrelated disciplines, but the different presentation formats may be problematic for advisors or other academic staff seeking information about multiple FPMs.

² For the purpose of transparency, it should be noted that the author of this report wrote these descriptions during a previous secondment to BCCAT.

The BCCAT website contains two main types of FPM-related information. One type is the research that articulation committees have conducted in deciding whether to implement an FPM. The other type of information is archived BCCAT reports and other documents related to FPMs.

Google Analytics data indicate relatively few page views for the BCTG FPM information. From January 1 to October 10, 2018, there were 6,798 page views of content within the FPM section of the site; there were 1,071,471 total page views for the BCTG site during that same period, meaning that only 0.63% of visitors to the BCTG site viewed the FPM information³. These numbers may also include visits by BCCAT-affiliated users, so it is possible that the actual numbers of “external” users viewing FPM information is even lower than these data indicate.

Finally, the pop-up text notifications on FPM-related course searches in the BCTG may be effective in raising awareness of FPMs among users who might not otherwise be aware of these transfer agreements. The pop-ups are a particularly important method of publicizing FPMs, since 43% of visitors to the BCTG site visit the “search” page.³ However, Google Analytics does not have any numbers recorded for clicks on the pop-up links, which indicates either that these numbers are not being tracked or that the numbers are so small that they are not registering.

BCCAT website

The BCCAT website contains two main types of FPM-related information. One type is the research that articulation committees have conducted in deciding whether to implement an FPM. Committees have generally conducted both a feasibility study and an implementation study; links to the full texts of both studies are posted on the pages of articulation committees with active FPMs, and also on the pages of most of the articulation committees that conducted FPM research but decided not to implement an FPM. The other type of information on the BCCAT website is archived BCCAT reports and other documents related to FPMs (e.g. Orum’s [2010] special report on FPMs). These archived documents can be found by using the search function on the BCCAT main page and specifying “publications” as the type of search.

The research studies leading to, or away from, FPM implementation are important material for articulation committees. Changes in articulation committee membership across time may result in the loss of the history of a specific FPM’s creation, especially the history residing with the members of the committee during the FPM development and implementation process. Access to the original research studies allows newer articulation committee members to understand the process and reasoning leading to the creation of an FPM, or to the decision to not proceed with creating one. It is unlikely that students, advisors, or administrators would visit an articulation committee website seeking information on FPM content, so it is probably not an issue that these pages do not contain links to the more concise summaries of the FPM reports on the BCTG site. Similarly, the archived reports and other documentation are important as records of the development and dissemination of FPM agreements, but there is no compelling reason for these records to be more prominently or clearly placed on the BCCAT website.

³ Data provided by Mike Winsemann, BCCAT Director of Information Technology.

Program and Institutional Websites

An online search was conducted to identify the extent to which FPM information is available on the websites of institutions and/or programs participating in FPMs. On the website of each institution identified as participating in an FPM, the term “flexible pre-major” was entered in the search function of the home page to identify FPM-related content on the site. If individual departments involved in FPMs had their own program pages, these pages were also visited to identify FPM-related content. The information recorded for each institution was: whether there was an institution-wide page for FPMs; whether individual departments or programs had FPM information on their own page; and whether there was FPM information in the institution’s academic calendar or equivalent documentation.

The data collected from these searches were then cross-tabulated with BCCAT’s archival records of institutional FPM sign-ons, to verify that an institution listed as being a participant in an FPM had provided a sign-on indicating its participation. The results of this cross-tabulation are presented in Appendix 1.

The most significant findings from the data described in Appendix 1 are:

- The Biology FPM has the highest number of participating institutions with FPM information on their websites; however, only 35% (7/20) of these participating institutions have this information. Several FPMs include both sending and receiving institutions with little or no FPM information on their websites.
- There is more information on FPMs on the websites of institutions more likely to be sending institutions in an FPM agreement. There is less FPM information (and, in several cases, no information) on the websites of institutions more likely to be receiving institutions.
- One-third of the institutions participating in one or more FPMs had no identifiable FPM information anywhere on their websites.

