March 11, 2026

Summary and Institutional Response to External Review Team Report on the Associate of Science Degree Self-Study

Introduction

This document reflects Alexander College's (AC's) adherence to the Ministry's [Program Quality Assessment and Criteria](), 2024, Program Quality Review Standard 8 Program Review and Assessment criteria. Following Ministry criteria, AC's Associate of Science Degree Self-Study was assessed by a panel of "three academic disciplinary experts external to the institution, with experience teaching at the degree level of the program" (p. 34). The review team consisted of Brian Chapell, Dean of Science and Technology at Douglas College; Jeff Dyck, Associate Dean, Faculty of Science at Kwantlen Polytechnic University; and Jennifer Talman, Associate Dean of Sciences at the British Columbia Institute of Technology.

After reviewing the self-study, the External Review Team convened on January 16, 2026, at AC's downtown campus to conduct a site visit that included meetings with faculty, support staff, students, and a tour of the facilities. Overall, the external reviewers noted that "the material in AC's self-study was consistent with reviewer observations during the campus visit." Specifically, the review team found that "stakeholders exhibited a sense of pride in the facilities and in the institution as a whole; and that the new downtown Vancouver campus has many amenities and supports for students, including modern laboratories to support the Associate of Science program." The impression of the external review team was that AC offers "a robust student experience in the Associate of Science program that prepares students well for transfer to bachelor[s'] degree programs at BC universities."

In compliance with Ministerial directives, we elaborate on our summary of the external team's report by presenting each recommendation followed by a concise and evidence-based institutional response. Publication of this document further complies with Ministerial requirements.

Section 1: Appropriateness and Accessibility of Program Structure

Recommendation 1.1: Provide information on whether the current structure of concentrations still meet student, institutional and market needs.

Response: Our marketing team relies on published survey data to assess student interest in specific concentrations and levels of study. Based on these insights, we share the findings with the Academic team to evaluate the feasibility of aligning new or existing offerings with demonstrated student demand.

Recent program popularity data indicates that, after business administration, which continues to be very popular among international students, Science programs, including Health Sciences, Pure/Applied Sciences, and Engineering and Technology are among the most popular programs. Specifically, IDP IQ Trend Data from Jan 2024 indicate that Health and Medicine, Engineering and Technology, and Applied

and Pure Sciences are the top four highest demand subject areas, accounting for over 47% of student choices. Similarly, IDP data from Nov 2024-Nov 2025 on program popularity shows that, Canada-wide and in British Columbia, Health and Medicine Applied and Pure Sciences, Engineering and Technology, and Computer Science and Mathematics are among the top five program choices.

Given that our Associate of Science degrees provide direct UT pathways to major public universities while aligning with labour market trends, we have concluded that the current concentrations in Computer Science and Math have ongoing value. Moreover, we will continue to modify these credentials as needed. For example, our introductory level CPSC courses now include cloud and A.I. courses. It is also important to note that our Associate of Science degree in Computer Science is designed to ladder into AC's proposed Bachelor of Science degree in Artificial Intelligence.

Looking ahead, we hope to develop a biology or health concentration in our Associate of Science degree and, eventually, a Bachelor of Science degree in Health Informatics, which would combine both biology and CPSC/AI disciplines.

Recommendation 1.2: Clarify the inclusion (or not) of the summer intensive term in determining degree completion times. This would be best measured by the number of semesters of full-time study required for students to complete their credential.

Response: Program completion requires 60 credits. Completion time is based on full-time study, which for academic purposes we define as 5 courses in each of the fall and winter terms or 10 courses distributed across the fall, winter and spring terms. The summer term may contribute to degree completion when a student typically needs just one course to complete their program. We generally do not include the summer term in our program completion calculation.

Recommendation 1.3: Provide data to support the faculty commentary that states the Associate of Science programs "do a good job of preparing students for transfer into bachelor's degree programs at public universities."

Response: BCCAT's [BC Transfer Students: Profile and Performance Report (2018/19-2022/23)](#) indicates that Arts and Science, and Engineering and Applied Science are among the top three transfer subject-areas of AC students (p. 25). According to BCCAT data, the average GPA or percentage among AC transfer students upon program completion at receiving institutions is UBCV 76.3%; UBCO 72.7%; SFU 3.1; KPU 3.1 (p. 43). The degree completion rate of AC transfer students is UBCV 86%; UVIC 76%; SFU 71%; grand total 78% (p. 51). BCCAT data further confirms that AC is among the top sending institutions in the province, with almost 800 students transferring to bachelor's degree programs over the five-year study period (p. 7).

