

Bachelor of Science: Computing and Information Systems

Program Review Summary Report, July 2024

Programs Reviewed:

University Certificate:

- Computing and Information Systems

Bachelor of Science:

- Computing and Information Systems major

External Review Team Appointed by the Provost & Vice President Academic:

- Dr. Liang Chen, Professor, Computer Science Department, University of Northern British Columbia
- Dr. JingTao Yao, Professor, Computer Science Department, University of Regina
- Dr. Shabnam Inanloo Dailoo, Associate Dean, Strategic Initiatives; Program Director, Heritage Resource Management, Faculty of Humanities and Social Sciences, Athabasca University (Internal Observer)

Key Milestones:

- Program Review Kick-off: April 21, 2023
- Self-Study Approved by Faculty of Science Faculty Council: December 5, 2023
- Virtual Site Visit: April 10 – 12, 2024
- Receipt of External Reviewer Report: May 28, 2024
- Program Response Report to Faculty of Science Faculty Council: September 10, 2024
- Program Response Report to Academic Planning, Priorities and Standards Committee (APPSC) of General Faculties Council: September 24, 2024
- Public Posting of BSc CIS Program Review Summary Report: following APPSC meeting
- Annual Program Update to APPSC: June 2025

Summary of Key Findings:

The External Reviewers' Report offers the following overview of the quality of the BSc Computing and Information Systems program:

“Based on a detailed assessment against Campus Alberta Quality Council standards using evidence from the self-study report and meeting summaries, the BSc CIS program at Athabasca University continues to meet and often exceed national and international quality standards. Through its robust academic rigor, comprehensive student support, active engagement in quality assurance, and commitment to maintaining integrity in all operations, the program ensures a high-quality educational experience that is competitive and relevant in the field of computing and information systems. ”

The External Reviewers’ Report and the Self-Study identify the following program strengths:

Flexible, Affordable and Accessible Online Delivery: The program’s online delivery format is highly praised for its flexibility, affordability and accessibility, allowing students to balance their studies with personal and professional responsibilities. This strength is particularly beneficial for adult learners and those living in remote areas.

Comprehensive Curriculum and Continuous Updates: The curriculum is regularly updated to include merging technologies and industry trends, which ensures that students are well prepared for current and future job markets. The program aligns with industry standards, incorporating cutting-edge topics like artificial intelligence and cybersecurity.

Robust Support Systems: The program offers extensive support systems including academic advisors, IT support, and career services. These resources are crucial for online learners and are well-regarded for their effectiveness in supporting student success.

Student Satisfaction with Program Relevancy: In the qualitative analysis of the students and alumni survey for the BSc CIS self-study, the majority of alumni and students found the program to be well designed, related to their work, and exactly what they were looking for. The course selection and research topics were characterized as broad enough to allow students to choose paths that align with one’s intended careers. Compared to other similar programs in Canada, the BSc CIS curriculum overlaps with other programs in many important areas of AI, system analysis and design, software development, network security and multimedia technologies, while covering some niche areas related to Information Systems such as web server management and distributed computing.

Opportunities for program improvement are suggested below.

Enhance Course Delivery Consistency and Curriculum Development: Standardize training for instructors and Academic Experts to ensure high-quality delivery and student evaluations across all courses. Explore strategies to reduce the teaching workload for faculty members. The current workload seems high and could hamper the development of new courses and the updating of existing ones. Provide dedicated IT support staff specifically for the development of this program’s course materials.

Increase Practical and Applied Learning Opportunities: Expand partnerships with industry to offer more co-op placements, internships, and live project opportunities. This will allow students to gain valuable work experience and apply their learning in real-world scenarios.

Upgrade Communication and Collaboration Technologies: Invest in state-of-the-art communication and collaboration tools to facilitate better interaction among students and between students and instructors. This could include more interactive forums, real-time collaboration platforms, and enhanced virtual classroom experiences.

Strengthen Support for Research and Scholarly Activities: Provide more opportunities and funding for both students and faculty to engage in research. This could involve setting up dedicated research groups within the program and increasing collaborations with external research institutions.

External Reviewer recommendations are addressed in the Program Action Plan below.

Program Action Plan for Implementation of Recommendations, Including Dean's Response:

	Recommendations (in order of priority for the program)	Proposed Action(s)	Timeline (include specifics)	Individual(s) Responsible for Leading the Action(s) (by role)	Responsibility for Resourcing Action(s) (if applicable; by role)	Dean's Response
1	Enhance Curriculum Integration and Updates	<p>Review courses in the faculty for currency and provide support for learning design and course revisions.</p> <p>Submit requests to the Institutional Resource Planning process for additional staffing to allow expansion of the program.</p> <p>Complete development of Targeted Enrolment Expansion courses for the BSc minors in Artificial Intelligence & Machine Learning and Data Science. (2024)</p>	<p>Ongoing</p> <p>Sept-Dec 2024</p>	<p>Associate Dean, Learning and Assessment and Learning Designers</p> <p>Dean</p> <p>Dean, faculty members</p>	<p>N/A</p> <p>Dean</p> <p>GoA funded with faculty resources</p>	<p>Course design teams are reviewing success measures and course quality on-going and will support faculty in developing and delivering effective courses.</p> <p>Bring additional faculty to grow program in emerging areas. Ensure resourcing for course production team.</p> <p>To be completed in 2024-5</p>
2	Expand Faculty Development Programs	Establish a seminar on frontiers in computing and information systems.	20024-26	Chair, School of Computing and Information Systems (SCIS)	<p>N/A</p> <p>N/A</p>	SCIS faculty will continue to create opportunities to share best practices and FST will support development.

		Report faculty's teaching and research activities and achievements in the school's meeting.		School of Computing and Information Systems, Associate Dean Research & Innovation		Research activities are reported at school and faculty level.
3	Strengthen Industry Partnerships	Develop additional Work Integrated Learning opportunities for students.	2024-26	Associate Dean Student Experience and Program Officer SCIS	N/A	Expand use of Riipen WIL platform as well as opportunities with IT division.
4	Enhance Online Learning Platforms	Transition all courses into Brightspace and/or Mobius	Jan 2025	Course production team, faculty members	OPVPA, FST	Migration is underway and due to be complete January 2025.
5	Increase Support for Research and Innovation	Initiate development of a full proposal for the PhD in Computing and Information Systems that will provide graduates with a pathway for advanced research degrees.	2024-2025	SCIS faculty, SCIS program officer	Dean, Associate Dean Student Experience	Obtained one new faculty position starting 2024-5.
6	Improve Student Engagement and Support	Initiate an effective student engagement program throughout Canada to reduce attrition rates and reduce completion times.	2024-2025	Program Officer	FST	Implemented recognitions letters to BSc students in 2024. Continuing to work on ways to support and engage students.
		Continue to increase the number of women in the program and expand student diversity	ongoing	SCIS Program Officer, Associate Dean Student Experience, University Relations	FST, University Relations	Continue events to elevate students and market programs to attract a diverse student population.
7	Broaden Alumni Networks and Engagement	Continue working with University Relations to refine a platform (Ten Thousand Coffees) that enables peer-to-peer interaction among	ongoing	Program Officer	Dean, Associate Dean Student Experience	Implemented platform in 2023 and will continue to promote platform to students.

		students and alumni for purposes of mentoring.				
8	Continuous Quality Improvement	ILE implementation, course revisions and system upgrades	ongoing	SCIS faculty, Course Production team	OPVPA, Dean	Implementation underway and training to fully utilize functionality as courses are revised.