These outcomes indicate relatively low, and in many cases non-existent, institutional and system-wide visibility for FPMs. Low visibility for FPMs may result in low usage, and the smaller amount of information available on the websites of receiving institutions may be particularly problematic for those students who do attempt to use an FPM to transfer from a sending institution. The low institutional visibility of FPMs also suggests that FPM information tends to reside with individuals rather than with established institutional processes or documentation – a situation which, as previously mentioned, poses the risk of information loss through staff turnover or articulation committee member turnover.

In the context of information availability, it should also be noted that the content of several FPMs has apparently not been recently reviewed. The information collected by White and Dace (2017) indicated that the articulation committee that most recently formally reviewed its FPM was Biology in 2015. The FPMs in Anthropology, Mathematics, Psychology, and Sociology are noted as last being reviewed in 2012; there is no record of when the most recent review occurred for the Economics and English FPMs. An examination of the minutes from these articulation committees’ most recent meetings did not identify any discussions of the structure or content of the current FPMs. It may be that FPMs are not explicitly addressed at these meetings if no delegates report course or curriculum changes requiring the FPM to be updated, but FPMs are not identified in these meetings’ minutes as a specific discussion item.

A further step in this analysis was inspired by the finding that several institutions included FPM information on their websites alongside information on associate degrees. Some institutions, primarily sending institutions, explicitly state that completion of a specified associate degree would be regarded as also completing the requirements for the FPM in that subject. To explore how FPM content relates to associate degree content, the content of an FPM was mapped onto the content of an associate degree program, using the random choice of the Economics FPM and the Associate of Arts degree program at Camosun College. Camosun signed onto the Economics FPM agreement, but beyond a general statement about credits transferring to universities, no FPM-related content was identified either on Camosun's main website or on its Economics program website. The mapping is presented in Appendix 2.

The mapping indicates that a student could complete the requirements for the Economics FPM while also completing the requirements for the Camosun Associate of Arts degree in Economics. Both sets of requirements could be completed simultaneously within two academic years. The only exception would be if the student planned to transfer to UBC's Economics program, which would require the student to take one additional course to fulfill the FPM requirements for admission to that specific program. Additionally, all of the Associate of Arts courses at Camosun that do not count toward completion of the Economics FPM are transferable to other BC post-secondary institutions, and could likely be used toward fulfilling elective or breadth requirements in a four-year degree program.

While this mapping only uses one FPM and one post-secondary program, it demonstrates the potential of supporting FPM usage by linking FPMs more closely to associate degree programs.

Finally, although there are no province-wide data on FPM usage, it may be possible to estimate the number of students interested in transfer agreements that facilitate entry into the third year of a degree program by using data on associate degree enrollment and completion. Tables 2 and 3 present these data as provided by Joanne Heslop, Manager, Student Transitions Project.

TABLE 2: Associate of Arts and Associate of Science (general or unspecified) degree awarded, 2008/09 to 2016/17

	Associate of Arts	Associate of Science
Camosun College	1,002	381
Capilano University	396	53
College of the Rockies	36	10
Douglas College	2,111	352
Kwantlen Polytechnic University	153	120
Langara College	605	140
North Island College	31	15
Northern Lights College	3	n/a
Nicola Valley Institute of Technology	53	n/a
Okanagan College	589	190
Selkirk College	105	26
Thompson Rivers University/TRU-OL	138	57
University of the Fraser Valley	378	42
Vancouver Island University	28	12
TOTAL	5,628	1,398

Data in this table exclude graduates from two-year programs designated as "university studies", "university arts/sciences", or "university transfer", i.e. not specifically identified as an AA or AS credential program.