1. Formal pathway agreements provide further evidence that AC's Associate of Science degree does a good job of preparing students for transfer into bachelor's degrees. For example, we currently have block transfer agreements for our Associate of Science degree to BCIT's Bachelor of Technology in Forensic Investigation, CAPU's Bachelor of Science in Environmental Studies, KPU's Bachelor of Science, Major in Health Science, and TRU's Bachelor of Science, Major in Data Science degree programs. We also have an MOU with UNBC for accepting block transfer for our Associate of Science degrees into their bachelors' degree programs. Additional transfer

agreements rely on specific AC science courses. For example, students who take a prescribed set of first-year science courses at AC may transfer into KPU's Bachelor in Psychiatric Nursing.

Section 2: Admission Requirements

Recommendation 2.1: Provide additional information on the MATH 099 approach to conditional admission. This could include further data on students who are not successful on their first attempt at MATH 099.

Response: Students may be conditionally admitted to the Associate of Science degree by qualifying for MATH 099: Fundamentals of Algebra with Trigonometry, a non-credit bridging course designed to provide students with foundational mathematical knowledge necessary for success in calculus-based university-level math courses. Conditionally admitted students must successfully complete MATH 099 with a minimum grade of 'C' as soon as possible (preferably in their first term) and then complete MATH 100: Pre-Calculus with a minimum grade of "C' (preferably in their second term).

We have analysed the academic success of students conditionally admitted via MATH 099, from Fall 2020 through Winter 2025. The data shows that 81% of the students received C or higher in MATH 099, with an average grade of 67%. In their other courses, these students achieved an average final grade of 64%. Thus, the data indicates that students who are conditionally accepted into the Associate of Science degree via MATH 099 have generally been successful not just in MATH 099 but also in their other courses.

Students who do not successfully complete MATH 099 in their first term have three options.

First, they may appeal to repeat MATH 099 in their second term. In adjudicating appeals, the Registrar's Office considers a student's overall attendance and academic performance in other courses. Where evidence suggests the student may be successful in a second try, appeals are normally granted. Students attempting to complete MATH 099 in their second term may still select enough courses to qualify as full-time students.

Second, students who do not successfully complete MATH 099 in their first term may attempt to meet the math admission requirement by writing the Math Placement Test.

Third, students in this category may choose to change their program to the Associate of Arts degree.

Overall, we do our best to provide options for students with weaker math skills and to provide them with additional support (see below).

Recommendation 2.2: Consider levels of support outside of MATH 099 that are provided to students with weaker math skills.

Response: The Writing and Learning Centre offers ongoing math tutoring. Recently, the WLC has begun drop-in homework sessions where students may bring in work from any course, including math, and tutors are available to help them with problems.

Recommendation 2.3: Provide a visual comparison between current [admission] requirements and "system norms."

*Response***:** A detailed chart has been created and is available if requested by an externally appointed review panel. In brief, we performed an environmental scan in August 2024. That peer research showed

that many BC institutions had no high school science requirements at all; many also had no high school math requirements (including DOUG, KPU, LANG, NIC, VIU). Instead, they had a disclaimer in their program requirements page/forms that alerting students to be aware that they are still required to meet course prerequisites, which may require students to upgrade before admission into those courses. Most require high school graduation or equivalent. Most also require English 12 or equivalent, and many programs require at least two Grade 12 academic subjects in addition to English 12.

Section 3: Methods of Delivery

Recommendation 3.1: Provide additional information on work-integrated learning (WIL). WIL is mentioned alongside Experiential Learning at the start of Section 3.

Response: As noted in our Program Quality Assessment Review, DQAB has directed private degree-granting institutions to ensure that associate degrees are not marketed as credentials that provide field-specific job training. However, the most recent *Labour Market Outlook Report 2025* identifies key skills such as complex problem solving, critical thinking, analysis, speaking, writing, collaboration, and time management as being required for almost every occupation in the future. The WIL components in our associate degrees focus on these are "transferrable skills" – generic skills developed in academia – that transfer easily to a variety of employment settings. At Alexander College, we have developed the AC3 framework that focuses on 3 key components, collaboration, communication, and critical thinking. Instructors identify in their course syllabi how these types of transferrable skills are developed in their respective courses.