TABLE 3: Associate of Arts and Associate of Science degrees awarded in subjects with FPMs, 2008/09 to 2016/17

	Total degrees awarded	Institutions offering this credential*
Associate of Arts - Anthropology	41	Kwantlen
Associate of Arts - Economics	26	<i>Douglas</i> (2) Kwantlen (24)
Associate of Arts- English	154	<i>Capilano</i> (45) Kwantlen (47) <i>Langara</i> (62)
Associate of Arts - Psychology	810	<i>Capilano</i> (211) Kwantlen (389) <i>Langara</i> (210)
Associate of Arts - Sociology	43	Kwantlen
Associate of Science - Biology	116	<i>Capilano</i> (45) Kwantlen (52) <i>Langara</i> (2)
Associate of Science - Mathematics	31	Capilano (1) Kwantlen (28) Langara (2)
TOTAL	1,221	

*The numbers in brackets after the name of each institution indicate the number of graduates with that credential from that institution. Institutions whose names are italicized are participants in the FPM in this subject.

The data in Tables 2 and 3 indicate ongoing student demand for Associate of Arts and Associate of Science programs. The total number of associate degrees awarded in BC peaked in 2003-04, when some BC universities guaranteed admission to associate degree graduates. Since then associate degrees have represented around 5% of the credentials awarded annually by those BC post-secondary institutions with associate degree programs (Bigsby, 2016).

The data in Tables 2 and 3 can also be used to estimate the number of associate degree students that could potentially complete an FPM. Excluding the 31 graduates of the Associate of Science in Mathematics (because of the unique structure of the Mathematics FPM in listing only receiving institutions), 641 of 1,221 graduates of associate degrees in a specific subject were enrolled at institutions also participating in FPMs in that subject.

It is also worth noting that approximately 80% of BC associate degree graduates go on to further studies, with 76% enrolling at a university (BC Student Outcomes, 2016). Thus, students planning to transfer from a two-year program to a four-year program may be completing associate degrees rather than FPMs. This possibility is supported by Central Data Warehouse data from 2011-12 to 2014-15, which identifies 140 students transferring credits in psychology from sending institutions participating in the Psychology FPM. However, only 26 (19%) of those students transferred credit for all of the courses that would have satisfied the requirements of the Psychology FPM.⁴

⁴ Data analysis conducted by Dr. Anna Tikina, BCCAT Research Officer.

(It should be noted that these data exclude UBC, UVic, SFU, and UNBC, so the reported number of transfers might be higher if data from those institutions were included.) The data in Table 3 indicate that Psychology is the most popular specialization among all associate degree programs; between 2011-12 and 2014-15, 345 students completed an associate degree in Psychology. This number contrasts quite strongly to the 26 students in the same period who completed the requirements for a Psychology FPM.

Discussion and Recommendations

The data collected and analyzed for this report, including the outcomes of the earlier FPM report commissioned by BCCAT (White & Dace, 2017), suggest that the FPM agreements in BC's post-secondary system face multiple challenges that collectively make these agreements largely ineffective. The BCCAT Principles of Transfer explicitly state that "[f]ormal transfer credit agreements recorded in the BC Transfer Guide constitute a guarantee to students" (BCCAT, 2010). FPMs cannot provide the transfer pathways that they promise to students if there is insufficient or absent information about these arrangements at both sending and receiving institutions. The findings from the literature review support the importance of clear communication of information, and commitment from both sending and receiving institutions, in the effective functioning of multi-institutional transfer agreements such as FPMs.

FPMs clearly have value to some institutions and programs, as indicated by the small number of institutions and programs that provide full and easily locatable FPM information on their websites. The graduation rates from associate degree programs also indicate student interest in transferable two-year programs. But the potential value of FPMs cannot be fully realized without adequate system-wide recognition and support, including adequate support from participating institutions and from articulation committees with FPMs. Supporting FPMs also includes questioning whether these agreements should be continued, rather than investing further resources into agreements that may no longer be effective or relevant.

Overall, the findings of this report suggest three potential courses of action. These actions are framed in the recognition that FPMs are the creation of, and primarily the responsibility of, articulation committees.

- 1) An articulation committee could decide to terminate its FPM agreement. Given the lack of communication about these agreements, and the apparent lack of regular maintenance and revision of the agreements themselves, this action would likely not require a significant amount of effort for most articulation committees and participating institutions.

Sending or receiving institutions who wish to continue an FPM-like transfer agreement could negotiate individual agreements with other institutions to replace the transfer opportunities theoretically provided by the FPM.

FPMs clearly have value to some institutions and programs, as indicated by the small number of institutions and programs that provide full and easily locatable FPM information on their websites.

Another option to replace a terminated FPM agreement would be to encourage institutions offering associate degree programs to develop majors or concentrations/specializations within those programs, to provide the same lower-level topic coverage as the FPMs provide. It has been noted that general Associate of Arts or Associate of Science programs may not provide sufficient coursework in a specific Arts or Science discipline for a student to easily move into upper-level studies in that discipline.

- 2) An articulation committee could decide to continue its FPM agreement. This decision would require several other actions:
 - a. A commitment by the articulation committee to review the content and structure of the FPM at least once a year, and to explicitly record the outcome of the review even if it does not result in changes or updates.
 - b. A commitment by the articulation committee to promptly communicate any changes in the FPM to BC-CAT and to participating institutions.
 - c. A commitment by the articulation committee to address the structural and operational issues identified in some current FPM agreements (e.g. ensuring that formal sign-ons for all participating institutions are obtained and archived).
 - d. A commitment by the articulation committee and participating institutions to ensure that complete, accurate and easily accessible FPM information is on every participating institution's website, and is also communicated to key parties (e.g. registrars, advisors, program/department heads and faculty members) in those institutions.
 - e. A commitment by the articulation committee and participating institutions to ensure that every course included in the FPM will transfer as equivalent to every other course in the same FPM category.

An FPM agreement could also continue with only the participation of those institutions that are explicitly committed to supporting the agreement, in the forms described in the points above. However, this might result in a reduced number of sending or receiving options for students, while still requiring the articulation committee and participating institutions to continue the work of maintaining the FPM agreement.

- 3) An articulation committee could focus on supporting system-wide methods to continue the benefits of FPMs (e.g. multi-institutional transferability into the third year of a degree program) without continuing the FPM agreement itself. The most obvious target of such a focus is associate degrees, since these credentials have a provincially mandated common curriculum, and students completing associate degree generally receive 60 transfer credits at receiving institutions. As shown by the mapping in Appendix 2, there may already be a considerable amount of similarity between the content of FPMs and the curriculum of associate degrees in FPM subjects. Encouraging the development of associate degrees, and supporting the continuance of existing ones, in disciplines with FPMs would allow articulation committees to encourage student retention and mobility in these disciplines without investing the ongoing effort required to maintain a functional FPM.

These possibilities must also be considered in the context of the upcoming K-12 curriculum changes in British Columbia (BC Ministry of Education, 2019) which will come into effect in July 2019. These changes may affect the content of lower-level post-secondary courses or the qualifications for admission to those courses. Thus, these changes may require FPM agreements to be revised, and this presents another reason for articulation committees to reconsider their FPMs at this time.

Given these possibilities, this report makes the following general recommendations:

- a) that BCCAT encourage the six articulation committees currently responsible for the seven active FPMs (Biology, Economics, English, Mathematics, Sociology/Anthropology, and Psychology) to include the issue of FPM continuance on the agendas of the articulation committees' next meeting;
- b) that BCCAT endeavour to have a representative attend each committee's meeting to explain the three possible courses of action outlined above, and to assist the committee in considering which option might be most feasible for them (or assist the committee in developing another course of action); and,
- c) that BCCAT assist the articulation committees and participating institutions in implementing decisions on the future of the current FPM agreements, including the possibility of developing associate degree options to replace the transfer pathways currently provided by the FPMs.

[UPDATE: In May 2019, BCCAT staff attended the annual articulation meetings of each of the six articulation committees named above. All six committees have committed to various types of review of the structure and function of their FPMs, with the goal of making a decision on the FPM's future at or before each committee's 2020 articulation committee meeting.]

It is time for the BC Transfer System to acknowledge the dysfunctionality of the current FPM structure and operations, and for the participants in FPMs to either discontinue these agreements or commit to providing the support and communication needed for the agreements to function effectively.