Moreover, to provide work-integrated-learning experiences that are congruent with the foregoing DQAB directive, AC faculty bridge academic learning with real-world applications through community engagement. For example, in BIOL 204: Introductory Ecology, field trips include structured educational visits to local facilities such as Burnaby's Incineration Waste Management Centre and Coquitlam's Circular Waste Management Facility. Other courses involve visits to scientific facilities, advanced research laboratories, and attendance at academic presentations offered by institutions such as UBC and SFU. Biology students also engage in their own applied research activities, such as sampling plant species in Burnaby's Central Park and analyzing water quality at Lafarge Park in Coquitlam.

Recommendation 3.2: Provide an appendix of course Curriculum Guidelines as well as a description of how they are maintained.

Response: An appendix has been created for Standard 3 in the Program Quality Assessment Review, which includes all relevant Curriculum Guides. In future, we will include such appendices in our Self-Study reports, in addition to citing them in our Program Quality Assessment Review.

As a general policy and process all our Curriculum Guides undergo a review every five years. Curriculum Guides may be reviewed sooner where disciplinary developments necessitate this. Please see our response to Recommendation 7.2 for sample revisions.

Recommendation 3.3: In the section labeled, "Lectures, Labs, and Tutorials as the Main Modalities of Course Delivery", there is reference to "two following tables"; however, the tables are not present.

Response: Information in the missing tables appears in Figures 3.1 and 3.2 on p. 16. The paragraph in the self-study has been amended to direct readers to the figures.

Recommendation 3.4: Include information about the AI detection system.

Response: Additional information has been added to the Self-Study on page 15. The learning management system has integrated third-party plagiarism/AI detection software, CopyLeaks, which can be used by faculty to check the integrity of student work. No AI detection system is completely foolproof. Therefore, we use multiple writing samples from in-class assignments, midterm exams or other in-class work for comparison in the event of suspected unauthorised AI use. Students always have the right of appeal if they feel they have erroneously been identified as using AI in a way that contravenes the course policy.

Moreover, individual academic departments have developed guidelines for student use of AI, and we are in the process of developing broad institutional guidelines that will establish a common language for describing various types or levels of AI use.

<u>Section 4:</u> Suitability of Curriculum for Program Goals and Standards

Recommendation 4.1: Include course names and credit values in the subject area flowcharts (e.g. Fig. 4.1).

Response: For future reference, revised flowcharts containing names and credit values have now been included in the report.

Recommendation 4.2: Provide an explanation of the English prerequisites, not only for progression in English courses, but also as English prerequisites for other courses (ENGL 088, 098, 099, 100).

Response: Facilitating fluency in English while simultaneously providing students with an opportunity to earn UT credits is one of the distinguishing characteristics of AC's approach to education. ENGL 088 through 099 are specifically designed for English as an Additional Language learners to build their written, oral and comprehension skills as they advance through each level of English.

Following the 2023 Associate of Arts program review, a minimum of ENGL 099 is now required to take degree-level courses. Students who take ENGL 099 are allowed to take a maximum of two UT courses. See Conditional Admission in policy A-02.1.

Several years ago, based on Faculty feedback and student success numbers, the decision was made to gradually increase English proficiency requirements. Most 200 level courses at the college now require ENGL 100 – Strategies for Academic Writing – as a prerequisite. Currently the lowest level of English instruction offered at the college is ENGL 099, which is equivalent to grade 12, reflecting an overall strengthening of English skills among our students and the lessening of demand for EAL courses since the pandemic.

Beginning in Fall 2024, the adjusted ENGL 100 requirements have been implemented in phases. We expect that this initiative will be completed by Winter 2027.

Recommendation 4.3: Provide further information on the role of the Indigenous point person**.**

Response: Indigenization/decolonization of the curriculum at AC has been an ongoing process for over five years. Dr. Christine Elsey is our newly appointed Indigenous Liaison who is assisting Alexander College in bringing about Indigenization across the curriculum. Dr. Elsey works one-on-one with faculty or at the department level, advising on resources, Indigenous perspectives and making connections with Indigenous Elders and Knowledge Keepers in the region who can also enhance Indigenous perspectives and experiences for our students.

It is important to note that Dr. Elsey is not solely responsible for this initiative. Faculty have had various Indigenous elders and educators share their experiences with students as guest speakers. Advice has been sought from BC Campus for resources which have been integrated into our curriculum and library collections. We also have the [Alexander College Teaching and Learning Indigenization Working Group](#), which provides resources that are available to all faculty and students. We anticipate that as AC continues to grow and broaden the scope of its curriculum, additional Indigenous resources and personnel will become part of our community.