Conclusion

White and Dace (2017) ended their report with these words:

Developing and implementing a system-wide transfer initiative is a complex endeavour requiring the full participation of all institutions involved, and multiple areas within each institution. Without that support, such a large scheme is difficult to sustain. This study has identified and corroborated earlier findings that reveal flaws with communication, process, and documentation that call into question the legitimacy of the FPM project.

In theory, FPM articulation agreements and programs fit well within our provincial system, as not all institutions offer four-year degrees at this time. Without taking important steps to improve the efficacy of FPMs, the FPM initiative will continue to labour. (p. 29-30)

The findings in this report echo the findings of White and Dace's report. This report has built upon those earlier findings to develop courses of action and recommendations to address the ineffectiveness of the currently active FPM agreements. Transfer agreements are intended to facilitate student mobility; however, transfer agreements are also a promise of mobility to students. It is a disservice to students when active transfer agreements do not or cannot deliver what they promise. It is time for the BC Transfer System to acknowledge the dysfunctionality of the current FPM structure and operations, and for the participants in FPMs to either discontinue these agreements or commit to providing the support and communication needed for the agreements to function effectively.

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Appendix 1:

Comparison of Participating Institutions by Recorded Sign-ons and by FPM Information

	Anthro- pology	Biology	Econom- ics	English	Math- ematics	Psychol- ogy	Sociology	% of FPMs at this institution with infor- mation on website
Alexander College	n/a	n/a	Sign-on recorded, FPM infor- mation on website	Sign-on recorded, FPM infor- mation on website	n/a	Sign-on recorded, FPM infor- mation on website	n/a	100% (3/3)
Camosun College	n/a	n/a	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	n/a	n/a	n/a	0% (0/2)
Capilano University	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	n/a	Sign-on recorded, no FPM informa- tion on website	No sign-on recorded, no FPM informa- tion on website	0% (0/6)
College of New Caledonia	n/a	Sign-on recorded, FPM infor- mation on website	n/a	Sign-on recorded, FPM infor- mation on website	n/a	Sign-on recorded, FPM infor- mation on website	n/a	100% (3/3)
College of the Rockies	n/a	Sign-on recorded, FPM infor- mation on website	Sign-on recorded, FPM infor- mation on website	Sign-on recorded, no FPM informa- tion on website	n/a	Sign-on recorded, no FPM informa- tion on website	n/a	50% (2/4)

	Anthro- pology	Biology	Econom- ics	English	Math- ematics	Psychol- ogy	Sociology	% of FPMs at this institution with infor- mation on website
Columbia College	n/a	n/a	No sign-on recorded, FPM infor- mation on website	Sign-on recorded, FPM infor- mation on website	n/a	n/a	n/a	50% (1/2)
Coquitlam College	n/a	n/a	No sign-on recorded, no FPM infor- mation on website	Sign-on recorded, no FPM infor- mation on website	n/a	n/a	n/a	0% (0/2)
Corpus Christi College	n/a	n/a	No sign-on recorded, no FPM infor- mation on website	Sign-on recorded, no FPM infor- mation on website	n/a	n/a	n/a	0% (0/2)
Douglas College	Sign-on recorded, no FPM infor- mation on website	Sign-on recorded, no FPM infor- mation on website	Sign-on recorded, FPM infor- mation on website	Sign-on recorded, no FPM infor- mation on website	n/a	No sign-on recorded, no FPM infor- mation on website	Sign-on recorded, no FPM infor- mation on website	16% (1/6)
Emily Carr University	n/a	n/a	n/a	No sign-on recorded, no FPM infor- mation on website	n/a	n/a	n/a	0% (0/1)
Kwantlen Polytechnic University	No sign-on recorded, FPM infor- mation on website	n/a	Sign-on recorded, no FPM infor- mation on website	Sign-on recorded, no FPM infor- mation on website	n/a	n/a	n/a	33% (1/3)

	Anthro- pology	Biology	Econom- ics	English	Math- ematics	Psychol- ogy	Sociology	% of FPMs at this institution with infor- mation on website
Langara College	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, FPM infor- mation on website	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	n/a	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	14% (1/7)
North Island College	Sign-on recorded, FPM infor- mation on website	Sign-on recorded, FPM infor- mation on website	No sign-on recorded, no FPM informa- tion on website	Sign-on recorded, FPM infor- mation on website	n/a	n/a	Sign-on recorded, FPM infor- mation on website	100% (5/5)
Northern Lights College	Sign-on recorded, no FPM informa- tion on website	n/a	n/a	Sign-on recorded, FPM infor- mation on website	n/a	n/a	Sign-on recorded, FPM infor- mation on website	66% (2/3)
Northwest Community College/ Coast Moun- tain College	n/a	Sign-on recorded, no FPM informa- tion on website	n/a	Sign-on recorded, no FPM informa- tion on website	n/a	n/a	n/a	0% (0/2)
Okanagan College	n/a	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, FPM infor- mation on website	n/a	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	20% (1/5)
Quest University	n/a	n/a	Sign-on recorded, no FPM informa- tion on website	n/a	n/a	n/a	n/a	0% (0/1)

	Anthro- pology	Biology	Econom- ics	English	Math- ematics	Psychol- ogy	Sociology	% of FPMs at this institution with infor- mation on website
Selkirk College	n/a	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, FPM infor- mation on website	n/a	Sign-on recorded, no FPM informa- tion on website	n/a	50% (2/4)
Simon Fraser University	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, FPM infor- mation on website	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, FPM infor- mation on website	No sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	29% (2/7)
Thompson Rivers University	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	No sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	0% (0/7)
Thompson Rivers University-OL	n/a	n/a	n/a	Sign-on recorded, no FPM informa- tion on website	n/a	n/a	n/a	0% (0/1)
Trinity Western University	n/a	Sign-on recorded, no FPM informa- tion on website	n/a	Sign-on recorded, no FPM informa- tion on website	n/a	n/a	n/a	0% (0/2)
UBC Vancouver	n/a	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	n/a	No sign-on recorded, no FPM informa- tion on website	No sign-on recorded, no FPM informa- tion on website	No sign-on recorded, no FPM informa- tion on website	0% (0/5)

	Anthro- pology	Biology	Econom- ics	English	Math- ematics	Psychol- ogy	Sociology	% of FPMs at this institution with infor- mation on website
UBC Okanagan	n/a	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	n/a	No sign-on recorded, no FPM informa- tion on website	No sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	0% (0/5)
University of the Fraser Valley	n/a	Sign-on recorded, no FPM informa- tion on website	No sign-on recorded, FPM infor- mation on website	Sign-on recorded, no FPM informa- tion on website	No sign-on recorded, no FPM informa- tion on website	n/a	n/a	25% (1/4)
University of Northern BC	n/a	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	n/a	No sign-on recorded, no FPM informa- tion on website	n/a	n/a	0% (0/3)
University of Victoria	n/a	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	n/a	No sign-on recorded, no FPM informa- tion on website	n/a	Sign-on recorded, no FPM informa- tion on website	0% (0/4)
Vancouver Community College	n/a	Sign-on recorded, FPM infor- mation on website	n/a	n/a	n/a	No sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	33% (1/3)

	Anthro- pology	Biology	Econom- ics	English	Math- ematics	Psychol- ogy	Sociology	% of FPMs at this institution with infor- mation on website
Vancouver Island University	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, no FPM informa- tion on website	n/a	n/a	Sign-on recorded, no FPM informa- tion on website	0% (0/5)
Yukon College	Sign-on recorded, no FPM informa- tion on website	Sign-on recorded, FPM infor- mation on website	n/a	n/a	n/a	Sign-on recorded, no FPM informa- tion on website	n/a	33% (1/3)
Number of recorded sign-ons	10	20	17	22	See notes	10	12	
Number of institutions signed on and with website information	1	7	3	8	See notes	3	2	
Number of in- stitutions with website infor- mation but no recorded sign-on	1	0	3	0	See notes	0	0	

Notes:

- Kwantlen has Anthropology FPM information on its website, but BCCAT has no record of Kwantlen signing on to this agreement.
- There are three institutions that have Economics FPM information on their websites but for which BCCAT has no record of sign-ons: Columbia College, North Island College, and UFV.
- The Mathematics FPM agreement lists the “core and additional courses” at receiving institutions (UBC Vancouver, UBC Okanagan, SFU, UVic, TWU, TRU, and UNBC). No formal sign-ons were obtained.