<u>Section 5:</u> Adequacy and Use of Resources

Recommendation 5.1: Provide examples or quantitative data to support the statement that library patron feedback is consistently positive.

Response: Library survey data indicates that the feedback for librarian-led workshops has been consistently positive. Over the past 2 years, three quarters of the students who attended these workshops indicated they had acquired new skills, while 99% or more indicated they felt the quality of the workshops met their needs. Most significantly, over 95% of the students completing these workshops indicated they felt prepared to engage in independent research.

Recommendation 5.2: Clarify the data that supports student demand for tutoring services (Figure 5.2). The data provided show that mathematics, statistics, and computer science have the highest demand, but [the] data are not conclusive.

*Response***:** Figure 5.2 was erroneously labelled "WLC Appointments" when it should have been labelled WLC Math and Science Appointments because it provides data for those subject areas only. Figure 5.2 has been replaced by Table 5-1, which presents demand for science and math related tutoring compared to other subject and academic study areas. The revised data shows that, across all programs, the highest demand for tutoring occurs in the humanities and social sciences.

Recommendation 5.3: Continue efforts to educate students about accessibility supports to benefit the student population.

*Response***:** This recommendation is actively being implemented. Student Life and student support services such as the WLC and Library regularly partner with each other for tabling events a few times each semester. The Student Rights and Responsibilities unit, which assists students encountering a barrier to their studies by reviewing exceptional circumstances at the level of the individual – e.g., grade appeals and accommodations, provides in-person services at the front desk several times per week. These events help broaden awareness about all student services AC provides. Additionally,

representatives participate in student orientation programs and offer in-class presentations to raise student awareness and buy-in for these important supports.

Recommendation 5.4: Consider procurement of adaptable or adjustable furniture in classrooms to benefit students requiring accommodations.

Response: Alexander College is committed to meeting the needs of students requiring accommodations. We will take this recommendation under advisement as we continue to develop our downtown campus.

Recommendation 5.5: Create an action plan to incentivize use of the Writing and Learning Centre to ensure that the students who would most benefit from it actually use it.

Response: This has already been done. Updated information appears on page 25 of the revised study. In response to less than optimal use of WLC resources by students and in light of the fact that many continue to struggle with academic success, the following action plan has been created to encourage use of the WLC: High risk, students on suspension or expulsion probation contracts are required to set up regular appointments with the WLC to assist them with all of their courses throughout the semester. The WLC also advertises Drop-In Study Sessions that offer assignment and academic help (and free snacks!).

<u>**Section 6**</u>**: Faculty Performance and Related Data** (the ERT does not have specific recommendations related to this domain)

<u>**Section 7:**</u> **Learning Outcomes Achieved by Students, Degree Standards, and Program Goals**

Recommendation 7.1: Confirm whether a two-level determination of Learning Objectives is indeed in use, or whether there are additional levels not reflected in the degree.

*Response***:** In our Associate of Science program, student achievement is framed under three conceptual tiers.

At the highest level, we identify the six dimensions of knowledge that provide a framework for degrees across Canada: (1) depth and breadth of knowledge, (2) knowledge of methodologies, (3) application of knowledge, (4) communication skills, (5) awareness of limits of knowledge, and (6) professional capacity/autonomy.

At the second tier, under each dimension of knowledge, we have created a corresponding program learning outcome that addresses graduate capabilities at an appropriate degree-level standard: (1) students will be able to understand their chosen areas of study by explaining and applying concepts, principles, and theories to reason and solve problems; (2) students will be able to understand the methods and practices of scholarly inquiry by asking questions, addressing knowledge gaps, and solving problems using the scientific process; (3) students will be able to think critically by analyzing, interpreting, and synthesizing information to solve problems; (4) students will be able to communicate effectively in written and oral academic English; (5) students will be able to recognize the ambiguity, nature, and limits of knowledge; and (6) students will be able to function effectively as independent learners and as team members to address ethical, social, global, and environmental issues in broader professional and social communities.

At the third tier, under each program learning outcome, we have established 3-5 measurable performance indicators that are assessed through established rubrics. For example, under the program learning outcome that addresses communication skills, we assess student's ability to follow academically/professionally accepted criteria, articulate ideas using a logical structure and arguments, use technology, communicate based on the audience, and use clear language free of syntax and grammar errors.