Appendix 2:

Associate of Arts (Economics) Curriculum at Camosun College, Compared to Economics FPM Requirements

This analysis is structured using the institution's own course plan for the Associate of Arts (AA) degree in Economics, as presented on the Camosun College economics department's website, <http://camosun.ca/learn/programs/economics/what-youll-learn/index.html>

Course pre-requisites are included to outline the sequence in which the courses in each program might be taken.

Year 1 (Terms 1 and 2)

Course Number	Course Name	Pre-Requisites	Applies to AA Degree Completion	Applies to Flexible Pre-Major Completion
ECON 103	Principles of Micro-economics	Yes (math and English requirements)	Yes	Yes
ECON 104	Principles of Macro-economics	Yes (math and English requirements)	Yes	Yes
MATH 108	Applied Calculus	Yes (math requirements)	Yes	Yes (MATH 100 can also be used to meet FPM calculus requirement)
ENGL 151	Academic Writing Strategies	Yes (English requirements)	Yes	No (but is transferable to 20 other BC PSEs)
Either BUS 140 or COMP 156	BUS 140 – Business Information Technology COMP 156 – Computer Concepts	BUS 140 – yes (English requirements) COMP 156 – yes (English requirements)	Yes	No (but BUS 140 transfers to 10 other BC PSEs; COMP 156 transfers to 17 other BC PSEs)
PLUS one lab science elective (3 credits), two humanities electives (6 credits), and one arts elective (3 credits)				

Year 2 (Terms 3 and 4)

Course Number	Course Name	Pre-Requisites	Applies to AA Degree Completion	Applies to Flexible Pre-Major Completion
BUS 230	Elementary Statistics	Yes (Math requirements)	Yes	Yes (either BUS 230 or BUS 231 can be used to meet Statistics I requirement)
BUS 231	Quantitative Methods	Yes (Math requirement which can be met with C in BUS 230)	Yes	Yes (either BUS 230 or BUS 231 can be used to meet Statistics I requirement)
ECON 203	Intermediate Micro-economics	Yes (C in ECON 103 and 104 and C in MATH 100 or MATH 108)	Yes	Yes (can be used as one of two courses to meet Post-Principles of Economics requirement)
ECON 204	Intermediate Macro-economics	Yes (C in ECON 103 and ECON 104 and C in MATH 100 or MATH 108)	Yes	Yes (can be used as one of two courses to meet Post-Principles of Economics requirement)
One of ECON 205, ECON 210, or BUS 130	ECON 205 – Managerial Economics ECON 210 – Money and Banking BUS 130 – Business Communications	Yes (ECON 205 and ECON 210 require C in ECON 103 and ECON 104; BUS 130 has English requirements)	Yes	ECON 205 and ECON 210 can be each be used as one of the two courses needed to meet Post-Principles of Economics Requirement
Either ENGL 161 or ENGL 164	ENGL 161 – Literary Genres ENGL 164 – Indigenous Literature	Yes (both have English requirements)	Yes	No (but ENGL 161 transfers to 17 other BC PSEs; ENGL 164 transfers to 12 other BC PSEs)

PLUS one second-year arts elective (3 credits) and one arts elective (3 credits)

If the Economics FPM was used to transfer from Camosun to UBC, the Camosun student would also have to take MATH 101 (Calculus 2) to fulfill UBC Economics' calculus requirement. The MATH 101 prerequisites are a grade of C in MATH 100 or a grade of A in MATH 108.



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