Through a process known as Deep Faculty Curriculum Assessment Review (DFCAR), instructors teaching students in second-year courses use the established PI rubrics to generate data on the strengths and weaknesses of our graduating students. PIs under each learning outcome are annually assessed on a cyclical basis. This data enables us to make appropriate changes to our curriculum and assessments.

Recommendation 7.2: Provide examples of changes made as a result of curriculum review.

Response: All of Alexander College's Curriculum Guides contain a revision history section where changes due to the review process are noted. For example, in the curriculum guide for CPSC 115, the following notations appear:

- April 29, 2015-Library resources added by Librarians, AC
- June 30, 2016-Noted that students with credit for MATH 115 may not take CPSC 115 for further credit, added by Mandie Brooks and approved by Tiko Kameda. Prerequisite also modified to match with MATH 115 prerequisites. Old prerequisites: ENGL 097, MATH 12(P) New prerequisites: ENGL 097, MATH 12 (C) or MATH 100 (C)
- September 28, 2022-Major revision (learning outcomes, content, textbook, assessment, resources) by Kelly Cheung.
- July 29, 2024 - Added one tutorial hour per week, Kelly Cheung

If more detail is required, we will make note of that for future review processes.

Section 8: Considerations Relating to Professional Accreditation (not applicable)

Section 9: Adequacy of Methods Used to Evaluate Student Learning

Recommendation 9.1: Include quantitative and/or qualitative student feedback on their experiences with the assessments used.

Response: A new table, Table 9-1 indicating student feedback on assessments, has been added into the study. Not too surprisingly, our students tend to enjoy lectures and course topics (consistently above 50 and 60%, respectively) with readings (30%) and assignments (typically in the low 40% range) being their least favourite activities. Reading and assessments provided the greatest challenges and are the most time consuming, so the statistics are not surprising. Nevertheless, AC instructors continue to employ a variety of classroom engagement and assessment methods, and consistently engage in course delivery improvement, which includes creating new classroom activities and interesting course projects.

Recommendation 9.2: Provide additional information on initiatives aimed at reducing D, F, and W rates in courses where the rates are exceptionally high.

Response: Clarification has been made in the commentary in the self study. The grade distribution data for science courses includes associate of arts, associate of science, and university transfer students. Typically, Associate of Science students perform better than Associate of Arts students in math and science courses. Similarly, BIOL 120, which has a higher D/W/F rate than other biology courses, tends to be a more challenging course for non-science majors because it includes substantial anatomical and medical terminology. As mentioned earlier, the Writing and Learning Centre is proactively reaching out to students at risk, to enhance student success.

Recommendation 9.3: Provide details on the evaluation schema of particular courses.

Response: Additional information has been added in the self study (pp. 39-40), with a focus on CPSC 245: Database Systems. Course components are weighted differently depending on course content, learning outcomes, if there is a required lab component, and some flexibility for individual teaching styles. For this reason, ranges are provided. Typically, 10-20% of total course marks are allotted for course components such as in-class work, labs, and quizzes, while major projects or midterm examinations could be weighted between 20-40% and the final exam accounting for 30-35% of the total course mark.

Recommendation 9.4: Clarify the grade distribution for MATH 099 presented in Table 9-1.

Note: this Table is now labelled 9-2 due to the addition of a new Table 9-1.

Response: Clarification has been made in the commentary of the self study. As noted above, the grade distribution data in Table 9-2 includes Associate of Arts, Associate of Science, and university transfer students. Typically, Associate of Science students perform better than Associate of Arts students in math and science courses.

Section 10: Graduate Outcomes

Recommendation 10.1: Acquire data pertaining to success of Associate of Science graduates in completing further education for future program reviews. If it isn't possible to track graduates through their PEN, the ERT recommends surveying program graduates.

Response: We do survey alumni, yet response rates have been less than 5%, which does not yield reliable data. Accordingly, we are seeking ways to incentivize survey feedback. In the interim, anecdotal yet consistent alumni feedback indicates that, prior to the recent IRCC policy changes, most of our graduates entered the workforce under the PGWP program. Meanwhile, the success of AC graduates who choose to pursue further studies is verified by the BCCAT data cited under Recommendation 1.3.

Summary

Alexander College greatly appreciates the time and feedback provided by the external review team. Their recommendations are being taken under advisement, and we will be sure to keep these in mind when we engage in future self studies.